GLENCORE

NEWS RELEASE
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Preliminary Results 2022

Highlights

Glencore's Chief Executive Officer, Gary Nagle, commented:

"The global pandemic, recovery from it and years of underinvestment, followed by conflict in Europe, exposed pre-existing vulnerabilities in energy security and supply chains, underpinning the generally high and volatile 2022 commodity price environment, which enabled the Group to generate record profitability for the year.

"The unprecedented developments in global energy markets were material drivers for both our marketing and industrial businesses, lifting Group Adjusted EBITDA to $34.1 billion, up $12.8 billion over the period. Marketing posted another record performance, with Adjusted EBIT of $6.4 billion, up 73% year on year, driven primarily by our energy departments successfully navigating the extreme market imbalances, volatility and dislocations across crude oil, LNG, refined products, coal and logistics infrastructure. Industrial EBITDA increased by $10.2 billion to $27.3 billion, benefitting primarily from record prices for our key coal benchmarks, amplified by the incremental contribution from the two-thirds of Cerrejón, acquired in January 2022, that Glencore did not previously own.

"Aligned with the record Adjusted EBITDA results, particularly in marketing, our net working capital significantly increased during the period, reflecting materially higher energy prices and elevated commodity market volatilities, where such additional investment in working capital should be considered in the context of the $3.8 billion increase in Energy Marketing Adjusted EBIT to $5.2 billion. Accounting for this build, significant surplus cash generation reduced Net debt to $0.1 billion, allowing for today's announcement of $7.1 billion (c.$0.56/share) of shareholder returns, comprising a $5.1 billion base cash distribution ($0.40/share), an additional $0.5 billion "top-up" cash distribution ($0.04/share) and a new $1.5 billion buy back programme (c.$0.12/share).

"High inflation rates and associated tighter monetary conditions present some risk to the economic outlook in 2023. China's reopening, however, together with a continued global focus on energy security and decarbonisation / electrification, mean that demand for many of our commodities is likely to remain healthy, while supply constraints persist and inventories remain relatively low.

"Recent government policies, such as the US Inflation Reduction Act and the EU's proposed Green Deal Industrial Plan, demonstrate the growing need for critical raw materials through to the end of the decade and beyond, necessitating fresh investment in both primary supply and recycling.

"The strength of our diversified business model across industrial and marketing, focusing on metals and energy, has proved itself adept in a range of market conditions, giving us a solid foundation to successfully navigate shorter-term challenges that may arise, as well as meet the resource needs of the future. I would like to thank all our employees for their efforts and tremendous contribution during the challenging, but very successful, 2022. As always, we remain focused on operating responsibly and ethically and creating sustainable long-term value for all our stakeholders."

US$ million	**2022**	2021	Change %
Key statement of income and cash flows highlights[1]:			
Revenue	255,984	203,751	26
Adjusted EBITDA◊	34,060	21,323	60
Adjusted EBIT◊	26,657	14,495	84
Net income for the year attributable to equity holders	17,320	4,974	248
Earnings per share (Basic) (US$)	1.33	0.38	250
Funds from operations (FFO)◊	28,938	17,057	70

US$ million	**31.12.2022**	31.12.2021	Change %
Key financial position highlights:			
Total assets	132,583	127,510	4
Total equity	45,219	36,917	22
Net funding◊	27,500	30,837	(11)
Net debt◊	75	6,042	(99)
Ratios:			
Net debt to Adjusted EBITDA◊	0.00	0.28	(99)

1 Refer to basis of presentation on page 6.

◊ Adjusted measures referred to as Alternative performance measures (APMs) which are not defined or specified under the requirements of International Financial Reporting Standards; refer to APMs section on page 116 for definitions and reconciliations and to note 2 of the financial statements for reconciliation of Adjusted EBIT/EBITDA.

STRONG FINANCIAL PERFORMANCE

- $34.1 billion Adjusted EBITDA, up 60% year-on-year (y/y), underpinned by robust Marketing and Industrial results
- Net income, pre-significant items: $18.9 billion, up 107%
- Post significant items, Net income attributable to equity holders was $17.3 billion, up 248%. Significant items reflect various impairments recorded and a gain on the acquisition of Cerrejón
- Net cash purchase and sale of PP&E: $4.5 billion, up 19%
- Shareholder returns of $7.1 billion (c.$0.56/share) announced, comprising a proposed $0.40/share ($5.1 billion) base distribution in respect of 2022 cash flows, alongside an additional 'top-up' $0.5 billion ($0.04/share) cash distribution and a new $1.5 billion (c$0.12/share) share buyback programme

RECORD INDUSTRIAL ASSET ADJUSTED EBITDA CONTRIBUTION

- Industrial Assets Adjusted EBITDA $27.3 billion, up 59%, primarily reflecting a $13.0 billion increase from energy products, in line with significantly higher coal prices, as well as the Cerrejon partner buy-out contribution
- Metals $9.3 billion, down $2.7 billion, reflecting higher costs and lower volumes; Energy $18.6 billion, up $13.0 billion (+232%)
- Unit cost results: Cu 80¢/lb (+13¢/lb y/y); Zn 38¢/lb (+42¢/lb y/y, whereby 2022 is net of 23¢/lb of non-cash inventory adjustments); Ni 631¢/lb (+177¢/lb y/y); coal $79/t ($166/t margin)

RECORD MARKETING RESULTS

- Marketing Adjusted EBIT $6.4 billion, up 73% y/y
- Energy Adjusted EBIT: $5.2 billion (+273%), as already tight post-pandemic energy markets were jolted by significant dislocation, generating extreme volatility in oil, refining margins, freight, gas and coal, with prices (absolute and in relation to quality and location differentials) reaching multi-year highs or records in many cases
- Metals Adjusted EBIT: $1.6 billion (-34%), mainly reflecting challenging conditions arising from China's prolonged Covid-19 lockdowns as well as higher overall inflation, triggering tighter monetary conditions and demand uncertainty
- Glencore's equity accounted share of Viterra rose 4% to $494 million

STRONG BALANCE SHEET

- Net debt being managed around a $10 billion cap, with sustainable deleveraging (after base distribution) below such cap periodically returned to shareholders via top-up cash distributions / buybacks, as appropriate.
- Year-end Net debt of $0.1 billion allows for $2.0 billion of additional shareholder returns under our "top-up" framework, taking into account the base distribution of $5.1 billion and $2.9 billion of pro-forma debt-like other cash commitments at year-end
- Net debt to Adjusted EBITDA of 0.00x
- Available committed liquidity of $13 billion; bond maturities capped at c.$3 billion in any given year
- Spot illustrative annualised free cash flow generation of c.$10.6 billion from Adjusted EBITDA of c.$22.6 billion

CLIMATE AMBITION

- Extensive stakeholder engagement on progress with our Climate Action Transition Plan during the year.
- There was broad support for our climate strategy, recognising the importance of maintaining a strategy that remains resilient to the risks and opportunities of the evolving energy transition, and encouragement to continue our focus on progressing towards our ambition of achieving a net zero total emissions footprint by 2050.
- A limited number of shareholders looked for opportunities to accelerate our current total emissions reduction pathway (50% reduction by 2035), while some raised the prospects for incremental growth in our coal production. However, the overwhelming majority of shareholders reiterated their support for our current responsibly managed coal decline strategy and associated targets.
- Our emissions reduction targets remain sector leading for total emissions (Scope 1+2+3) along with our ambition to achieve Net-zero total emissions by 2050, with a supportive policy environment.
- Our strategy of responsibly depleting our coal portfolio over time reflects our belief that the energy transition will be non-linear through time and geography, with the responsible decline of our coal portfolio meeting critical energy needs through this evolution.
- We will continue to engage with our stakeholders as we progress the implementation of our strategy and respond to the global challenges of climate change and the energy transition.

For further information please contact:

Investors

Martin Fewings	t: +41 41 709 2880	m: +41 79 737 5642	martin.fewings@glencore.com

Media

Charles Watenphul	t: +41 41 709 2462	m: +41 79 904 3320	charles.watenphul@glencore.com

www.glencore.com

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GLENCORE PLC

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Notes for Editors

Glencore is one of the world's largest global diversified natural resource companies and a major producer and marketer of more than 60 responsibly-sourced commodities that advance everyday life. Through a network of assets, customers and suppliers that spans the globe, we produce, process, recycle, source, market and distribute the commodities that enable decarbonisation while meeting the energy needs of today.

Glencore companies employ around 135,000 people, including contractors. With a strong footprint in over 35 countries in both established and emerging regions for natural resources, our marketing and industrial activities are supported by a global network of more than 40 offices.

Glencore's customers are industrial consumers, such as those in the automotive, steel, power generation, battery manufacturing and oil sectors. We also provide financing, logistics and other services to producers and consumers of commodities.

Glencore is proud to be a member of the Voluntary Principles on Security and Human Rights and the International Council on Mining and Metals. We are an active participant in the Extractive Industries Transparency Initiative.

Glencore recognises our responsibility to contribute to the global effort to achieve the goals of the Paris Agreement. Our ambition is to be a net zero total emissions company by 2050. In August 2021, we increased our medium-term emission reduction target to a 50% reduction by 2035 on 2019 levels and introduced a new short-term target of a 15% reduction by 2026 on 2019 levels.

CHIEF EXECUTIVE OFFICER'S REVIEW

The global pandemic, recovery from it and years of underinvestment, followed by conflict in Europe, exposed pre-existing vulnerabilities in energy security and supply chains, underpinning the generally high and volatile 2022 commodity price environment, which enabled the Group to generate record profitability for the year.

Weather and logistics constraints, high energy costs, project delays, and community and employee protest campaigns, meant 2022 was a year of supply challenges. Against such backdrop, nothwithstanding the progressive tightening of monetary conditions and declining consumer sentiment in many key markets over the second half of the year, together with stalling industrial activity in Europe and China's zero-Covid policy, physical commodity markets remained generally healthy, with prices well supported.

In copper, mined supply underperformed initial projections by c.1.3 million tonnes (c.6%). Good electrification demand for copper, largely offset weakness in other sectors, supporting annual average prices just 6% below 2021's average. Aluminium and zinc markets also experienced meaningful supply cuts with high energy prices forcing smelter curtailments, keeping both markets tight and inventories at lows levels. In nickel, solid demand for the more limited high-quality material buoyed LME-grade prices, despite the expansion of low-grade production and weak stainless markets.

Russia's invasion of Ukraine generated one of the largest dislocations in global energy markets in recent history. Most relevant to Glencore were the large coal price moves, where both high energy (NEWC) and low energy (API5) thermal coal markets jumped to record levels in 2022, with average prices up 163% and 112% respectively. The legacy of general sector underinvestment, along with high rates of mine disruption in Australia, Indonesia and Colombia, left supply unable to easily respond to the stronger demand brought on by the rapid changes in Europe's energy mix.

2022 FINANCIAL SCORECARD

The unprecedented 2022 developments in global energy markets were material drivers for both our marketing and industrial businesses, lifting Group Adjusted EBITDA to $34.1 billion, up $12.8 billion over the period. Net income before significant items increased $9.8 billion to $18.9 billion, while significant items, reflecting various impairments recorded and a gain on the acquisition of Cerrejón, reduced Net Income attributable to equity holders to $17.3 billion.

Marketing posted another record performance, with Adjusted EBIT of $6.4 billion, up 73% year on year, driven primarily by our energy departments, successfully navigating the extreme market imbalances, volatility and dislocations across crude oil, LNG, refined products, coal and logistics infrastructure. Metals marketing Adjusted EBIT of $1.6 billion was 34% below 2021, reflecting more subdued market conditions in the second half, amid rising interest rates, recession fears and the effects of China's zero-Covid policy.

Industrial Adjusted EBITDA increased by $10.2 billion to $27.3 billion for the period, benefitting primarily from record prices for our key coal benchmarks, amplified by the incremental contribution from the two-thirds of Cerrejón, acquired in January 2022, that Glencore did not previously own. Excluding this transaction, on a like for like basis, coal production actually declined by almost 9 million tonnes (7%), primarily due to abnormally wet weather. Coal Adjusted EBITDA increased by $12.7 billion to $17.9 billion, while strong oil and gas markets also supported our oil E&P assets, with Adjusted EBITDA rising by $552 million to $781 million.

Earnings from our metals industrial business declined by $2.7 billion, largely reflecting higher costs, primarily energy-driven, and areas of lower production across the portfolio. Reduced copper and zinc volumes incorporate the base effect of asset sales (notably Ernest Henry and South American zinc assets), Katanga's geotechnical constraints, and end of life variability / declines at particular Mount Isa and Kazzinc mines.

Aligned with the record Adjusted EBITDA results, particularly in marketing, our net working capital significantly increased during the period, reflecting materially higher energy prices and elevated commodity market volatilities. Marketing accounted for some $5 billion of net working capital investment (unchanged from H1 2022) across 3 key categories:- a) $0.7 billion net increase in physical forward commodity related contracts (which are not margined), b) $1.9 billion net increase in trade receivables / payables, whereby we previously obtained higher than average payment terms from various Russian suppliers, along with a specific slow-moving exposure expected to be settled in 2023 and c) $2.4 billion net increase in net margins calls paid, in excess of derivative fair values. The various commodity exchanges significantly increased their initial margining requirements during the period, resulting in the posting of an additional $2.2 billion from $1.9 billion to $4.1 billion. This additional investment in working capital should be considered in the context of the $3.8 billion increase in Energy Marketing Adjusted EBIT to $5.2 billion.

Accounting for this working capital build and, after effecting $7.1 billion of Glencore shareholder distributions and buybacks during 2022, significant surplus cash was generated during the year, which reduced Net funding and Net debt to $27.5 billion and $0.1 billion respectively from the prior period levels of $30.8 billion and $6.0 billion, allowing for further "top-up" returns under our shareholder returns framework.

SHAREHOLDER RETURNS

Reflecting our strong financial performance, we significantly increased shareholder returns in 2022. Our framework of managing Net debt around a $10 billion cap, with deleveraging, after the base distribution, periodically returned to shareholders, allowed us to announce c.$8.5 billion of returns, up from $2.8 billion in 2021. These returns comprised a $3.4 billion base distribution in respect of 2021 cashflows, along with $5.1 billion of top-up returns, encompassing a c.$1.5 billion cash element and $3.6 billion cumulative share buybacks for completion in February 2023.

For 2023, basis 2022 cash flows, we are recommending to shareholders a $0.40 per share (c.$5.1 billion) base distribution, made up of $1 billion from Marketing cash flows and 25% ($4.1 billion) of Industrial attributable cash flows.

Our "Top up" returns capital allocation framework generates an additional c.$2 billion for return, applied in the form of an incremental c$0.5 billion cash distribution ($0.04 per share) and $1.5 billion of further share buybacks. Payment of the aggregate cash distribution of $0.44 per share will be effected 50% in each of June 2023 and September 2023.

OUR CLIMATE AMBITION

During the year we engaged extensively on progress with our Climate Action Transition Plan. Our shareholders continue to reinforce that climate strategy is an important area of focus. There was broad support for our climate strategy, recognising the importance of maintaining a strategy that remains resilient to the risks and opportunities of the evolving energy transition, and encouragement to continue our focus on progressing towards our ambition of achieving a net zero total emissions footprint by 2050.

A limited number of shareholders looked for opportunities to accelerate our current total emissions reduction pathway (50% reduction by 2035), while some raised the prospects for incremental growth in our coal production. However, the overwhelming majority of shareholders reiterated their support for our current responsibly managed coal decline strategy and associated targets.

Our 2026 and 2035 emissions reduction targets of 15% and 50% respectively, remain on track. During the period 2019 to 2035, our planning includes the closure of at least 12 coal mines across our global coal portfolio. We have continued to make meaningful progress in the identification of carbon abatement opportunities across the portfolio and significantly expanded our Marginal Abatement Cost Curve (MACC) to include more than 14 million tonnes of potential Scope 1+2 abatement initiatives. These potential initiatives range from renewable power purchases and on-site renewable power generation, through to energy storage systems, operational efficiency initiatives and electrification. Our carbon abatement initiatives have also advanced with a key CCUS (CTSCo) project EIS progressing to public consultation. In addition, we took steps to grow our global recycling footprint and advance circularity of critical minerals through new partnerships and investments to expand our recycling capabilities.

Our emissions reduction strategy remains sector leading for total emissions (Scope 1+2+3) along with our ambition to achieve Net-zero total emissions by 2050 with a supportive policy enviroment. Our strategy of responsibly depleting our coal portfolio over time reflects our belief that the energy transition will be non-linear through time and geography, with the responsible decline of our coal portfolio meeting critical energy needs through this evolution.

We look forward to continuing engagement with our stakeholders as we progress the implementation of our strategy and respond to the global challenges of climate change and the energy transition.

RESPONSIBLE AND ETHICAL PRODUCTION AND SUPPLY

The safety and security of our workforce and communities living around our industrial assets are a priority in all our operational activities. Our ambition is to prevent fatalities, occupational diseases and injuries wherever we operate. Unfortunately, we recorded the loss of four lives at Glencore's managed operations in 2022. We believe that consistent application and reinforcement of our SafeWork framework, through strong visible leadership, can drive and deliver the safety culture and operating discipline we are looking for, and get our people home safe.

Glencore resolved the previously disclosed investigations by authorities in the United States, the United Kingdom and Brazil during the period. These investigations into past activities in certain Group businesses related to bribery, and separate US investigations related to market manipulation. We acknowledge the misconduct identified in these investigations and have cooperated with the authorities. This type of behaviour has no place in the Glencore of today, and the Board, management team and I are very clear about the culture that we want and our commitment to be a responsible and ethical operator wherever we work.

Glencore continues to cooperate with the previously disclosed and ongoing investigation by the Office of the Attorney General of Switzerland into Glencore International AG for failure to have the organisational measures in place to prevent alleged corruption and an investigation of similar scope by the Dutch Public Prosecution Service. The timing and outcome of these investigations remain uncertain.

OUTLOOK

High inflation rates and associated tighter monetary conditions present some risk to the economic outlook in 2023. China's reopening, however, together with a continued global focus on energy security and decarbonisation / electrification, mean that demand for many of our commodities is likely to remain healthy, while supply constraints persist and inventories remain relatively low.

Recent government policies, such as the US Inflation Reduction Act and the EU's proposed Green Deal Industrial Plan, demonstrate the growing need for critical raw materials through to the end of the decade and beyond, necessitating fresh investment into both primary supply and recycling.

The strength of our diversified business model across industrial and marketing, focusing on metals and energy, has proved itself adept in a range of market conditions, giving us a solid foundation to successfully navigate shorter-term challenges that may arise, as well as meet the resource needs of the future. I would like to thank all our employees for their efforts and tremendous contribution during the challenging, but very successful, 2022. As always, we remain focused on operating responsibly and ethically and creating sustainable long-term value for all our stakeholders.

Gary Nagle

Chief Executive Officer

FINANCIAL AND OPERATIONAL REVIEW

BASIS OF PRESENTATION

The financial information in the Financial and Operational Review is presented on a segmental measurement basis, including all references to revenue (see note 2) and has been prepared on the basis as outlined in note 1 of the financial statements, with the exception of the accounting treatment applied to relevant material associates and joint ventures for which Glencore's attributable share of revenues and expenses are presented. In addition, the Peruvian listed Volcan, while a subsidiary of the Group, is accounted for using the equity method for internal reporting and analysis due to the relatively low economic interest (23%) held by the Group.

The Group's results are presented on an "adjusted" basis, using alternative performance measures (APMs) which are not defined or specified under the requirements of IFRS, but are derived from the financial statements, prepared in accordance with IFRS, reflecting how Glencore's management assesses the performance of the Group. The APMs are provided in addition to IFRS measures to aid in the comparability of information between reporting periods and segments and to aid in the understanding of the activities taking place across the Group by adjusting for Significant items and by aggregating or disaggregating (notably in the case of relevant material associates and joint ventures accounted for on an equity basis) certain IFRS measures. APMs are also used to approximate the underlying operating cash flow generation of the operations (Adjusted EBITDA). Significant items (see reconciliation below) are items of income and expense, which, due to their nature and variable financial impact or the expected infrequency of the events giving rise to them, are separated for internal reporting and analysis of Glencore's results, to aid in providing an understanding and comparative basis of the underlying financial performance.

APMs used by Glencore may not be comparable with similarly titled measures and disclosures by other companies. APMs have limitations as an analytical tool, and a user of the financial statements should not consider these measures in isolation from, or as a substitute for, analysis of the Group's results of operations; and they may not be indicative of the Group's historical operating results, nor are they meant to be a projection or forecast of its future results.

Alternative performance measures are denoted by the symbol ◊ and are further defined and reconciled to the underlying IFRS measures in the APMs section on page 116.

MARKET CONDITIONS

Selected average commodity prices

	Spot 31 Dec 2022	Spot 31 Dec 2021	**Average 2022**	Average 2021	Change in average %
S&P GSCI Industrial Metals Index	451	499	480	457	5
S&P GSCI Energy Index	288	252	334	230	45
LME (cash) copper price ($/t)	8,365	9,741	8,805	9,320	(6)
LME (cash) zinc price ($/t)	3,003	3,590	3,475	3,005	16
LME (cash) lead price ($/t)	2,337	2,338	2,147	2,202	(2)
LME (cash) nickel price ($/t)	29,886	20,881	25,623	18,474	39
Gold price ($/oz)	1,824	1,829	1,802	1,799	–
Silver price ($/oz)	24	23	22	25	(12)
Metal Bulletin cobalt standard grade, in-warehouse Rotterdam ($/lb)	19	34	30	24	25
Ferro-chrome 50% Cr import, CIF main Chinese ports, contained Cr (¢/lb)	100	114	106	113	(6)
Iron ore (Platts 62% CFR North China) price ($/DMT)	112	113	113	156	(28)
Coal API4 ($/t)	185	126	271	125	117
Coal Newcastle (6,000) ($/t)	399	166	360	137	163
Oil price – Brent ($/bbl)	86	78	99	71	39

Currency table

	Spot 31 Dec 2022	Spot 31 Dec 2021	**Average 2022**	Average 2021	Change in average %
AUD : USD	0.68	0.72	0.69	0.75	(8)
USD : CAD	1.36	1.26	1.30	1.25	4
EUR : USD	1.08	1.14	1.05	1.18	(11)
GBP : USD	1.20	1.35	1.23	1.37	(10)
USD : CHF	0.92	0.91	0.95	0.91	4
USD : KZT	463	435	461	427	8
USD : ZAR	17.04	15.94	16.37	14.79	11

FINANCIAL RESULTS

Towards the end of 2021, energy prices were already at elevated levels, on account of supply underinvestment and tighter product availability, as many parts of the world were recovering from Covid. Moving into 2022, the impact of these price developments on manufactured goods and consumer inputs more broadly, translated into increasingly higher inflation being reported in many key economies, providing the impetus for interest rate hikes and an overall monetary tightening cycle. The US Federal Reserve started raising rates in March 2022.

The Russia/Ukraine war, commencing in February, with its associated sanctions regimes, intensified supply-side shocks in energy, agricultural products and commodities trading markets in general. Material trade flows needed to adjust for the now non-availability of Russian material into many of its traditional routes and/or flows through Russia itself. Furthermore, many western companies meaningfully withdrew from legal Russian trade (self-sanctioning) as ESG risk became increasingly unacceptable. In this environment, commodity prices and volatility, particularly in the energy sector, surged in the first half.

Our business overall benefitted greatly from our strategic exposure to energy, via our industrial coal portfolio and oil marketing business (both liquids and LNG).

In this environment, direct commodity price-related input costs rose, such as diesel fuel, with production unit costs generally also increasing on account of:

- indirect inflationary pressure on goods and services (particularly energy related flow-through impacts on explosives, chemicals, reagents and OEM spare parts);
- competition for skilled employees and contractors, reflecting some residual Covid restrictions impacting labour mobility;
- government revenue-linked royalties; and
- supply chain pressures, including their secondary effects on shipping and handling costs, as trade flows adjusted in response to the war.

Chinese domestic policies were a further material macro force in 2022. In particular, its commitment to zero-Covid dampened industrial and consumer demand, with a resulting drag on metals prices in the June-August period, with prices broadly stable over the balance of the year.

Average year-over-year price increases for coal (Newc), and Brent crude were 163% and 39%, respectively. Metals moved in different directions: zinc and nickel increased on average, while copper and ferrochrome declined modestly. Although average cobalt metal prices were higher year-over-year, lower payabilities resulted in hydroxide realised prices being broadly compatible with 2021. Owing mainly to such higher overall prices, offset somewhat by the higher costs noted above, Adjusted EBITDA was a record of $34,060 million and Adjusted EBIT was $26,657 million in 2022 respectively, compared to $21,323 million and $14,495 million in 2021. Overall production was mixed year-over-year, reflecting portfolio disposals (Ernest Henry (copper/gold) and South American zinc assets), end of mine life volume impacts / variability (Kazzinc, Mount Isa) and geotechnical processing challenges at Katanga, offset by additional contribution (via partner stake purchases) from Cerrejón. Adjusted EBITDA mining margins were 36% (2021: 45%) in our metal operations and 66% (2021: 47%) in our energy operations. See page 18.

Combining the various factors above, income attributable to equity holders was a record $17,320 million (2021: $4,974 million), after recognising various significant items (particularly in our metals' industrial assets where cost inflation had the largest impact) as discussed below. EPS increased from $0.38 per share to $1.33 per share.

Adjusted EBITDA/EBIT◊

Adjusted EBITDA by business segment is as follows:

	2022			2021			
US$ million	Marketing activities	Industrial activities	Adjusted EBITDA	Marketing activities	Industrial activities	Adjusted EBITDA	Change %
Metals and minerals	1,694	9,274	10,968	2,588	12,017	14,605	(25)
Energy products	5,558	18,590	24,148	1,829	5,603	7,432	225
Corporate and other[1]	(457)	(599)	(1,056)	(194)	(520)	(714)	48
Total	**6,795**	**27,265**	**34,060**	**4,223**	**17,100**	**21,323**	**60**

Adjusted EBIT by business segment is as follows:

	2022			2021			
US$ million	Marketing activities	Industrial activities	Adjusted EBIT	Marketing activities	Industrial activities	Adjusted EBIT	Change %
Metals and minerals	1,640	5,082	6,722	2,494	8,128	10,622	(37)
Energy products	5,199	15,850	21,049	1,395	3,252	4,647	353
Corporate and other[1]	(457)	(657)	(1,114)	(194)	(580)	(774)	44
Total	**6,382**	**20,275**	**26,657**	**3,695**	**10,800**	**14,495**	**84**

1 Corporate and other Marketing activities includes $494 million (2021: $473 million) of Glencore's equity accounted share of Viterra.

Marketing activities

Marketing delivered record results, successfully navigating the elevated levels of market volatility, disruption, rapidly and materially changing underlying commodity flows, and a constant reassessment of forward-looking supply and demand scenarios, particularly relating to energy markets, as noted above. Marketing Adjusted EBITDA and EBIT increased, respectively, over prior year, by 61% to $6,795 million and by 73% to $6,382 million, driven by our oil and gas department, as it capitalised on the extreme energy market imbalances, volatility and dislocations across crude oil, LNG, refined products and logistics infrastructure. Metals and minerals Adjusted EBIT was down 34% over 2021, due to the more challenging market conditions prevailing for much of 2022, reflecting global recessionary fears and a Chinese economy impacted by lockdown restrictions.

In 2022, agricultural markets also saw elevated prices and volatility, such that Viterra reported an EBITDA and Net Income of $2.0 billion and $1.0 billion respectively. Our 50% share of earnings (captured within Corporate and Other) was $494 million (post-interest and tax) compared to $473 million in the prior year. Viterra's recently-completed Gavilon acquisition (primarily US market presence) provides further benefits of scale and synergy opportunities.

Industrial activities

Industrial Adjusted EBITDA increased by 59% to $27,265 million (Adjusted EBIT was $20,275 million, compared to $10,800 million in 2021). As noted above, the increase was primarily driven by stronger average year-over-year commodity prices, particularly related to our coal operations and the additional contribution from the increased ownership in Cerrejón. Metals industrial EBITDA was down 23% to $9,274 million compared to prior year, where other than in relation to lower prices (e.g. copper) the largest contributors were:

- African copper – EBITDA down $0.6 billion compared to 2021, as a result of significant geotechnical and other operating challenges impacting Katanga during the year, resulting in a decrease of 44kt of copper production; and
- Australia zinc – EBITDA down $0.5 billion compared to 2021, owing to inflationary cost pressures, lower zinc volumes and grades as Lady Loretta approaches end of mine life, challenging copper operating conditions and various NRV non-cash inventory-related valuation adjustments.

Earnings

A summary of the differences between reported Adjusted EBIT and income attributable to equity holders, including significant items, is set out in the following table:

US$ million	**2022**	2021
Adjusted EBIT◊	26,657	14,495
Net finance and income tax expense in relevant material associates and joint ventures[1]	(710)	(1,207)
Proportionate adjustment Volcan[1]	62	179
Net finance costs	(1,336)	(1,140)
Income tax expense[2]	(6,169)	(3,163)
Non-controlling interests	378	(39)
Income attributable to equity holders of the Parent pre-significant items◊	**18,882**	**9,125**
Earnings per share (Basic) pre-significant items (US$)[3◊]	1.44	0.69
Significant items◊		
Share of Associates' significant items[4]	(9)	(11)
Movement in unrealised inter-segment profit elimination[5]	1,176	(549)
Gain/(loss) on acquisitions and disposals of non-current assets[6]	1,287	(607)
Other expense – net[7]	(911)	(1,947)
Impairments[8]	(3,337)	(1,838)
Income tax (expense)/credit[2]	(199)	137
Non-controlling interests' share of significant items[9]	431	664
Total significant items	**(1,562)**	**(4,151)**
Income attributable to equity holders of the Parent	**17,320**	**4,974**
Earnings per share (Basic) (US$)[3]	1.33	0.38

1 Refer to note 2 of the financial statements and to APMs section for reconciliations.
2 Refer to other reconciliations section for the allocation of the total income tax expense between pre-significant and significant items.
3 Based on weighted average number of shares, refer to note 18 of the financial statements.
4 Recognised within share of income from associates and joint ventures, see note 2 of the financial statements.
5 Recognised within cost of goods sold, see note 2 of the financial statements.
6 Refer to note 4 of the financial statements and to APMs section for reconciliations.
7 Recognised within other income/(expense) – net, see note 5 of the financial statements and to APMs section for reconciliations.
8 Refer to notes 7 and 11 of the financial statements and to APMs section for reconciliations.
9 Recognised within non-controlling interests, refer to APMs section.

Significant items

Significant items are items of income and expense, which, due to their nature and variable financial impact or the expected infrequency of the events giving rise to them, are separated for internal reporting, and analysis of Glencore's results, to aid in providing an understanding and comparative basis of the underlying financial performance.

In 2022, Glencore recognised a net expense, after tax and non-controlling interests, of $1,562 million (2021: $4,151 million) in significant items comprised of:

- Expenses of $9 million (2021: $11 million) relating to Glencore's share of significant expenses recognised directly by our associates.
- Gain on acquisitions and disposals of non-current assets of $1,287 million (2021: loss of $607 million) primarily related to the gains recognised on the acquisition of the remaining 66.67% interest in Cerrejón ($1,029 million) and the disposal of Ernest Henry ($512 million).
- Other income/(expense) – net expense of $911 million (2021: $1,947 million) see note 5. Balance primarily comprises:
  - $106 million (2021: gains of $64 million) of mark-to-market losses on equity investments / derivative positions accounted for as held for trading, including the commodity price linked deferred consideration related to the sale of Mototolo in 2018 and the ARM Coal non-discretionary dividend obligation.
  - $349 million net loss (2021: $187 million) of net foreign exchange losses, whereby 2022 primarily relates to realised foreign currency losses recycled from other comprehensive income recognised in respect of an intragroup restructuring.
  - $302 million (2021: $1,640 million) relating to various legal matters and related costs (legal, expert and compliance), including in respect of the government investigations (see notes 23 and 31).
  - $370 million (2021: $177 million), comprising movements in restoration, rehabilitation and decommissioning estimates relating to sites that are no longer operational.
- Impairments of $3,337 million (2021: $1,838 million), see note 7. The corresponding net impact, after income taxes and non-controlling interests was $2,341 million (2021: $1,137 million). The 2022 charge primarily relates to Mt. Isa Copper ($656 million), Mt. Isa Zinc ($455 million), Zhairem ($185 million) and Koniambo ($227 milllion), due to significant changes to key macro estimates, heavily influenced by the the Russian/Ukrainian war, and operational challenges in certain areas, Mopani advance ($422 million) and outstanding VAT claims in the DRC of $632 million. The 2021 impairment related primarily to Koniambo ($1,170 million), HG Storage ($331 million), outstanding VAT claims ($151 million) and net $98 million reversal of impairments of certain loans and physical advances.
- Income tax expense of $199 million (2021: credit of $137 million) – see income taxes below.

Net finance costs

Net finance costs were $1,336 million during 2022, a 17% increase compared to $1,140 million in the comparable reporting period. Interest expense for 2022 was $1,771 million, up 31% over 2021 due to higher average floating base rates (mainly SOFR). Interest income was $435 million compared to $208 million in the prior year, also due to the higher average floating base rates. See note 6.

Income taxes

An income tax expense of $6,368 million was recognised during 2022, compared to an expense of $3,026 million in 2021. The effective tax rate is 27.8%, however when adjusting for significant items (primarily impairments, foreign exchange adjustments and tax losses not recognised), the effective tax rate increases to 28.1% (33.5% in 2021).

STATEMENT OF FINANCIAL POSITION

Current and non-current assets

Total assets were $132,583 million as at 31 December 2022, compared to $127,510 million as at 31 December 2021. Current assets increased from $57,776 million to $69,223 million, due primarily to an increase in receivables, including margin calls paid in respect of the Group's hedging activities, on account of higher energy commodity prices at year end relative to the prior year and higher inventories, in part reflecting slower sales into China amid Covid lockdowns and shipping bottlenecks and delays in respect of realignment of trade flows post the Ukraine war. Non-current assets decreased from $69,734 million to $63,360 million, primarily due to capital expenditure over the period being below depreciation and amortisation expense, $1,982 million of impairments to property, plant and equipment, $2,440 million of asset values reclassified to held for sale and mark-to-market losses recognised on other investments (see below and notes 7, 16 and 11).

Current and non-current liabilities

Total liabilities were $87,364 million as at 31 December 2022, compared to $90,593 million as at 31 December 2021. Current liabilities increased from $49,459 million to $53,420 million, primarily due to an increase in income tax payable of $2,875 million, reflecting the aggregate catch-up cashflow timing impact of final settlement of 2022 income taxes due in 2023 (e.g. final Australian 2022 income taxes are due on 1 June 2023) and an increase in current borrowings (see note 21). Non-current liabilities decreased from $41,134 million to $33,944 million, primarily due to a decrease of non-current borrowings (see note 21).

Movements relating to current and non-current borrowings are set out below in the net funding and net debt movement reconciliation and in note 21.

Equity

Total equity was $45,219 million as at 31 December 2022, compared to $36,917 million as at 31 December 2021, the movements being primarily the income for the year of $16,511 million, including non-controlling interests and a decrease in other comprehensive income noted below, offset by shareholder distributions and buybacks ($7,097 million) concluded during the year.

Other comprehensive income/(loss)

A loss of $788 million was recognised during 2022, compared to an income of $42 million in 2021, primarily relating to net mark-to-market losses of $1,124 million (2021: $52 million) with respect to various minority investments, comprising mainly our holdings in EN+ and Rossneft (see note 11), and exchange losses on translation of foreign operations of $307 million (2021: $87 million), primarily our South African ZAR-denominated subsidiaries, offset by foreign exchange losses recycled to the statement of income of $481 million (2021: $Nil) and net defined benefit plan remeasurements of $231 million (2021: $223 million).

Cash flow and net funding/debt

Net funding

US$ million	31.12.2022	31.12.2021
Total borrowings as per financial statements	28,777	34,641
Proportionate adjustment – net funding[1]	646	(563)
Cash and cash equivalents	(1,923)	(3,241)
Net funding◊	**27,500**	**30,837**

1 Refer to APMs section for definition and reconciliations.

Cash and non-cash movements in net funding

US$ million	2022	2021
Cash generated by operating activities before working capital changes, interest and tax	32,915	16,725
Proportionate adjustment – Adjusted EBITDA[1]	2,402	3,619
Non-cash adjustments included within EBITDA	35	–
Net interest paid[1]	(1,069)	(853)
Tax paid[1]	(5,904)	(2,676)
Dividends received from associates[1]	559	242
Funds from operations◊	**28,938**	**17,057**
Net movement in inventories[2]	(5,149)	(5,689)
Net other working capital changes[2]	(8,334)	400
Increase in long-term advances and loans[2]	(200)	–
Acquisition and disposal of subsidiaries – net[2]	609	252
Purchase and sale of investments – net[2]	128	108
Purchase and sale of property, plant and equipment – net[2]	(4,543)	(3,802)
Margin payments in respect of financing related hedging activities	(1,824)	(970)
Proceeds received on acquisition of non-controlling interests in subsidiaries	–	10
Distributions paid and transactions of own shares – net	(7,539)	(3,024)
Cash movement in net funding	**2,086**	**4,342**
Net funding acquired in business combinations	(20)	–
Change in lease obligations	(379)	(915)
Foreign currency revaluation of borrowings and other non-cash items	1,650	1,164
Total movement in net funding	**3,337**	**4,591**
Net funding◊, beginning of the year	(30,837)	(35,428)
Net funding◊, end of year	**(27,500)**	**(30,837)**
Less: Readily marketable inventories[2]	27,425	24,795
Net debt◊, end of year	**(75)**	**(6,042)**

1 Refer to APMs section for definition and reconciliations.
2 Refer to Other reconciliations section.

The reconciliation in the table above is the method by which management reviews movements in net funding and net debt and comprises key movements in cash and any significant non-cash items.

Net funding as at 31 December 2022 decreased by $3.3 billion to $27,500 million and net debt (net funding less readily marketable inventories) decreased by $6.0 billion to $75 million, as funds from operations of $28,938 million significantly exceeded the $4,543 million of net capital expenditure, $7,539 million of distribution to shareholders, non-controlling interests and purchase of own shares and respectively, $5,149 million and $8,334 million in inventory and net other working capital outflows.

The latter primarily includes a $1.1 billion reduction in deferred income, $0.9 billion paid during the period towards settlement of the various legal investigations (see note 21), a $0.5 billion reduction in other provisions (mainly remuneration and rehabilitation related), a $1.9 billion net increase in trade receivables / payables (see notes 14 and 25), a $0.7 billion net increase in physical forward commodity related contracts (see note 29), and a $2.4 billion net increase in net margins calls paid, in excess of the movement in current financial assets / liabilities (our derivative commodity related contracts / hedging instruments, excluding physical forwards) (see notes 14 and 25), whereby the various commodity exchanges significantly increased their initial margining requirements during the period, resulting in the posting of an additional $2.2 billion from $1.9 billion to $4.1 billion. The latter 3 categories, aggregating to some $5 billion, substantially relate to our Energy marketing activities (oil, gas and coal), whereby the additional investment in working capital, should be considered in the context of a 273% increase in Energy Marketing EBIT from $1.4 billion to $5.2 billion.

The non-RMI inventory balance increased by $2.5 billion over the year, including the $1.2 billion inter-segment profit-in-stock elimination adjustment (see note 2), whereby a positive corresponding cashflow effect is reported within 'cash generated by operating activities' above. The remaining variance primarily comprises Astron oil refinery ($0.3 billion), as we initiated its restart in Q4 2022, requiring parallel crude and product stocks to be held for a period of time, the build-up of additional inventory capacity at African copper ($0.2 billion) to assist with processing complexities and supply-chain challenges, as well as higher Kazzinc inventories ($0.2 billion), owing to supply-chain challenges resulting from the Russian/Ukraine war.

Business and investment acquisitions and disposals

Net inflows from business and investment disposals/acquisitions were $737 million over the year, compared to $370 million in 2021. The net inflow mainly comprises the proceeds from the sale of Ernest Henry for $584 million (see note 26). The net inflow in 2021 comprises mainly the proceeds from the sale of Chemoil Terminals (oil storage facilities in the US) for $248 million (see note 26). In May, Glencore subscribed for $200 million of convertible debt in Li-Cycle, a leading lithium-ion battery recycler in North America (see note 12).

Liquidity and funding activities

In March 2022 (effective May 2022), Glencore refinanced its short-term revolving credit facility (RCF). As at 31 December 2022, the overall RCF facilities comprise:

- a $6,535 million one-year revolving credit facility with a one-year borrower's term-out option (to May 2024);
- a $450 million medium-term revolving credit facility (to May 2025); and
- a $4,200 million medium-term revolving credit facility (to May 2026).

As in previous years, these committed unsecured facilities contain no financial covenants, no rating triggers, no material adverse change clauses and no external factor clauses.

As at 31 December 2022, Glencore had available committed liquidity amounting to $13.0 billion (31 December 2021: $10.3 billion).

CREDIT RATINGS

In light of the Group's extensive funding activities, maintaining investment grade credit rating status is a financial priority. The Group's credit ratings are currently Baa1 (positive outlook) from Moody's and BBB+ (positive outlook) from Standard & Poor's. Glencore's publicly stated objective, as part of its overall financial policy package, is to seek and maintain a minimum of strong Baa/BBB credit ratings from Moody's and Standard & Poor's respectively. In support thereof, Glencore targets a maximum 2x Net debt/Adjusted EBITDA ratio through the cycle, augmented by a Net debt cap of c.$10 billion.

VALUE AT RISK

One of the tools used by Glencore to monitor and limit its primary market risk exposure, namely commodity price risk related to its physical marketing activities, is the use of a value at risk (VaR) computation. VaR is a risk measurement technique, which estimates the potential loss that could occur on risk positions as a result of movements in risk factors over a specified time horizon, given a specific level of confidence. The VaR methodology is a statistically defined, probability-based approach that takes into account market volatilities, as well as risk diversification by recognising offsetting positions and correlations between commodities and markets. In this way, risks can be measured consistently across markets and commodities and risk measures can be aggregated to derive a single risk value.

Glencore uses a VaR approach based on Monte Carlo simulations computed at a 95% confidence level and utilising a weighted data history for a one-day time horizon. Glencore's Board, as part of its annual review process in H2 2021, approved an increase in the Group's consolidated VaR limit (one day 95% confidence level) from $100 million to $150 million, with effect from 1 January 2022, which represents approximately 0.3% of total equity.

Prior to the Russia/Ukraine conflict, Glencore operated within the $150 million limit. Around the time of the invasion, the Group's VaR spiked due to the unprecedented levels of volatility in commodity markets (primarily energy but also certain metals), rather than due to any change in the Group's marketing positions or trading strategies. Given the market backdrop, prior to any likely breach, the Chief Risk Officer proactively consulted with the Board and received a temporary waiver from the application of a Group VaR limit. During the waiver period, the Chief Risk Officer reported regularly to the Board.

In mid-May, as some non-energy markets started to normalise, the temporary waiver was rescinded and replaced with a VaR limit of $200 million, to account for the statistically elevated energy market risk environment. Similarly, prior to any breach, a temporary waiver was approved in mid-August due to the increasing LNG risks as the European gas market was under significant pressure. In mid-September, following a comprehensive review, the Board determined it was appropriate to revert to the prior VaR limit of $150 million, but to exclude LNG from the Group VaR limit, while maintaining a separate multipronged LNG risk reporting and control structure, including the continued calculation and highlighting of VaR outcomes.

The year-end VaR (one day 95%), excluding LNG, was $76 million ($88 million, including LNG), comfortably within the Group's $150 million limit. Average Group VaR, excluding LNG since its exclusion in mid-September, was $70 million. Including LNG, average market risk VaR (one day 95%) during 2022 was $158 million, with an observable high of $451 million and a low of $66 million, while average equivalent VaR during 2021 was $54 million.

DISTRIBUTIONS

In accordance with the Company's shareholder return policy, the Directors have recommended a 2022 financial year base cash distribution of $0.40 per share amounting to $5.1 billion, accounting for own shares held as at 10 February 2022. In addition, the Directors have recommended a 'top-up' cash distribution of $0.04 per share amounting to some $0.5 billion, whereby payment of the aggregate distribution of $0.44 per share will be effected as a $0.22 per share distribution in June 2023 and a $0.22 per share distribution in September 2023 (in accordance with the Company's announcement of the 2023 Distribution timetable made on 15 February 2023). The Company will also conduct a buy-back of its own shares to the value of up to $1.5 billion, with intended completion by the time of the Group's interim results announcement in August 2023.

The cash distribution is to be effected as a reduction of the capital contribution reserves of the Company. As such, this distribution would be exempt from Swiss withholding tax. As at 31 December 2022, Glencore plc had CHF 18 billion of such capital contribution reserves in its statutory accounts. The distribution is subject to shareholders' approval at Glencore's AGM on 26 May 2023.

The distribution is ordinarily paid in US dollars. Shareholders on the Jersey register may elect to receive the distribution in sterling, euros or Swiss francs, the exchange rates of which will be determined by reference to the rates applicable to the US dollar at the time. Shareholders on the Johannesburg register will receive their distribution in South African rand. Further details on distribution payments, together with currency election and distribution mandate forms, are available from the Group's website (www.glencore.com) or from the Company's Registrars.

BOARD CHANGES

Liz Hewitt was appointed as Independent Non-Executive Director on 18 July 2022. From March 2023, she will replace Gill Marcus as Chair of the Audit Committee, who will remain a member of the Committee. Gill Marcus replaced Martin Gilbert as Senior Independent Director on 2 December 2022, who remains on the Board as an Independent Non-Executive Director.

MARKETING ACTIVITIES

HIGHLIGHTS

Marketing Adjusted EBIT of $6,382 million was 73% higher than in 2021, having successfully navigated the extraordinary supply-side shocks in global energy and agricultural markets stemming from the Russia/Ukraine war and demand uncertainty related to mainly ex-China rising inflation and tightening monetary conditions, in conjunction with China's commitment to its zero-Covid policy over much of 2022.

The Russian invasion of Ukraine in February 2022, led to significant upheaval, uncertainty and ultimately realignment of global trade flows, most notably in the energy complex. Already challenged oil and gas markets responded accordingly, with prices (absolute and in relation to quality and location differentials) reaching multi-year highs or records in many cases, before easing over Q4 in the face of the relatively mild weather start to winter, with high gas inventory levels having been built up. European coal imports were materially higher during the year, reflecting substitution for gas, at the same time as supply was limited by an Indonesian export ban earlier in the year and weather disruptions in Australia, South Africa and Colombia.

Against this challenging and elevated risk backdrop, as evidenced by our Value at Risk analysis discussed in note 27, Adjusted EBIT from the Energy products business was $5,199 million, a near four-fold increase over the prior year.

Metals and minerals Adjusted EBIT decreased by 34% to $1,640 million, reflecting the weak Chinese construction, manufacturing and consumer spending activity levels noted below, as well, in % terms, the strong 2021 contribution.

Viterra (reported within corporate and other) contributed $494 million on an attributable, after-tax basis, matching 2021's record performance.

US$ million	**Metals and minerals**	**Energy products**	**Corporate and other[1]**	**2022**	Metals and minerals	Energy products	Corporate and other[1]	2021
Revenue	77,382	137,720	–	215,102	71,318	106,265	–	177,583
Adjusted EBITDA◊	1,694	5,558	(457)	6,795	2,588	1,829	(194)	4,223
Adjusted EBIT◊	1,640	5,199	(457)	6,382	2,494	1,395	(194)	3,695
Adjusted EBITDA margin	2.2%	4.0%	n.m.	3.2%	3.6%	1.7%	n.m.	2.4%

1 Corporate and other Marketing activities includes $494 million (2021: $473 million) of Glencore's equity accounted share of Viterra.

Selected marketing volumes sold

	Units	**2022**	2021	Change %
Copper metal and concentrates[1]	mt	3.6	3.1	16
Zinc metal and concentrates[1]	mt	2.4	2.7	(11)
Lead metal and concentrates[1]	mt	0.8	1.1	(27)
Gold	moz	1.9	1.8	6
Silver	moz	69.0	65.5	5
Nickel	kt	263	202	30
Ferroalloys (incl. agency)	mt	8.4	9.3	(10)
Alumina/aluminium	mt	10.0	8.9	12
Iron ore	mt	71.0	49.9	42
Thermal coal[2]	mt	78.4	67.7	16
Metallurgical coal[2]	mt	2.5	4.6	(46)
Crude oil	mbbl	535	706	(24)
Oil products	mbbl	544	704	(23)

1 Estimated metal unit contained.

2 Includes agency volumes.

COPPER

Having started the year marginally below $10,000/t, the continuation of supportive financial conditions, low level of refined inventories and limited mine supply growth buoyed copper prices in early 2022, with the LME three-month copper price reaching $10,845/t in March. The negative impact of declining sentiment emerged in April, with concerns related to tightening monetary policies, Covid outbreaks in China and the impact of the war in Ukraine, leading to progressive US dollar appreciation and speculative positions moving net-short, with prices drifting below $8,000/t through Q3 and early Q4. Improving copper consumption in China, following various accommodative monetary policy measures taken to stabilise the domestic economy, resulted in global refined inventories declining to their lowest level in more than 15 years during Q4 and spot cathode premiums reaching record levels. Copper prices ended the reporting period modestly below $8,500/t.

Spot smelter treatment and refining charges, paid by mines to smelters, continued to move higher during the year, reaching levels last seen in 2018, as increases in mine supply allowed concentrate supply chains to replenish stocks.

Looking forward, we expect mine supply growth to be constrained by aging assets, a diminished project pipeline and geopolitical conditions, with new projects likely to experience delays. In the near term, global demand sentiment will be dependent on the outlook for fiscal tightening measures, and improving industrial activity and recovery in the construction sector in China. In the longer term, demand growth will be driven by population growth and rising living standards in emerging economies, supported by

climate change policies and action expected to be a key driver for copper growth sectors, given their crucial role in accelerating the clean energy transition, from renewable power generation and distribution, to energy storage and electric vehicles (EVs).

COBALT

Cobalt commenced the year in a strong position, with growing EV demand supplemented by post-Covid recovery in key metal sectors including aerospace. Metal priced at $33.50/lb in early January, reaching a high of $39.75/lb in late April. Meanwhile hydroxide payables maintained levels in the high 80%s, reflecting robust aggregate lithium-ion battery demand.

Fundamentals deteriorated progressively from Q2, with China's protracted Covid lockdowns and global recessionary concerns. The Chinese consumer goods sector exhibited the largest cobalt demand contraction, with mobile phone sales seeing double-digit year-on-year declines. Meanwhile cobalt production growth remained robust, fuelling an oversupply.

Metal prices declined progressively during the year to the low $20/lb levels, while hydroxide payables drifted to low 60% levels. By year end, cobalt metal dropped to $18.75/lb, down 44% versus the end of 2021. Hydroxide payables dipped below 60%, resulting in a hydroxide price down 63% versus end of 2021.

EV segment demand exhibited robust growth in 2022, and the trend of strong cobalt demand from EVs looks set to continue. This sector is now well established in China and Europe, while the North American market continues to emerge as a major EV growth region, accelerated by supportive policies including the Inflation Reduction Act which have induced a wave of EV supply chain investments.

Within the EV sector, the average cobalt required per kWh continues to diminish, however strong cobalt demand remains underpinned by the rate of EV sales growth, and while it may take some time, given current excess inventory levels, cobalt fundamentals are expected to improve, also once China begins its recovery phase, which should see a turnaround in consumer goods battery demand.

ZINC

Physical indicators, such as metal premiums increasing to c.$700/t in the US and c.$500/ in the EU, backwardated spreads, and visible metal exchange inventories reaching the lowest level in more than three decades, signalled tight market conditions in 2022. The average zinc price increased by 16% YoY from $3,005/t in 2021 to $3,485/t in 2022.

On the supply side, both mined and refined metal production underperformed initial expectations and prior year. Delays in project ramp-ups, operational issues, and soaring production costs affected mine (c. -1.0% YoY) and metal (c. -3% YoY) supply. European zinc smelters, accounting for c.30% of ex-China zinc metal production, were the most affected by the high energy price environment resulting in extended periods of production shutdowns or curtailments. Zinc mine and metal supply are expected to recover in 2023, although the risk of continued disruptions remains high.

Ex-China demand for zinc was healthy in H1, with orders reducing in H2, due to US/EU recession fears, rising interest rates, and power-related demand destruction in Europe. China's zinc demand materially decreased in 2022, as the country's economic activity suffered from property industry slowdown and the effects of the zero-Covid policy. This resulted in China being a net exporter of zinc metal in 2022 for the first time in decades, with such flows helping to balance the RoW zinc metal markets. We expect China to return to importing metal in 2023, as consumption recovers with China's reopening after the reversal of zero Covid.

In the lead market, the 2022 average price declined by 2% YoY to $2,153/t due to demand weakness, despite visible metal exchange inventories down by 60% YoY (LME and ShFE combined). News of lead smelter disruptions in Q4, as well as lead's inclusion in the Bloomberg Commodity Index (BCOM) resulted in an end-of-year price uptick, ending the year at $2,337/t.

NICKEL

While all base metal prices were volatile following the start of the war in Ukraine, the disruption to the nickel market was truly exceptional. The LME market was suspended in March 2022 having briefly reached $100,000/t. Since its restoration, liquidity in the Nickel contract has remained particularly thin, with increased price volatility. The LME has committed to implement a number of measures in an attempt to restore confidence in the Nickel contract exchange.

Following a sharp rebound in 2021, primary Ni demand saw more modest growth of 4% in 2022 as core manufacturing demand for stainless steel dropped in all regions, offset by growth in batteries and alloys. Chinese stainless steel production, accounting for more than half of global nickel demand, was down on the prior year, impacted by its zero-Covid policy. In other regions, notably Europe, the energy crisis and weak end-use demand weighed on metal consumption. Nickel demand from alloys and specialty steels was supported by the recovery of the oil & gas and aerospace sectors while EV sales continued to increase.

While the supply of LME grade Nickel remains tight, a significant excess of non-LME grade units has incentivised the conversion of these units into Nickel matte and Nickel sulphate, both eligible for the battery segment and feedstock for LME grade production.

FERROALLOYS

Input cost increases were largely passed through to the market, notwithstanding lower demand due to reduced stainless steel production. Limited chrome ore supply growth in South Africa, coupled with inland and portside logistics constraints, resulted in chrome ore exports remaining flat year-on-year.

Vanadium demand was overall stable as the aerospace sector began to recover to pre-pandemic levels, offsetting steel sector reductions. Geopolitical supply concerns regarding Russian vanadium also contributed to price increases.

ALUMINIUM

The aluminium market experienced a highly volatile 2022. After rallying in Q1, peaking at an all-time high of $4,074/t in March on the back of tightening supply and margining issues, the LME three-month contract retreated by 49% to $2,081/t by the end of September. Covid-19 lockdowns and a weak construction sector in China, as well as high inflation and rising interest rates in the West, led to a deteriorating demand outlook. Despite most regions showing deficits, the weight of macro factors and US dollar strength kept the prices subdued for the rest of the year, finishing at $2,350/t.

Premiums in Europe and the Americas reached all-time highs in H1, basis supply-side logistical challenges, before retracing, due to the weaker macroeconomic backdrop. The Midwest Premium closed the year at 22c/lb, while the CIF Main Japanese Port Spot Premium decreased from $170/t in May to $75/t at year end.

The alumina market followed a similar pattern in 2022, peaking at $530/t in March before retracing to c.$370/t by the end of H1. With China's significant addition of new refining capacity and power-related aluminium curtailments, the import window was closed for much of H2 2022. Together with similar curtailments amongst European aluminium smelters, and with new alumina production from Indonesia and Jamalco (restart), alumina prices fell further in H2 2022, trading mainly between $310/t to $330/t.

IRON ORE

The iron ore market was impacted by geopolitical uncertainty and slow economic growth, particularly in China. Other than a short-term supply impact due to the Ukraine war and changes in Indian export duties, for most of the year iron ore was oversupplied. Ex-China, inflation and broader recessionary caution undermined steel demand, while in China, zero-Covid policy put pressure on industrial activities, including the construction sector. As a result, many steelmakers' margins were breakeven to negative, with low-grade ore often then preferred, where cost-cutting was the main theme. However, with China lifting its zero-Covid policy in December, Chinese mills have actively sought to restock in preparation for the upcoming spring.

COAL

Coal supply disruptions, particularly from Indonesia, Australia and Colombia, and increased coal demand into Europe and India contributed to coal supply shortfalls in 2022, which, correlating with the significantly higher global gas prices, resulted in record average 2022 prices for GCNewc ($363/t), API4 ($272/t) and API2 ($292/t), up 163%, 117% and 148% respectively from their 2021 averages.

While demand for seaborne thermal coal was down c.2% in Pacific markets, largely due to Chinese domestic production growth, the global seaborne thermal coal market grew by c.2% in 2022, as European demand increased by c.30Mt.

Australian thermal coal exports declined c.20Mt YoY, primarily due to reduced Newcastle coal exports, which together with lower Colombian volumes, contributed to a substantial reduction in the supply of higher energy, low ash coals into the seaborne market. Indonesian exports recovered after an export ban during Q1, with YoY total volumes increasing by c.29Mt, with growth primarily coming from coals with energy content below 4000kcal/kg NAR.

Global production of blast furnace pig iron, the main driver of coking coal and PCI demand fell by c.3% YoY as a combination of high energy prices and weaker steel demand curtailed European and Asian blast furnaces. This lower demand for metallurgical coals was offset by reduced supply from Australia due to weather and a swing of PCI coals into thermal markets, as the latter were pricing higher for much of 2022. Premium HCC prices averaged $364/t during 2022, 63% above the $224/t average in 2021.

OIL

Russia's invasion of Ukraine resulted in the biggest dislocation in global energy markets in recent history. Oil prices had seen a steady recovery post-pandemic driven by demand recovery and low inventory levels. The impact of the invasion resulted in a supply shock, with Brent reaching a multi-year high of $127/bbl in March. Brent Oil prices remained volatile in the $100-120/bbl range for the remainder of H1 as the market struggled to rebalance the unprecedented structural changes to oil markets, particularly in Europe. During H2, oil prices weakened considerably driven by a deteriorating macroeconomic outlook and resilient oil supply. Weaker demand from China due to extended lockdowns contributed to lower demand with Brent ending the year at $86/bbl.

Gas markets, already tight given low storage levels heading into the European 2021/22 winter, were even more disrupted by the Ukraine invasion, resulting in a surge in gas prices with the European TTF natural gas benchmark price reaching a peak of $99/mmbtu ($23/mmbtu: 31 December 2021). The elevated European gas prices drove large flows of LNG into Europe to meet demand following curtailed pipeline flows of Russian natural gas. Milder temperatures drove weaker demand in H2, which together with near-full storage levels, saw gas prices recede, whereby the TTF price closed the year around starting year levels.

Refined product markets were impacted by the Ukraine invasion, supply interruptions from US and European refinery outages and by reduced exports from China in Q2-Q3. Global refined product balances tightened amidst sustained stock draws, resulting in historically low levels of product inventories worldwide. Refined oil product cracks, in particular transportation fuels, surged to historical highs during the first half of 2022. Diesel cracks remained strong throughout most of the year, however gasoline cracks weakened substantially in H2, due to a combination of lower than expected demand during peak driving season (especially in the US), an excess supply of non-refinery gasoline blendstocks and a surge in Chinese exports in Q4.

In shipping, long-standing trade patterns were materially disrupted by the invasion of Ukraine, increasing demand for longer haul routes, sending overall freight rates significantly higher. Tonnage availability remained tight throughout most of the year.

INDUSTRIAL ACTIVITIES

HIGHLIGHTS

Industrial Adjusted EBITDA increased by 59% to a record $27,265 million compared to $17,100 million in 2021. The increase substantially comprises the higher coal Adjusted EBITDA (a more than three-fold increase over prior year), on account of the much stronger coal prices over the year, including the incremental contribution of the two-thirds of Cerrejón, acquired in January 2022, that Glencore did not previously own.

Adjusted EBITDA contribution from Metals and minerals assets was $9,274 million, down 23% compared to the prior year. Our business saw overall production volume reductions including in relation to portfolio disposals (Ernest Henry (copper/gold) and South American zinc assets); end of mine life volume impacts / variability (Kazzinc, Mount Isa); mining sequencing during the period (Collahuasi, Antapaccay); operational and ramp-up constraints (Katanga, Kazzinc, Mount Isa); and labour action (INO). Energy-driven direct and indirect input costs rose substantially across the board, notably with respect to higher diesel spend and increased power costs at our more energy-intensive metals' smelting and refining assets.

Adjusted EBITDA contribution from Energy products assets was $18,590 million, compared to $5,603 million in 2021, mainly due to the significantly higher prices across the energy complex as noted in the Marketing section.

Reflecting the above, Adjusted EBITDA mining margins were 36% (2021: 45%) in our metals operations and 66% (2021: 47%) in our energy operations.

Capex of $4,807 million (2021: $4,423 million) was $384 million (9%) higher year over year, including $113 million in relation to the 66.7% of Cerrejón we did not previously own.

US$ million	**Metals and minerals**	**Energy products**	**Corporate and other**	**2022**	Metals and minerals	Energy products	Corporate and other	2021
Revenue◊	38,993	39,333	6	78,332	41,535	19,269	6	60,810
Adjusted EBITDA◊	9,274	18,590	(599)	27,265	12,017	5,603	(520)	17,100
Adjusted EBIT◊	5,082	15,850	(657)	20,275	8,128	3,252	(580)	10,800
Adjusted EBITDA mining margin	36%	66%		51%	45%	47%		44%

Production from own sources – Total[1]

		2022	2021	Change %
Copper	kt	1,058.1	1,195.7	(12)
Cobalt	kt	43.8	31.3	40
Zinc	kt	938.5	1,117.8	(16)
Lead	kt	191.6	222.3	(14)
Nickel	kt	107.5	102.3	5
Gold	koz	661	809	(18)
Silver	koz	23,750	31,519	(25)
Ferrochrome	kt	1,488	1,468	1
Coal	mt	110.0	103.3	6
Oil (entitlement interest basis)	kboe	6,131	5,274	16

1 Controlled industrial assets and joint ventures only. Production is on a 100% basis, except for joint ventures, where the Group's attributable share of production is included.

INDUSTRIAL ACTIVITIES
continued

FINANCIAL INFORMATION 2022

US$ million	Revenue◊	Adjusted EBITDA◊	Adjusted EBITDA mining margin[3,4◊]	Depreciation and amortisation	Adjusted EBIT◊	Capital expenditure◊		
						Sustaining	Expansionary	Total
Copper assets								
Africa	3,526	1,551	44%	(826)	725	379	61	440
Collahuasi[1]	2,120	1,501	71%	(290)	1,211	159	173	332
Antamina[1]	1,575	1,186	75%	(351)	835	355	7	362
Other South America	2,120	969	46%	(548)	421	575	47	622
Australia	351	70	20%	(63)	7	85	–	85
Polymet	–	(16)		–	(16)	–	8	8
Custom metallurgical	9,769	467		(179)	288	200	2	202
Intergroup revenue elimination	(355)	–		–	–	–	–	–
Copper	**19,106**	**5,728**	**54%**	**(2,257)**	**3,471**	**1,753**	**298**	**2,051**
Zinc assets								
Kazzinc	3,564	807	23%	(596)	211	271	75	346
Australia	3,767	415	11%	(611)	(196)	397	21	418
European custom metallurgical	4,260	119		(115)	4	104	43	147
North America	1,770	127		(87)	40	24	–	24
Volcan	–	(2)		–	(2)	–	–	–
Other Zinc	203	11	5%	(15)	(4)	22	–	22
Zinc	**13,564**	**1,477**	**16%**	**(1,424)**	**53**	**818**	**139**	**957**
Nickel assets								
Integrated Nickel Operations	2,028	886	44%	(327)	559	155	265	420
Australia	1,186	483	41%	(27)	456	26	–	26
Koniambo	713	(72)	(10%)	(40)	(112)	19	–	19
Nickel	**3,927**	**1,297**	**33%**	**(394)**	**903**	**200**	**265**	**465**
Ferroalloys	2,396	719	30%	(116)	603	109	10	119
Aluminium/Alumina	–	55		(1)	54	5	–	5
Iron ore	–	(2)		–	(2)	–	–	–
Metals and minerals	**38,993**	**9,274**	**36%**	**(4,192)**	**5,082**	**2,885**	**712**	**3,597**
Coking Australia	2,468	1,359	55%	(208)	1,151	186	–	186
Thermal Australia	16,890	11,410	68%	(1,430)	9,980	547	–	547
Thermal South Africa	2,767	1,655	60%	(461)	1,194	146	–	146
Cerrejón[2]	5,393	3,609	67%	(438)	3,171	169	–	169
Prodeco	–	(113)		–	(113)	–	–	–
Coal (own production)	**27,518**	**17,920**	**65%**	**(2,537)**	**15,383**	**1,048**	**–**	**1,048**
Coal other revenue (buy-in coal)	1,961							
Oil E&P assets	1,004	781	78%	(128)	653	11	–	11
Oil refining assets	8,850	(111)		(75)	(186)	82	31	113
Energy products	**39,333**	**18,590**	**66%**	**(2,740)**	**15,850**	**1,141**	**31**	**1,172**
Corporate and other	6	(599)		(58)	(657)	–	38	38
Total Industrial activities◊	**78,332**	**27,265**	**51%**	**(6,990)**	**20,275**	**4,026**	**781**	**4,807**

1 Represents the Group's share of these JVs.
2 In January 2022, Glencore acquired the remaining 66.67% of Cerrejón. 2021 numbers represent Glencore's 33.33% interest in Cerrejón.

INDUSTRIAL ACTIVITIES
continued

FINANCIAL INFORMATION 2021

US$ million	Revenue◊	Adjusted EBITDA◊	Adjusted EBITDA mining margin[3,4◊]	Depreciation and amortisation	Adjusted EBIT◊	Capital expenditure◊ Sustaining	Expansionary	Total
Copper assets								
Africa	4,256	2,174	51%	(504)	1,670	258	42	300
Collahuasi[1]	2,599	2,133	82%	(287)	1,846	292	95	387
Antamina[1]	1,791	1,416	79%	(311)	1,105	287	9	296
Other South America	2,494	1,400	56%	(515)	885	658	26	684
Australia	889	477	54%	(125)	352	81	–	81
Polymet	–	(13)		–	(13)	7	–	7
Custom metallurgical	10,186	325		(159)	166	164	–	164
Intergroup revenue elimination	(249)	–		–	–	–	–	–
Copper	21,966	7,912	63%	(1,901)	6,011	1,747	172	1,919
Zinc assets								
Kazzinc	3,501	1,103	32%	(437)	666	252	90	342
Australia	4,246	946	22%	(566)	380	281	2	283
European custom metallurgical	4,035	71		(132)	(61)	89	87	176
North America	1,964	281		(129)	152	33	2	35
Volcan	–	9		–	9	–	–	–
Other Zinc	524	111	21%	(102)	9	48	–	48
Intergroup revenue elimination	(10)	–		–	–	–	–	–
Zinc	14,260	2,521	26%	(1,366)	1,155	703	181	884
Nickel assets								
Integrated Nickel Operations	1,811	836	46%	(396)	440	258	312	570
Australia	763	196	26%	(29)	167	51	–	51
Koniambo	242	(164)	(68%)	(81)	(245)	16	–	16
Nickel	2,816	868	31%	(506)	362	325	312	637
Ferroalloys	2,493	809	32%	(115)	694	104	24	128
Aluminium/Alumina	–	(91)		(1)	(92)	5	–	5
Iron ore	–	(2)		–	(2)	–	–	–
Metals and minerals	41,535	12,017	45%	(3,889)	8,128	2,884	689	3,573
Coking Australia	1,975	959	49%	(229)	730	132	8	140
Thermal Australia	6,976	3,270	47%	(1,398)	1,872	279	146	425
Thermal South Africa	1,488	563	38%	(438)	125	126	3	129
Cerrejón[2]	772	452	59%	(89)	363	30	–	30
Prodeco	–	(18)		(11)	(29)	–	–	–
Coal (own production)	11,211	5,226	47%	(2,165)	3,061	567	157	724
Coal other revenue (buy-in coal)	865							
Oil E&P assets	294	229	78%	(110)	119	35	–	35
Oil refining assets	6,899	148		(76)	72	60	–	60
Energy products	19,269	5,603	47%	(2,351)	3,252	662	157	819
Corporate and other	6	(520)		(60)	(580)	–	31	31
Total Industrial activities◊	**60,810**	**17,100**	**44%**	**(6,300)**	**10,800**	**3,546**	**877**	**4,423**

3 Adjusted EBITDA mining margin for Metals and Minerals is Adjusted EBITDA excluding non-mining assets as described below ($8,508 million (2021: $11,422 million)) divided by Revenue excluding non-mining assets and intergroup revenue elimination ($23,549 million (2021: $25,609 million) i.e. the weighted average EBITDA margin of the mining assets. Non-mining assets are the Copper custom metallurgical assets, Zinc European custom metallurgical assets, Zinc North America (principally smelting/processing), the Aluminium/Alumina group and Volcan (equity accounted with no relevant revenue) as noted in the table above.

4 Energy products EBITDA margin is Adjusted EBITDA for coal and Oil E&P (but excluding Oil refining) ($18,701 million (2021: $5,455 million)), divided by the sum of coal revenue from own production and Oil E&P revenue ($28,522 million (2021: $11,505 million)).

PRODUCTION DATA

Production from own sources – Copper assets[1]

		2022	2021	Change %
African Copper (Katanga, Mutanda, Mopani)				
Copper metal	kt	253.4	277.2	(9)
Cobalt[2]	kt	40.2	27.7	45
Collahuasi[3]				
Copper in concentrates	kt	251.1	277.2	(9)
Silver in concentrates	koz	3,350	4,219	(21)
Gold in concentrates	koz	38	45	(16)
Antamina[4]				
Copper in concentrates	kt	152.5	150.0	2
Zinc in concentrates	kt	144.3	153.7	(6)
Silver in concentrates	koz	4,964	6,135	(19)
Other South America (Antapaccay, Lomas Bayas)				
Copper metal	kt	72.6	64.3	13
Copper in concentrates	kt	151.0	170.8	(12)
Gold in concentrates and in doré	koz	61	90	(32)
Silver in concentrates and in doré	koz	1,222	1,382	(12)
Australia (Ernest Henry, Cobar)				
Copper metal	kt	–	44.8	(100)
Copper in concentrates	kt	37.3	40.5	(8)
Gold	koz	–	64	(100)
Silver	koz	446	654	(32)
Total Copper department				
Copper	**kt**	**917.9**	**1,024.8**	**(10)**
Cobalt	**kt**	**40.2**	**27.7**	**45**
Zinc	**kt**	**144.3**	**153.7**	**(6)**
Gold	**koz**	**99**	**199**	**(50)**
Silver	**koz**	**9,982**	**12,390**	**(19)**

Production from own sources – Zinc assets[1]

		2022	2021	Change %
Kazzinc				
Zinc metal	kt	125.7	147.9	(15)
Zinc in concentrates	kt	20.7	–	n.m.
Lead metal	kt	16.9	19.8	(15)
Lead in concentrates	kt	0.4	–	n.m.
Copper metal[5]	kt	20.5	25.6	(20)
Gold	koz	546	595	(8)
Silver	koz	2,721	2,921	(7)
Silver in concentrates	koz	12	–	n.m.
Australia (Mount Isa, Townsville, McArthur River)				
Zinc in concentrates	kt	564.0	609.4	(7)
Copper metal	kt	70.5	91.5	(23)
Lead in concentrates	kt	165.9	188.1	(12)
Silver	koz	557	625	(11)
Silver in concentrates	koz	5,592	6,521	(14)
North America (Matagami, Kidd)				
Zinc in concentrates	kt	56.5	96.1	(41)
Copper in concentrates	kt	28.3	30.3	(7)
Silver in concentrates	koz	1,346	1,383	(3)
Other Zinc: South America (Bolivia, Peru)[6]				
Zinc in concentrates	kt	27.3	110.7	(75)
Lead in concentrates	kt	8.4	14.4	(42)
Copper in concentrates	kt	1.4	1.7	(18)
Silver in concentrates	koz	3,345	7,383	(55)
Total Zinc department				
Zinc	**kt**	**794.2**	**964.1**	**(18)**
Lead	**kt**	**191.6**	**222.3**	**(14)**
Copper	**kt**	**120.7**	**149.1**	**(19)**
Gold	**koz**	**546**	**595**	**(8)**
Silver	**koz**	**13,573**	**18,833**	**(28)**

Production from own sources – Nickel assets[1]

		2022	2021	Change %
Integrated Nickel Operations (INO) (Sudbury, Raglan, Nikkelverk)				
Nickel metal	kt	46.2	55.0	(16)
Nickel in concentrates	kt	0.2	0.2	–
Copper metal	kt	11.9	13.5	(12)
Copper in concentrates	kt	7.6	8.3	(8)
Cobalt metal	kt	0.6	1.1	(45)
Gold	koz	16	15	7
Silver	koz	195	296	(34)
Platinum	koz	32	33	(3)
Palladium	koz	83	83	–
Rhodium	koz	4	4	–
Murrin Murrin				
Nickel metal	kt	35.7	30.1	19
Cobalt metal	kt	3.0	2.5	20
Koniambo				
Nickel in ferronickel	kt	25.4	17.0	49
Total Nickel department				
Nickel	**kt**	**107.5**	**102.3**	**5**
Copper	**kt**	**19.5**	**21.8**	**(11)**
Cobalt	**kt**	**3.6**	**3.6**	**–**
Gold	**koz**	**16**	**15**	**7**
Silver	**koz**	**195**	**296**	**(34)**
Platinum	**koz**	**32**	**33**	**(3)**
Palladium	**koz**	**83**	**83**	**–**
Rhodium	**koz**	**4**	**4**	**–**

Production from own sources – Ferroalloys assets[1]

		2022	2021	Change %
Ferrochrome[7]	kt	1,488	1,468	1
Vanadium Pentoxide	mlb	19.8	20.5	(3)

Total production – Custom metallurgical assets[1]

		2022	2021	Change %
Copper (Altonorte, Pasar, Horne, CCR)				
Copper metal	kt	456.9	490.6	(7)
Copper anode	kt	474.9	454.0	5
Zinc (Portovesme, San Juan de Nieva, Nordenham, Northfleet)				
Zinc metal	kt	683.0	800.6	(15)
Lead metal	kt	273.4	244.9	12

Coal assets[1]

		2022	2021	Change %
Australian coking coal	mt	8.7	9.1	(4)
Australian semi-soft coal	mt	4.0	4.5	(11)
Australian thermal coal (export)	mt	53.4	55.9	(4)
Australian thermal coal (domestic)	mt	7.8	6.0	30
South African thermal coal (export)	mt	12.7	14.7	(14)
South African thermal coal (domestic)	mt	3.7	5.3	(30)
Cerrejón[8]	mt	19.7	7.8	153
Total Coal department	**mt**	**110.0**	**103.3**	**6**

Oil assets

		2022	2021	Change %
Glencore entitlement interest basis				
Equatorial Guinea	kboe	5,107	4,141	23
Cameroon	kbbl	1,024	1,133	(10)
Total Oil department	**kboe**	**6,131**	**5,274**	**16**

1 Controlled industrial assets and joint ventures only. Production is on a 100% basis, except for joint ventures, where the Group's attributable share of production is included.
2 Cobalt contained in concentrates and hydroxides.
3 The Group's pro-rata share of Collahuasi production (44%).
4 The Group's pro-rata share of Antamina production (33.75%).
5 Copper metal includes copper contained in copper concentrates and blister.
6 South American production excludes Volcan Compania Minera.
7 The Group's attributable 79.5% share of the Glencore-Merafe Chrome Venture.
8 2021 numbers represented the Group's pro-rata share of Cerrejón production (33.3%). Glencore acquired the remaining 66.7% of Cerrejón in January 2022, such that 2022 production is presented on a 100% basis.

OPERATING HIGHLIGHTS

Copper assets

Own sourced copper production of 1,058,100 tonnes was 137,600 tonnes (12%) lower than 2021, due to the basis change arising from the sale of Ernest Henry in January 2022 (44,800 tonnes), the ongoing geotechnical constraints at Katanga (44,300 tonnes), Collahuasi planned mining sequence changes (26,100 tonnes) and a lower contribution from Mount Isa (21,000 tonnes, shown in the Zinc section below).

African Copper

Own sourced copper production of 253,400 tonnes was 23,800 tonnes (9%) below 2021, mainly reflecting the previously disclosed geotechnical constraints related to Katanga's open pit, unplanned downtime at the acid plant and sporadic power supply interruptions, partially offset by Mutanda's restart in H2 2021.

Own sourced cobalt production of 40,200 tonnes was 12,500 tonnes (45%) higher than 2021, driven by Mutanda's restart.

Collahuasi

Attributable copper production of 251,100 tonnes was 26,100 tonnes (9%) lower than 2021, due to lower ore mined, reflecting planned mining sequence and intermittent Covid-related absenteeism.

Antamina

Attributable copper production of 152,500 tonnes was 2,500 tonnes (2%) higher than 2021, due to higher copper grades.

Attributable zinc production of 144,300 tonnes was 9,400 tonnes (6%) lower than 2021, reflecting lower zinc grades.

Other South America

Copper production of 223,600 tonnes was 11,500 tonnes (5%) lower than 2021, mainly reflecting mining sequence planning at Antapaccay, with higher production expected in 2023. Lomas Bayas recorded 8,300 tonnes more than in 2021, due to leaching improvements and expansion of the leaching surface area.

Australia

Own sourced copper production of 37,300 tonnes was 48,000 tonnes (56%) lower than 2021, mainly due to the basis change effect of Ernest Henry having been sold in early January 2022.

Custom metallurgical assets

Copper anode production of 474,900 tonnes was 20,900 tonnes (5%) higher than 2021, mainly reflecting maintenance at Altonorte in the base period, partially offset by lower production at Horne due to supply constraints and planned maintenance.

Copper cathode production of 456,900 tonnes was 33,700 tonnes (7%) lower than 2021, due to lower CCR production resulting from Horne's lower than planned output and planned maintenance at Pasar.

Zinc assets

Own sourced zinc production of 938,500 tonnes was 179,300 tonnes (16%) lower than 2021, reflecting the disposal / cessation of South America operations (83,400 tonnes), closure of Matagami (30,100 tonnes) and lower volumes from Mount Isa (39,600 tonnes), as Lady Loretta approaches end of mine life.

Kazzinc

Own sourced zinc production of 146,400 tonnes was 1,500 tonnes (1%) lower than 2021, reflecting lower grades from the Maleevsky mine due to its progressive depletion, partly offset by increased Zhairem production.

Own sourced lead production of 17,300 tonnes was 2,500 tonnes (14%) lower than 2021, mainly reflecting the extended closure of the lead smelter in September/October for a safety investigation.

Own sourced copper production of 20,500 tonnes was 5,100 tonnes (20%) lower than 2021, mainly due to Maleevsky's progressive depletion.

Own sourced gold production of 546,000 ounces was 49,000 ounces (8%) lower than 2021, due to displacement of own units (expected to be processed in 2023) in favour of third party units. Total gold production of 912,000 ounces was in line with 2021.

Australia

Zinc production of 564,000 tonnes was 45,400 tonnes (7%) lower than 2021, mostly related to lower volume and grade at Lady Loretta, reflecting reserves depletion as the mine approaches end of life.

Lead production of 165,900 tonnes was 22,200 tonnes (12%) down on 2021, for the same reasons as zinc.

Copper production of 70,500 tonnes was 21,000 tonnes (23%) lower than 2021, reflecting Covid-19 related absenteeism and loss of a high-grade stope due to ground conditions and a damaged orepass.

North America

Zinc production of 56,500 tonnes was 39,600 tonnes (41%) lower than 2021, reflecting the progressive depletion of both Kidd and Matagami, the latter closing in June 2022.

South America

Zinc production of 27,300 tonnes was 75% lower than 2021, reflecting disposal of the Bolivian mines at the end of Q1 2022 and cessation of mining at Iscaycruz in Q3 2021. Los Quenuales was sold in December 2022, following which, no operating assets remain in this grouping.

European custom metallurgical assets

Zinc metal production of 683,000 tonnes was 117,600 tonnes (15%) lower than 2021, mainly relating to partial curtailment of operations at Portovesme from Q4 2021 and a full suspension at Nordenham from November 2022, in each case due to high European power prices.

Lead metal production of 273,400 tonnes was 28,500 tonnes (12%) higher than 2021, reflecting the contribution of the Nordenham Metal lead smelter acquired in September 2021.

Nickel assets

Own sourced nickel production of 107,500 tonnes was 5,200 tonnes (5%) higher than 2021, reflecting Murrin Murrin's scheduled major maintenance shut in the prior year and Koniambo running two production lines for the majority of 2022, partially offset by lower production at INO due to strike action in Canada and Norway.

Integrated Nickel Operations (INO)

Own sourced nickel production of 46,400 tonnes was 8,800 tonnes (16%) lower than the comparable 2021 period, reflecting Raglan mine industrial action from May to September 2022 and a short industry-based strike at Nikkelverk.

Murrin Murrin

Own sourced nickel production of 35,700 tonnes was 5,600 tonnes (19%) higher than 2021, and own sourced cobalt production of 3,000 tonnes was 20% higher, in each case, primarily due to the scheduled periodic lengthy plant maintenance shut down carried out in the base period (May-June 2021).

Koniambo

Nickel production of 25,400 tonnes was 8,400 tonnes (49%) higher than 2021, as the plant operated with both processing lines for the majority of 2022.

Ferroalloys assets

Attributable ferrochrome production of 1,488,000 tonnes was in line with 2021.

Coal assets

Coal production of 110.0 million tonnes was 6.7 million tonnes (6%) higher than 2021, reflecting higher attributable production from Cerrejón, following the acquisition in January 2022 of the remaining two-thirds interest that Glencore did not already own, less declines elsewhere in the portfolio.

On a like for like basis, overall Group production declined by 8.9 million tonnes (7%), primarily due to wet weather challenges and an extended community blockade in Colombia.

Australian coking

Production of 8.7 million tonnes was 0.4 million tonnes (4%) lower than 2021, reflecting mining sequencing changes at Hail Creek and abnormally wet weather.

Australian thermal and semi-soft

Production of 65.2 million tonnes was 1.2 million tonnes (2%) lower than 2021, with production impacted by extreme wet weather conditions.

South African thermal

Production of 16.4 million tonnes was 3.6 million tonnes (18%) lower than 2021, due to the disposal of Middelburg (1.2 million tonnes impact), wet weather challenges and continued export rail constraints.

Cerrejón

On a like-for-like basis, production of 19.7 million tonnes was 3.7 million tonnes (16%) lower than 2021, due to heavy rains in the June to November period and community blockades impacting operations in early September, with ramp-up challenges thereafter.

Oil assets

Exploration and production

Entitlement interest oil production of 6.1 million barrels of oil equivalent was 0.9 million barrels (16%) higher than 2021, due to a full year of production from the Alen gas project in Equatorial Guinea, following its commencement in March 2021.

CONSOLIDATED STATEMENT OF INCOME

FOR THE YEAR ENDED 31 DECEMBER 2022

US$ million	Notes	**2022**	2021
Revenue	3	255,984	203,751
Cost of goods sold		(228,723)	(191,370)
Selling and administrative expenses		(2,430)	(2,115)
Share of income from associates and joint ventures	11	2,300	2,618
Gain/(loss) on acquisitions and disposals of non-current assets	4	1,287	(607)
Other income	5	365	186
Other expense	5	(1,276)	(2,133)
Impairments of non-current assets	7	(3,285)	(1,905)
(Impairments)/reversal of impairments of financial assets	7	(52)	67
Dividend income	11	45	23
Interest income	6	435	208
Interest expense	6	(1,771)	(1,348)
Income before income taxes		**22,879**	**7,375**
Income tax expense	8	(6,368)	(3,026)
Income for the year		**16,511**	**4,349**
Attributable to:			
Non-controlling interests		(809)	(625)
Equity holders of the Parent		17,320	4,974
Earnings per share:			
Basic (US$)	18	1.33	0.38
Diluted (US$)	18	1.32	0.37

All amounts presented are derived from continuing operations. The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

FOR THE YEAR ENDED 31 DECEMBER 2022

US$ million	Notes	**2022**	2021
Income for the year		16,511	4,349
Other comprehensive income			
Items not to be reclassified to the statement of income in subsequent periods:			
Defined benefit plan remeasurements	24	298	284
Tax charge on defined benefit plan remeasurements		(67)	(61)
Fair value loss on equity investments accounted for at fair value through other comprehensive income	11	(1,124)	(52)
Tax credit/(charge) on equity investments accounted for at fair value through other comprehensive income		2	(4)
Gain/(loss) due to changes in credit risk on financial liabilities accounted for at fair value through profit and loss		2	(7)
Net items not to be reclassified to the statement of income in subsequent periods		**(889)**	**160**
Items that have been or may be reclassified to the statement of income in subsequent periods:			
Exchange loss on translation of foreign operations		(307)	(87)
Items recycled to the statement of income[1]	5/26	481	–
Loss on cash flow hedges		(38)	(212)
Tax credit on loss on cash flow hedges		2	–
Cash flow hedges reclassified to the statement of income		65	241
Tax charge on cash flow hedges reclassified to the statement of income		(2)	(2)
Share of other comprehensive loss from associates and joint ventures	11	(100)	(58)
Net items that have been or may be reclassified to the statement of income in subsequent periods		**101**	**(118)**
Other comprehensive (loss)/income		**(788)**	**42**
Total comprehensive income		**15,723**	**4,391**
Attributable to:			
Non-controlling interests		(824)	(645)
Equity holders of the Parent		16,547	5,036

1 Comprises foreign exchange translation losses recycled upon disposal of subsidiaries ($50 million)(see notes 17 and 26) and restructuring of intragroup debt ($431 million)(see note 5).

All amounts presented are derived from continuing operations. The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

AS AT 31 DECEMBER 2022

US$ million	Notes	2022	2021
Assets			
Non-current assets			
Property, plant and equipment	9	39,564	43,159
Intangible assets	10	6,160	6,235
Investments in associates and joint ventures	11	11,878	12,294
Other investments	11	456	1,620
Advances and loans	12	2,654	3,527
Other financial assets	28	206	458
Inventories	13	605	662
Deferred tax assets	8	1,837	1,779
		63,360	**69,734**
Current assets			
Inventories	13	33,460	28,434
Accounts receivable	14	24,565	19,493
Other financial assets	28	6,109	4,636
Income tax receivable	8	401	364
Prepaid expenses		325	287
Cash and cash equivalents	15	1,923	3,241
		66,783	**56,455**
Assets held for sale	16	2,440	1,321
		69,223	**57,776**
Total assets		**132,583**	**127,510**
Equity and liabilities			
Capital and reserves – attributable to equity holders			
Share capital	17	141	146
Reserves and retained earnings	17	49,269	39,785
		49,410	**39,931**
Non-controlling interests	34	(4,191)	(3,014)
Total equity		**45,219**	**36,917**
Non-current liabilities			
Borrowings	21	18,851	26,811
Deferred income	22	1,547	2,088
Deferred tax liabilities	8	3,651	4,469
Other financial liabilities	28	2,055	710
Provisions	23	7,163	6,117
Post-retirement and other employee benefits	24	677	939
		33,944	**41,134**
Current liabilities			
Borrowings	21	9,926	7,830
Accounts payable	25	29,726	29,313
Deferred income	22	1,060	1,573
Provisions	23	1,425	2,093
Other financial liabilities	28	4,882	6,077
Income tax payable	8	4,660	1,785
		51,679	**48,671**
Liabilities held for sale	16	1,741	788
		53,420	**49,459**
Total equity and liabilities		**132,583**	**127,510**

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 31 DECEMBER 2022

US$ million	Notes	**2022**	2021
Operating activities			
Income before income taxes		22,879	7,375
Adjustments for:			
Depreciation and amortisation		6,987	6,335
Share of income from associates and joint ventures	11	(2,300)	(2,618)
Streaming revenue and other non-current provisions		65	(280)
(Gain)/loss on acquisitions and disposals of non-current assets	4	(1,287)	607
Unrealised mark-to-market movements on other investments	5	106	(64)
Impairments	7	3,337	1,838
Other non-cash items – net[1]		1,792	2,392
Interest expense – net	6	1,336	1,140
Cash generated by operating activities before working capital changes, interest and tax		**32,915**	**16,725**
Working capital changes			
Increase in accounts receivable[2]		(4,942)	(5,888)
Increase in inventories		(5,035)	(5,660)
(Decrease)/increase in accounts payable[3]		(3,292)	6,423
Total working capital changes		**(13,269)**	**(5,125)**
Income taxes paid		(4,881)	(1,837)
Interest received		234	100
Interest paid		(1,340)	(1,003)
Net cash generated by operating activities		**13,659**	**8,860**
Investing activities			
Increase in long-term advances and loans	12	(200)	–
Net cash received in acquisition of subsidiaries	26	321	–
Net cash received from disposal of subsidiaries	26	455	252
Purchase of investments		(476)	(86)
Proceeds from sale of investments		604	194
Purchase of property, plant and equipment		(4,177)	(3,618)
Proceeds from sale of property, plant and equipment		63	342
Dividends received from associates and joint ventures	11	1,691	2,375
Net cash used by investing activities		**(1,719)**	**(541)**

1 See reconciliation below.

2 Includes movements in other financial assets, prepaid expenses and other long-term advances and loans.

3 Includes movements in other financial liabilities, provisions and deferred income.

Other non-cash items comprise the following:

US$ million	Notes	**2022**	2021
Net foreign exchange losses	5	349	187
Closed sites rehabilitation provisioning	5	370	177
Share based and deferred remuneration costs	20	1,134	476
Legal and regulatory proceedings	5/23	–	1,556
Other		(61)	(4)
Total		**1,792**	**2,392**

All amounts presented are derived from continuing operations. The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 31 DECEMBER 2022

US$ million	Notes	**2022**	2021
Financing activities[1]			
Proceeds from issuance of capital market notes[2]		–	4,877
Repayment of capital market notes		(2,850)	(2,807)
Repurchase of capital market notes		(103)	(125)
Repayment of revolving credit facility		(2,563)	(2,244)
Proceeds from other non-current borrowings		430	231
Rrepayment of other non-current borrowings		(73)	(493)
Repayment of lease liabilities		(577)	(634)
Margin payments in respect of financing related hedging activities		(1,824)	(970)
Proceeds from/(repayment of) current borrowings		3,306	(2,016)
Repayment of/(proceeds from) U.S. commercial papers		(1,407)	675
Proceeds received on acquisition of non-controlling interests in subsidiaries		–	55
Payments on acquisition of non-controlling interests in subsidiaries		–	(45)
Return of capital/distributions to non-controlling interests		(442)	(163)
Purchase of own shares	17	(2,503)	(746)
Disposal of own shares[3]		238	–
Distributions paid to equity holders of the Parent	19	(4,832)	(2,115)
Net cash used by financing activities		**(13,200)**	**(6,520)**
(Decrease)/increase in cash and cash equivalents		(1,260)	1,799
Effect of foreign exchange rate changes		(50)	11
Cash and cash equivalents, beginning of year		3,308	1,498
Cash and cash equivalents, end of year		**1,998**	**3,308**
Cash and cash equivalents reported in the statement of financial position	15	1,923	3,241
Cash and cash equivalents attributable to assets held for sale	16	75	67

1 Refer to note 21 for reconciliation of movement in borrowings.

2 2021 amount net of issuance costs relating to capital market notes of $48 million.

3 Comprises primarily cash received from the exercise of share-based option awards assumed in previous business combinations. There are no outstanding options as at 31 December 2022.

All amounts presented are derived from continuing operations. The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

FOR THE YEAR ENDED 31 DECEMBER 2022

	Retained earnings	Share premium	Other reserves (Note 17)	Own shares (Note 17)	Total reserves and retained earnings	Share capital	Total equity attributable to equity holders	Non-controlling interests (Note 33)	Total equity
1 January 2021	**2,849**	**45,794**	**(5,848)**	**(5,304)**	**37,491**	**146**	**37,637**	**(3,235)**	**34,402**
Income for the year	4,974	–	–	–	4,974	–	4,974	(625)	4,349
Other comprehensive income/(loss)	164	–	(102)	–	62	–	62	(20)	42
Total comprehensive income	**5,138**	**–**	**(102)**	**–**	**5,036**	**–**	**5,036**	**(645)**	**4,391**
Own share disposal (see note 17)	(78)	–	–	173	95	–	95	–	95
Own share purchases (see note 17)	–	–	–	(746)	(746)	–	(746)	–	(746)
Equity-settled share-based expenses (see note 20)	30	–	–	–	30	–	30	–	30
Change in ownership interest in subsidiaries (see note 33)	–	–	(6)	–	(6)	–	(6)	14	8
Acquisition/disposal of business (see note 26)	–	–	–	–	–	–	–	1,017	1,017
Reclassifications	(25)	–	25	–	–	–	–	(2)	(2)
Distributions paid (see note 19)	–	(2,115)	–	–	(2,115)	–	(2,115)	(163)	(2,278)
31 December 2021	**7,914**	**43,679**	**(5,931)**	**(5,877)**	**39,785**	**146**	**39,931**	**(3,014)**	**36,917**

	Retained earnings	Share premium	Other reserves (Note 17)	Own shares (Note 17)	Total reserves and retained earnings	Share capital	Total equity attributable to equity holders	Non-controlling interests (Note 33)	Total equity
1 January 2022	**7,914**	**43,679**	**(5,931)**	**(5,877)**	**39,785**	**146**	**39,931**	**(3,014)**	**36,917**
Income for the year	17,320	–	–	–	17,320	–	17,320	(809)	16,511
Other comprehensive income/(loss)	129	–	(902)	–	(773)	–	(773)	(15)	(788)
Total comprehensive income	**17,449**	**–**	**(902)**	**–**	**16,547**	**–**	**16,547**	**(824)**	**15,723**
Own share disposal (see note 17)	(81)	–	–	430	349	–	349	–	349
Own share purchases (see note 17)	–	–	–	(2,549)	(2,549)	–	(2,549)	–	(2,549)
Equity-settled share-based expenses (see note 20)	(32)	–	–	–	(32)	–	(32)	–	(32)
Change in ownership interest in subsidiaries (see note 33)	–	–	(3)	–	(3)	–	(3)	115	112
Acquisition/disposal of business (see note 26)	–	–	–	–	–	–	–	(28)	(28)
Reclassifications	(4)	–	3	–	(1)	–	(1)	2	1
Cancellation of shares (see note 20)	–	(2,130)	–	2,135	5	(5)	–	–	–
Distributions paid (see note 19)	–	(4,832)	–	–	(4,832)	–	(4,832)	(442)	(5,274)
31 December 2022	**25,246**	**36,717**	**(6,833)**	**(5,861)**	**49,269**	**141**	**49,410**	**(4,191)**	**45,219**

The accompanying notes are an integral part of the consolidated financial statements.

NOTES TO THE FINANCIAL STATEMENTS

1. Accounting policies

CORPORATE INFORMATION

Glencore plc (the “Company”, “Parent”, the “Group” or “Glencore”), is a leading integrated producer and marketer of natural resources, with worldwide activities in the production, refinement, processing, storage, transport and marketing of metals and minerals and energy products. Glencore operates on a global scale, marketing and distributing physical commodities sourced from third party producers and own production to industrial consumers, such as those in the battery, electronic, construction, automotive, steel, energy and oil industries. Glencore also provides financing, logistics and other services to producers and consumers of commodities. In this regard, Glencore seeks to capture value throughout the commodity supply chain. Glencore’s long experience as a commodity producer and merchant has allowed it to develop and build upon its expertise in the commodities which it markets and cultivate long-term relationships with a broad supplier and customer base across diverse industries and in multiple geographic regions.

Glencore is a publicly traded limited company incorporated in Jersey and domiciled in Switzerland, at Baarermattstrasse 3, 6340 Baar. Its ordinary shares are traded on the London and Johannesburg stock exchanges.

This preliminary announcement was authorised for issue in accordance with a Directors’ resolution on 14 February 2023.

The unaudited financial information for the year ended 31 December 2022 and audited financial information for the year ended 31 December 2021 contained in this document do not constitute statutory accounts as defined in Article 105 of Companies (Jersey) Law 1991. The financial information for the year ended 31 December 2022 will be included in the financial statements of Glencore which will be delivered to the Registrar in due course. The audit report for 31 December 2022 is yet to be signed by the auditor.

STATEMENT OF COMPLIANCE

The financial information included in this preliminary announcement has been prepared in accordance with the recognition and measurement criteria of:

- International Financial Reporting Standards (IFRS) adopted by the United Kingdom; and
- IFRS as issued by the International Accounting Standards Board (IASB).

This announcement does not itself contain sufficient information to comply with those standards. The Company expects to publish full financial statements that comply with IFRS Standards in March 2023.

CRITICAL ACCOUNTING JUDGEMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTY

The preparation of the consolidated financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of assets and liabilities as well as the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Estimates and assumptions are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable and relevant under the circumstances, independent estimates, quoted market prices and common industry standard modelling techniques. Actual outcomes could result in a material adjustment to the carrying amount of assets or liabilities affected in future periods.

Glencore has identified the following areas as being critical to understanding Glencore’s financial position as they require management to make complex and/or subjective judgements, estimates and assumptions about matters that are inherently uncertain:

CRITICAL ACCOUNTING JUDGEMENTS

In the process of applying Glencore’s accounting policies, management has made the following judgements based on the relevant facts and circumstances including macro-economic circumstances and, where applicable, interpretation of underlying agreements, which have the most significant effect on the amounts recognised in the consolidated financial statements.

(i) Determination of control of subsidiaries and joint arrangements

Judgement is required to determine when Glencore has control of subsidiaries or joint control of joint or other unincorporated arrangements. This requires an assessment of the relevant activities (those relating to the operating and capital decisions of the arrangement, such as: the approval of the capital expenditure programme for each year, and appointing, remunerating and terminating the key management personnel or service providers of the operations) and when the decisions in relation to those activities are under the control of Glencore or require unanimous consent. See note 26 for a summary of the acquisitions of subsidiaries completed during 2022 and 2021 and the key judgements made in determining control thereof.

Judgement is also required in determining the classification of a joint arrangement between a joint venture or a joint operation through an evaluation of the rights and obligations arising from the arrangement and in particular, if the joint arrangement has been structured through a separate vehicle, further consideration is required of whether:

(1) the legal form of the separate vehicle gives the parties rights to the assets and obligations for the liabilities;

(2) the contractual terms and conditions give the parties rights to the assets and obligations for the liabilities; and

(3) other facts and circumstances give the parties rights to the assets and obligations for the liabilities.

1. Accounting policies continued

Joint arrangements in which the primary activity is the provision of output to the shareholders, typically convey substantially all the economic benefits of the assets to the parties and judgement is required in assessing whether the terms of the offtake agreements and any other obligations for liabilities of the arrangement result in the parties being substantially the only source of cash flows contributing to the continuity of the operations of the arrangement.

Certain joint arrangements that are structured through separate vehicles including Collahuasi and Viterra are accounted for as joint ventures. The Collahuasi arrangement is primarily designed for the provision of output to the shareholders sharing joint control, the offtake terms of which are at prevailing market prices and the parties are not obligated to cover any potential funding shortfalls. In management's judgement, Glencore is not the only possible source of funding and does not have a direct or indirect obligation to the liabilities of the arrangement, but rather shares in its net assets and, therefore, such arrangements have been accounted for as joint ventures.

Differing conclusions around these judgements may materially impact how these businesses are presented in the consolidated financial statements – under the full consolidation method, equity method or recognition of Glencore's share of assets, liabilities, revenue and expenses, including any assets or liabilities held jointly. See note 11 for a summary of these joint arrangements and the key judgements made in determining the applicable accounting treatment for any material joint arrangements entered during the year.

(ii) Classification of transactions which contain a financing element (notes 21, 22 and 25)

Transactions for the purchase of commodities may contain a financing element such as extended payment terms. Under such an arrangement, a financial institution may issue a letter of credit on behalf of Glencore and act as the paying party upon delivery of product by the supplier and Glencore will subsequently settle the liability directly with the financial institution, generally from 30 up to 90 days after physical supply. Judgement is required to determine the most appropriate classification and presentation of these transactions within the statements of cash flows and financial position. In determining the appropriate classification, management considers the underlying economic substance of the transaction and the significance of the financing element to the transaction. Typically, the economic substance of the transaction is determined to be operating in nature as the financing element is insignificant and the time frame in which the original arrangement is extended by, is consistent and within supply terms commonly provided in the market. As a result, the entire cash flow is presented as operating in the statement of cash flows with a corresponding trade payable in the statement of financial position. As at 31 December 2022, trade payables include $7,504 million (2021: $8,565 million) of such liabilities arising from supplier financing arrangements, the weighted average of which extended settlement of the original payable to 67 days (2021: 77 days) after physical supply and are due for settlement 35 days (2021: 33 days) after year end. There was no significant exposure to any individual financial institution under these arrangements. These payables are not included within net funding and net debt as defined in the APMs section.

(iii) Classification of physical liquefied natural gas (LNG) purchase and sale contracts at amortised cost or fair value through profit and loss (notes 28 and 29)

Judgement is required to determine the appropriate IFRS 9 classification of physical LNG purchase and sale contracts as being measured at amortised cost or fair value through profit and loss. This requires an assessment of whether the contracts to buy or sell LNG (a non-financial item) can be settled net in cash or with another financial instrument, or by exchanging financial instruments, as if the contracts were financial instruments, and whether there is a past practise of net settling similar contracts. Those physical LNG contracts that can be net settled are considered to be derivatives, measured at fair value through profit or loss (see notes 28 and 29). Contracts that do not meet the definition of derivatives are considered own use contacts and are to be accounted for as executory contracts measured at amortised cost.

Differing conclusions around classification of these contracts, may materially impact their presentation as financial assets or liabilities and any fair value adjustments recognised through profit and loss. As at 31 December 2022, the net fair value of physical LNG contracts on the statement of financial position is $2,533 million (2021: $912 million), comprising a $2,552 million forward physical asset and a $19 million forward physical liability (2021: $1,786 million forward physical asset and $874 million forward physical liability).

(iv) Investigations by regulatory and enforcement authorities and claims against the company in connection with the investigations – Critical judgement in relation to whether a present obligation exists (note 31).

(v) Impact of carbon pricing. No material change to the Group's related accounting estimates is expected within the next financial year as a result of this judgement.

(vi) Valuation of investments in EN+ and Rosneft (note 11). No material change to the Group's related accounting estimates is expected within the next financial year as a result of this judgement.

1. Accounting policies continued

KEY SOURCES OF ESTIMATION UNCERTAINTY

In the process of applying Glencore's accounting policies, management has made key estimates and assumptions concerning the future and other key sources of estimation uncertainty. The key assumptions and estimates at the reporting date that have a significant risk of resulting in a material adjustment to the carrying amount of assets and liabilities within the next financial year, are described below. Actual results may differ from these estimates under different assumptions and conditions and may materially affect financial results or the financial position reported in future periods.

(i) Recognition of deferred tax assets and uncertain tax positions (note 8)

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 there will be sufficient taxable income available to offset the tax assets when they do reverse. These judgements and estimates are subject to risk and uncertainty and therefore, to the extent assumptions regarding future profitability change, there can be a material increase or decrease in the amounts recognised in the consolidated statement of income in the period in which the change occurs, notably the deferred tax asset and uncertain tax position of the Group's DRC operations as outlined in note 8. The recoverability of the Group's deferred tax assets and the completeness and accuracy of its uncertain tax positions, including the estimates and assumptions contained therein are reviewed regularly by management.

(ii) Impairments and impairment reversals (note 7)

Investments in associates and joint ventures, advances and loans, property, plant and equipment and intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying value of an individual asset or a cash-generating unit (CGU) may not be fully recoverable, or at least annually for CGUs to which goodwill and other indefinite life intangible assets have been allocated. Indicators of impairment may include changes in the Group's operating and economic assumptions, including those arising from changes in reserves or mine planning, updates to the Group's commodity supply, demand and price forecasts, or the possible impacts from emerging risks such as those related to climate change and the transition to a lower carbon economy. If an asset or CGU's recoverable amount is less than its carrying amount, an impairment loss is recognised in the consolidated statement of income. For those assets or CGUs which were impaired in prior periods, if their recoverable amount exceeds their carrying amount, an impairment reversal is recorded in the consolidated statement of income. Future cash flow estimates which are used to calculate the asset's or CGU's recoverable amount are discounted using asset or CGU specific discount rates and are based on expectations about future operations, using a combination of internal sources and those inputs available to a market participant, which primarily comprise estimates about production and sales volumes, commodity prices (considering current and future prices and price trends including factors such as the current global trajectory of climate change), reserves and resources, operating costs and capital expenditures. Estimates are reviewed regularly by management. Changes in such estimates and in particular, deterioration in the commodity pricing outlook, could impact the recoverable amounts of these assets or CGUs, whereby some or all of the carrying amount may be impaired or the impairment charge reversed (if pricing outlook improves significantly or the service potential of the asset or CGU has otherwise increased from the time of the previous impairment) with the impact recorded in the statement of income.

As referred to above and further described below in the 'impairment or impairment reversals' accounting policy, the Group carries out, at least annually, an impairment assessment. Following this review, indicators of impairment or impairment reversal were identified for various CGUs, including those due to changes in the underlying commodity price environment most influencing the respective operation. The Group assessed the recoverable amounts of these CGUs and as at 31 December 2022, except for those CGUs disclosed in note 7, the estimated recoverable amounts exceeded the carrying values. For certain CGUs where no impairment was recognised, should there be a significant deterioration or improvement in the key assumptions, a material impairment or reversal could result within the next financial year. A summary of the carrying values, the key / most sensitive assumptions and a sensitivity impact of potential movements in these assumptions for each such CGU with limited headroom (relative to its estimated recoverable amount) is shown below. In providing sensitivity analysis (and particularly on commodity price assumptions), a 10% change, representing a typical deviation parameter common in the industry, has generally been provided. Where a higher or lower percentage is reasonably possible on an operational assumption, this has been clearly identified.

Katanga

Katanga's non-current capital employed is carried at approximately $3,800 million. The valuation is sensitive to price and a deterioration in this key assumption could result in an impairment. The short to long-term copper and cobalt price assumptions were $8,200-$7,400/t and $24.50-$22.50/lb respectively. A 10% reduction in the copper price assumption across the curve could result in a $440 million impairment. A 10% reduction in the cobalt price assumption across the curve is not expected to result in an impairment.

Mutanda

Mutanda's non-current capital employed is carried at approximately $2,300 million, inclusive of a $109 million intangible asset recognised during the year and net of an accumulated impairment of $955 million. Following care and maintenance status since 2019, a limited restart of operations commenced in 2021, utilising stockpiles of oxide ore. The valuation includes value attributable to the long-term copper / cobalt sulphide mining and processing development potential. The valuation is sensitive to price and eventual commercialisation and ramp-up of the sulphide project, and deteriorations or improvements in these key assumptions may result in additional impairments or reversals.

1. Accounting policies continued

The short to long-term copper and cobalt price assumptions were $8,200-$7,400/t and $24.50-$22.50/lb respectively. A 10% reduction in the copper price assumption across the curve is not expected to result in a further impairment, whereas a 10% reduction in the realised cobalt price assumption (across the curve) could result in a further $150 million impairment. Should the copper and cobalt assumptions rise by 10% (across the curve), the previously recognised impairment could be reversed in its entirety.

Kazzinc Smelting

Management has assessed that the Kazzinc business comprises three CGUs: the core Kazzinc Smelting (integrated mining and smelting operations); the Zhairem zinc/lead mine; and the Vasilkovsky gold mine.

Kazzinc Smelting has not been impaired in the past or in the current year. However, industry cost pressures, including energy inputs and additional taxes, are such that there is no appreciable difference between carrying value and recoverable value. Should zinc prices move higher in line with the industry cost curve and/or stronger demand, the recoverable value could increase. Conversely, in a recessionary scenario the recoverable value could be lower than the carrying value.

Kazzinc Smelting's non-current capital employed is carried at approximately $1,300 million. The valuation is sensitive to price and the realisation of certain operational efficiencies, and deteriorations in these key assumptions may result in an impairment.

The short to long-term zinc price assumption was $3,250 - $2,450/t and the discount rate was 11%. A 10% reduction in the zinc price assumption (across the curve) could result in a $200 million impairment. A 1% increase in the discount rate could result in a $130 million impairment. Equivalent upside sensitivities are materially symmetrical with the downsides illustrated.

Zhairem has been impaired in 2022 (refer note 7).

Management does not expect that any reasonably possible changes in assumptions could lead to an impairment of Vasilkovsky within the next financial year.

Astron

Astron's non-current capital employed is carried at approximately $800 million. The valuation is sensitive to oil refining margins. A change in oil refining margin assumptions (across the curve) of $1/bbl is reasonably possible and could result in a $240 million change (increase or decrease) to the carrying value of the Astron Energy CGU.

(iii) Restoration, rehabilitation and decommissioning costs (note 23)

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. Most of these rehabilitation and decommissioning events are expected to take place many years in the future and the currently estimated requirements and costs that will have to be met when the restoration event occurs are inherently uncertain and could materially change over time.

In calculating the appropriate provision for the expected restoration, rehabilitation or decommissioning obligations, cost estimates of the future potential cash outflows based on current studies of the expected rehabilitation activities and timing thereof, are prepared. These forecasts are then discounted to their present value using a risk-free rate specific to the liability and the currency in which they are denominated.

Any changes in the expected future costs or risk-free rate are initially reflected in both the provision and the asset and subsequently in the consolidated statement of income over the remaining economic life of the asset. As the actual future costs can differ from the estimates due to changes in laws, regulations, technology, costs and timing, the provisions including the estimates and assumptions contained therein are reviewed regularly by management. A material change in the provision within the next financial year could arise from changes in risk-free rates. The aggregate effect of changes within the next financial year as a result of revisions to cost and timing assumptions is not expected to be material.

ADOPTION OF NEW AND REVISED STANDARDS

The following clarification revisions to existing accounting pronouncements became effective as of 1 January 2022 and have been adopted by the Group.

(i) Onerous Contracts – Cost of Fulfilling a Contract (Amendments to IAS 37) – effective for year ends beginning on or after 1 January 2022

The amendments specify that the 'cost of fulfilling' a contract comprises the 'costs that relate directly to the contract'. Costs that relate directly to a contract can either be incremental costs of fulfilling that contract or an allocation of other costs that relate directly to fulfilling contracts. The Group has applied the amendments to contracts for which the Group has not yet fulfilled all its obligations as at 1 January 2022.

(ii) Property, Plant and Equipment – Proceeds before intended use (Amendments to IAS 16) – effective for year ends beginning on or after 1 January 2022

The amendments prohibit an entity from deducting from the cost of an item of property, plant and equipment, any proceeds received from selling items produced while preparing the assets for its intended use. Instead, any entity recognises the proceeds from selling such items, and the costs of producing those items, in the statement of income.

1. Accounting policies continued

(iii) Reference to the Conceptual Framework (Amendments to IFRS 3) – effective for year ends beginning on or after 1 January 2022

The amendments update the references to the Conceptual Framework for Financial Reporting and add an exception for the recognition of liabilities and contingent liabilities within the scope of IAS 37 *Provisions, Contingent Liabilities and Contingent Assets* and IFRIC 21 *Levies*. The amendments also confirm that contingent assets should not be recognised at the acquisition date.

These amendments did not have a material impact on the Group.

REVISED STANDARDS NOT YET EFFECTIVE

At the date of the authorisation of this preliminary annoucement, the following revised IFRS standards, which are applicable to Glencore, were issued but not yet effective:

(i) Deferred Tax related to Assets and Liabilities arising from a Single Transaction (Amendments to IAS 12) – effective for year ends beginning on or after 1 January 2023

The amendments specify how companies should account for deferred tax on transactions such as leases and decommissioning obligations, and clarify that the initial recognition exception does not apply to transactions where both an asset and a liability are recognised in a single transaction. Accordingly, deferred tax is required to be recognised on such transactions.

(i) Definition of Accounting Estimates (Amendments to IAS 8) – effective for year ends beginning on or after 1 January 2023

The amendments introduce the definition of accounting estimates and include other amendments to IAS 8 to help entities distinguish changes in accounting estimates from changes in accounting policies.

(iii) Materiality of Accounting Policy Disclosure (Amendments to IAS 1) – effective for year ends beginning on or after 1 January 2023

The amendments require companies to disclose their material accounting policy information rather than their significant accounting policies.

(iv) Classification of Liabilities as current or non-current (Amendments to IAS 1) – effective for year ends beginning on or after 1 January 2023

The amendments clarify that the classification of liabilities as current or non-current is based on rights that are in existence at the end of the reporting period, specify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability, explain that rights are in existence if covenants are complied with at the end of the reporting period, and introduce a definition of 'settlement' to make clear that settlement refers to the transfer to the counterparty of cash, equity instruments, other assets or services.

No significant changes to presentation or disclosures within these financial statements are expected following the adoption of these amendments.

BASIS OF PREPARATION

The preliminary announcement is prepared under the historical cost convention except for certain financial assets, liabilities, marketing inventories and pension obligations that are measured at revalued amounts or fair values at the end of each reporting period as explained in the accounting policies below. Historical cost is defined as the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire them at the time of their acquisition. The principal accounting policies adopted are set out below.

The Directors have assessed that they have, at the time of approving this preliminary announcement, a reasonable expectation that the Group has adequate resources to continue in operational existence for the 12 months from the expected date of approval of the 2022 Annual Report and Accounts. Therefore, they continue to adopt the going concern basis of accounting in preparing these financial statements. The Directors have made this assessment after consideration of the Group's budgeted cash flows and related assumptions including appropriate stress testing of the identified uncertainties (being primarily commodity prices and currency exchange rates) and access to undrawn credit facilities and monitoring of debt maturities. Further information on Glencore's objectives, policies and processes for managing its capital and financial risks is detailed in note 27.

All amounts are expressed in millions of United States Dollars, the presentation currency of the Group, unless otherwise stated.

PRINCIPLES OF CONSOLIDATION

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries.

Control is achieved when Glencore 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. Specifically, Glencore controls an investee if, and only if, Glencore has all of the following:

- Power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee);
- Exposure, or rights, to variable returns from its involvement with the investee; and
- The ability to use its power over the investee to affect its returns.

1. Accounting policies continued

When Glencore has less than a majority of the voting rights of an investee or similar rights of an investee, it considers all relevant facts and circumstances in assessing whether it has power over the investee including:

- The size of Glencore's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- Potential voting rights held by Glencore, other vote holders or other parties;
- Rights arising from other contractual arrangements; and
- Any additional facts and circumstances that indicate that Glencore has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above. Consolidation of a subsidiary begins when Glencore obtains control over the subsidiary and ceases when Glencore loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of income and other comprehensive income from the date Glencore gains control until the date when Glencore ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies. All intragroup 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 Glencore'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 Glencore.

When Glencore loses control of a subsidiary, a gain or loss is recognised in the consolidated statement of income and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), and liabilities of the subsidiary and any non-controlling interests. All amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for as if Glencore had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable IFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under IFRS 9, when applicable, or the cost on the initial recognition of an investment in an associate or a joint venture.

INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

Associates and joint ventures (together "Associates") in which Glencore 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 is not control or joint control over those policies. Significant influence is presumed if Glencore holds between 20% and 50% of the voting rights, unless evidence exists to the contrary. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control over an arrangement, which exists only when decisions about relevant strategic and/or key operating decisions require unanimous consent of the parties sharing control.

Equity accounting involves Glencore recording its share of the Associate's net income and equity. Glencore's interest in an Associate is initially recorded at cost and is subsequently adjusted for Glencore's share of changes in net assets of the Associate, less any impairment in the value of individual investments. Where Glencore transacts with an Associate, unrealised profits and losses are eliminated to the extent of Glencore's interest in that Associate.

Changes in Glencore's interests in Associates are accounted for as a gain or loss on disposal with any difference between the amount by which the carrying value of the Associate is adjusted and the fair value of the consideration received being recognised directly in the consolidated statement of income.

JOINT OPERATIONS

A joint operation is a joint arrangement whereby the parties that have joint control of the arrangement, have rights to the assets and obligations for the liabilities relating to the arrangement.

When Glencore undertakes its activities under joint operations, Glencore recognises in relation to its interest in a joint operation:

- Its assets, including its share of any assets held jointly;
- Its liabilities, including its share of any liabilities incurred jointly;
- Its revenue from the sale of its share of the output arising from the joint operation;
- Its share of the revenue from the sale of the output by the joint operation; and
- Its expenses, including its share of any expenses incurred jointly.

1. Accounting policies continued

The Group accounts for the assets, liabilities, revenues and expenses relating to its interest in a joint operation in accordance with the IFRSs applicable to the particular assets, liabilities, revenues and expenses.

Where Glencore transacts with a joint operation, unrealised profits and losses are eliminated to the extent of Glencore's interest in that joint operation.

OTHER UNINCORPORATED ARRANGEMENTS

In some cases, Glencore participates in unincorporated arrangements where it has the rights to its share of the assets and obligations for its share of the liabilities of the arrangement, rather than a right to the net returns of the arrangement, but does not share joint control. In such cases, Glencore accounts for its share of the assets, liabilities, revenues and expenses in accordance with the IFRSs applicable to the particular assets, liabilities, revenues and expenses and obligations for the liabilities relating to the arrangement, similar to a joint operation noted above.

BUSINESS COMBINATIONS AND GOODWILL

Acquisitions of subsidiaries and businesses are accounted for using the acquisition method of accounting. The cost of the acquisition is measured at fair value, which is calculated as the sum of the acquisition date fair values of the assets transferred, liabilities incurred to the former owners of the acquiree and the equity interests issued in exchange for control of the acquiree. The identifiable assets, liabilities and contingent liabilities ("identifiable net assets") are recognised at their fair value at the date of acquisition. Acquisition related costs are recognised in the consolidated statement of income as incurred.

Where a business combination is achieved in stages, Glencore's previously held interests in the acquired entity are remeasured to fair value at the acquisition date (i.e. the date Glencore attains control) and the resulting gain or loss, if any, is recognised in the consolidated statement of income.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed.

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to the CGUs that are expected to benefit from the synergies of the combination. CGUs to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata based on the carrying amount of each asset in the unit.

Any impairment loss is recognised directly in profit or loss. An impairment loss recognised for goodwill is not able to be reversed in subsequent periods.

On disposal of the relevant CGU, the attributable amount of goodwill is included in the determination of the profit or loss on disposal.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, Glencore reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted for additional information obtained during the "measurement period" (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured either at fair value or at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at fair value or, when applicable, on the basis specified in another IFRS.

Similar procedures are applied in accounting for the purchases of interests in Associates and joint operations. Any goodwill arising from such purchases is included within the carrying amount of the investment in Associates, but not amortised thereafter. Any excess of Glencore's share of the net fair value of the Associate's identifiable net assets over the cost of the investment is included in the consolidated statement of income in the period of the purchase.

NON-CURRENT ASSETS HELD FOR SALE AND DISPOSAL GROUPS

Non-current assets, liabilities and those included in disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use, they are available for immediate disposal and the sale is highly probable. Non-current assets, liabilities and those included in disposal groups held for sale are measured at the lower of their carrying amount or fair value less costs to sell.

1. Accounting policies continued

REVENUE RECOGNITION

Revenue is derived principally from the sale of goods (sale of commodities) 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 Glencore 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 Glencore 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 and changes in fair value are recognised as an adjustment to revenue. In all cases, fair value is estimated by reference to forward market prices.

Revenue from the sale of material by-products are included within revenue. Where a by-product is not regarded as significant, revenue may be credited against cost of goods sold.

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

Payments received for future metal (primarily gold and silver) deliveries (prepayments) are accounted for as executory contracts whereby the prepayment is initially recorded as deferred revenue in the consolidated statement of financial position. The initial deferred revenue amount is unwound and revenue is recognised in the consolidated statement of income as and when Glencore physically delivers the metal and loses control of it. Where these prepayments are in excess of one year and contain a significant financing component, the amount of the deferred revenue is adjusted for the effects of the time value of money. Glencore applies the practical expedient to not adjust the promised amount of consideration for the effects of time value of money if the period between delivery and the respective payment is one year or less.

Royalty, interest and dividend income is recognised when the right to receive payment has been established, it is probable that the economic benefits will flow to Glencore and the amount of income can be measured reliably. Royalty revenue is recognised on an accruals basis in accordance with the substance of the relevant agreement. Interest income is accrued on a time basis, by reference to the principal outstanding and the applicable effective interest rate.

FOREIGN CURRENCY TRANSLATION

Glencore's reporting currency and the functional currency of the majority of its operations is the U.S. dollar as this is assessed to be the principal currency of the economic environment in which it operates.

(i) Foreign currency transactions

Transactions in foreign currencies are converted into the functional currency of each entity using the exchange rate prevailing at the transaction date. Monetary assets and liabilities outstanding at year-end are converted at year-end rates. Non-monetary items measured in terms of historical cost are translated using the exchange rate at the date of the transaction. The resulting exchange differences are recorded in the consolidated statement of income.

(ii) Translation of financial statements

For the purposes of consolidation, assets and liabilities of group companies whose functional currency is in a currency other than the U.S. dollar are translated into U.S. dollars using year-end exchange rates, while their statements of income are translated using average rates of exchange for the year. Translation adjustments are included as a separate component of shareholders' equity and have no consolidated statement of income impact to the extent that no disposal of the foreign operation has occurred. Where an intragroup balance is, in substance, part of the Group's net investment in an entity, exchange gains and losses on that balance are taken to the currency translation reserve. Cumulative translation differences are recycled from equity and recognised as income or expense on partial disposal of the net investment in an entity, which includes repayments of capital and loans. On such partial disposals, when the Group's percentage of equity ownerships do not change, the 'absolute' approach is applied. Under this approach, the amounts held in the foreign currency translation reserve are reclassified to income or expense based on the proportionate share of total cumulative translation differences recognised in the net investment.

1. Accounting policies continued

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

BORROWING COSTS

Borrowing costs are expensed as incurred except where they relate to the financing of construction or development of qualifying assets in which case they are capitalised up to the date when the qualifying asset is ready for its intended use.

EMPLOYEE AND RETIREMENT BENEFITS

Wages, salaries, bonuses, social security contributions, paid annual and sick leave are accrued in the period in which the associated services are rendered by the employees of the Group.

Glencore operates various pension schemes in accordance with local requirements and practices of the respective countries. The annual costs for defined contribution plans that are funded by payments to separate trustee administered funds or insurance companies equal the contributions that are required under the plans and accounted for as an expense.

For defined benefit retirement plans, the cost of providing benefits is determined using the Projected Unit Credit Method, with actuarial valuations being carried out at the end of each annual reporting period. Remeasurements comprising actuarial gains and losses, the effect of the asset ceiling (if applicable) and the return on plan assets (excluding interest) are recognised immediately in the statement of financial position with a charge or credit to other comprehensive income in the period in which they occur. Remeasurements recognised in other comprehensive income are not reclassified. Past service cost is recognised in profit or loss when the plan amendment or curtailment occurs, or when the Group recognises related restructuring costs or termination benefits, if earlier. Gains or losses on settlement of a defined benefit plan are recognised when the settlement occurs. Net interest is calculated by applying a discount rate to the net defined benefit liability or asset.

Defined benefit costs are split into three categories:

- service costs, which includes current service cost, past service cost and gains and losses on curtailments and settlements;
- net interest expense or income; and
- remeasurements.

The Group recognises service costs within the consolidated statement of income.

Net interest expense or income is recognised within interest expense or income within the consolidated statement of income.

Any past service cost (or the gain or loss on settlement) is calculated by measuring the defined benefit liability (asset) using updated assumptions and comparing benefits offered and plan assets before and after the plan amendment (or curtailment or settlement) but ignoring the effect of the asset ceiling (that may arise when the defined benefit plan is in a surplus position). The Group uses the updated assumptions from this remeasurement to determine current service cost and net interest for the remainder of the reporting period after the change to the plan. In the case of the net interest for the period post-plan amendment, the net interest is calculated by multiplying the net defined benefit liability (asset) as remeasured with the discount rate used in the remeasurement (also taking into account the effect of contributions and benefit payments on the net defined benefit liability (asset)).

The retirement benefit obligation recognised in the consolidated statement of financial position represents the deficit or surplus in the Group's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

Glencore also provides post-retirement healthcare benefits to certain employees in Canada, South Africa and the United States. These are accounted for in a similar manner to the defined benefit pension plans, however are unfunded.

SHARE-BASED PAYMENTS

(i) Equity-settled share-based payments

Equity-settled share-based payments are measured at the fair value of the awards based on the market value of the shares at the grant date. Fair value excludes the effect of non-market-based vesting conditions. The fair value is charged to the consolidated statement of income and credited to retained earnings on a straight-line basis over the period the estimated awards are expected to vest.

At each balance sheet date, the Company revises its estimate of the number of equity instruments expected to vest as a result of the effect of non-market-based vesting conditions. The impact of the revision of the original estimates, if any, is recognised in the consolidated statement of income such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to retained earnings.

(ii) Cash-settled share-based payments

For cash-settled share-based payments, a liability is initially recognised at fair value based on the estimated number of awards that are expected to vest, adjusting for market and non-market-based performance conditions. Subsequently, at each reporting period until the liability is settled, it is remeasured to fair value with any changes in fair value recognised in the consolidated statement of income.

1. Accounting policies continued

INCOME TAXES

Income taxes consist of current and deferred income taxes. Current taxes represent income taxes expected to be payable based on enacted or substantively enacted tax rates at the period end on expected current taxable income, and any adjustment to tax payable in respect of previous years. Deferred taxes are recognised for temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable income, using enacted or substantively enacted income tax rates which are expected to be effective at the time of reversal of the underlying temporary difference. Deferred tax assets and unused tax losses are only recognised to the extent that their recoverability is probable. Deferred tax assets are reviewed at reporting period end and amended to the extent that it is no longer probable that the related benefit will be realised. To the extent that a deferred tax asset not previously recognised subsequently fulfils the criteria for recognition, an asset is then recognised.

Deferred tax assets and liabilities are offset when they relate to income taxes levied by the same authority and Glencore has both the right and the intention to settle its current tax assets and liabilities on a net or simultaneous basis. The tax effect of certain temporary differences is not recognised principally with respect to the initial recognition of an asset or liability (other than those arising in a business combination or in a manner that initially impacted accounting or taxable profit) and temporary differences relating to investments in subsidiaries and Associates to the extent that Glencore can control the timing of the reversal of the temporary difference and it is probable the temporary difference will not reverse in the foreseeable future. Deferred tax is provided in respect of fair value adjustments on acquisitions. These adjustments may relate to assets such as extraction rights that, in general, are not eligible for income tax allowances.

Current and deferred tax are recognised as an expense or income in the consolidated statement of income, except when they relate to items that are recognised outside the consolidated statement of income (whether in other comprehensive income or directly in equity) or where they arise from the initial accounting for a business combination.

Royalties, extraction taxes and other levies/taxes are treated as taxation arrangements when they have the characteristics of an income tax, including being imposed and determined in accordance with regulations established by the respective government's taxation authority and the amount payable is based on taxable income – rather than physical quantities produced or as a percentage of revenues – after adjustment for temporary differences. For such arrangements, current and deferred tax is provided on the same basis as described above for other forms of taxation. Obligations arising from royalty arrangements that do not satisfy these criteria are recognised as current provisions and included in cost of goods sold.

Glencore assesses its liabilities and contingencies for all tax years open to audit based upon the latest information available. Inherent uncertainties exist in estimates of tax contingencies due to complexities of interpretation and changes in tax laws. For those matters where it is probable that an adjustment will be made, the Group records its best estimate of these tax liabilities, including related interest charges, taking into account the range of possible outcomes.

PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost, being the fair value of the consideration given to acquire or construct the asset, including directly attributable costs required to bring the asset to the location or to a condition necessary for operation and the direct cost of dismantling and removing the asset, less accumulated depreciation and any accumulated impairment losses.

Property, plant and equipment are depreciated to their estimated residual value over the estimated useful life of the specific asset concerned, or the estimated remaining life of the associated mine (LOM), field or lease.

Depreciation commences when the asset is available for use. The major categories of property, plant and equipment are depreciated/amortised on a units of production (UOP) and/or straight-line basis as follows:

Buildings	10 – 45 years
Freehold land	not depreciated
Plant and equipment	3 – 30 years/UOP
Right-of-use assets	2 – 20 years
Mineral and petroleum rights	UOP
Deferred mining costs	UOP

(i) Mineral and petroleum rights

Mineral and petroleum reserves, resources and rights (together "Mineral and petroleum rights") which can be reasonably valued, are recognised in the assessment of fair values on acquisition. Mineral and petroleum rights for which values cannot be reasonably determined are not recognised. Exploitable Mineral and petroleum rights are amortised using the UOP basis over the commercially recoverable reserves and, in certain circumstances, other mineral resources. Mineral resources are included in amortisation calculations where there is a high degree of confidence that they will be extracted in an economic manner.

1. Accounting policies continued

(ii) Exploration and evaluation expenditure

Exploration and evaluation expenditure relates to costs incurred in the exploration and evaluation of potential mineral and petroleum resources and includes costs such as exploration and production licences, researching and analysing historical exploration data, exploratory drilling, trenching, sampling and the costs of pre-feasibility studies. Exploration and evaluation expenditure for each area of interest, other than that acquired from another entity, is charged to the consolidated statement of income as incurred except when the expenditure is expected to be recouped from future exploitation or sale of the area of interest and it is planned to continue with active and significant operations in relation to the area, or at the reporting period end, the activity has not reached a stage which permits a reasonable assessment of the existence of commercially recoverable reserves, in which case the expenditure is capitalised. As the intangible component (i.e. licences) represents an insignificant and indistinguishable portion of the overall expected tangible amount to be incurred and recouped from future exploitation, these costs along with other capitalised exploration and evaluation expenditure are recorded as a component of property, plant and equipment. Purchased exploration and evaluation assets are recognised at their fair value at acquisition.

As the capitalised exploration and evaluation expenditure asset is not available for use, it is not depreciated. All capitalised exploration and evaluation expenditure is monitored for indications of impairment. Where a potential impairment is indicated, an assessment is performed for each area of interest or at the CGU level. To the extent that capitalised expenditure is not expected to be recovered it is charged to the consolidated statement of income.

Administration costs that are not directly attributable to a specific exploration area are charged to the consolidated statement of income. Licence costs paid in connection with a right to explore in an existing exploration area are capitalised and amortised over the term of the permit.

DEVELOPMENT EXPENDITURE

When commercially recoverable reserves are determined and such proposed development receives the appropriate approvals, capitalised exploration and evaluation expenditure is transferred to construction in progress, a component within the plant and equipment asset sub-category. All subsequent development expenditure is similarly capitalised, provided commercial viability conditions continue to be satisfied.

Proceeds from the sale of product extracted during the development phase are recognised in the statement of income. Upon completion of development and commencement of production, capitalised development costs are further transferred, as required, to the appropriate plant and equipment asset category and depreciated using the unit of production method (UOP) or straight-line basis.

Deferred mining costs

Mainly comprises certain capitalised costs related to underground mining as well as pre-production and in-production stripping activities as outlined below. Deferred mining costs are amortised using the UOP basis over the life of the ore body to which those costs relate.

DEFERRED STRIPPING COSTS

Stripping costs incurred in the development of a mine (or pit) before production commences are capitalised as part of the cost of constructing the mine (or pit) and subsequently amortised over the life of the mine (or pit) on a UOP basis.

In-production stripping costs related to accessing an identifiable component of the ore body to realise benefits in the form of improved access to ore to be mined in the future (stripping activity asset), are capitalised within deferred mining costs provided all the following conditions are met:

(a) it is probable that the future economic benefit associated with the stripping activity will be realised;

(b) the component of the ore body for which access has been improved can be identified; and

(c) the costs relating to the stripping activity associated with the improved access can be reliably measured.

If all of the criteria are not met, the production stripping costs are charged to the consolidated statement of income as they are incurred.

The stripping activity asset is subsequently depreciated on a UOP basis over the life of the identified component of the ore body that became more accessible as a result of the stripping activity and is then stated at cost less accumulated depreciation and any accumulated impairment losses.

LEASES

As lessee, the Group assesses whether a contract contains a lease at inception of the contract. The Group recognises a right-of-use asset and corresponding lease liability in the statement of financial position for all lease arrangements where it is the lessee, except for short-term leases with a term of twelve months or less and leases of low value assets. For these leases, the Group recognises the lease payments as an operating expense on a straight-line basis over the term of the lease.

1. Accounting policies continued

The lease liability is initially measured at the present value of the future lease payments from the commencement date of the lease. The lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, the asset and company specific incremental borrowing rates. Lease liabilities are recognised within borrowings on the statement of financial position. The lease liability is subsequently measured by increasing the carrying amount to reflect interest on the lease liability (using the effective interest method) and by reducing the carrying amount to reflect the lease payments made. The Group remeasures the lease liability, with a corresponding adjustment to the related right-of-use assets, whenever:

- The lease term changes or there is a significant event or change in circumstances resulting in a change in the assessment of exercise of a purchase option, in which case the lease liability is remeasured by discounting the revised lease payments using a revised discount rate;
- The lease payments change due to the changes in an index or rate or a change in expected payment under a guaranteed residual value, in which case the lease liability is remeasured by discounting the revised lease payments using an unchanged discount rate; or
- A lease contract is modified and the lease modification is not accounted for as a separate lease, in which case the lease liability is remeasured based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of modification.

The right-of-use assets are initially recognised on the balance sheet at cost, which comprises the amount of the initial measurement of the corresponding lease liability, adjusted for any lease payments made at or prior to the commencement date of the lease, any lease incentive received and any initial direct costs incurred, and expected costs for obligations to dismantle and remove right-of-use assets when they are no longer used. Right-of-use assets are recognised within property, plant and equipment on the statement of financial position. Right-of-use assets are depreciated on a straight-line basis from the commencement date of the lease over the shorter of the useful life of the right-of-use asset or the end of the lease term.

The Group enters into lease arrangements as a lessor with respect to some of its time charter vessels. Leases for which the Group is an intermediate lessor are classified as finance or operating leases by reference to the right-of-use asset arising from the head lease. Income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Amounts due from lessees under finance leases are recognised as receivables at the amount of the Group's net investment in the leases. Finance lease income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of these leases.

RESTORATION, REHABILITATION AND DECOMMISSIONING

Restoration, rehabilitation and decommissioning costs arising from the installation of plant and other site preparation work, discounted using a risk-free rate specific to the liability and the currency in which they are denominated 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.

Costs for restoration of subsequent site disturbance, which is created on an ongoing basis during production, are provided for at their net present values and charged to the consolidated statement of income as extraction progresses.

Changes in the estimated timing of the rehabilitation or changes to the estimated future costs are accounted for prospectively by recognising an adjustment to the rehabilitation liability and a corresponding adjustment to the asset to which it relates, provided a reduction, if any, in the provision is not greater than the depreciated capitalised cost of the related asset, in which case the capitalised cost is reduced to Nil and the remaining adjustment recognised in the consolidated statement of income. In the case of closed sites, changes to estimated costs are recognised immediately in the consolidated statement of income.

INTANGIBLE ASSETS

Intangible assets acquired separately are measured on initial recognition at cost. The cost of intangible assets acquired in a business combination is their fair value at the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortisation (calculated on a straight-line basis over their useful lives) and accumulated impairment losses, if any.

Internally generated intangibles are not capitalised. Instead, the related expenditure is recognised in the consolidated statement of income in the period in which the expenditure is incurred.

Identifiable intangible assets with a finite life are amortised on a straight-line basis over their expected useful life. The amortisation method and period are reviewed annually and impairment testing is undertaken when circumstances indicate the carrying amount may not be recoverable. Other than goodwill which is not amortised, Glencore has no identifiable intangible assets with an indefinite life.

The major categories of intangibles are amortised on a units of production (UOP) and/or straight-line basis as follows:

Port allocation rights	UOP
Licences, trademarks and software	3 – 20 years
Customer relationships	5 – 9 years

1. Accounting policies continued

Goodwill impairment testing

For the purpose of impairment testing, goodwill has been allocated to the CGUs, or groups of CGUs, that are expected to benefit from the synergies of the business combination and which represent the level at which management monitors and manages the goodwill. In assessing whether an impairment is required, the carrying value of the CGU is compared with its recoverable amount. The recoverable amount is the higher of its fair value less costs of disposal (FVLCD) and its value in use (VIU). If the recoverable amount of the CGU is less than the carrying amount of the unit, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro-rata basis of the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognised directly in the consolidated statement of income. An impairment loss recognised for goodwill can not be reversed in subsequent periods.

OTHER INVESTMENTS

Equity investments, other than investments in Associates, are recorded at fair value. Glencore designated investments that are not held for trading as at fair value through other comprehensive income (FVTOCI). As a result, changes in fair value are recorded in the consolidated statement of other comprehensive income. Dividends from these investments are recognised in the consolidated statement of income, unless the dividend represents a recovery of part of the cost of the equity investment. Investments that are held for trading are subsequently measured at fair value through profit or loss (FVTPL).

IMPAIRMENT OR IMPAIRMENT REVERSALS

Glencore conducts, at least annually, an internal review of asset values which is used as a source of information to assess for any indications of impairment or impairment reversal. Formal impairment tests are carried out, at least annually, for cash-generating units containing goodwill and for all other non-current assets, when events or changes in circumstances indicate the carrying value may not be recoverable.

A formal impairment or reversal test involves determining whether the carrying amounts are in excess (or below, as the case may be) of their recoverable amounts. An asset's recoverable amount is determined as the higher of its FVLCD and its VIU. Such reviews are undertaken on an asset-by-asset basis, except where assets do not generate cash flows independent of other assets, in which case the review is undertaken at the CGU level.

If the carrying amount of an asset exceeds its recoverable amount, an impairment loss is recorded in the consolidated statement of income to reflect the asset at the lower amount.

For those assets which were impaired in prior periods, if their recoverable amount exceeds their carrying amount, and the change in their recoverable amount is not solely due to the passage of time, an impairment reversal is recorded in the consolidated statement of income to reflect the asset at the higher amount to the extent the increased carrying amount does not exceed the carrying value of the asset that would have been determined had no impairment previously been recognised. Goodwill impairments cannot be subsequently reversed.

PROVISIONS

Provisions are recognised when Glencore has a present obligation (legal or constructive), as a result of past events, and it is probable that an outflow of resources embodying economic benefits that can be reliably estimated will be required to settle the liability.

The amount recognised as a provision is the best estimate of the consideration required to settle the present obligation at the balance sheet date, taking into account the risks and uncertainties surrounding the obligation, including interpretation of specific laws and likelihood of settlement. Where a provision is measured using the cash flow estimated to settle the present obligation, its carrying amount is the present value of those cash flows (when the effect of the time value of money is material).

ONEROUS CONTRACTS

An onerous contract is considered to exist where Glencore has a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received from the contract. Present obligations arising under onerous contracts are recognised and measured as provisions.

UNFAVOURABLE CONTRACTS

An unfavourable contract is considered to exist when Glencore, in a business combination, acquires a contract under which the terms of the contract require Glencore to sell or purchase products or services on terms which are economically unfavourable compared to current market terms at the time of the business combination. Unfavourable contracts are recognised at the present value of the economic loss and amortised into the statement of income over the term of the contract.

INVENTORIES

The vast majority of inventories attributable to the marketing activities are valued at fair value less costs of disposal with the remainder valued at the lower of cost or net realisable value, with costs allocated using the first-in-first-out (FIFO) method. Unrealised gains and losses from changes in fair value are reported in cost of goods sold.

1. Accounting policies continued

Inventories held by the industrial activities are valued at the lower of cost or net realisable value. Cost is determined using FIFO or the weighted average method and comprises material costs, labour costs and allocated production related overhead costs. Typically raw materials and consumables are measured using the FIFO method and work in progress inventories using the weighted average method. Where the production process results in more than one product being produced (joint products), cost is allocated between the various products according to the ratio of contribution of these metals to gross sales revenue. Financing and storage costs related to inventory are expensed as incurred.

Non-current inventories primarily relate to stockpiles which are not expected to be utlised within the normal operating cycle.

NON-FINANCIAL INSTRUMENTS (PHYSICAL ADVANCES OR PREPAYMENTS)

The Group enters into physical advances and prepayment agreements with certain suppliers and customers. When such advances and prepayments are primarily settled in cash or another financial asset, they are classified as financial assets or financial liabilities (see below). Where such advances and prepayments are settled through physical delivery or receipt of an underlying product they are classified as non-financial assets or non-financial liabilities. Such advances and prepayments are initially recorded at the amount of the cash paid or received and are subsequently reduced by the relevant contractual volumes of physical deliveries made. Certain physically-settled advances and prepayments which relate to contracts to buy or sell commodities that can be settled on a net basis are accounted for under IFRS 9 as if they were financial instruments.

FINANCIAL INSTRUMENTS

Financial assets and financial liabilities are recognised in the Group's consolidated statement of financial position when the Group becomes a party to the contractual provisions of the instrument. Contractual maturities of such financial assets and financial liabilities may be longer than one year. However, in the normal course of trading activities, derivative financial instruments are often settled before their maturity date, and therefore classified as current assets or current liabilities.

Financial assets are classified as either financial assets at amortised cost, at fair value through other comprehensive income (FVTOCI) or at fair value through profit or loss (FVTPL) depending upon the business model for managing the financial assets and the nature of the contractual cash flow characteristics of the financial asset. Financial assets are initially recognised at fair value on the trade date, including, in the case of instruments not subsequently measured at fair value through profit or loss, directly attributable transaction costs. Trade receivables with no provisional price features and where there is no significant financing component, are initially recognised at their transaction price. Subsequently, other investments, provisionally priced trade receivables and derivatives are carried at fair value and trade receivables that do not contain provisional price features, loans and other receivables are carried at amortised cost.

Financial liabilities, other than derivatives and those containing provisional price features, are initially recognised at fair value of consideration received net of transaction costs as appropriate and subsequently carried at amortised cost. Financial liabilities that contain provisional pricing features (accounted for as embedded derivatives) were designated in their entirety as at FVTPL. Derivatives are carried at FVTPL.

Where financial assets and financial liabilities recognised at fair value are managed and reported to key management personnel on the basis of its net exposure to either market risks or credit risk, fair value of that group of financial assets and financial liabilities is measured on the basis of the net price that would be received to sell the long position and to transfer the short position for a particular risk exposure of the specific financial asset or liability being measured. When the group of financial assets and/or financial liabilities are not presented on a net basis in the statement of financial position, any portfolio level adjustments are allocated to the individual instruments that make up the group on an appropriate basis.

(i) Impairment of financial assets

A loss allowance for expected credit losses is determined for all financial assets (as well as for issued loan commitments and financial guarantee contracts), other than those at FVTPL and investments in equity instruments measured at FVTOCI, at the end of each reporting period. The expected credit loss recognised represents a probability-weighted estimate of credit losses over the expected life of the financial instrument.

The Group applies the simplified approach to measure the loss allowance for trade receivables classified at amortised cost, using the lifetime expected loss provision. The expected credit losses on these financial assets are estimated using a provision matrix by reference to past default experience and an equivalent credit rating, adjusted as appropriate for current observable data and forward-looking information.

For all other financial assets at amortised cost, the Group recognises lifetime expected credit losses when there has been a significant increase in credit risk since initial recognition, which is determined by:

- A review of overdue amounts;
- Comparing the risk of default at the reporting date and at the date of initial recognition; and
- An assessment of relevant historical and forward-looking quantitative and qualitative information.

For those balances that are beyond 30 days overdue, such is presumed to be an indicator of a significant increase in credit risk.

1. Accounting policies continued

If the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month expected credit loss, which comprises the expected lifetime loss from the instrument were a default to occur within 12 months of the reporting date.

The Group considers an event of default has materialised and the financial asset is credit impaired when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay the Group without taking into account any collateral held by the Group or if the financial asset is more than 90 days past due, unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate. The Group writes off a financial asset when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery.

(ii) Derecognition of financial assets and financial liabilities

The Group derecognises a financial asset when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognises its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

The Group derecognises financial liabilities when the Group's obligations are discharged, cancelled or have expired.

On derecognition of a financial asset/financial liability in its entirety, the difference between the carrying amount of the financial asset/financial liability and the sum of the consideration received and receivable/paid and payable is recognised in profit and loss. On derecognition of equity investments designated and measured at FVTOCI, the cumulative gain or loss recognised in other comprehensive income is reclassified directly to retained earnings.

OWN SHARES

The cost of purchases of own shares is deducted from equity. Where they are purchased, issued to employees or sold, no gain or loss is recognised in the consolidated statement of income. Such gains and losses are recognised directly in equity. Any proceeds received on disposal of the shares or transfers to employees are recognised in equity.

DERIVATIVES AND HEDGING ACTIVITIES

Derivative instruments, which include physical contracts to sell or purchase commodities that do not meet the own use exemption, are initially recognised at fair value when Glencore becomes a party to the contractual provisions of the instrument and are subsequently remeasured to fair value at the end of each reporting period. Fair values are determined using quoted market prices, dealer price quotations or using models and other valuation techniques, the key inputs for which include current market and contractual prices for the underlying instrument, time to expiry, yield curves, volatility of the underlying instrument and counterparty risk.

Gains and losses on derivative instruments for which hedge accounting is not applied, other than the revenue adjustment mechanism embedded within provisionally priced sales and mark-to-market movements on physical forward sales contracts, are recognised in cost of goods sold.

Those derivatives qualifying and designated as hedges are either (i) a Fair Value Hedge of the change in fair value of a recognised asset or liability or an unrecognised firm commitment, or (ii) 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.

At the inception of the hedge and on an ongoing basis, Glencore documents whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationship meets the qualifying hedge effectiveness requirements.

Glencore discontinues hedge accounting when the qualifying criteria for the hedged relationship is no longer met.

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.

A change in the fair value of derivatives designated as a Cash Flow Hedge is initially recognised in the consolidated statement of comprehensive income and accumulated in the cash flow hedge reserve in shareholders' equity. The deferred amount is then released to the consolidated statement of income in the same periods during which the hedged transaction affects the consolidated statement of income. Hedge ineffectiveness is recorded in the consolidated statement of income when it occurs.

When a hedging instrument expires or is sold, or when a hedge no longer meets the criteria for hedge accounting, any cumulative gain or loss existing in equity at that time remains in shareholders' equity and is recognised in the consolidated statement of income when the committed or forecast transaction is ultimately recognised in the consolidated statement of income. However, if a forecast or committed transaction is no longer expected to occur, the cumulative gain or loss that was recognised in equity is immediately transferred to the consolidated statement of income.

1. Accounting policies continued

A derivative may be embedded in a non-derivative "host contract" such as provisionally priced sales and purchases. Such combinations are known as hybrid instruments. If a hybrid contract contains a host that is a financial asset within the scope of IFRS 9, then the relevant classification and measurement requirements are applied to the entire contract at the date of initial recognition. Should the host contract not be a financial asset within the scope of IFRS 9, the embedded derivative is separated from the host contract, if it is not closely related to the host contract, and accounted for as a standalone derivative. Where the embedded derivative is separated, the host contract is accounted for in accordance with its relevant accounting policy, unless the entire instrument is designated at FVTPL in accordance with IFRS 9.

FINANCIAL GUARANTEE CONTRACTS

Financial guarantee contracts are accounted for in accordance with IFRS 9 as financial liabilities. After initial recognition, any such contracts are subsequently measured at the higher of the amount of the provision for expected credit losses and the amount initially recognised less any income recognised in accordance with the principles of IFRS 15.

2. Segment information

Glencore is organised and operates on a worldwide basis in two core business segments – Marketing activities and Industrial activities, reflecting the reporting lines and structure used by Glencore's Management to allocate resources and assess the performance of Glencore.

The business segments' contributions to the Group are primarily derived from a) the net margin or premium earned from physical Marketing activities (net sale and purchase of physical commodities) and the provision of marketing and related value-add services and b) the net margin earned from Industrial asset activities (resulting from the sale of physical commodities over the cost of production and/or cost of sales). The marketing related operating segments have been aggregated under the Marketing reportable segment as their economic characteristics (historic and expected long-term Adjusted EBITDA margins and the nature of the marketing services provided) are similar. The industrial related operating segments have been aggregated under the Industrial reportable segment as the core activities (extracting raw material and / or processing it further into saleable product, as required, and then selling it at prevailing market prices), the exposure to long-term economic risks (price movements, technology, sovereign and production substitution) and the longer-term average Adjusted EBITDA margins are similar. The economic and operational characteristics of our coal operating and commercial units are not expected to change in the foreseeable future and continue to be included within the industrial assets and marketing reporting segments respectively.

Corporate and other: consolidated statement of income amounts represent Group related income and expenses (including share of Viterra earnings and certain variable bonus charges). Statement of financial position amounts represent Group related balances.

The financial performance of the operating segments is principally evaluated by management with reference to Adjusted EBIT/EBITDA. Adjusted EBIT is the net result of segmental revenue (revenue including Proportionate adjustments as defined in the Alternative performance measure section) less cost of goods sold and selling and administrative expenses plus share of income from associates and joint ventures, dividend income and the attributable share of Adjusted EBIT of relevant material associates and joint ventures, which are accounted for internally by means of proportionate consolidation, excluding significant items. Adjusted EBITDA consists of Adjusted EBIT plus depreciation and amortisation, including the related Proportionate adjustments. In addition, Volcan, while a subsidiary of the Group, is accounted for under the equity method for internal reporting and analysis due to the relatively low economic ownership held by the Group.

The accounting policies of the operating segments are the same as those described in note 2 with the exception of the Antamina copper/zinc mine, the Collahuasi joint venture and Volcan. Under IAS 28 and IFRS 11, Glencore's investment in the Antamina copper/zinc mine (34% owned) is considered to be an associate as it is not subject to joint control and the Collahuasi copper mine (44% owned) is considered to be a joint venture. Associates and joint ventures are required to be accounted for in Glencore's financial statements under the equity method. For internal reporting and analysis, Glencore evaluates the performance of these investments under the proportionate consolidation method, reflecting Glencore's proportionate share of the revenues, expenses, assets and liabilities of the investments. For internal reporting and analysis, management evaluates the performance of Volcan under the equity method, reflecting the Group's relatively low 23.3% economic ownership in this fully ring-fenced listed entity, with its stand-alone, independent and separate capital structure. The balances as presented for internal reporting purposes are reconciled to Glencore's statutory disclosures in the following tables and/or in the Alternative performance measures section.

In January 2022, Glencore completed the acquisition of the remaining 66.67% interest in Cerrejón (coal), that it did not previously own (see note 26), increasing Glencore's ownership to 100% and providing it with the ability to exercise control and fully consolidate Cerrejón. Prior to the transaction, Glencore evaluated the performance of its 33.33% interest in Cerrejón under the proportionate consolidation method, such that 2021 segment comparatives reflect Glencore's proportionate share of the revenues, expenses, assets and liabilities of the investment.

In Q4 2022, Glencore commenced a process exploring the possible disposal of its 23.3% economic interest in Volcan. As a result, the carrying amounts of Volcan assets and liabilities as at 31 December 2022 are classified as held for sale (see note 16). For segmental reporting purposes, Volcan continues to be accounted for as an equity accounted associate.

2. Segment information continued

Glencore accounts for intra-segment sales and transfers where applicable as if the sales or transfers were to third parties, i.e. at arm's length commercial terms.

2022 US$ million	Marketing activities	Industrial activities	Inter-segment eliminations	**Total**
Revenue				
Metals and minerals	77,382	38,993	(25,499)	90,876
Energy products	137,720	39,333	(9,256)	167,797
Corporate and other	–	6	–	6
Revenue – segmental	**215,102**	**78,332**	**(34,755)**	**258,679**
Proportionate adjustment – revenue[1]	–	(2,695)	–	(2,695)
Revenue – reported measure	**215,102**	**75,637**	**(34,755)**	**255,984**
Metals and minerals				
Adjusted EBITDA	1,694	9,274	–	10,968
Depreciation and amortisation	(54)	(3,776)	–	(3,830)
Proportionate adjustment – depreciation[1]	–	(416)	–	(416)
Adjusted EBIT	**1,640**	**5,082**	**–**	**6,722**
Energy products				
Adjusted EBITDA	5,558	18,590	–	24,148
Depreciation and amortisation	(359)	(2,740)	–	(3,099)
Adjusted EBIT	**5,199**	**15,850**	**–**	**21,049**
Corporate and other				
Adjusted EBITDA[2]	(457)	(599)	–	(1,056)
Depreciation and amortisation	–	(58)	–	(58)
Adjusted EBIT	**(457)**	**(657)**	**–**	**(1,114)**
Total Adjusted EBITDA	**6,795**	**27,265**	**–**	**34,060**
Total depreciation and amortisation	(413)	(6,574)	–	(6,987)
Total depreciation proportionate adjustment	–	(416)	–	(416)
Total Adjusted EBIT	**6,382**	**20,275**	**–**	**26,657**
Share of associates' significant items[1,3]				(9)
Movement in unrealised inter-segment profit elimination adjustments[4]				1,176
Gain on acquisitions and disposals of non-current assets				1,287
Other expense – net				(911)
Impairments				(3,337)
Interest expense – net				(1,336)
Income tax expense				(6,368)
Proportionate adjustment – net finance, impairment and income tax expense[1]				(648)
Income for the year				**16,511**

1 Refer to segment information on previous page and APMs section for definition.

2 Marketing activities include $494 million of Glencore's equity accounted share of Viterra.

3 Share of associates' significant items comprise Glencore's share of significant charges relating to impairments and other items booked directly by various associates.

4 Represents the required adjustment to eliminate unrealised profit or losses arising on inter-segment transactions, i.e. before ultimate sale to a third party. For Glencore, such adjustments arise on the sale of product, in the ordinary course of business, from its Industrial to Marketing operations. Management assesses segment performance prior to any such adjustments, as if the sales were to third parties.

2. Segment information continued

2021 US$ million	Marketing activities	Industrial activities	Inter-segment eliminations	Total
Revenue				
Metals and minerals[1]	71,318	41,535	(26,506)	86,347
Energy products[1]	106,265	19,269	(3,955)	121,579
Corporate and other	–	6	–	6
Revenue – segmental	**177,583**	**60,810**	**(30,461)**	**207,932**
Proportionate adjustment – revenue[2]	–	(4,181)	–	(4,181)
Revenue – reported measure	**177,583**	**56,629**	**(30,461)**	**203,751**
Metals and minerals				
Adjusted EBITDA	2,588	12,017	–	14,605
Depreciation and amortisation	(94)	(3,485)	–	(3,579)
Proportionate adjustment – depreciation[2]	–	(404)	–	(404)
Adjusted EBIT	**2,494**	**8,128**	**–**	**10,622**
Energy products				
Adjusted EBITDA	1,829	5,603	–	7,432
Depreciation and amortisation	(434)	(2,262)	–	(2,696)
Proportionate adjustment – depreciation[2]	–	(89)	–	(89)
Adjusted EBIT	**1,395**	**3,252**	**–**	**4,647**
Corporate and other				
Adjusted EBITDA[3]	(194)	(520)	–	(714)
Depreciation and amortisation	–	(60)	–	(60)
Adjusted EBIT	**(194)**	**(580)**	**–**	**(774)**
Total Adjusted EBITDA	**4,223**	**17,100**	**–**	**21,323**
Total depreciation and amortisation	(528)	(5,807)	–	(6,335)
Total depreciation proportionate adjustment	–	(493)	–	(493)
Total Adjusted EBIT	**3,695**	**10,800**	**–**	**14,495**
Share of associates' significant items[2,4]				(11)
Movement in unrealised inter-segment profit elimination adjustments[5]				(549)
Loss on acquisitions and disposals of non-current assets				(607)
Other expense – net				(1,947)
Impairments				(1,838)
Interest expense – net				(1,140)
Income tax expense				(3,026)
Proportionate adjustment – net finance, impairment and income tax expense[2]				(1,028)
Income for the year				**4,349**

1 Certain prior year balances have been restated to conform with current year presentation of inter-segment eliminations.
2 Refer to segment information above and APMs section for definition.
3 Marketing activities include $473 million of Glencore's equity accounted share of Viterra.
4 Share of associates' significant items comprise Glencore's share of significant charges relating to impairments and other items booked directly by various associates.
5 Represents the required adjustment to eliminate unrealised profit or losses arising on inter-segment transactions, i.e. before ultimate sale to a third party. For Glencore, such adjustments arise on the sale of product, in the ordinary course of business, from its Industrial to Marketing operations. Management assesses segment performance prior to any such adjustments, as if the sales were to third parties.

2. Segment information continued

2022 US$ million	Marketing activities	Industrial activities	Corporate and other	Total
Current assets	47,534	17,326	–	64,860
Current liabilities	(32,495)	(9,258)	–	(41,753)
Allocatable current capital employed	**15,039**	**8,068**	**–**	**23,107**
Property, plant and equipment	920	38,644	–	39,564
Intangible assets	5,142	1,018	–	6,160
Investments in associates and other investments	4,509	7,825	–	12,334
Non-current advances and loans	1,666	988	–	2,654
Inventories	–	605	–	605
Allocatable non-current capital employed	**12,237**	**49,080**	**–**	**61,317**
Other assets[1]			6,406	6,406
Other liabilities[2]			(45,611)	(45,611)
Total net assets	**27,276**	**57,148**	**(39,205)**	**45,219**
Capital expenditure				
Metals and minerals	60	3,597	–	3,657
Energy products	239	1,172	–	1,411
Corporate and other	–	38	–	38
Capital expenditure – segmental	**299**	**4,807**	**–**	**5,106**
Proportionate adjustment – capital expenditure[3]	–	(461)	–	(461)
Capital expenditure – reported measure[4]	**299**	**4,346**	**–**	**4,645**

2021 US$ million	Marketing activities	Industrial activities	Corporate and other	Total
Current assets	38,080	15,134	–	53,214
Current liabilities	(33,553)	(7,288)	–	(40,841)
Allocatable current capital employed	**4,527**	**7,846**	**–**	**12,373**
Property, plant and equipment	961	42,198	–	43,159
Intangible assets	5,149	1,086	–	6,235
Investments in associates and other investments	5,565	8,349	–	13,914
Non-current advances and loans	1,943	1,584	–	3,527
Inventories	5	657	–	662
Allocatable non-current capital employed	**13,623**	**53,874**	**–**	**67,497**
Other assets[1]			6,799	6,799
Other liabilities[2]			(49,752)	(49,752)
Total net assets	**18,150**	**61,720**	**(42,953)**	**36,917**
Capital expenditure				
Metals and minerals	145	3,573	–	3,718
Energy products	656	819	–	1,475
Corporate and other	–	31	–	31
Capital expenditure – segmental	**801**	**4,423**	**–**	**5,224**
Proportionate adjustment – capital expenditure[3]	–	(516)	–	(516)
Capital expenditure – reported measure[4]	**801**	**3,907**	**–**	**4,708**

1 Other assets include non-current financial assets, deferred tax assets, cash and cash equivalents and assets held for sale.

2 Other liabilities include borrowings, non-current deferred income, deferred tax liabilities, non-current provisions, non-current post-retirement and other employee benefits, non-current financial liabilities and liabilities held for sale.

3 Refer to APMs section for definition.

4 Includes $425 million (2021: $1,006 million), comprising $219 million (2021: $648 million) in Marketing activities and $206 million (2021: $358 million) in Industrial activities, of 'right-of-use assets' capitalised in accordance with IFRS 16 – Leases.

2. Segment information continued

GEOGRAPHICAL INFORMATION

US$ million	2022	2021
Revenue from third parties[1]		
The Americas	44,354	37,930
Europe	87,662	64,284
Asia	104,861	86,576
Africa	13,238	9,991
Oceania	5,869	4,970
	255,984	**203,751**
Non-current assets[2]		
The Americas	17,183	16,963
Europe	11,297	11,152
Asia	3,966	4,683
Africa	11,300	12,389
Oceania	14,461	17,163
	58,207	**62,350**

1 Revenue by geographical destination is based on the country of incorporation of the sales counterparty, however this may not necessarily be the country of the counterparty's ultimate parent and/or final destination of product.

2 Non-current assets are non-current assets excluding other investments, advances and loans, other financial assets and deferred tax assets. Non-current assets comprise assets in Australia of $14,164 million (2021: $16,714 million), in Peru of $5,519 million (2021: $7,243 million) and the DRC of $6,074 million (2021: $6,555 million).

3. Revenue

US$ million	2022	2021
Sale of commodities	252,356	201,113
Freight, storage and other services	3,628	2,638
Total	**255,984**	**203,751**

Revenue is derived principally from the sale of commodities, recognised once control of the goods has transferred from Glencore to the buyer. Revenue from sale of commodities includes $78 million (2021: $710 million) of mark-to-market related adjustments on provisionally priced sales arrangements. Revenue derived from freight, storage and other services is recognised over time as the service is rendered. Revenue is measured based on consideration specified in the contract with the customer and is presented net of amounts prepaid as incentives and/or rebates paid to customers, and excludes amounts collected on behalf of third parties. This is consistent with the revenue information disclosed for each reportable segment (see note 2).

4. Gain/(loss) on acquisitions and disposals of non-current assets

US$ million	Notes	2022	2021
Gain on bargain purchase of Cerrejón	26	1,029	–
Gain on sale of Ernest Henry	26	512	–
Loss on sale of Bolivia Zinc	26	(104)	–
Loss on sale of E&P Chad	26	(34)	–
Gain on sale of BaseCore	11	131	–
Loss on sale of Los Quenuales	26	(180)	–
Loss on sale of Access World	26	(23)	–
Derecognition of non-controlling interest on disposal of Mopani	26	–	(1,022)
Gain on sale of Chemoil Terminals	26	–	110
Net gain on sale of other investments/operations		71	98
(Loss)/gain on disposal of property, plant and equipment		(115)	207
Total		**1,287**	**(607)**

ACQUISITION OF CERREJÓN
In January 2022, Glencore completed the acquisition of the remaining 66.67% interest in Cerrejón, a coal mine in Colombia, resulting in a bargain purchase gain of $1,029 million (see note 26).

DISPOSAL OF ERNEST HENRY
In January 2022, Glencore completed the disposal of its interest in Ernest Henry Mining Pty Ltd, a copper-gold mine in Queensland, Australia, resulting in a gain on sale of $512 million (see note 26).

DISPOSAL OF BOLIVIA ZINC
In March 2022, Glencore completed the disposal of its interest in the Bolivia zinc assets (Sinchi Wayra and Illapa), resulting in a loss on sale of $104 million (see note 26).

DISPOSAL OF E&P CHAD
In June 2022, Glencore completed the disposal of its Chad upstream oil operations, resulting in a loss on sale of $34 million (see note 26).

DISPOSAL OF BASECORE
In July 2022, BaseCore Metals (a Glencore joint venture) completed the disposal of a royalty package to Sandstrom Gold Ltd, resulting in an overall gain on sale to Glencore of $131 million (see note 11).

DISPOSAL OF LOS QUENUALES
In December 2022, Glencore completed the disposal of its Los Quenuales zinc, lead, silver operations in Peru, facilitated by the earlier settlement of an underlying silver streaming arrangement, resulting in a loss on sale of $180 million (see note 26).

DISPOSAL OF ACCESS WORLD
In December 2022, Glencore completed the disposal of its interest in the Access World Group, a global commodities storage and logistics group, resulting in a loss on sale of $23 million (see note 26).

DISPOSAL OF MOPANI
In March 2021, Glencore completed the disposal of its interest in Mopani to ZCCM Investments Holdings plc. The net loss on disposal reflects the derecognition to the statement of income of the previously recognised book value of the non-controlling interest equity balance, which largely related to the non-controlling interests' share of historical impairments and losses, and net liabilities in Mopani (see note 26).

DISPOSAL OF CHEMOIL TERMINALS
In December 2021, Glencore completed the disposal of its 100% interest in Chemoil Terminals LLC, which owns the Long Beach and Carson oil products storage terminals in California, resulting in a gain of $110 million (see note 26).

5. Other income/(expense) – net

US$ million	Notes	2022	2021
Net changes in mark-to-market valuations		–	64
Release of unfavourable contract provision	22	–	122
Gain on energy contracts		264	–
Other income – net		101	–
Total other income		**365**	**186**
Net changes in mark-to-market valuations		(106)	–
Net foreign exchange losses		(349)	(187)
Legal and regulatory proceedings		(302)	(1,640)
Closed sites rehabilitation provisioning		(370)	(177)
Other expenses – net		(149)	(129)
Total other expenses		**(1,276)**	**(2,133)**
Total other expense – net		**(911)**	**(1,947)**

Together with foreign exchange movements and mark-to-market valuations, other net income / (expense) includes other items that, due to their nature and variable financial impact or infrequency of the events giving rise to these items, are reported separately from operating segment results.

GAIN ON ENERGY CONTRACTS

Following the significant appreciation in European traded power prices in the summer of 2022, the Group recognised a $264 million gain over a number of its physically settled electricity contracts within its European metallurgical operations.

NET CHANGES IN MARK-TO-MARKET VALUATIONS

Primarily relates to movements on interests in investments and loans (see notes 11 and 14), the ARM Coal non-discretionary dividend obligation (see note 29) and deferred consideration related to Mototolo stake sale in 2018 (see notes 12 and 14), all carried at fair value.

NET FOREIGN EXCHANGE LOSSES

2022 net foreign exchange losses include realised foreign currency losses of $431 million (see page 26) recognised on the restructuring and partial repayment of ZAR-denominated intragroup debt and return of capital that were part of the Group's net investment in its South African operations. These repayments are considered a partial disposal of a net investment in a subsidiary, and thus a proportionate share of the total accumulated foreign exchange losses recognised in the net investment were recycled to the statement of income upon these repayments.

LEGAL AND REGULATORY PROCEEDINGS

Comprises various investigations (legal, expert and compliance) related costs and other costs for ongoing legal matters of $122 million (2021: $1,584 million) and a settlement with the DRC authorities of $180 million (see notes 23 and 32).

CLOSED SITES REHABILITATION PROVISIONING

Comprises movements in restoration, rehabilitation and decommissioning estimates related to sites that are no longer operational (see note 23).

6. Interest income/(expense)

US$ million	Notes	**2022**	2021
Bank deposits and other financial assets		290	110
Interest income and accretion on certain advances repayable with product	12	133	90
Loans to associates		12	8
Interest income		**435**	**208**
Interest expense for financial liabilities not classified at FVTPL			
Capital market notes		(869)	(733)
Revolving credit facilities		(118)	(55)
Lease liabilities	9	(88)	(98)
Other bank loans		(225)	(93)
Less: capitalised interest	9	31	33
Other interest		(178)	(65)
		(1,447)	(1,011)
Other interest expense			
Post-retirement employee benefits	24	(19)	(23)
Deferred income	22	(97)	(115)
Restoration and rehabilitation	23	(155)	(153)
Other provisions	23	(36)	(33)
Other interest		(17)	(13)
		(324)	(337)
Interest expense		**(1,771)**	**(1,348)**

7. Impairments

US$ million	Notes	2022	2021
(Impairments)/reversal of impairments of non-current assets			
Property, plant and equipment and intangible assets	9/10	(1,984)	(1,452)
Investments	11	(167)	(333)
Advances and loans - current and non-current	12/14	(389)	31
VAT receivable - non-current	12	(632)	(151)
Inventory and other		(113)	–
		(3,285)	**(1,905)**
(Impairments)/reversal of impairments of financial assets			
Advances and loans - current and non-current	12/14	(52)	67
		(52)	**67**
Total impairments[1]		**(3,337)**	**(1,838)**

1 Impairments recognised during the year are allocated to Glencore's operating segments as follows: Marketing activities $515 million (2021: $270 million) and Industrial activities $2,822 million (2021: $1,568 million).

As part of a regular portfolio review, Glencore carries out an assessment of whether there are indicators of cash-generating unit (CGU) or asset impairments or whether a previously recorded impairment may no longer be required.

The recoverable amounts of the property, plant and equipment and intangible assets were measured based on fair value less costs of disposal (FVLCD). The FVLCD of all CGUs are determined by discounted cash flow techniques based on the most recent approved financial budgets, underpinned and supported by the life of asset plans of the respective operations. The valuation models use a combination of internal sources and those inputs available to a market participant, which comprise the most recent reserve and resource estimates, relevant cost assumptions and where possible, market forecasts of commodity price and foreign exchange rate assumptions, discounted using operation specific post-tax real discount rates (unless otherwise indicated) ranging from 7.4% – 14.9% (2021: 6.7% – 15.5%). The valuations generally remain most sensitive to price and a deterioration / improvement in the pricing outlook may result in additional impairments/reversals. The determination of FVLCD used Level 3 valuation techniques for both years. In providing sensitivity analysis (and particularly on commodity price assumptions), a 10% change, representing a typical deviation parameter common in the industry, has been provided. Where a higher percentage is reasonably possible on an operational assumption, that has been clearly identified.

As a result of the regular impairment assessment, the following significant impairment charges were recognised:

2022

Property, plant and equipment and intangible assets

During 2022, significant changes to key macro estimates ensued, exacerbated by the Russian/Ukrainian war, which contributed to significant supply/demand imbalances, extreme commodity price volatility, higher energy prices and, in some cases, which are generally linked, emboldening governments to raise royalties and taxes. 2022 saw broad based cost increases, reflecting:

- direct and indirect inflationary pressures on goods and services (particularly energy related flow-through impacts on electricity costs, coal, diesel, steel, explosives, chemicals, reagents and Original Equipment Manufacturer spare parts);
- competition for skilled employees and contractors;
- supply chain pressures, including their secondary effects on shipping and handling costs, as trade flows adjusted in response to the war.

The weighting of the above macro factors on certain CGUs, combined with various operational challenges, resulted in a number of impairments in our Industrial activities segment, almost exclusively related to metals and minerals' CGUs. The valuations are most sensitive to price and discount rate assumptions and a deterioration/improvement in these assumptions could result in additional impairments/reversal of impairments. See below.

7. Impairments continued

US$ million	2022 impairment/ (reversal of impairment) pre tax	post tax	Capital employed[1]	Discount rate	Short to Long-term price assumption	Impairments/(reversal of impairments) resulting from changes in key assumptions Decrease/(increase) in price of 10%[2]		Increase/(decrease) in discount rate of 1%	
Cash-generating unit									
Mt. Isa copper[3]	656	460	–	9.7%	Cu: 8,157 - 7,400	–	–	–	–
Mt. Isa zinc	455	318	630	9.7%	Zn: 3,250 - 2,450	504	(318)	50	(58)
McArthur River zinc	172	96	869	8.7%	Zn: 3,250 - 2,450	396	(96)	63	(71)
Zhairem zinc	185	148	565	11.0%	Zn: 3,250 - 2,450	161	(148)	21	(22)
Portovesme zinc[3]	143	105	72	9.9%	Zn: 3,250 - 2,450	–	–	–	–
Volcan zinc	164	116	1,243	9.4%	Zn: 3,250 - 2,450	303	(242)	69	(96)
Koniambo nickel[3]	227	227	–	10.7%	Ni: 19,500 - 18,400	–	–	–	–
Various other	(18)	(18)	–						
	1,984	**1,452**	**3,379**			**1,364**	**(804)**	**203**	**(247)**

1 Estimated recoverable non-current capital employed, post impairment. Non-current capital employed includes property, plant and equipment, non-current inventory, less rehabilitation provisions and net deferred tax liabilities.

2 Across the curve.

3 The estimated recoverable value of non-current capital employed of these CGUs is estimated to be de minimis. No reasonably possible change in assumptions would materially impact this value, hence no sensitivity analysis is presented.

- $656 million, Mt. Isa Copper CGU. During the year, various options for copper mining activities were considered in the context of higher costs due to the above macro factors. These factors outweighed the significant efforts made over the past few years to make the operation more competitive, such that the entire carrying value of this CGU was impaired.
- $455 million, Mt. Isa Zinc CGU and $172 million, McArthur River Zinc CGU. Resulting primarily from the above noted macro impacts, during 2022, the zinc market and its related treatment and refinery cost / revenue / profit drivers were significantly impacted, particularly in relation to ex-China smelting, where updated Group assumptions have significantly impacted Australia Zinc's long-term through-the-cycle expected mining returns.
- $185 million, Zhairem zinc/lead CGU. In addition to the above noted macro impacts, the Zhairem CGU, located in Kazakhstan, was significantly impacted by additional logistical impositions, as traditional supply chains were re-routed and the Kazakhstan government increased mineral extraction tax by some 50% (e.g. the rate applicable to zinc increased from 7% to 10.5%).
- $143 million, Portovesme zinc/lead CGU. As a result of the above noted macro impacts, particularly relating to increases in European energy costs, Portovesme curtailed its primary zinc and lead smelting operations, with its remaining focus then being the treatment / recycling of waelz oxides. These macro factors outweighed the significant efforts made over the past few years to make the primary operations more competitive, such that the entire carrying value of these CGUs, other than the waelz-oxide line, was impaired.
- $164 million, Volcan zinc CGU. Resulting primarily from the above noted macro impacts, during 2022, the zinc market and its related treatment and refinery cost / revenue / profit drivers were significantly impacted, particularly in relation to ex-China smelting, whereby updated assumptions, including in relation to Peru's increasing political challenges, have impacted the long-term through-the-cycle expected returns of Volcan's southern cluster CGU.
- $227 million, Koniambo nickel CGU. As a result of persistent operational challenges, high ferro-nickel price discounts, and the above noted macro impacts, which have produced significantly higher energy and other costs, a strategic review of the long-term viability of Koniambo was initiated with one of the options being the potential cessation of operations. These factors outweigh the significant efforts made over the past few years to make the operation more competitive, such that the entire carrying value of this CGU was impaired.
- Net $18 million reversal of impairments. The balance of the impairment charges of $70 million on property, plant and equipment (none of which were individually material) relate to specific assets (Industrial activities segment) where utilisation is no longer required or to projects no longer progressed due to changes in production and development plans, net of reversals of impairment of $88 million on property, plant and equipment (none of which were individually material) as a result of improved market conditions in the oil and gas market (Industrial activities segment).

Investments

Primarily comprises impairment charges of $55 million in respect of our 26.3% interest in Trevali Mining Corporation (Industrial activities segment), reflecting the company obtaining creditor protection, following a serious mining incident at its Perkoa Mine in Burkina Faso in April 2022, and $54 million in respect of our 2.1% interest in Britishvolt (Marketing activities segment), owing to its financial difficulties and recent entering into administration. As a result, the entire carrying values of these investments were impaired.

7. Impairments continued

Advances and loans – current and non-current

During 2022, the originally expected production rate at Mopani was not achieved, in part due to a lack of funding. The new shareholder has conducted operational and strategic reviews, resulting in Mopani seeking additional funding and to restructure and extend repayment of the transaction debt (see note 12). As a result, the advance was impaired by $422 million to a value of $596 million. The valuation assumes a long-term copper price of $7,400/t and an asset specific discount rate of 19%, which is reflective of an increase in emerging market risk premiums and underlying interest rates. The valuation remains most sensitive to price, receipt of physical copper and discount rate assumptions, and a deterioration in these assumptions could result in additional impairments. Should the price assumptions fall by 10% (across the curve), a further $43 million of impairment would be recognised. Should the discount rate increase by 1%, a further $36 million of impairment would be recognised, while a 10% decrease in physical copper estimates could result in an additional impairment of $19 million. Conversely, a 10% increase in price assumptions (across the curve) would result in an impairment reversal of $44 million or a 10% increase in physical copper receipts would result in an impairment reversal of $18 million.

VAT receivable – non-current

As a result of the continued delay and non-performance by the DRC government in settling long outstanding Value Added Tax ("VAT") claims, impairment charges of $632 million were recognised in respect of balances outstanding at our Mutanda and Katanga CGUs (Industrial activities segment).

Inventories – non-current

As a result of geotechnical and other operational challenges, the Katanga CGU undertook an extensive technical review and operational optimisation exercise, resulting in a significant reduction in its shorter term production forecasts over the next 3-4 years, such that $113 million of inventory stockpile value has been impaired, consistent with its latest life of mine model.

2021

Property, plant and equipment and intangible assets

- In H1 2021, Koniambo incurred failures at its power plant and suffered a slag leak in line 2 of its metallurgical plant, resulting in a suspension of production. Extensive investigation into the cause of the leak ensued, following which it was determined to target lower throughput, revise certain grade and process recovery assumptions and increase the frequency of major maintenance shut-downs, with the intention of delivering more sustainable long-term operations. These revised changes in volume and cost assumptions and the emergence of higher discounts on non-battery application nickel relative to the LME nickel benchmark price, resulted in a reduction of Koniambo's estimated recoverable value (Industrial activities segment) to $550 million and an impairment of $1,170 million. The valuation assumed a long-term realised nickel price of approximately $13,700/t and an operation specific discount rate of 9.8%. Further revisions to the operating plans are possible. As at 31 December 2021, a 10% reduction in either the long-term realised nickel price or life of mine production could have resulted in the remaining carrying value being fully impaired. A 10% increase in variable operating costs could have resulted in an additional impairment of $170 million. Conversely, a 10% increase in the long-term realised nickel price could have resulted in an impairment reversal of $450 million.
- The balance of the impairment charges on property, plant and equipment (none of which were individually material) relate to specific assets where utilisation is no longer required or to projects no longer progressed due to changes in production and development plans. As a result, the full carrying amount of these assets/projects was impaired, with $282 million recognised in our Industrial activities segment.

Investments

Primarily comprises an impairment charge of $331 million in respect of our 49% investment in HG Storage (Marketing activities segment), to an estimated recoverable value of $189 million following a review of the carrying value against valuation benchmarks. As at 31 December 2021, the valuation of this investment is not considered to be a significant source of estimation uncertainty as no change in assumptions reasonably possible within the next 12 months would materially affect the carrying value.

Advances and loans – current and non-current

In 2021, impairment reversals on advances and loans of $98 million (none of which were individually material) were recognised following an improvement in the underlying financial condition of various counterparties, with $63 million recognised in our Marketing activities segment and $35 million recognised in our Industrial activities segment. Of the total $98 million of impairment reversals, $67 million relate to financial assets and $31 million relate to non-financial assets.

VAT receivable – non-current

As a result of continued challenge and non-performance by certain government authorities in settling long outstanding VAT claims, an impairment charge of $151 million was recognised in our Industrial activities segment.

8. Income taxes

Income taxes consist of the following:

US$ million	2022	2021
Current income tax expense	(7,165)	(2,923)
Adjustments in respect of prior year current income tax	(274)	158
Deferred income tax credit/(expense)	998	(92)
Adjustments in respect of prior year deferred income tax	73	(169)
Total tax expense reported in the statement of income	**(6,368)**	**(3,026)**
Deferred income tax expense recognised directly in other comprehensive income	(65)	(67)
Total tax expense recognised directly in other comprehensive income	**(65)**	**(67)**

The effective Group tax rate is different from the statutory Swiss income tax rate applicable to the Company for the following reasons:

US$ million	2022	2021
Income before income taxes	22,879	7,375
Less: Share of income from associates and joint ventures	(2,300)	(2,618)
Parent Company's and subsidiaries' income before income tax and attribution	**20,579**	**4,757**
Income tax expense calculated at the Swiss income tax rate of 12% (2021: 12%)	(2,469)	(571)
Tax effects of:		
Different tax rates from the standard Swiss income tax rate	(3,057)	(1,486)
Tax-exempt income ($360 million (2021: $207 million) from recurring items and $178 million (2021: $25 million) from non-recurring items)	538	232
Items not tax deductible ($670 million (2021: $987 million) from recurring items and $582 million (2021: $378 million) from non-recurring items)	(1,252)	(1,365)
Foreign exchange fluctuations	(187)	52
Changes in tax rates	(47)	15
Utilisation and changes in recognition of tax losses and temporary differences	385	101
Tax losses not recognised	(98)	15
Adjustments in respect of prior years	(201)	(11)
Other	20	(8)
Income tax expense	**(6,368)**	**(3,026)**

The non-tax deductible items of $1,252 million (2021: $1,365 million) primarily relate to financing costs, impairments and various other expenses.

The impact of tax-exempt income of $538 million (2021: $232 million) primarily relates to non-taxable dividends, income that is not effectively connected to the taxable jurisdiction, and various other items.

The tax impact of foreign exchange fluctuations relates to the foreign currency movements on deferred tax balances where the underlying tax balances are denominated in a currency different to the functional currency determined for accounting purposes.

8. Income taxes continued

DEFERRED TAXES

Deferred taxes as at 31 December 2022 and 2021 are attributable to the items in the table below:

US$ million	2022	Recognised in the statement of income	Recognised in other comprehensive income	Business combination and disposal of subsidiaries	Foreign currency exchange movements	Other	2021
Deferred tax assets[1]							
Tax losses carried forward	1,515	116	–	(4)	1	(16)	1,418
Other	322	(18)	(2)	(17)	(2)	–	361
Total	**1,837**	**98**	**(2)**	**(21)**	**(1)**	**(16)**	**1,779**
Deferred tax liabilities[1]							
Depreciation and amortisation	(3,299)	1,254	–	(625)	60	168	(4,156)
Mark-to-market valuations	(125)	(1)	(2)	5	–	–	(127)
Other	(227)	(280)	(61)	295	5	–	(186)
Total	**(3,651)**	**973**	**(63)**	**(325)**	**65**	**168**	**(4,469)**
Total Deferred tax - net	**(1,814)**	**1,071**	**(65)**	**(346)**	**64**	**152**	**(2,690)**

US$ million	2021	Recognised in the statement of income	Recognised in other comprehensive income	Business combination and disposal of subsidiaries	Foreign currency exchange movements	Other	2020
Deferred tax assets[1]							
Tax losses carried forward	1,418	(532)	–	–	–	(1)	1,951
Other	361	115	(10)	–	(2)	(43)	301
Total	**1,779**	**(417)**	**(10)**	**–**	**(2)**	**(44)**	**2,252**
Deferred tax liabilities[1]							
Depreciation and amortisation	(4,156)	(150)	–	19	98	–	(4,123)
Mark-to-market valuations	(127)	7	(6)	–	–	–	(128)
Other	(186)	299	(51)	–	(3)	39	(470)
Total	**(4,469)**	**156**	**(57)**	**19**	**95**	**39**	**(4,721)**
Total Deferred tax - net	**(2,690)**	**(261)**	**(67)**	**19**	**93**	**(5)**	**(2,469)**

1 Asset and liability positions in the same category reflect the impact of tax assets and liabilities arising in local tax jurisdictions that cannot be offset against tax assets and liabilities arising in other tax jurisdictions.

Deferred tax assets are net of $311 million (2021: $287 million) of uncertain tax liabilities related to tax estimation and judgement uncertainties with respect to various open tax disputes discussed below.

Deferred tax assets are recognised for tax losses carried forward only to the extent that realisation of the related tax benefit is probable. As at 31 December 2022, $1,915 million (2021: $2,016 million) of deferred tax assets related to available loss carry forwards have been brought to account, of which $1,515 million (2021: $1,418 million) are disclosed as deferred tax assets with the remaining balance being offset against deferred tax liabilities arising in the same tax entity. This balance is primarily comprised of:

- $652 million (2021: $629 million) in entities domiciled in the DRC;
- $493 million (2021: $482 million) in entities domiciled in Switzerland; and
- $277 million (2021: $238 million) in entities domiciled in the U.S.

In evaluating whether it is probable that taxable profits will be earned in future accounting periods prior to any tax loss expiry as may be the case, all available evidence was considered, including approved budgets, forecasts and business plans and, in certain cases, analysis of historical operating results. These forecasts are consistent with those prepared and used internally for business planning and impairment testing purposes. Following this evaluation, it was determined there would be sufficient taxable income generated to realise the benefit of the deferred tax assets. With the exception of the deferred tax assets raised in respect of the Group's DRC operations (see below), no reasonably possible change in any of the key assumptions would result in a material reduction in forecast headroom of tax profits so that the recognised deferred tax asset would not be realised.

8. Income taxes continued

The recognised losses carried forward in the DRC primarily relate to historical development, ramp-up and financing related costs at KCC. The losses carried forward have an unlimited carry forward period, but are subject to annual utilisation limitation. Deferred taxation assets have been recognised for the full estimated available tax losses at 31 December 2022 as sufficient future taxable profits are expected to fully utilise the recognised carry forward tax losses. In recognising these deferred tax assets, consideration was given to the range of possible outcomes to determine the expected value of the tax losses available for future offset, including to what extent previously incurred tax losses would be available to offset future taxable profits. Any adverse challenge by the DRC tax authorities could materially impact the currently recognised tax losses and could result in a reversal of part or all of the recognised deferred tax assets.

The recognised losses carried forward in Switzerland primarily relate to non-recurring events. Based on the core business activities conducted in Switzerland and taxable income forecasts going forward, sufficient taxable profits are expected to fully utilise the recognised tax losses prior to expiration.

The recognised losses carried forward in the U.S. primarily relate to non-recurring events in 2011 and have a carry forward period of 20 years. The U.S. entities comprise our core U.S. marketing activities and based on taxable income forecasts going forward, sufficient taxable profits are expected to fully utilise the recognised tax losses prior to expiration.

INCOME TAX RECEIVABLE / PAYABLE

US$ million	**2022**	2021
Income tax receivable	401	364
Income tax payable	(4,660)	(1,785)
Net income tax payable	**(4,259)**	**(1,421)**

INCOME TAX JUDGEMENTS AND UNCERTAIN TAX LIABILITIES

Glencore assesses its liabilities and contingencies for all tax years open to audit based upon the latest information available. Inherent uncertainties exist in estimates of tax contingencies due to complexities of interpretation and changes in tax laws. For those matters where it is probable that an adjustment will be made, the Group records its reasoned estimate of these tax liabilities, including related interest charges. These current open tax matters are spread across numerous jurisdictions and consist primarily of legacy transfer pricing matters that have been open for a number of years and may take several more years to resolve. In recognising a provision for these taxation exposures, consideration was given to the range of possible outcomes to determine the Group's best estimate of the amount to provide. As at 31 December 2022, the Group has recognised $1,486 million (2021: $880 million) of uncertain tax liabilities related to possible adverse outcomes of these open matters, of which, $311 million (2021: $287 million) has been recognised net of deferred tax assets, with the balance of $1,175 million (2021: $593 million) recognised as an income tax payable. The change in the total uncertain tax position during the year reflects the issuance of various new assessments and the outcome of certain settlements and court rulings.

UK Tax Audit

In previous periods, HMRC have issued formal transfer pricing, unallowable purposes and diverted profits tax assessments for the 2008-2018 tax years, amounting to $746 million. The Group has appealed against, and continues to vigorously contest, these assessments, following, over the years, various legal opinions received and detailed analysis conducted, supporting its positions and policies applied. Therefore, the Group has not fully provided for the amount assessed. The matter is now proceeding through the Mutual Agreement Process, pursuant to article 24 of the Switzerland – United Kingdom Income Tax Treaty 1977. Management does not anticipate a significant risk of material changes in estimates in this matter within the next financial year.

DRC Tax Audit

As a matter of course, various tax authorities in the DRC issue draft assessments adjusting revenue and denying costs and other items, along with customs related claims for alleged non-compliance or incorrect coding on certain filings. Upon receipt of such draft assessments, the Group engages with the tax authorities to defend its filing positions. As at 31 December 2022, there are various ongoing technical discussions and challenges, the ultimate outcome of which remains uncertain, and therefore there remains a risk that the outcome could materially impact the recognised balances within the next financial year. It is impractical to provide further sensitivity estimates of potential downside variances.

8. Income taxes continued

AVAILABLE GROSS TAX LOSSES

Available gross tax losses carried forward and deductible temporary differences, for which no deferred tax assets have been recognised in the consolidated financial statements, are detailed below and will expire as follows:

US$ million	**2022**	2021
1 year	115	1,024
2 years	48	425
3 years	44	41
Thereafter	9,642	11,095
Unlimited	13,806	10,335
Total	**23,655**	**22,920**

As at 31 December 2022, unremitted earnings of $62,829 million (2021: $50,116 million) have been retained by subsidiaries for reinvestment. No provision is made for income taxes.

9. Property, plant and equipment

2022

US$ million	Notes	Freehold land and buildings	Plant and equipment	Right-of-use assets	Mineral and petroleum rights	Exploration and evaluation	Deferred mining costs	**Total**
Gross carrying amount:								
1 January 2022		6,854	44,580	3,048	30,019	665	15,552	100,718
Business combination	26	542	1,009	20	961	–	271	2,803
Disposal of subsidiaries	26	(169)	(256)	(37)	(163)	(255)	(382)	(1,262)
Additions		67	3,179	425	84	–	876	4,631
Disposals		(59)	(1,127)	(169)	(94)	(4)	(186)	(1,639)
Effect of foreign currency exchange movements		(8)	(171)	(1)	(145)	2	(30)	(353)
Reclassification to held for sale	16	(897)	(953)	(86)	(3,824)	–	(1,199)	(6,959)
Other movements[1]		174	(411)	(2)	417	5	192	375
31 December 2022		**6,504**	**45,850**	**3,198**	**27,255**	**413**	**15,094**	**98,314**
Accumulated depreciation and impairment:								
1 January 2022		2,940	27,361	1,343	15,777	577	9,561	57,559
Disposal of subsidiaries	26	(137)	(199)	(33)	(113)	(210)	(323)	(1,015)
Disposals		(53)	(1,003)	(134)	(50)	(2)	(185)	(1,427)
Depreciation		383	2,610	573	1,993	–	1,269	6,828
Impairment	7	91	910	–	323	(2)	660	1,982
Effect of foreign currency exchange movements		(3)	(89)	(2)	(54)	(1)	(7)	(156)
Reclassification to held for sale	16	(447)	(474)	(21)	(3,490)	–	(609)	(5,041)
Other movements[1]		33	26	–	(39)	–	–	20
31 December 2022		**2,807**	**29,142**	**1,726**	**14,347**	**362**	**10,366**	**58,750**
Net book value 31 December 2022		**3,697**	**16,708**	**1,472**	**12,908**	**51**	**4,728**	**39,564**

1 Primarily consists of increases in rehabilitation costs of $399 million and reclassifications within the various property, plant and equipment headings.

Plant and equipment includes expenditure for construction in progress of $3,731 million (2021: $3,387 million). Mineral and petroleum rights include biological assets of $25 million (2021: $24 million). Depreciation expenses included in cost of goods sold are $6,782 million (2021: $6,129 million) and in selling and administrative expenses, $46 million (2021: $52 million).

During 2022, $31 million (2021: $33 million) of interest was capitalised. With the exception of project specific borrowings, the rate used to determine the amount of borrowing costs eligible for capitalisation was 3.5% (2021: 3%).

As at 31 December 2022, with the exception of leases, no property, plant or equipment was pledged as security for borrowings (2021: $Nil).

9. Property, plant and equipment continued

2021

US$ million	Notes	Freehold land and buildings	Plant and equipment	Right-of-use assets	Mineral and petroleum rights	Exploration and evaluation	Deferred mining costs	**Total**
Gross carrying amount:								
1 January 2021		6,576	44,514	2,576	30,495	1,974	17,462	103,597
Disposal of subsidiaries	26	(100)	(352)	(12)	(132)	–	(101)	(697)
Additions		114	2,936	1,006	75	–	566	4,697
Disposals		(73)	(668)	(301)	(50)	–	(171)	(1,263)
Effect of foreign currency exchange movements		(18)	(250)	(17)	(211)	–	(47)	(543)
Reclassification to held for sale	16	(86)	(760)	(207)	(783)	(1,320)	(2,576)	(5,732)
Other movements[1]		441	(840)	3	625	11	419	659
31 December 2021		**6,854**	**44,580**	**3,048**	**30,019**	**665**	**15,552**	**100,718**
Accumulated depreciation and impairment:								
1 January 2021		2,626	25,438	1,004	14,838	1,884	10,697	56,487
Disposal of subsidiaries	26	(36)	(260)	(5)	(126)	–	(92)	(519)
Disposals		(9)	(600)	(213)	(48)	–	(171)	(1,041)
Depreciation		341	2,553	639	1,354	–	1,293	6,180
Impairment	7	16	902	3	495	–	36	1,452
Effect of foreign currency exchange movements		(5)	(118)	(6)	(74)	–	(13)	(216)
Reclassification to held for sale	16	(31)	(524)	(80)	(651)	(1,317)	(2,246)	(4,849)
Other movements[1]		38	(30)	1	(11)	10	57	65
31 December 2021		**2,940**	**27,361**	**1,343**	**15,777**	**577**	**9,561**	**57,559**
Net book value 31 December 2021		**3,914**	**17,219**	**1,705**	**14,242**	**88**	**5,991**	**43,159**

1 Primarily consists of increases in rehabilitation costs of $634 million and reclassifications within the various property, plant and equipment headings.

LEASES

The Group leases various assets including land and buildings and plant and equipment. As at 31 December 2022, the net book value of recognised right-of use assets relating to land and buildings was $418 million (2021: $450 million) and plant and equipment $1,054 million (2021: $1,255 million). The depreciation charge for the period relating to those assets was $58 million (2021: $89 million) and $515 million (2021: $550 million), respectively.

Disclosure of amounts recognised as lease liabilities in the statement of financial position and cash outflows for leases in the year are included within note 21 and their maturity analysis within note 27.

Amounts recognised in the statement of income are detailed below:

US$ million	**2022**	2021
Depreciation on right-of-use assets	(573)	(639)
Interest expense on lease liabilities	(88)	(98)
Expense relating to short-term leases	(781)	(493)
Expense relating to low-value leases	(16)	(3)
Expense relating to variable lease payments not included in the measurement of the lease liability	(7)	(5)
Income from subleasing right-of-use assets	153	304
Total	**(1,312)**	**(934)**

At 31 December 2022, the Group is committed to $229 million of short-term lease payments (2021: $209 million) and $Nil (2021: $56 million) related to capitalised leases not yet commenced.

10. Intangible assets

2022

US$ million	Notes	Goodwill	Port allocation rights	Licences, trademarks and software	Customer relationships and other	**Total**
Cost:						
1 January 2022		13,293	1,203	561	669	15,726
Disposal of subsidiaries	26	(159)	–	(4)	(24)	(187)
Additions		–	1	6	7	14
Disposals		–	(1)	(25)	(2)	(28)
Effect of foreign currency exchange movements		–	(73)	3	2	(68)
Reclassification to held for sale	16	–	–	(1)	(10)	(11)
Other movements[1]		–	(2)	14	111	123
31 December 2022		**13,134**	**1,128**	**554**	**753**	**15,569**
Accumulated amortisation and impairment:						
1 January 2022		8,293	308	341	549	9,491
Disposal of subsidiaries	26	(159)	–	(4)	(24)	(187)
Disposals		–	–	(24)	(3)	(27)
Amortisation expense[2]		–	97	34	28	159
Impairment	7	–	–	2	–	2
Effect of foreign currency exchange movements		–	(24)	–	2	(22)
Reclassification to held for sale	16	–	–	–	(6)	(6)
Other movements		–	–	(1)	–	(1)
31 December 2022		**8,134**	**381**	**348**	**546**	**9,409**
Net book value 31 December 2022		**5,000**	**747**	**206**	**207**	**6,160**

1 Includes $109 million for Mutanda mining license renewal, which is being amortised over 15 years (see note 33).
2 Recognised in cost of goods sold.

2021

US$ million	Notes	Goodwill	Port allocation rights	Licences, trademarks and software	Customer relationships and other	**Total**
Cost:						
1 January 2021		13,293	1,312	585	693	15,883
Additions		–	–	4	7	11
Disposals		–	–	(33)	(3)	(36)
Effect of foreign currency exchange movements		–	(109)	(6)	(12)	(127)
Reclassification to held for sale	16	–	–	(19)	(5)	(24)
Other movements		–	–	30	(11)	19
31 December 2021		**13,293**	**1,203**	**561**	**669**	**15,726**
Accumulated amortisation and impairment:						
1 January 2021		8,293	247	342	534	9,416
Disposals	26	–	–	(22)	(3)	(25)
Amortisation expense[1]		–	89	37	29	155
Effect of foreign currency exchange movements		–	(28)	(2)	(5)	(35)
Reclassification to held for sale	16	–	–	(16)	(4)	(20)
Other movements		–	–	2	(2)	–
31 December 2021		**8,293**	**308**	**341**	**549**	**9,491**
Net book value 31 December 2021		**5,000**	**895**	**220**	**120**	**6,235**

1 Recognised in cost of goods sold.

10. Intangible assets continued

GOODWILL

The carrying amount of goodwill has been allocated to cash-generating units (CGUs), or groups of CGUs as follows:

US$ million	2022	2021
Metals and minerals marketing business	3,326	3,326
Coal marketing business	1,674	1,674
Total	**5,000**	**5,000**

METALS AND MINERALS AND COAL MARKETING BUSINESSES

Goodwill of $3,326 million and $1,674 million was recognised in connection with previous business combinations and was allocated to the metals and minerals marketing and coal marketing CGUs respectively, based on the annual synergies expected to accrue to the respective marketing departments as a result of increased volumes, blending opportunities and freight and logistics arbitrage opportunities.

PORT ALLOCATION RIGHTS

Port allocation rights represent contractual entitlements to export certain amounts of coal on an annual basis from Richards Bay Coal Terminal in South Africa recognised as part of previous business combinations. The rights are amortised on a units of production basis.

LICENCES, TRADEMARKS AND SOFTWARE

Intangibles related to internally developed technology and patents were recognised in previous business combinations and are amortised over the estimated economic life of the technology which ranges between 3 – 20 years.

CUSTOMER RELATIONSHIPS

Customer relationships mainly represent intangible assets related to long-standing customer relationships recognised in previous business combinations. These intangible assets are being amortised on a straight-line basis over their estimated economic life which ranges between 5 – 9 years.

GOODWILL IMPAIRMENT TESTING

Given the nature of each CGU's activities, information on its fair value is usually difficult to obtain unless negotiations with potential purchasers or similar transactions are taking place. Consequently:

- The recoverable amount for each of the marketing CGUs is determined by reference to the FVLCD which utilises a price to earnings multiple approach based on the 2023 approved financial budget which includes factors such as marketing volumes handled and operating, interest and income tax charges, generally based on past experience. The price to earnings multiple of 12 times (2021: 12 times) is derived from observable market data for broadly comparable businesses; and
- Glencore believes that no reasonably possible changes in any of the above key assumptions would cause the recoverable amount to fall below the carrying value of the CGU over the next 12 months. The determination of FVLCD for each of the marketing CGUs used Level 3 valuation techniques in both years.

11. Investments in associates, joint ventures and other investments

INVESTMENTS IN ASSOCIATES AND JOINT VENTURES

US$ million	Notes	**2022**	2021
1 January		12,294	12,400
Additions		157	53
Disposals		(232)	(2)
Share of income from associates and joint ventures		2,300	2,618
Share of other comprehensive loss from associates and joint ventures		(100)	(58)
Transfer of previously held equity accounted investment to subsidiary	26	(598)	–
Impairments	7	(113)	(333)
Dividends received		(1,691)	(2,375)
Reclassification to held for sale	16	(148)	(11)
Other movements		9	2
31 December		**11,878**	**12,294**
Of which:			
Investments in associates		4,806	5,567
Investments in joint ventures		7,072	6,727

As at 31 December 2022, the carrying value of our listed associates is $430 million (2021: $406 million), mainly comprising Century Aluminum and PT CITA, which have carrying values of $232 million (2021: $165 million) and $181 million (2021: $177 million), respectively. The fair value of our listed associates, using published price quotations (a Level 1 fair value measurement) is $652 million (2021: $967 million). As at 31 December 2021, Glencore's investment in Century Aluminum was pledged under a loan facility, with proceeds received and recognised in current borrowings of $120 million (see note 21).

Transfer of previously held equity accounted investment to subsidiary

In January 2022, Glencore completed the acquisition of the remaining 66.67% interest in Cerrejón, a coal mine in Colombia, that it did not own. Prior to the acquisition, Glencore owned a 33.33% interest in Cerrejón which was accounted for as an associate (see note 26).

Disposals

On 12 July 2022, Glencore effected the sale of a royalty package by BaseCore Metals LP ("BaseCore") to Sandstorm Gold Ltd. ("Sandstorm"). Glencore received, in aggregate, $300 million in cash and Sandstorm shares for its 50% interest in BaseCore. The disposal resulted in a gain on disposal of non-current assets of $131 million (see note 4).

11. Investments in associates, joint ventures and other investments continued

2022 Details of material associates and joint ventures

Summarised financial information in respect of Glencore's associates and joint ventures, reflecting 100% of the underlying associates' and joint ventures' relevant figures, is set out below.

US$ million	Antamina	**Total material associates**	Collahuasi	Viterra	**Total material joint ventures**	**Total material associates and joint ventures**
Non-current assets	5,137	**5,137**	5,540	7,207	**12,747**	**17,884**
Current assets	2,105	**2,105**	2,405	16,480	**18,885**	**20,990**
Non-current liabilities	(2,129)	**(2,129)**	(2,602)	(7,496)	**(10,098)**	**(12,227)**
Current liabilities	(681)	**(681)**	(436)	(10,958)	**(11,394)**	**(12,075)**
The above assets and liabilities include the following:						
Cash and cash equivalents	87	**87**	446	637	**1,083**	**1,170**
Current financial liabilities[1]	(50)	**(50)**	(21)	(4,007)	**(4,028)**	**(4,078)**
Non-current financial liabilities[1]	(1,089)	**(1,089)**	(1,084)	(6,759)	**(7,843)**	**(8,932)**
Net assets 31 December 2022	**4,432**	**4,432**	**4,907**	**5,233**	**10,140**	**14,572**
Glencore's ownership interest	33.8%		44.0%	49.9%		
Acquisition fair value and other adjustments	1,694	**1,694**	1,046	1,256	**2,302**	**3,996**
Carrying value	3,192	**3,192**	3,205	3,867	**7,072**	**10,264**

1 Financial liabilities exclude trade, other payables and provisions.

Summarised profit and loss in respect of Glencore's associates and joint ventures, reflecting 100% of the underlying associates' and joint ventures' relevant figures for the year ended 31 December 2022 including group adjustments relating to alignment of accounting policies or fair value adjustments, is set out below.

US$ million	Antamina	**Total material associates**	Collahuasi	Viterra	**Total material joint ventures**	**Total material associates and joint ventures**
Revenue	4,668	**4,668**	4,817	56,832	**61,649**	**66,317**
Income for the year	1,601	**1,601**	1,807	995	**2,802**	**4,403**
Other comprehensive loss	–	**–**	(13)	(155)	**(168)**	**(168)**
Total comprehensive income	1,601	**1,601**	1,794	840	**2,634**	**4,235**
Glencore's share of dividends paid	472	**472**	660	200	**860**	**1,332**
The above income for the year includes the following:						
Depreciation and amortisation	(1,039)	**(1,039)**	(658)	(936)	**(1,594)**	**(2,633)**
Interest income[1]	86	**86**	9	131	**140**	**226**
Interest expense[2]	(5)	**(5)**	(120)	(397)	**(517)**	**(522)**
Income tax expense	(952)	**(952)**	(832)	(463)	**(1,295)**	**(2,247)**

1 Includes foreign exchange gains and other income of $186 million.

2 Includes foreign exchange losses and other expenses of $62 million.

11. Investments in associates, joint ventures and other investments continued

2021 Details of material associates and joint ventures

Summarised financial information in respect of Glencore's associates and joint ventures, reflecting 100% of the underlying associates' and joint ventures' relevant figures, is set out below.

US$ million	Cerrejón	Antamina	**Total material associates**	Collahuasi	Viterra	**Total material joint ventures**	**Total material associates and joint ventures**
Non-current assets	2,033	5,288	**7,321**	5,398	6,118	**11,516**	**18,837**
Current assets	1,030	1,607	**2,637**	1,913	13,399	**15,312**	**17,949**
Non-current liabilities	(690)	(1,875)	**(2,565)**	(1,758)	(5,031)	**(6,789)**	**(9,354)**
Current liabilities	(509)	(973)	**(1,482)**	(994)	(9,682)	**(10,676)**	**(12,158)**
The above assets and liabilities include the following:							
Cash and cash equivalents	511	134	**645**	354	472	**826**	**1,471**
Current financial liabilities[1]	(27)	(45)	**(72)**	(21)	(4,516)	**(4,537)**	**(4,609)**
Non-current financial liabilities[1]	(14)	(847)	**(861)**	(402)	(4,409)	**(4,811)**	**(5,672)**
Net assets 31 December 2021	**1,864**	**4,047**	**5,911**	**4,559**	**4,804**	**9,363**	**15,274**
Glencore's ownership interest	33.3%	33.8%		44.0%	49.9%		
Acquisition fair value and other adjustments	(54)	1,756	**1,702**	1,059	1,265	**2,324**	**4,026**
Carrying value	567	3,124	**3,691**	3,065	3,662	**6,727**	**10,418**

1 Financial liabilities exclude trade, other payables and provisions.

Summarised profit and loss in respect of Glencore's associates and joint ventures, reflecting 100% of the underlying associates' and joint ventures' relevant figures for the year ended 31 December 2021, including group adjustments relating to alignment of accounting policies or fair value adjustments, is set out below.

US$ million	Cerrejón	Antamina	**Total material associates**	Collahuasi	Viterra	**Total material joint ventures**	**Total material associates and joint ventures**
Revenue	2,317	5,307	**7,624**	5,906	39,704	**45,610**	**53,234**
Income for the year	636	1,992	**2,628**	2,777	947	**3,724**	**6,352**
Other comprehensive loss	–	–	**–**	(13)	(94)	**(107)**	**(107)**
Total comprehensive (loss)/income	636	1,992	**2,628**	2,764	853	**3,617**	**6,245**
Glencore's share of dividends paid	240	749	**989**	1,144	150	**1,294**	**2,283**
The above (loss)/income for the year includes the following:							
Depreciation and amortisation	(267)	(919)	**(1,186)**	(653)	(776)	**(1,429)**	**(2,615)**
Interest income[1]	–	–	**–**	66	55	**121**	**121**
Interest expense[2]	(18)	(38)	**(56)**	(13)	(229)	**(242)**	**(298)**
Income tax credit/(expense)	(435)	(1,241)	**(1,676)**	(1,470)	(282)	**(1,752)**	**(3,428)**

1 Includes foreign exchange gains and other income of $114 million.
2 Includes foreign exchange losses and other expenses of $58 million.

11. Investments in associates, joint ventures and other investments continued

Aggregate information of associates and joint ventures that are not individually material:

US$ million	**2022**	2021
The Group's share of income	467	38
The Group's share of other comprehensive loss	(17)	(5)
The Group's share of total comprehensive income	450	33
Aggregate carrying value of the Group's interests	1,614	1,876

The amount of corporate guarantees in favour of associates and joint ventures as at 31 December 2022 was $463 million (2021: $611 million). No amounts have been claimed or provided as at 31 December 2022. Glencore's share of joint ventures' capital commitments amounts to $464 million (2021: $213 million).

OTHER INVESTMENTS

US$ million	**2022**	2021
Fair value through other comprehensive income[1]		
EN+ GROUP PLC	–	789
Yancoal	–	160
OSJC Rosneft	–	485
Press Metal Aluminium	129	–
Shenzhen Energy Gas Investment Holding	104	–
Other	186	186
	419	1,620
Fair value through profit and loss		
Sandstorm Gold Ltd	35	–
Other	2	–
	37	–
Total	**456**	**1,620**

1 Movements in fair value through other comprehensive income for the year comprise negative changes in fair value of $1,274 million relating to EN+ and Rosneft (see below) net of positive changes in fair value of $150 million (2021: negative changes of $52 million) relating to other investments.

During the year, dividend income from equity investments designated as at fair value through other comprehensive income amounted to $45 million (2021: $23 million).

Investments in EN+ and Rosneft

In February 2022, the Russian government commenced a war against the people of Ukraine, resulting in a humanitarian crisis and significant disruption to financial and commodity markets. A number of countries including, the United States of America, European Union, Switzerland and United Kingdom imposed a series of sanctions against the Russian government, various companies, and certain individuals. In response to these sanctions, Russia implemented a number of counter-sanctions including restrictions on the divestment from Russian assets by foreign investors.

Glencore owns equity stakes in EN+ (10.6%) and Rosneft (0.57%), listed on the London Stock Exchange and Moscow Stock Exchange. On 3 March 2022, EN+ was suspended from trading on the London Stock Exchange and Rosneft stopped trading on the Moscow exchange. On 24 March, Rosneft resumed trading, however, Glencore is not able to sell its Rosneft shares on the Moscow Stock Exchange and is unable to ascribe probabilities to possible outcomes of any potential exit process.

IFRS defines fair value as 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. Further, an entity should take into account the characteristics of the asset or liability if market participants would take those into account when pricing the asset or liability, where such characteristics would include restrictions on the sale or use of the asset. Under current market conditions, given the restrictions noted above, the quoted share prices for both investments are not deemed to be reliable evidence of fair value and thus it was determined that it is no longer appropriate to classify these investments as Level 1 financial instruments in accordance with IFRS, but rather as Level 3 financial instruments. In valuing these investments as a Level 3 investment, Glencore concluded that there is no realistic way to exit these stakes in the current environment and considered that the measure of fair value is subject to high measurement uncertainty. Both equity interests were written down to $Nil on the basis that their fair value is not materially different to $Nil given the valuation a market participant would ascribe to a hypothetical transfer reflecting their inability to access the market. The corresponding negative mark-to-market adjustments was recognised in other comprehensive income.

12. Advances and loans

US$ million	Notes	2022	2021
Financial assets at amortised cost			
Loans to associates		130	128
Other non-current receivables and loans		309	519
Deferred consideration	26	142	–
Rehabilitation trust fund[1]		148	148
		729	**795**
Financial assets at fair value through profit and loss			
Other non-current receivables and loans	28	22	28
Convertible loan	28	168	–
Contingent consideration	28	103	135
		293	**163**
Non-financial assets			
Pension surpluses	24	148	125
Advances repayable with product[2]		1,254	1,673
Land rights prepayment		150	150
Other tax and related non-current receivables[3]		80	621
		1,632	**2,569**
Total		**2,654**	**3,527**

1 The balance has been assessed for impairment and is deemed recoverable.
2 Net of $538 million (2021: $1,074 million) provided by various banks, the repayment terms of which are contingent upon and connected to the future delivery of contractual production.
3 Includes VAT impairment charges of $632 million (see note 7).

FINANCIAL ASSETS AT AMORTISED COST

Loans to associates

Loans to associates generally bear interest at applicable floating market rates plus a premium.

Other non-current receivables and loans

Other non-current receivables and loans comprise the following:

US$ million	2022	2021
Secured financing arrangements	306	511
Other	3	8
Total	**309**	**519**

Various financing facilities, generally marketing related and secured against certain assets and/or payable from the future sale of production of the counterparty. The non-current receivables and loans are interest-bearing and on average are to be repaid over a three-year period.

Rehabilitation trust fund

Glencore makes contributions to controlled funds established to meet the costs of its restoration and rehabilitation liabilities, primarily in South Africa. These funds are not available for the general purposes of the Group, and there is no present obligation to make any further contributions.

Loss allowances of financial assets at amortised cost

The Group determines the expected credit loss of loans to associates, other non-current receivables and loans (at amortised cost) and deferred consideration based on different scenarios of probability of default and expected loss applicable to each of the material underlying balances. Expected credit losses for these assets are measured as either 12-month expected credit losses, taking into account prior experience regarding probability of default adjusted for forward looking information, or as lifetime expected credit losses (when there is significant increase in credit risk or the asset is credit-impaired). The movement in loss allowance for financial assets classified at amortised cost is detailed below:

12. Advances and loans continued

2022 US$ million	Loans to associates 12-Month ECL	Lifetime ECL[1]	Total	Other non-current receivables and loans and deferred consideration 12-Month ECL	Lifetime ECL[2]	Total	Total
Gross carrying value 31 December 2022[3]	15	191	206	365	431	796	1,002
Allowance for credit loss							
1 January 2022	–	62	62	14	240	254	316
Released during the period[4]	–	–	–	–	(9)	(9)	(9)
Charged during the period[4]	–	14	14	–	91	91	105
Effect of foreign currency exchange movements	–	–	–	(5)	–	(5)	(5)
Reclassifications from current accounts receivable	–	–	–	–	14	14	14
31 December 2022	**–**	**76**	**76**	**9**	**336**	**345**	**421**
Net carrying value 31 December 2022	**15**	**115**	**130**	**356**	**95**	**451**	**581**

1 Comprises stage 3 credit losses of $76 million.
2 Comprises stage 2 credit losses of $51 million and stage 3 credit losses of $285 million.
3 Increases in lifetime ECL gross carrying values during the year result primarily from reclassifications from 12 months ECL.
4 $37 million recognised as impairment (see note 7) and the balancing charge of $59 million recognised in cost of goods sold.

2021 US$ million	Loans to associates 12-Month ECL	Lifetime ECL[1]	Total	Other non-current receivables and loans and deferred consideration 12-Month ECL	Lifetime ECL[2]	Total	Total
Gross carrying value 31 December 2021	31	159	190	529	244	773	963
Allowance for credit loss							
1 January 2021	–	62	62	37	303	340	402
Released during the period[3]	–	–	–	(23)	(5)	(28)	(28)
Charged during the period[3]	–	–	–	15	–	15	15
Utilised during the period	–	–	–	(13)	(35)	(48)	(48)
Reclassifications to current accounts receivable	–	–	–	(2)	(23)	(25)	(25)
31 December 2021	**–**	**62**	**62**	**14**	**240**	**254**	**316**
Net carrying value 31 December 2021	**31**	**97**	**128**	**515**	**4**	**519**	**647**

1 Comprises stage 3 credit losses of $62 million.
2 Comprises stage 3 credit losses of $240 million.
3 $22 million recognised as impairment (see note 7) and the balancing charge of $9 million recognised in cost of goods sold.

FINANCIAL ASSETS AT FAIR VALUE THROUGH PROFIT AND LOSS

Other non-current receivables and loans

During 2022, no fair value movements were recognised (2021: positive $35 million)(see note 7).

Convertible loan

In May 2022, Glencore subscribed for $200 million of convertible debt in Li-Cycle Holdings Corp. ("Li-Cycle"), a leading lithium-ion battery recycler in North America, listed on the New York Stock Exchange. The convertible loan is repayable by 2027 at an effective interest rate of SOFR plus 5% per annum. If Glencore elects to convert during the conversion option period, Glencore would hold an approximate 10% equity stake in Li-Cycle. The loan is classified as financial asset at fair value through profit and loss in accordance with IFRS (see notes 28 and 29). During 2022, fair value movements of negative $40 million were recognised (see note 5).

Contingent consideration

In 2022, fair value movements of positive $117 million (2021: $39 million) were recognised (see note 5).

NON-FINANCIAL ASSETS

Advances repayable with product

US$ million	**2022**	2021
Counterparty		
Mopani transaction debt	579	881
Société Nationale d'Electricité (SNEL) power advances	338	304
Chad State National Oil Company	199	293
Société Nationale des Pétroles du Congo	86	129
Other[1]	52	66
Total	**1,254**	**1,673**

1 Comprises no individually material items.

12. Advances and loans continued

Mopani

On 31 March 2021, Glencore completed the disposal of its 90% interest in Mopani to ZCCM Investments Holdings plc, the holder of the remaining 10% interest in Mopani, in exchange for $1 and the rights to offtake copper and other metals from Mopani until $1.5 billion of existing intercompany debt (the "transaction debt") has been repaid to Glencore. The transaction debt attracts interest at a floating benchmark rate plus 3%. The repayment of the transaction debt is in substance based on Glencore receiving physical product deliveries from Mopani through its offtake rights and retaining defined percentages of Mopani's annual gross revenues until the transaction debt is fully repaid. On the date of completion, the fair value of the transaction debt was determined to be $838 million (see note 26). During 2022, the originally expected production rate at Mopani was not achieved, in part due to a lack of funding. The new shareholder has conducted operational and strategic reviews, resulting in Mopani seeking additional funding and to restructure and extend repayment of the transaction debt. As a result, an impairment of $422 million was recognised (see note 7). As at 31 December 2022, $596 million (2021: $904 million) of debt is outstanding, of which $579 million (2021: $881 million) is due after 12 months and is presented above and $17 million (2021: $23 million) is due within 12 months and is included in Accounts receivable.

SNEL power advances

In early 2012, a joint agreement with Société Nationale d'Électricité (SNEL), the Democratic Republic of the Congo's (DRC) national electricity utility, was signed whereby Glencore's operations would contribute $375 million to a major electricity infrastructure refurbishment programme, including transmission and distribution systems. This facilitated a progressive increase in power availability to 450 megawatts by the end of Q1 2020. Funding commenced in the second quarter of 2012 and completed in Q4 2021. The loans are being repaid via discounts on electricity purchases.

Chad State National Oil Company

The net outstanding amount of advances to the Chad State National Oil Company (SHT) is $232 million (2021: $321 million). These amounts are to be settled through future oil deliveries over ten years. As at 31 December 2022, the advance is net of $393 million (2021: $604 million) provided by a syndicate of lenders, the repayment terms of which are contingent upon and connected to the receipt of oil due from SHT under the prepayment. Of the net amount advanced, $199 million (2021: $293 million) is receivable after 12 months and is presented within Other non-current receivables and loans and $33 million (2021: $31 million) is due within 12 months and included within Accounts receivable.

Société Nationale des Pétroles du Congo (SNPC)

The net outstanding amount of advances to SNPC is $131 million (2021: $156 million). These amounts are to be settled through future oil deliveries over five years. As at 31 December 2022, the advance is net of $385 million (2021: $498 million) provided by the lenders, the repayment terms of which are contingent upon and connected to the future receipt of oil contractually due from SNPC. Of the net amount advanced, $86 million (2021: $129 million) is due after 12 months and is presented within Other long-term receivables and loans and $45 million (2021: $27 million) is due within 12 months and included within Accounts receivable.

Land rights prepayment

In 2019, Kamoto Copper Company ("KCC") entered into an agreement with La Générale des Carrières et des Mines ("Gécamines"), Glencore's 25% joint venture partner in KCC, to acquire from Gécamines a comprehensive land package covering areas adjacent to KCC's existing mining concessions for $250 million. The package includes multiple blocks for construction of a new long-term tailings facility and the possible exploitation of additional resources that will enhance KCC's ability to more efficiently operate its mines, facilities and other key infrastructure requirements.

In addition to the above consideration, the agreement includes the following key additional undertakings:

- obligations on KCC to remove tailings (estimated at circa 15m dmt), currently in a sub-section of these areas, to another suitable location;
- contingent obligations to pay "Pas de Porte" payments to Gécamines if KCC declares a JORC compliant reserve or otherwise elects to mine any resources in the Resource Areas; and
- a new royalty to Gécamines of 2.5% of net sales from the acquired land areas if KCC elects to mine any resources in such areas.

In August 2020, KCC advanced $150 million to Gécamines as an agreed prepayment of the consideration due. If the closing conditions as prescribed in the agreement are not fulfilled, Glencore has the right to accrue interest on the prepaid amount, terminate the agreement and, if funds are not returned, offset against future amounts owing to Gécamines. The balance of the consideration is due 5 days after the respective closing conditions of each area to be transferred are satisfied. During 2022, activities to progress the transfer of these land packages (e.g. removal of tailings and drilling activities to confirm resource availability) continued.

13. Inventories

US$ million	2022	2021
Inventory at fair value less costs of disposal	**19,157**	**16,073**
Raw materials and consumables	5,970	5,077
Semi finished products	5,527	4,901
Finished goods	2,806	2,383
Inventory at the lower of cost or net realisable value	**14,303**	**12,361**
Total current inventory	**33,460**	**28,434**
Raw materials and consumables	605	662
Inventory at the lower of cost or net realisable value	**605**	**662**
Total non-current inventory	**605**	**662**

CURRENT INVENTORY

The amount of inventories and related ancillary costs recognised as an expense during the period was $211,666 million (2021: $177,704 million).

Fair value of inventories are predominantly a Level 2 fair value measurement (see note 29) using observable market prices obtained from exchanges, traded reference indices or market survey services adjusted for relevant location and quality differentials. There are no significant unobservable inputs in the fair value measurement of such inventories.

Glencore has a number of dedicated financing facilities, which finance a portion of its inventories. In each case, the inventory has not been derecognised as the Group has not transferred control. The proceeds received are recognised as current borrowings (see note 21). As at 31 December 2022, the total amount of inventory pledged under such facilities was $3,455 million (2021: $17 million). The proceeds received and recognised as current borrowings were $3,092 million (2021: $2 million) and $80 million (2021: $80 million) as non-current borrowings.

NON-CURRENT INVENTORY

Non-current inventories valued at lower of cost or net realisable value are not expected to be utilised or sold within the normal operating cycle and are therefore classified as non-current inventory.

14. Accounts receivable

US$ million	Notes	2022	2021
Financial assets at amortised cost			
Trade receivables		7,202	4,943
Margin calls paid and other broker balances		7,515	5,914
Receivables from associates		441	413
Deferred consideration	26	333	–
Other receivables[1]		528	402
		16,019	**11,672**
Financial assets at fair value through profit and loss			
Trade receivables containing provisional pricing features	28	5,426	5,267
Finance lease receivable	28	–	2
Contingent consideration	28	128	175
Other receivables	28	73	79
		5,627	**5,523**
Non-financial assets			
Advances repayable with product[2]		1,416	876
Other tax and related receivables[3]		1,503	1,422
		2,919	**2,298**
Total		**24,565**	**19,493**

1 Includes current portion of non-current loans receivable of $319 million (2021: $296 million).

2 Includes advances, net of $487 million (2021: $409 million) provided by banks, the repayment terms of which are contingent upon and connected to the future delivery of contractual production over the next 12 months.

3 Comprises sales and other tax receivables of $1,351 million (2021: $1,253 million) and other receivables of $152 million (2021: $169 million).

The average credit period on sales of goods is 17 days (2021: 16 days). The carrying value of trade receivables approximates fair value.

The Group applies a simplified approach to measure the loss allowance for trade receivables classified at amortised cost, using the lifetime expected loss provision. The expected credit loss on trade receivables is estimated using a provision matrix by reference to past default experience and credit rating, adjusted as appropriate for current observable data. Expected credit loss provisions are recognised in cost of goods sold and during the period, $148 million (2021: $11 million) of such losses were recognised. Current year provision is up over prior year due primarily to higher over-all gross receivable balances on-hand at period-end as a result of higher commodity prices and a specific slow-moving exposure which is expected to be settled during 2023. The following table details the risk profile of trade receivables based on the Group's provision matrix.

US$ million	**Trade receivables – days past due**					
As at 31 December 2022	**Not past due**	**<30**	**31 – 60**	**61 – 90**	**>90**	**Total**
Gross carrying amount	5,014	444	158	85	1,673	7,374
Weighted average expected credit loss rate	0.45%	0.67%	0.98%	1.17%	7.34%	
Lifetime expected credit loss	(23)	(3)	(2)	(1)	(143)	(172)
Total	**4,991**	**441**	**156**	**84**	**1,530**	**7,202**

US$ million	**Trade receivables – days past due**					
As at 31 December 2021	**Not past due**	**<30**	**31 – 60**	**61 – 90**	**>90**	**Total**
Gross carrying amount	4,034	287	157	152	337	4,967
Weighted average expected credit loss rate	0.27%	0.55%	0.82%	1.10%	2.33%	
Lifetime expected credit loss	(11)	(2)	(1)	(2)	(8)	(24)
Total	**4,023**	**285**	**156**	**150**	**329**	**4,943**

14. Accounts receivable continued

The Group determines the expected credit loss of receivables from associates, deferred consideration and other receivables (at amortised cost) based on different scenarios of probability of default and expected loss applicable to each of the material underlying balances. Expected credit losses for these assets are measured as either 12-month expected credit losses, taking into account prior experience regarding probability of default adjusted for forward looking information, or as lifetime expected credit losses (when there is significant increase in credit risk or the asset is credit-impaired). The movement in allowance for credit loss relating to receivables from associates and other receivables is detailed below:

2022	Receivables from associates			Other receivables and deferred consideration			
US$ million	12-Month ECL	Lifetime ECL[1]	Total	12-Month ECL	Lifetime ECL[2]	Total	**Total**
Gross carrying value 31 December 2022	432	136	568	896	108	1,004	1,572
Allowance for credit loss							
1 January 2022	–	116	116	23	106	129	245
Released during the period[3]	–	(2)	(2)	(5)	–	(5)	(7)
Charged during the period[3]	–	21	21	34	16	50	71
Utilised during the period	–	–	–	(3)	(4)	(7)	(7)
Effect of foreign currency exchange movements	–	(8)	(8)	–	(4)	(4)	(12)
Reclassification to held for sale	–	–	–	–	(6)	(6)	(6)
Reclassifications to non-current receivables and loans	–	–	–	(10)	(4)	(14)	(14)
31 December 2022	**–**	**127**	**127**	**39**	**104**	**143**	**270**
Net carrying value 31 December 2022	**432**	**9**	**441**	**857**	**4**	**861**	**1,302**

1 Comprises stage 2 credit losses of $2 million and stage 3 credit losses of $125 million.
2 Comprises stage 2 credit losses of $29 million and stage 3 credit losses of $75 million.
3 $15 million recognised as impairment (see note 7) and the balancing $49 million net charge recognised in cost of goods sold.

2021	Receivables from associates			Other receivables and deferred consideration			
US$ million	12-Month ECL	Lifetime ECL[1]	Total	12-Month ECL	Lifetime ECL[2]	Total	**Total**
Gross carrying value 31 December 2021	391	138	529	387	144	531	1,060
Allowance for credit loss							
1 January 2021	–	122	122	51	81	132	254
Released during the period[3]	–	–	–	(10)	–	(10)	(10)
Charged during the period[3]	–	3	3	15	15	30	33
Utilised during the period	–	–	–	(29)	(19)	(48)	(48)
Effect of foreign currency exchange movements	–	(9)	(9)	–	–	–	(9)
Reclassifications from non-current receivables and loans	–	–	–	(4)	29	25	25
31 December 2021	**–**	**116**	**116**	**23**	**106**	**129**	**245**
Net carrying value 31 December 2021	**391**	**22**	**413**	**364**	**38**	**402**	**815**

1 Comprises stage 2 credit losses of $2 million and stage 3 credit losses of $114 million.
2 Comprises stage 2 credit losses of $33 million and stage 3 credit losses of $73 million.
3 $7 million recognised as a reversal of impairment (see note 7) and the balancing $30 million net charge recognised in cost of goods sold.

Glencore has a number of dedicated financing facilities, which finance a portion of its receivables. The receivables have not been derecognised, as the Group retains the principal risks and rewards of ownership. The proceeds received are recognised as current borrowings (see note 21). As at 31 December 2022, the total amount of trade receivables pledged was $278 million (2021: $Nil) and proceeds received and classified as current borrowings amounted to $200 million (2021: $Nil).

15. Cash and cash equivalents

US$ million	**2022**	2021
Bank and cash on hand	1,445	2,403
Deposits and treasury bills	478	838
Total	**1,923**	**3,241**

Cash and cash equivalents comprise cash held at bank, cash in hand and short-term bank deposits with an original maturity of three months or less. The carrying amount of these assets approximates their fair value.

As at 31 December 2022, $78 million (2021: $547 million) was restricted, including $Nil (2021: $477 million) held in on-shore accounts in our DRC operations, available to effect payment to on-shore counterparts only.

16. Assets and liabilities held for sale

Net assets held for sale are measured at their carrying amount, being the lower of carrying amount and fair value less costs to sell. As of 31 December 2022, the carrying amounts of assets and liabilities held for sale were lower than their fair value less costs to sell, hence no gains or losses were recognised in the statement of income for the period.

The carrying value of the assets and liabilities classified as held for sale are detailed below:

2022

US$ million	Cobar	Volcan	**Total**
Non-current assets			
Property, plant and equipment	451	1,467	1,918
Intangible assets	1	4	5
Investments in associates and joint ventures	–	148	148
Advances and loans	–	71	71
Deferred tax assets	–	32	32
	452	**1,722**	**2,174**
Current assets			
Inventories	25	57	82
Accounts receivable	4	68	72
Income tax receivable	–	29	29
Prepaid expenses	3	5	8
Cash and cash equivalents	1	74	75
	33	**233**	**266**
Total assets held for sale	**485**	**1,955**	**2,440**
Non-current liabilities			
Borrowings	–	(777)	(777)
Deferred tax liabilities	(25)	(151)	(176)
Provisions	(20)	(322)	(342)
Deferred income	–	(6)	(6)
Post-retirement and other employee benefits	(1)	–	(1)
	(46)	**(1,256)**	**(1,302)**
Current liabilities			
Borrowings	(1)	(22)	(23)
Accounts payable	(42)	(315)	(357)
Provisions	–	(31)	(31)
Income tax payable	–	(28)	(28)
	(43)	**(396)**	**(439)**
Total liabilities held for sale	**(89)**	**(1,652)**	**(1,741)**
Total net assets held for sale	**396**	**303**	**699**
Non-controlling interest	**–**	**201**	**201**

COBAR

In March 2022, Glencore entered into an agreement with Metals Acquisition Corp (MAC) for the disposal of its 100% interest in Cobar, a copper mine in New South Wales, Australia for $775 million in cash and an additional up to $100 million cash or equity stake in MAC, plus $75 million dependent on a future equity raise with an equity back-stop provision for Glencore's benefit, plus $75 million contingent payment when copper averages exceed $4.25/lb for 18 continuous months over the life of mine and a $75 million contingent payment when copper averages exceed US$4.50/lb for 24 continuous months over the life of mine. Completion of the sale is conditional on approval of MAC's shareholders and receipt of certain regulatory approvals and is expected to occur in H1 2023.

VOLCAN

In Q4 2022, Glencore commenced a process exploring the possible disposal of its 23.3% economic interest in Volcan.

16. Assets and liabilities held for sale continued

2021

US$ million	Ernest Henry	Bolivia	Access World	E&P Chad	Total as at 31.12.2021
Non-current assets					
Property, plant and equipment	311	161	171	240	883
Intangible assets	–	2	2	–	4
Investments	–	–	11	–	11
Advances and loans	–	–	10	–	10
Deferred tax assets	30	10	4	–	44
	341	**173**	**198**	**240**	**952**
Current assets					
Inventories	16	36	–	22	74
Accounts receivable	26	82	93	14	215
Income tax receivable	–	–	1	–	1
Prepaid expenses	2	–	10	–	12
Cash and cash equivalents	1	21	45	–	67
	45	**139**	**149**	**36**	**369**
Total assets held for sale	**386**	**312**	**347**	**276**	**1,321**
Non-current liabilities					
Borrowings	–	(3)	(111)	–	(114)
Deferred income	(138)	–	–	–	(138)
Deferred tax liabilities	–	(4)	(1)	(4)	(9)
Provisions	(74)	(29)	(1)	(85)	(189)
Post-retirement and other employees benefits	(1)	(17)	(1)	–	(19)
	(213)	**(53)**	**(114)**	**(89)**	**(469)**
Current liabilities					
Borrowings	–	(7)	(17)	–	(24)
Accounts payable	(32)	(55)	(97)	(6)	(190)
Deferred income	(53)	–	–	–	(53)
Provisions	(1)	(35)	(3)	–	(39)
Income tax payable	–	(14)	(1)	–	(15)
	(86)	**(111)**	**(118)**	**(6)**	**(321)**
Total liabilities held for sale	**(299)**	**(164)**	**(232)**	**(95)**	**(790)**
Total net assets held for sale	**87**	**148**	**115**	**181**	**531**
Non-controlling interest	**–**	**–**	**(2)**	**–**	**(2)**

ERNEST HENRY

In November 2021, Glencore agreed to dispose of its 100% interest in Ernest Henry Mining Pty Ltd, a copper-gold mine in Queensland, Australia for AUD $1 billion (c.US$720 million), comprising AUD $800 million on closing and the balance (AUD $200 million) due 12 months post closing. The transaction closed in January 2022 (see note 26).

BOLIVIA

In October 2021, Glencore agreed to sell its Bolivian zinc assets (Sinchi Wayra and Illapa), to Santacruz Silver Mining Ltd, for approximately $110 million and a 1.5% NSR royalty over the life of the mines. $20 million was due on completion with the balance (c.$90 million) due over the following 4 years. The transaction closed in March 2022 (see note 26).

ACCESS WORLD

At 31 December 2021, Glencore was in advanced negotiations with a prospective buyer to dispose of its 100% interest in the Access World Group, a global storage and logistics group, for $180 million. The share purchase agreement was subsequently signed on 31 January 2022 and the transaction closed in December 2022 (see note 26).

E&P CHAD

In August 2021, Glencore agreed to dispose 100% of its Chad upstream oil operations to Perenco S.A.. The transaction closed in June 2022 (see note 26).

17. Share capital and reserves

	Number of ordinary shares (thousand)	Share capital (US$ million)	Share premium (US$ million)
Authorised:			
31 December 2022 and 2021 Ordinary shares with a par value of $0.01 each	50,000,000		
Issued and fully paid up:			
1 January 2021 and 31 December 2021 – Ordinary shares	**14,586,200**	**146**	**43,679**
Own shares cancelled during the year	(500,000)	(5)	(2,130)
Distributions paid (see note 19)	–	–	(4,832)
31 December 2022 – Ordinary shares	**14,086,200**	**141**	**36,717**

	Treasury Shares		Trust Shares		**Total**	
	Number of shares (thousand)	Own shares (US$ million)	Number of shares (thousand)	Own shares (US$ million)	**Number of shares (thousand)**	**Own shares (US$ million)**
Own shares:						
1 January 2021	1,261,887	(4,801)	103,001	(503)	**1,364,888**	**(5,304)**
Own shares purchased during the year	128,501	(616)	32,000	(130)	**160,501**	**(746)**
Own shares disposed during the year	–	–	(35,788)	173	**(35,788)**	**173**
31 December 2021	**1,390,388**	**(5,417)**	**99,213**	**(460)**	**1,489,601**	**(5,877)**
1 January 2022	1,390,388	(5,417)	99,213	(460)	**1,489,601**	**(5,877)**
Own shares purchased during the year	425,309	(2,503)	–	–	**425,309**	**(2,503)**
Own shares transferred to satisfy employee share awards	(50,000)	225	50,000	(271)	**–**	**(46)**
Own shares disposed during the year	–	–	(93,567)	430	**(93,567)**	**430**
Own shares cancelled during the year	(500,000)	2,135	–	–	**(500,000)**	**2,135**
31 December 2022	**1,265,697**	**(5,560)**	**55,646**	**(301)**	**1,321,343**	**(5,861)**

OWN SHARES

Own shares comprise shares acquired under the Company's share buy-back programmes ("Treasury Shares") and shares of Glencore plc held by Group employee benefit trusts ("the Trusts") to satisfy the potential future settlement of the Group's employee stock plans ("Trust Shares").

The Trusts also coordinate the funding and manage the delivery of Trust Shares and free share awards under certain of Glencore's share plans. The Trust Shares have been acquired by either stock market purchases or share issues from the Company. The Trusts may hold an aggregate of Trust Shares up to 5% of the issued share capital of the Company at any one time and are permitted to sell them. The Trusts have waived the right to receive distributions from the Trust Shares that they hold. Costs relating to the administration of the Trusts are expensed in the period in which they are incurred.

In July 2022, Glencore announced a $3 billion share buy-back programme to be completed by February 2023, effected in accordance with the terms of the authority granted by shareholders at the 2022 Annual General Meeting. As at 31 December 2022, $1,920 million of shares have been purchased. No liability has been recognised in respect of this share buy-back programme as the terms of the arrangement do not result in a contractual obligation.

During the year, Glencore also purchased the remaining $33 million of shares under the $650 million share buy-back programme announced in August 2021 and $550 million shares under the share buy-back programme announced in February 2022.

In October 2022, Glencore cancelled 500 million of treasury shares, adopting a policy to reduce and maintain from time to time treasury shares below 10% of total issued share capital.

As at 31 December 2022: 1,321,342,547 shares (2021: 1,489,601,292 shares), including 1,265,696,812 Treasury Shares (2021: 1,390,388,731 shares), equivalent to 9.38% (2021: 9.36%) of the issued share capital were held at a cost of $5,861 million (2021: $5,877 million) and market value of $8,809 million (2021: $7,559 million).

17. Share capital and reserves continued

OTHER RESERVES

US$ million	Foreign currency translation reserve	Cash flow hedge reserve	Net unrealised gain/(loss)	Net ownership changes in subsidiaries	**Total**
1 January 2022	(2,898)	(124)	(300)	(2,609)	(5,931)
Exchange loss on translation of foreign operations	(290)	–	–	–	(290)
Items recycled to the statement of income on restructuring of intragroup debt (see note 5)	431	–	–	–	431
Items recycled to the statement of income upon disposal of subsidiaries (see note 26)	84	–	–	(34)	50
Gain on cash flow hedges, net of tax	–	27	–	–	27
Loss on equity investments accounted for at fair value through other comprehensive income, net of tax	–	–	(1,122)	–	(1,122)
Change in ownership interest in subsidiaries (see note 33)	–	–	–	(3)	(3)
Gain due to changes in credit risk on financial liabilities accounted for at fair value through profit and loss	–	–	2	–	2
Reclassifications	–	–	3	–	3
31 December 2022	**(2,673)**	**(97)**	**(1,417)**	**(2,646)**	**(6,833)**
1 January 2021	(2,832)	(147)	(266)	(2,603)	(5,848)
Exchange loss on translation of foreign operations	(66)	–	–	–	(66)
Gain on cash flow hedges, net of tax	–	23	–	–	23
Loss on equity investments accounted for at fair value through other comprehensive income, net of tax	–	–	(52)	–	(52)
Change in ownership interest in subsidiaries (see note 33)	–	–	–	(6)	(6)
Loss due to changes in credit risk on financial liabilities accounted for at fair value through profit and loss	–	–	(7)	–	(7)
Reclassifications	–	–	25	–	25
31 December 2021	**(2,898)**	**(124)**	**(300)**	**(2,609)**	**(5,931)**

The translation adjustment reserve is used to capture the cumulative impact of foreign currency translation adjustments arising from the Group’s non-USD denominated functional currency subsidiaries.

The cash flow hedge reserve is used to accumulate the gains and losses from the effective portion of hedging instruments contained within hedge relationships until the hedged item impacts profit or loss. Cost of hedging is recorded within the cash flow hedge reserve due to its immaterial amount.

The net unrealised gain/loss reserve is used to accumulate the gains and losses associated with the remeasurement of the Group’s investments carried at FVTOCI and changes in credit risk on financial liabilities measured at FVTPL.

The net ownership changes in subsidiaries reserve is used to capture equity movements arising from changes in the Group’s ownership in its subsidiaries.

18. Earnings per share

US$ million	2022	2021
Income attributable to equity holders of the Parent for basic earnings per share	17,320	4,974
Weighted average number of shares for the purposes of basic earnings per share (thousand)	13,042,304	13,204,101
Effect of dilution:		
Equity-settled share-based payments (thousand)	98,454	132,503
Weighted average number of shares for the purposes of diluted earnings per share (thousand)	13,140,758	13,336,604
Basic earnings per share (US$)	**1.33**	**0.38**
Diluted earnings per share (US$)	**1.32**	**0.37**

HEADLINE EARNINGS:

Headline earnings is a Johannesburg Stock Exchange (JSE) defined performance measure. The calculation of basic and diluted earnings per share, based on headline earnings as determined by the requirements of the Circular 1/2021 as issued by the South African Institute of Chartered Accountants (SAICA), is reconciled using the following data:

US$ million	2022	2021
Income attributable to equity holders of the Parent for basic earnings per share	17,320	4,974
Net (gain)/loss on acquisitions and disposals[1]	(1,287)	652
Net (gain)/loss on acquisitions and disposals - non-controlling interest	(4)	–
Net (gain)/loss on acquisitions and disposals - tax	86	75
Impairments[2]	3,181	1,906
Impairments – non-controlling interest	(404)	(689)
Impairments – tax	(585)	(34)
Headline and diluted earnings for the year	**18,307**	**6,884**
Headline earnings per share (US$)	**1.40**	**0.52**
Diluted headline earnings per share (US$)	**1.39**	**0.52**

1 See note 4.

2 Comprises impairments of property, plant and equipment and intangible assets, investments, advances and loans, VAT receivable (see note 7) and Glencore's share of impairments booked directly by associates (see note 2).

19. Distributions

US$ million	2022	2021
Paid during the year:		
First tranche distribution - $0.13 per ordinary share (2021: $0.06)	1,707	794
Second tranche and additional distribution - $0.24 per ordinary share (2021: $0.10)	3,125	1,321
Total	**4,832**	**2,115**

The proposed distribution in respect of the year ended 31 December 2022 of $0.44 per ordinary share amounting to some $5.6 billion is subject to approval by shareholders at the Annual General Meeting and has not been included as a liability in these financial statements. Such declared distributions are expected to be paid equally ($0.22 each) in June 2023 and September 2023.

20. Share-based payments

	Number of awards granted (thousands)	Fair value at grant date (US$ million)	**Number of awards outstanding 2022 (thousands)**	Number of awards outstanding 2021 (thousands)	**Expense recognised 2022 (US$ million)**	Expense recognised 2021 (US$ million)
Deferred awards						
2018 Series	12,891	65	3,535	3,535	3	–
2019 Series	10,791	37	667	667	–	–
2020 Series	45,798	85	–	31,538	–	(2)
2021 Series[1]	21,327	94	13,016	20,565	(1)	90
2022 Series	6,403	38	5,267	–	30	–
	97,210		**22,485**	**56,305**	**32**	**88**
Performance share awards						
2017 Series	19,750	95	344	400	–	3
2018 Series	28,499	104	2,293	9,823	2	12
2019 Series	29,705	90	9,066	18,504	9	23
2020 Series	33,583	104	19,555	31,466	26	55
2021 Series[1]	26,803	129	24,918	16,005	69	8
2022 Series	20,928	135	19,793	–	12	–
	159,268		**75,969**	**76,198**	**118**	**101**
Total	**256,478**		**98,454**	**132,503**	**150**	**189**

1 During the current year, 762 thousand shares have been granted as part of the deferred awards 2021 series and 10,798 thousand shares have been granted as part of the performance share awards 2021 series, resulting in an increase of the fair value at grant date amount by $3 million for deferred share awards and $53 million for performance share awards.

Between 2011-2021 deferred awards were made under the Company's Deferred Bonus Plan and performance share awards were made under the Company's Performance Share Plan. In May 2021 the Company introduced a single Incentive Plan which replaced both of these plans and under which both deferred awards and performance share awards continue to be made.

DEFERRED AWARDS

Under a deferred award the payment of a portion of a participant's annual bonus is deferred for a period of one to seven years as an award of either ordinary shares (a "Bonus Share Award") or cash. Awards vest over a specified period, subject to continued employment and forfeiture for malus events. The Bonus Share Awards may be satisfied, at Glencore's option, in shares by the issue of new ordinary shares, by the transfer of ordinary shares held in treasury or by the transfer of ordinary shares purchased in the market or in cash, with a value equal to the market value of the award at settlement, including distributions paid between award and settling. Glencore currently intends to settle all Bonus Share Awards in shares. The associated expense is recorded in the statement of income/loss as part of the expense for performance bonuses. The fair value at grant date is determined as the monthly volume-weighted average share price (VWAP) of Glencore plc prior to the respective award date.

PERFORMANCE SHARE AWARDS

Performance share awards vest in tranches over a specified period, subject to continued employment and forfeiture for malus events. At grant date, each award is equivalent to one ordinary share of Glencore. Awards vest in one, two or three tranches on 31 January or 30 June of the years following the year of grant, as may be the case. The awards may be satisfied, at Glencore's option, in shares by the issue of new ordinary shares, by the transfer of ordinary shares held in treasury or by the transfer of ordinary shares purchased in the market or in cash, with a value equal to the market value of the award at vesting, including distributions paid between award and vesting. Glencore currently intends to settle these awards in shares. The fair value at grant date is determined as the monthly volume-weighted average share price (VWAP) of Glencore plc prior to the respective award date.

20. Share-based payments continued

SHARE-BASED AWARDS ASSUMED IN PREVIOUS BUSINESS COMBINATIONS

	Total options outstanding (thousands)	Weighted average exercise price (GBP)
1 January 2022	44,537	3.91
Exercised	(44,537)	4.16
31 December 2022	**–**	**–**
1 January 2021	71,667	4.25
Lapsed	(27,130)	4.80
Exercised	–	–
31 December 2021	**44,537**	**3.91**

As at 31 December 2021, a total of 44,536,755 options were outstanding and exercisable, having an exercise price of GBP3.91 and a weighted average exercise price of GBP3.91. Since the share price leading up to the expiry date of 17 February 2022 was above the exercise price, all of these options were exercised. Glencore settled these awards by the transfer of ordinary shares held as Trust Shares.

21. Borrowings

US$ million	Notes	**2022**	2021
Non-current borrowings			
Capital market notes		17,229	22,376
Amount drawn under syndicated revolving credit facilities		–	2,543
Lease liabilities		934	1,093
Other bank loans		688	799
Total non-current borrowings		**18,851**	**26,811**
Current borrowings			
Secured inventory/receivables/other facilities	11/13/14	3,292	122
U.S. commercial paper		333	1,764
Capital market notes		2,977	2,884
Lease liabilities		445	525
Other bank loans[1]		2,879	2,535
Total current borrowings		**9,926**	**7,830**
Total borrowings		**28,777**	**34,641**

1 Comprises various uncommitted bilateral bank credit facilities and other financings.

CHANGES IN LIABILITIES ARISING FROM FINANCING ACTIVITIES

Liabilities arising from financing activities are those for which cash flows are classified in the Group's consolidated cash flow statement as cash flows from financing activities. The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes.

21. Borrowings continued

2022

US$ million	Borrowings excluding lease liabilities	Lease liabilities	**Total borrowings**	Cross currency and interest rate swaps and net margins[1]	**Total liabilities arising from financing activities**
1 January 2022	33,023	1,618	34,641	23	34,664
Cash related movements[2]					
Repayment of capital market notes	(2,850)	–	(2,850)	–	(2,850)
Repurchase of capital market notes	(103)	–	(103)	–	(103)
Repayment of revolving credit facilities	(2,563)	–	(2,563)	–	(2,563)
Proceeds from other non-current borrowings	430	–	430	–	430
Repayment of other non-current borrowings	(73)	–	(73)	–	(73)
Repayment of lease liabilities	–	(577)	(577)	–	(577)
Margin payments for financing related hedging activities	–	–	–	(1,824)	(1,824)
Repayment of U.S. commercial papers	(1,407)	–	(1,407)	–	(1,407)
Proceeds from current borrowings	3,306	–	3,306	–	3,306
	(3,260)	**(577)**	**(3,837)**	**(1,824)**	**(5,661)**
Non-cash related movements					
Borrowings acquired in business combinations[3]	52	30	82	–	82
Borrowings reclassified to held for sale[4]	(762)	(38)	(800)	–	(800)
Borrowings disposed of on disposal of subsidiaries	–	(2)	(2)	–	(2)
Fair value adjustment to fair value hedged borrowings	(1,250)	–	(1,250)	–	(1,250)
Fair value movement of hedging derivatives	–	–	–	1,647	1,647
Foreign exchange movements	(436)	(41)	(477)	–	(477)
Change in lease liabilities	–	389	389	–	389
Interest on convertible bonds	21	–	21	–	21
Other movements	10	–	10	–	9
	(2,365)	**338**	**(2,027)**	**1,647**	**(381)**
31 December 2022	**27,398**	**1,379**	**28,777**	**(154)**	**28,623**

2021

US$ million	Borrowings excluding lease liabilities	Lease liabilities	**Total borrowings**	Cross currency and interest rate swaps and net margins[1]	**Total liabilities arising from financing activities**
1 January 2021	35,958	1,521	37,479	91	37,570
Cash related movements[2]					
Proceeds from issuance of capital market notes	4,877	–	4,877	–	4,877
Repayment of capital market notes	(2,807)	–	(2,807)	–	(2,807)
Repurchase of capital market notes	(125)	–	(125)	–	(125)
Repayment of revolving credit facilities	(2,244)	–	(2,244)	–	(2,244)
Proceeds from other non-current borrowings	231	–	231	–	231
Repayment of other non-current borrowings	(493)	–	(493)	–	(493)
Repayment of lease liabilities	–	(634)	(634)	–	(634)
Margin payments for financing related hedging activities	–	–	–	(970)	(970)
Proceeds from U.S. commercial papers	675	–	675	–	675
Repayment of current borrowings	(2,016)	–	(2,016)	–	(2,016)
	(1,902)	**(634)**	**(2,536)**	**(970)**	**(3,506)**
Non-cash related movements					
Borrowings (disposed of)/acquired in business combinations[3]	(1)	(7)	(8)	–	(8)
Borrowings reclassified to held for sale[4]	–	(138)	(138)	–	(138)
Fair value adjustment to fair value hedged borrowings	(499)	–	(499)	–	(499)
Fair value movement of hedging derivatives	–	–	–	902	902
Foreign exchange movements	(599)	(45)	(644)	–	(644)
Change in lease liabilities	–	922	922	–	922
Interest on convertible bonds	21	–	21	–	21
Other movements	45	(1)	44	–	44
	(1,033)	**731**	**(302)**	**902**	**600**
31 December 2021	**33,023**	**1,618**	**34,641**	**23**	**34,664**

1 The currency and interest rate swaps are reported on the balance sheet within the headings 'Other financial assets' and 'Other financial liabilities' (see note 27) and margin calls paid/received within accounts receivable/payable (see notes 14 and 25).

2 See consolidated statement of cash flows.

3 See note 26.

4 See note 16.

21. Borrowings continued

CAPITAL MARKET NOTES

US$ million	Maturity	2022	2021
Euro 1,000 million 1.875% coupon bonds	Sep 2023	–	1,136
Euro 400 million 3.70% coupon bonds	Oct 2023	–	467
Euro 600 million 0.625% coupon bonds	Sep 2024	644	682
Euro 750 million 1.75% coupon bonds	Mar 2025	749	862
Euro 500 million 3.75% coupon bonds	Apr 2026	499	598
Euro 500 million 1.50% coupon bonds	Oct 2026	470	566
Euro 950 million 1.125% coupon bonds	Mar 2028	1,014	1,079
Euro 600 million 0.75% coupon bonds	Mar 2029	510	653
Euro 500 million 1.25% coupon bonds	Mar 2033	367	526
Eurobonds		**4,253**	**6,569**
GBP 500 million 3.125% coupon bonds	Mar 2026	541	677
Sterling bonds		**541**	**677**
CHF 175 million 1.25% coupon bonds	Oct 2024	184	194
CHF 250 million 0.35% coupon bonds	Sep 2025	270	274
CHF 225 million 1.00% coupon bonds	Mar 2027	244	248
CHF 150 million 0.51% coupon bonds	Sep 2028	142	160
Swiss Franc bonds		**840**	**876**
US$ 1,500 million 4.125% coupon bonds	May 2023	–	1,538
US$ 1,000 million 4.125% coupon bonds	Mar 2024	972	970
US$ 1,000 million 4.625% coupon bonds	Apr 2024	960	1,029
US$ 625 million non-dilutive convertible bonds	Mar 2025	574	552
US$ 500 million 4.00% coupon bonds	Apr 2025	470	510
US$ 1,000 million 1.625% coupon bonds	Sep 2025	995	994
US$ 365 million 4.375% coupon bonds[1]	Feb 2026	–	469
US$ 600 million 1.625% coupon bonds	Apr 2026	503	587
US$ 1,000 million 4.00% coupon bonds	Mar 2027	926	1,043
US$ 50 million 4.00% coupon bonds	Mar 2027	50	50
US$ 500 million 3.875% coupon bonds	Oct 2027	460	522
US$ 750 million 4.875% coupon bonds	Mar 2029	697	811
US$ 1,000 million 2.50% coupon bonds	Sep 2030	993	992
US$ 600 million 2.85% coupon bonds	Apr 2031	535	598
US$ 750 million 2.65% coupon bonds	Sep 2031	621	745
US$ 250 million 6.20% coupon bonds	Jun 2035	269	269
US$ 500 million 6.90% coupon bonds	Nov 2037	580	582
US$ 497 million 6.00% coupon bonds	Nov 2041	535	536
US$ 468 million 5.55% coupon bonds	Oct 2042	473	473
US$ 500 million 3.875% coupon bonds	Apr 2051	496	496
US$ 500 million 3.375% coupon bonds	Sep 2051	486	488
US$ bonds		**11,595**	**14,254**
Total non-current bonds		**17,229**	**22,376**
Euro 1,000 million 1.875% coupon bonds	Sep 2023	1,070	–
Euro 400 million 3.70% coupon bonds	Oct 2023	422	–
GBP 500 million 6.00% coupon bonds	Apr 2022	–	677
JPY 10 billion 1.075% coupon bonds	May 2022	–	87
US$ 600 million 5.375% coupon bonds	Feb 2022	–	410
US$ 250 million LIBOR plus 1.65% coupon bonds	May 2022	–	250
US$ 996 million 4.25% coupon bonds	Oct 2022	–	999
US$ 500 million 3.00% coupon bonds	Oct 2022	–	461
US$ 1,500 million 4.125% coupon bonds	May 2023	1,485	–
Total current bonds		**2,977**	**2,884**

1 The book value of $361 million has been reclassified to liabilities held for sale (see note 16).

21. Borrowings continued

2022 BOND ACTIVITIES
There were no bond activities during the year.

2021 BOND ACTIVITIES
- In February 2021, issued:
  - 5 year $475 million, 4.375% coupon bond (Volcan)
- In March 2021, issued:
  - 8 year EUR600 million, 0.75% coupon bond
  - 12 year EUR500 million, 1.25% coupon bond
- In April 2021, issued:
  - 5 year $600 million, 1.625% coupon bond
  - 10 year $600 million, 2.85% coupon bond
  - 30 year $500 million, 3.875% coupon bond
- In September 2021, issued:
  - 7 year CHF150 million, 0.5% coupon bond
  - 10 year $750 million, 2.625% coupon bond
  - 30 year $500 million, 3.375% coupon bond

COMMITTED SYNDICATED REVOLVING CREDIT FACILITIES
In March 2022 (effective May 2022), Glencore refinanced its short term revolving credit facilities. The borrowing rate of the short term facilities now aligns with the LIBOR reform protocols, and stands at SOFR compounded in arrears across the relevant borrowing period, plus a margin of 45bps. The borrowing rate of the medium term facility remains unchanged, at US$ LIBOR plus 27.5bps subject to a ratings grid, but will be updated during a planned 2023 refinancing exercise, into a SOFR-based rate.

As at 31 December 2022, the facilities comprise:

- a $6,535 million one year revolving credit facility with a one-year borrower's term-out option (to May 2024);
- a $450 million medium-term revolving credit facility (to May 2025); and
- a $4,200 million medium-term revolving credit facility (to May 2026).

As in previous years, these committed unsecured facilities contain no financial covenants, no rating triggers, no material adverse change clauses and no external factor clauses.

SECURED FACILITIES

US$ million	Maturity[1]	Interest	**2022**	2021
Syndicated committed metals inventory/receivables facilities[2]	Nov 2024	5.7%	101	82
Syndicated uncommitted metals and oil inventory/receivables facilities[2]	Jul 2023	SOFR + 65 bps	610	–
Other secured facilities[2,3]	Jan 2023	5.0%	2,661	120
Total			**3,372**	**202**
Current			3,292	122
Non-current			80	80

1 Uncommitted facilities are re-drawn several times until actual expiry of the facility contract.

2 Comprises various facilities. The maturity and interest detail represent the weighted average of the various debt balances outstanding at year end.

3 Inventory related. Since year-end, in the ordinary course of business, these maturities have been rolled/extended. The maturity and interest detail represent the weighted average of the various debt balances outstanding at year end.

22. Deferred income

US$ million	Notes	Unfavourable contracts	Prepayments	**Total**
1 January 2022		336	3,325	3,661
Additions		–	562	562
Accretion in the year		–	97	97
Revenue recognised in the year		(66)	(1,633)	(1,699)
Reclassification to held for sale	16	–	(6)	(6)
Effect of foreign currency exchange difference		(5)	(3)	(8)
31 December 2022		**265**	**2,342**	**2,607**
Current		72	988	1,060
Non-current		193	1,354	1,547
1 January 2021		529	3,131	3,660
Additions		–	1,336	1,336
Accretion in the year		–	115	115
Revenue recognised in the year		(70)	(1,066)	(1,136)
Released in the year	5	(122)	–	(122)
Reclassification to held for sale	16	–	(191)	(191)
Effect of foreign currency exchange difference		(1)	–	(1)
31 December 2021		**336**	**3,325**	**3,661**
Current		56	1,517	1,573
Non-current		280	1,808	2,088

UNFAVOURABLE CONTRACTS

In several business combinations, Glencore recognised liabilities related to various assumed contractual agreements to deliver tonnes of coal over various periods ending until 2032 at fixed prices lower than the prevailing market prices on the respective acquisition dates.

These amounts are released to revenue as the underlying commodities are delivered to the buyers over the life of the contracts at rates consistent with the extrapolated forward price curves at the time of the acquisitions.

In 2021, certain contractual terms were renegotiated and related unfavourable contract provisions in the amount of $122 million were released (see note 5).

PREPAYMENTS

Prepayments comprise various short to long-term product supply agreements whereby an upfront prepayment is received in exchange for the future delivery of a specific product, such as gold, silver or cobalt. The arrangements are accounted for as executory contracts whereby the advance payment is recorded as deferred revenue. The revenue from the advance payment is recognised as the specific product identified in the contract is delivered consistent with the implied forward price curve at the time of the transaction and an accretion expense, representing the time value of the upfront deposit, is also recognised.

Prepayments mainly comprise:

- Life of mine arrangements - long-term streaming agreements for the future delivery of gold and/or silver produced over the life of mine from our Antamina and Antapaccay operations. In addition to the upfront payment received Glencore receives an ongoing amount equal to 20% of the spot silver and gold price. Once certain delivery thresholds have been met at Antapaccay, the ongoing cash payment increases to 30% of the spot gold and silver prices. As at 31 December 2022, $1,025 million (2021: $1,068 million) of product delivery obligations remain, of which $42 million (2021: $35 million) are due within 12 months.
- Silver supply arrangement – Various silver prepayment arrangements for the future delivery of an average of 13 million ounces of silver per annum, over a remaining 3 year period. As at 31 December 2022, $507 million (2021: $784 million) of product delivery obligations remain, of which $277 million (2021: $408 million) are due within 12 months.
- Palladium supply arrangements – Various palladium prepayment arrangements for the future delivery of an average of 31 thousand ounces of palladium per annum, over a remaining 3 year period. As at 31 December 2022, $85 million (2021: $141 million) of product delivery obligations remain, of which $41 million (2021: $58 million) are due within 12 months.
- Gold supply arrangements – Various gold supply arrangements for the future delivery of 269 thousand ounces (2021: 518 thousand ounces) of gold over a 6-month period. As at 31 December 2022, $391 million (2021: $765 million) of product delivery obligations remain, which are due within 12 months.

22. Deferred income continued

- Cobalt supply arrangement – In March 2019, Glencore signed a six year cobalt prepayment arrangement in exchange for an upfront advance payment of $100 million. Under the terms of the arrangement Glencore is required to deliver an average of 1,621 metric tons of cobalt per annum over a four year period starting 2021. As at 31 December 2022, $58 million (2021: $94 million) of product delivery obligations remain, of which $47 million (2021: $26 million) are due within 12 months.
- Iron ore supply arrangement – In November 2021, Glencore signed an 18 month iron ore prepayment arrangement in exchange for an upfront advance payment of $200 million. Under the terms of the arrangement, Glencore is required to deliver an average of 3,600,000 metric tons of iron ore per annum. As at 31 December 2022, $100 million (2021: $200 million) of product delivery obligations remain of which, $100 million (2021: $117 million) are due within 12 months.

23. Provisions

US$ million	Notes	Rehabilitation costs	Onerous contracts	Legal investigations	Other provisions	**Total**
1 January 2022		5,731	455	1,500	524	8,210
Utilised		(238)	(143)	(883)	(152)	(1,416)
Released		(30)	(71)	(133)	(30)	(264)
Accretion		155	26	–	10	191
Assumed in business combination	26	998	–	–	73	1,071
Disposal of subsidiaries	26	(158)	–	–	(9)	(167)
Additions		840	265	–	285	1,390
Reclassification to held for sale	16	(290)	–	–	(83)	(373)
Effect of foreign currency exchange movements		(45)	(2)	–	(7)	(54)
31 December 2022		**6,963**	**530**	**484**	**611**	**8,588**
Current		531	185	484	225	1,425
Non-current		6,432	345	–	386	7,163
1 January 2021		5,182	535	–	746	6,463
Utilised		(190)	(122)	–	(276)	(588)
Released		(14)	(103)	–	(31)	(148)
Accretion		153	31	–	2	186
Disposal of subsidiaries	26	(67)	–	–	(10)	(77)
Additions		918	116	1,500	137	2,671
Reclassification to held for sale	16	(191)	–	–	(37)	(228)
Effect of foreign currency exchange movements		(60)	(2)	–	(7)	(69)
31 December 2021		**5,731**	**455**	**1,500**	**524**	**8,210**
Current		337	109	1,500	147	2,093
Non-current		5,394	346	–	377	6,117

REHABILITATION COSTS

Rehabilitation provision represents the accrued costs required to provide adequate restoration and rehabilitation upon the completion of production activities. These amounts will be settled when rehabilitation is undertaken, generally at the end of a project's life, which ranges from two to in excess of 50 years with an average for all sites, weighted by closure provision, of some 19 years (2021: 23 years). Discount rates were determined for each relevant jurisdiction by reference to the average annual real-terms return on a relevant government security with a tenor of 20 years.

As at 31 December 2022, the discount rate applied in calculating the restoration and rehabilitation provision is a pre-tax risk free rate specific to the liability and the currency in which they are denominated as follows: US dollar 1.25% (2021: 1.5%), South African rand 3.75% (2021: 3.75%), Australian dollar 2.0% (2021: 2.0%), Canadian dollar 1.25% (2021: 1.5%), and Chilean peso 2.5% (2021: 2.5%).

The sensitivity of the rehabilitation costs provision to changes in the discount rate assumptions as at 31 December 2022, assuming that all other assumptions are held constant, is set out below:

	Discount rate	
US$ million	**Increase 1%**	**Decrease 1%**
Decrease/(increase) in overall rehabilitation provision	822	(1,096)
(Decrease)/increase in property, plant and equipment	(662)	878
Net increase/(decrease) in statement of income	160	(218)
Effect in the following year		
Decrease/(increase) in depreciation expense	35	(46)
(Increase)/decrease in interest expense	(22)	36
Net increase/(decrease) in statement of income	13	(10)

23. Provisions continued

ONEROUS CONTRACTS

Onerous contracts represent liabilities related to contractual take or pay commitments for securing coal logistics capacity at fixed prices and quantities higher than the acquisition date forecasted usage and prevailing market price. The provision is released to costs of goods sold as the underlying commitments are incurred.

INVESTIGATIONS BY REGULATORY AND ENFORCEMENT AUTHORITIES

The Board has appointed a committee, the Investigations Committee, to oversee the response to the investigations on behalf of the Board.

On 24 May 2022 the Group announced that it had resolved the previously disclosed investigations by authorities in the United States, the United Kingdom and Brazil.

Under the terms of the US resolutions, Glencore agreed to pay penalties of $701 million to resolve bribery investigations and $486 million to resolve market manipulation investigations by the Department of Justice ("DOJ") and the Commodity Futures Trading Commission ("CFTC"). Of this amount, up to $166 million would be credited against other parallel matters, including in the UK, so that the net amount payable to the US authorities is expected to be $1,020 million. Glencore further agreed to pay $40 million under a resolution signed with the Brazilian Federal Prosecutor's Office ("MPF") in connection with its bribery investigation into the Group. On 3 November 2022, Glencore Energy UK Limited was sentenced to pay a financial penalty and costs of £281 million in the Serious Fraud Office ("SFO") investigation.

The Group has settled the amounts due to the CFTC, the DOJ in respect of the market manipulation matter and the SFO and expects to settle the amounts due to the DOJ in respect of the bribery matter and the MPF during the first half of 2023.

Accordingly, the Group has retained a provision for the United States and Brazil resolutions which at 31 December 2022 amounts to $484 million.

The Group remains subject to the following ongoing investigations:

- The Office of the Attorney General of Switzerland ("OAG") is investigating Glencore International AG for failure to have the organisational measures in place to prevent alleged corruption.
- The Dutch authorities are conducting a criminal investigation into Glencore International AG related to potential corruption pertaining to the DRC. The scope of the investigation is similar to that of the OAG investigation. The Dutch authorities are coordinating their investigation with the OAG and the Group expects any possible resolution to avoid duplicative penalties for the same conduct.

The timing and outcome of the OAG and Dutch investigations remains uncertain – see note 31.

OTHER PROVISIONS

Other comprises provisions for possible demurrage, mine concession and construction related claims, a royalty indemnification related to the disposal of the Ernest Henry operations (see note 26) and various other individually immaterial legal matters. This balance comprises no individually material provisions.

24. Personnel costs and employee benefits

US$ million	Notes	Post-retirement employee benefits	Other employee entitlements	**Total**
1 January 2022		782	157	939
Utilised		(82)	(37)	(119)
Released		(1)	(1)	(2)
Accretion		19	–	19
Additions		97	79	176
Actuarial gain		(298)	–	(298)
Reclassification to held for sale	16	–	(1)	(1)
Effect of foreign currency exchange movements		(29)	(8)	(37)
31 December 2022		**488**	**189**	**677**
1 January 2021		980	181	1,161
Utilised		(84)	(9)	(93)
Released		(1)	(7)	(8)
Accretion		23	–	23
Additions		151	14	165
Actuarial gain		(284)	–	(284)
Reclassification to held for sale	16	–	(19)	(19)
Effect of foreign currency exchange movements		(3)	(3)	(6)
31 December 2021		**782**	**157**	**939**

The provision for post-retirement employee benefits includes pension plan liabilities of $178 million (2021: $352 million) and post-retirement medical plan liabilities of $310 million (2021: $430 million).

The other employee entitlements provision represents the value of governed employee entitlements due to employees upon their termination of employment. The associated expenditure will occur in a pattern consistent with when employees choose to exercise their entitlements.

Total personnel costs, which include salaries, wages, social security, other personnel costs and share-based payments, incurred for the years ended 31 December 2022 and 2021, were $6,319 million and $6,012 million, respectively. Personnel costs related to consolidated industrial subsidiaries of $4,284 million (2021: $4,188 million) are included in cost of goods sold. Other personnel costs, including deferred bonus and performance share plans, are included in selling and administrative expenses.

The Company and certain subsidiaries sponsor various pension schemes in accordance with local regulations and practices. Eligibility for participation in the various plans is either based on completion of a specified period of continuous service, or date of hire. Among these schemes are defined contribution plans as well as defined benefit plans.

DEFINED CONTRIBUTION PLANS
Glencore's contributions under these plans amounted to $171 million in 2022 (2021: $173 million).

POST-RETIREMENT MEDICAL PLANS
The Company participates in a number of post-retirement medical plans in Canada, USA and South Africa, which provide coverage for prescription drugs, medical, dental, hospital and life insurance to eligible retirees. Almost all of the post-retirement medical plans in the Group are unfunded.

24. Personnel costs and employee benefits continued

DEFINED BENEFIT PENSION PLANS

The Company operates defined benefit plans in various countries, the main locations being Canada, Switzerland, UK and the U.S.. Approximately 63% of the present value of the pension obligations accrued relates to the defined benefit plans in Canada, which are pension plans that provide benefits to members in the form of a guaranteed level of pension payable for life. Contributions to the Canadian plans are made to meet or exceed minimum funding requirements based on provincial statutory requirements and associated federal taxation rules.

The majority of benefit payments are from trustee-administered funds; however, there are also a number of unfunded plans where Glencore meets the benefit payments as they fall due. Plan assets held in trusts are governed by local regulations and practices in each country. Responsibility for governance of the plans – overseeing all aspects of the plans including investment decisions and contribution schedules – lies with Glencore. Glencore has set up committees to assist in the management of the plans and has also appointed experienced, independent professional experts such as investment managers, actuaries, custodians, and trustees.

The movement in the defined benefit pension and post-retirement medical plans over the year is as follows:

			Defined benefit pension plans		
US$ million	Notes	Post-retirement medical plans	Present value of defined benefit obligation	Fair value of plan assets	Net liability for defined benefit pension plans
1 January 2022		**430**	2,760	(2,533)	**227**
Current service cost		8	52	–	52
Past service cost - plan amendments		1	3	–	3
Settlement of pension plan disposal		–	(115)	121	6
Interest expense/(income)		17	67	(65)	2
Total expense recognised in consolidated statement of income		**26**	7	56	**63**
Loss on plan assets, excluding amounts included in interest expense - net		–	–	383	383
Gain from change in demographic assumptions		(7)	(26)	–	(26)
Gain from change in financial assumptions		(91)	(576)	–	(576)
(Gain)/loss from actuarial experience		(6)	25	–	25
Actuarial (gains)/losses recognised in consolidated statement of comprehensive income		**(104)**	(577)	383	**(194)**
Employer contributions		–	–	(64)	(64)
Benefits paid directly by the Company		(18)	(8)	8	–
Benefits paid from plan assets		–	(130)	130	–
Net cash (outflow)/inflow		**(18)**	(138)	74	**(64)**
Exchange differences		(24)	(140)	138	(2)
31 December 2022		**310**	1,912	(1,882)	**30**
Of which:					
Pension surpluses	12	–			(148)
Pension deficits		310			178

The actual return on plan assets in respect of defined benefit pension plans amounted to a loss of $456 million (2021: gain of $107 million), comprising interest income and the re-measurement of plan assets, including exchange differences.

During the next financial year, the Group expects to make a contribution of $76 million in respect of the defined benefit pension and post-retirement medical plans across all countries, including current service costs and contributions required by pension legislation. Contributions over the next five years for the Canadian plans only, based on the most recently filed actuarial reports, approximate $115 million. Future funding requirements and contributions are reviewed and adjusted on an annual basis.

24. Personnel costs and employee benefits continued

US$ million	Notes	Post-retirement medical plans	Defined benefit pension plans: Present value of defined benefit obligation	Defined benefit pension plans: Fair value of plan assets	Defined benefit pension plans: Net liability for defined benefit pension plans
1 January 2021		**476**	3,138	(2,674)	**464**
Current service cost		7	62	–	62
Past service cost - plan amendments		(6)	–	–	–
Settlement of pension plan disposal		–	(137)	138	1
Interest expense/(income)		18	64	(59)	5
Total expense/(income) recognised in consolidated statement of income		**19**	(11)	79	**68**
Gain on plan assets, excluding amounts included in interest expense - net		–	–	(46)	(46)
Gain from change in demographic assumptions		–	(12)	–	(12)
Loss from change in financial assumptions		(37)	(188)	–	(188)
Loss from actuarial experience		(4)	3	–	3
Actuarial losses/(gains) recognised in consolidated statement of comprehensive income		**(41)**	(197)	(46)	**(243)**
Employer contributions		–	–	(63)	(63)
Employee contributions		–	1	(1)	–
Benefits paid directly by the Company		(22)	(8)	8	–
Benefits paid from plan assets		–	(165)	166	1
Net cash (outflow)/inflow		**(22)**	(172)	110	**(62)**
Exchange differences		(2)	2	(2)	–
31 December 2021		**430**	2,760	(2,533)	**227**
Of which:					
Pension surpluses	12	–			(125)
Pension deficits		430			352

The defined benefit obligation accrued in Canada represents the majority for the Company. The breakdown below provides details of the Canadian plans for both the statement of financial position and the weighted average duration of the defined benefit obligation as at 31 December 2022 and 2021. The net liability of any of the Group's defined benefit plans outside of Canada as at 31 December 2022 does not exceed $34 million (2021: $70 million).

24. Personnel costs and employee benefits continued

2022

US$ million	Canada	Other	**Total**
Post-retirement medical plans			
Present value of defined benefit obligation	264	46	**310**
of which: amounts owing to active members	74	8	82
of which: amounts owing to pensioners	190	38	228
Defined benefit pension plans			
Present value of defined benefit obligation	1,203	709	**1,912**
of which: amounts owing to active members	261	364	625
of which: amounts owing to non-active members	14	91	105
of which: amounts owing to pensioners	928	254	1,182
Fair value of plan assets	(1,277)	(605)	**(1,882)**
Net defined benefit (asset)/liability at 31 December 2022	**(74)**	**104**	**30**
Of which:			
Pension surpluses	(126)	(22)	(148)
Pension deficits	52	126	178
Weighted average duration of defined benefit obligation - years	10	12	**11**

2021

US$ million	Canada	Other	**Total**
Post-retirement medical plans			
Present value of defined benefit obligation	379	51	**430**
of which: amounts owing to active members	123	11	134
of which: amounts owing to pensioners	256	40	296
Defined benefit pension plans			
Present value of defined benefit obligation	1,753	1,007	**2,760**
of which: amounts owing to active members	434	484	918
of which: amounts owing to non-active members	25	167	192
of which: amounts owing to pensioners	1,294	356	1,650
Fair value of plan assets	(1,772)	(761)	**(2,533)**
Net defined benefit (asset)/liability at 31 December 2021	**(19)**	**246**	**227**
Of which:			
Pension surpluses	(115)	(10)	(125)
Pension deficits	96	256	352
Weighted average duration of defined benefit obligation - years	13	15	**13**

Estimated future benefit payments of the Canadian plans, which reflect expected future services but exclude plan expenses, up until 2032 are as follows:

US$ million	Post-retirement medical plans	Defined benefit pension plans	**Total**
2023	18	83	101
2024	18	83	101
2025	18	82	100
2026	17	82	99
2027	17	82	99
2028-2032	85	402	487
Total	**173**	**814**	**987**

24. Personnel costs and employee benefits continued

The plan assets consist of the following:

	2022		2021	
	Active market	Non-active market	Active market	Non-active market
Cash and short-term investments	37	–	40	–
Fixed income	569	182	823	195
Equities	567	–	851	–
Other	329	198	416	208
Total	**1,502**	**380**	**2,130**	**403**

The fair value of plan assets includes none of Glencore's own financial instruments and no property occupied by or other assets used by Glencore. For many of the plans, representing a large portion of the global plan assets, asset-liability matching strategies are in place, where the fixed-income assets are invested broadly in alignment with the duration of the plan liabilities, and the proportion allocated to fixed-income assets is raised when the plan funding level increases. The asset mix for each plan reflects the nature, expected changes in, and size of the liabilities and the assessment of long-term economic conditions, market risk, expected investment returns as considered during a formal asset mix study, including sensitivity analysis and/or scenario analysis, conducted periodically for the plans.

Through its defined benefit plans, Glencore is exposed to a number of risks, the most significant of which are detailed below:

Asset volatility: The plan liabilities are calculated using a discount rate set with reference to corporate bond yields; if plan assets underperform this yield, this will create a deficit. The funded plans hold a significant proportion of equities, which are expected to outperform bonds in the long term while contributing volatility and risk in the short term. Glencore believes that due to the long-term nature of the plan liabilities, a level of continuing equity investment is an appropriate element of Glencore's long-term strategy to manage the plans efficiently.

Change in bond yields: A decrease in bond yields will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.

Inflation risk: Some of the plans' benefit obligations are linked to inflation, and higher inflation will lead to higher liabilities, although, in most cases, caps on the level of inflationary increases are in place to protect the plan against extreme inflation.

Life expectancy: The majority of the plans' obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liability.

Salary increases: Some of the plans' benefit obligations related to active members are linked to their salaries. Higher salary increases will therefore tend to lead to higher plan liabilities.

The principal weighted-average actuarial assumptions used were as follows:

	Post-retirement medical plans		Defined benefit pension plans	
	2022	2021	**2022**	2021
Discount rate	6.2%	4.1%	4.9%	2.7%
Future salary increases	–	–	2.7%	2.6%
Future pension increases	–	–	0.4%	0.5%
Ultimate medical cost trend rate	3.5%	4.6%	–	–

Mortality assumptions are based on the latest available standard mortality tables for the individual countries concerned. As at 31 December 2022, these tables imply expected future life expectancy, for employees aged 65, 16 to 24 years for males (2021: 16 to 23) and 20 to 25 years for females (2021: 20 to 25). The assumptions for each country are reviewed regularly and are adjusted where necessary to reflect changes in fund experience and actuarial recommendations.

24. Personnel costs and employee benefits continued

The sensitivity of the defined benefit obligation to changes in principal assumptions as at 31 December 2022 is set out below, assuming that all other assumptions are held constant and the effect of interrelationships is excluded.

US$ million	Increase/(decrease) in pension obligation Post-retirement medical plans	Defined benefit pension plans	Total
Discount rate			
Increase by 100 basis points	(34)	(168)	**(202)**
Decrease by 100 basis points	38	194	**232**
Rate of future salary increase			
Increase by 100 basis points	–	23	**23**
Decrease by 100 basis points	–	(22)	**(22)**
Rate of future pension benefit increase			
Increase by 100 basis points	–	24	**24**
Decrease by 100 basis points	–	(22)	**(22)**
Medical cost trend rate			
Increase by 100 basis points	36	–	**36**
Decrease by 100 basis points	(29)	–	**(29)**
Life expectancy			
Increase in longevity by one year	8	41	**49**

25. Accounts payable

US$ million	Notes	2022	2021
Financial liabilities at amortised cost			
Trade payables		11,044	10,397
Margin calls received and other broker balances		112	729
Associated companies		903	1,124
Other payables and accrued liabilities		644	889
		12,703	**13,139**
Financial liabilities at fair value through profit and loss			
Trade payables containing provisional pricing features	28	14,079	13,806
Other payables	28	102	–
		14,181	**13,806**
Non-financial liabilities			
Advances settled in product		676	459
Other payables and accrued liabilities[1]		1,839	1,460
Other tax and related payables		327	449
		2,842	**2,368**
Total		**29,726**	**29,313**

1 Primarily comprised of employee benefits accruals.

Trade payables are obligations to pay for goods and services. Trade payables typically have maturities up to 90 days depending on the type of material and the geographic area in which the purchase transaction occurs and the agreed terms. The carrying value of trade payables approximates fair value.

26. Acquisition and disposal of subsidiaries and other entities

2022 ACQUISITIONS

In 2022, Glencore acquired the remaining 66.67% interest in Cerrejón that it did not already own, and various other businesses, none of which are individually material. The acquisition accounting for Cerrejón has now been finalised, with no adjustments to the previously reported provisional fair values.

The net cash acquired/(used) in the acquisition of subsidiaries and the fair value of assets acquired and liabilities assumed on the acquisition date are detailed below:

US$ million	Cerrejón	Other	**Total**
Non-current assets			
Property, plant and equipment	2,470	333	2,803
	2,470	333	**2,803**
Current assets			
Inventories	315	51	366
Accounts receivable[1]	312	13	325
Cash and cash equivalents	511	5	516
	1,138	69	**1,207**
Non-current liabilities			
Non-current borrowings	(13)	–	(13)
Deferred tax liabilities	(278)	(50)	(328)
Provisions	(1,033)	(8)	(1,041)
	(1,324)	(58)	**(1,382)**
Current liabilities			
Borrowings	(17)	(52)	(69)
Accounts payable	(232)	(70)	(302)
Provisions	(30)	–	(30)
Income tax payable	(309)	–	(309)
	(588)	(122)	**(710)**
Total fair value of net assets acquired	**1,696**	**222**	**1,918**
Cash and cash equivalents paid	(100)	(95)	(195)
Less: amounts previously recognised as investments	(567)	(31)	(598)
Gain on bargain purchase of subsidiaries	**1,029**	**96**	**1,125**
Cash and cash equivalents paid	(100)	(95)	(195)
Cash and cash equivalents acquired	511	5	516
Net cash acquired/(used) in acquisition of subsidiaries	**411**	**(90)**	**321**

1 There is no material difference between the gross contractual amounts for accounts receivable and their fair value.

Cerrejón

On 11 January 2022, Glencore completed the acquisition of the remaining 66.67% interest in Cerrejón, a coal mine in Colombia, that it did not own. The purchase price consideration of $588 million was based on an economic effective date of 31 December 2020. After taking into account the dividends generated during 2021, together with certain other adjustments, the completion cash payment made by Glencore amounted to $100 million. As Glencore holds 100% of the voting shares, providing it the ability to control the key strategic, operating and capital decisions of the business, it is required to account for Cerrejón using the full consolidation method in accordance with IFRS 10.

Prior to the acquisition, Glencore owned a 33.33% interest in Cerrejón which was accounted for as an associate. In accordance with IFRS 3 *Business Combinations*, the equity interest is required to be revalued, at the date of acquisition, to its fair value with any resulting gain or loss recognised in the statement of income. On the date of acquisition, the fair value of 100% of the net assets acquired was determined to be $1,696 million, a value broadly consistent with the carrying value of the initial 33.33% equity interest and as a result, no gain or loss was recognised on the revaluation of the original equity interest.

The valuation was determined using a bottom-up approach to identify the fair value of the specific assets and liabilities within the Cerrejón Group, with the mineral reserves being valued using a discounted cash-flow method that assumes life of mine saleable coal production of 223 million tonnes over the period 2022-2032, at a long-term CIF price of $67/t, adjusted as appropriate for coal quality, applying a discount rate of 8.56%.

26. Acquisition and disposal of subsidiaries and other entities continued

As the assessed fair value of $1,696 million was in excess of the completion cash payment and the fair value of the previously held investment, a bargain purchase gain on acquisition of $1,029 million was recognised in the consolidated statement of income. Glencore assessed that all identifiable assets and liabilities had been included in the valuation prior to recognising the gain as noted above. The gain effectively represents the discount that the selling joint venture partners were willing to accept in order to achieve timely execution of their respective decarbonisation strategies. The immediate near-term valuation was also supported by the net $411 million of unencumbered cash assumed on completion, benefitting from the transaction effective date of 31 December 2020.

From the date of acquisition, the operation contributed $5,393 million of revenue and $2,909 million of attributable income (including the bargain purchase gain) for the period ended 31 December 2022.

Other

From the date of acquisition, the other operations contributed $223 million of revenue and $241 million of attributable income (including the bargain purchase gain) for the period ended 31 December 2022.

2021 ACQUISITIONS

There were no material acquisitions.

26. Acquisition and disposal of subsidiaries and other entities continued

2022 DISPOSALS

The carrying value of the assets and liabilities over which control was lost and consideration receivable from the 2022 disposals are detailed below:

US$ million	Ernest Henry[1]	Bolivia Zinc[1]	E&P Chad[1]	Access World[1]	Los Quenuales	Other	**Total**
Non-current assets							
Property, plant and equipment	311	163	247	206	126	121	1,174
Intangible assets	–	2	–	11	–	–	13
Investments in associates	–	–	–	10	–	–	10
Advances and loans	–	43	–	9	2	–	54
Deferred tax assets	16	13	–	4	21	–	54
	327	221	247	240	149	121	**1,305**
Current assets							
Inventories	16	97	21	–	5	6	145
Accounts receivable	24	90	19	159	9	19	320
Prepaid expenses	–	–	–	12	–	1	13
Cash and cash equivalents	1	17	5	42	7	3	75
	41	204	45	213	21	29	**553**
Non-controlling interest	–	–	–	(2)	(2)	(24)	**(28)**
Non-current liabilities							
Non-current borrowings	–	(8)	–	(110)	(1)	–	(119)
Deferred income	(138)	–	–	–	–	–	(138)
Deferred tax liabilities	–	(4)	(3)	(1)	–	(3)	(11)
Non-current provisions	(74)	(26)	(86)	(3)	(97)	(59)	(345)
Post-retirement and other employee benefits	(1)	(16)	–	(1)	–	–	(18)
	(213)	(54)	(89)	(115)	(98)	(62)	**(631)**
Current liabilities							
Borrowings	–	(2)	–	(19)	(1)	–	(22)
Accounts payable	(30)	(139)	(7)	(154)	(23)	(19)	(372)
Provisions	(38)	(44)	–	(3)	(9)	(2)	(96)
Income tax payable	–	(13)	–	(4)	–	–	(17)
	(68)	(198)	(7)	(180)	(33)	(21)	**(507)**
Carrying value of net assets disposed	**87**	**173**	**196**	**156**	**37**	**43**	**692**
Cash and cash equivalents (received)/paid	(585)	–	(17)	(40)	10	(30)	(662)
Items recycled to the statement of income	–	–	–	22	1	27	50
Reclassified to investment in associate	–	–	–	–	–	(17)	(17)
Royalty indemnification[2]	125	–	–	–	–	–	125
Streaming settlement	–	–	–	–	132	–	132
Future consideration	(139)	(69)	(145)	(115)	–	(3)	(471)
Net (gain)/loss on disposal	**(512)**	**104**	**34**	**23**	**180**	**20**	**(151)**
Cash and cash equivalents received/(paid)	585	–	17	40	(142)	30	530
Less: cash and cash equivalents disposed	(1)	(17)	(5)	(42)	(7)	(3)	(75)
Net cash received/(used) in disposal	**584**	**(17)**	**12**	**(2)**	**(149)**	**27**	**455**

1 As at 31 December 2021, total assets and liabilities were presented as current assets and liabilities "held for sale" (see note 16).

2 See note 23.

26. Acquisition and disposal of subsidiaries and other entities continued

Ernest Henry

In January 2022, Glencore disposed of its 70% interest in Ernest Henry Mining Pty Ltd, a copper-gold mine in Queensland, Australia. After closing adjustments, $585 million was received with $139 million receivable in January 2023. The contractual terms of the deferred consideration give rise to cash flows that are solely payments of principal and interest, therefore the receivable is accounted for as financial asset at amortised cost. A $125 million provision was recognised for the indemnification of future royalty payments under an existing agreement.

Bolivia Zinc

In March 2022, Glencore disposed of its 100% interest in the Bolivian zinc assets (Sinchi Wayra and Illapa), to Santacruz Silver Mining Ltd. After closing adjustments, $90 million is receivable over a 4 year period and a 1.5% NSR royalty over the life of the mines. The fair value of the future consideration was determined to be $69 million using a discounted cash flow model of the projected amount and timing of receipts, discounted using an asset specific discount rate of 11%. The contractual terms of the deferred consideration give rise to cash flows that are solely payments of principal and interest, therefore the receivable is accounted for as financial asset at amortised cost.

E&P Chad

In June 2022, Glencore disposed of its Chad upstream oil operations to Perenco S.A. for $197 million, of which $17 million was due on closing and $180 million is due through a price and production participation arrangement payable annually. The fair value of the future consideration was determined to be $145 million using a discounted cash flow model of the projected amount and timing of receipts, discounted using an asset specific discount rate of 13%. The contractual terms of the deferred consideration give rise to cash flows that are solely payments of principal and interest, therefore the receivable is accounted for as financial asset at amortised cost.

Los Quenuales

In December 2022, Glencore disposed of its 100% interest in Los Quenuales, a zinc-lead-silver mine in Peru, to Alpayana S.A for $10 million in cash. Conditional on completion of the transaction, Glencore earlier settled its silver streaming arrangement over one of Los Quenuales' mining properties with Wheaton Precious Metals for a payment of $132 million.

Access World

In December 2022, Glencore disposed of its 100% interest in the Access World Group, a global commodities storage and logistics group, for $180 million. $40 million was received in December and, after closing adjustments, $115 million is receivable over 2023. The contractual terms of the deferred consideration give rise to cash flows that are solely payments of principal and interest, therefore the receivable is accounted for as financial asset at amortised cost.

26. Acquisition and disposal of subsidiaries and other entities continued

2021 DISPOSALS

The carrying value of the assets and liabilities over which control was lost and consideration receivable from the 2021 disposals are detailed below:

US$ million	Mopani	Chemoil Terminals	Others	**Total**
Non-current assets				
Property, plant and equipment	748	158	20	926
Advances and loans	5	–	–	5
	753	158	20	**931**
Current assets				
Inventories	168	–	–	168
Accounts receivable	99	3	14	116
Prepaid expenses	3	–	–	3
Cash and cash equivalents	–	10	10	20
	270	13	24	**307**
Non-current liabilities				
Non-current borrowings	–	(6)	–	(6)
Deferred tax liabilities	–	(18)	(1)	(19)
Non-current provisions	(55)	–	(61)	(116)
Post-retirement and other employee benefits	(9)	–	–	(9)
	(64)	(24)	(62)	**(150)**
Current liabilities				
Borrowings	–	(1)	(1)	(2)
Accounts payable	(81)	(8)	–	(89)
Provisions	(23)	–	(16)	(39)
Income tax payable	(12)	–	–	(12)
	(116)	(9)	(17)	**(142)**
Carrying value of net assets disposed	**843**	**138**	**(35)**	**946**
Cash and cash equivalents received	–	(248)	(24)	(272)
Future consideration	(838)	–	–	(838)
Net loss/(gain) on disposal before non-controlling interest	**5**	**(110)**	**(59)**	**(164)**
Derecognition of non-controlling interest	1,017	–	–	1,017
Net loss/(gain) on disposal after non-controlling interest	**1,022**	**(110)**	**(59)**	**853**
Cash and cash equivalents received	–	248	24	272
Less: cash and cash equivalents disposed	–	(10)	(10)	(20)
Net cash received in disposal	**–**	**238**	**14**	**252**

Mopani

On 31 March 2021, Glencore completed the disposal of its 90% interest in Mopani to ZCCM Investments Holdings plc, the holder of the remaining 10% interest in Mopani, in exchange for $1 and the rights to offtake copper and other metals from Mopani until $1.5 billion of existing intercompany debt (the "transaction debt") has been repaid to Glencore. The repayment of the transaction debt is based on Glencore receiving physical commodities from Mopani through its offtake rights and applying fixed percentages of annual gross revenues generated from the sale of such commodities against the transaction debt until it is fully repaid. As Glencore is no longer able to unilaterally direct the key strategic, operating and capital decisions of Mopani, it was deemed to have disposed of its controlling interest at the fair value of the transaction debt on the date of completion, being $838 million. Fair value was determined using a discounted cash flow model of the projected amount and timing of metal volumes received from Mopani under the offtake rights and market forecasts of commodity prices, discounted using an asset specific discount rate of 11.4%.

The net loss on disposal reflects the derecognition to the statement of income of the previously recognised book value of the non-controlling interest equity balance, which largely related to the non-controlling interests' share of historical impairments and losses, and resulting net liabilities in Mopani.

Chemoil Terminals

On 17 December 2021, Glencore completed the disposal of its 100% interest in Chemoil Terminals LLC, which owns the Long Beach and Carson oil products storage terminals in California, for a consideration of $248 million.

27. Financial and capital risk management

Financial risks arising in the normal course of business from Glencore's operations comprise market risk (including commodity price risk, interest rate risk and currency risk), credit risk (including performance risk) and liquidity risk. It is Glencore's policy and practice to identify and, where appropriate and practical, actively manage such risks (for management of "margin" risk within Glencore's extensive and diversified industrial portfolio, refer net present value at risk below) to support its objectives in managing its capital and future financial security and flexibility. Glencore's overall risk management programme focuses on the unpredictability of financial markets and seeks to protect its financial security and flexibility by using derivative financial instruments where possible to substantially hedge these financial risks. Glencore's finance and risk professionals, working in coordination with the commodity departments, monitor, manage and report regularly to senior management and the Board of Directors on the approach and effectiveness in managing financial risks along with the financial exposures facing the Group.

Glencore's objectives in managing its "capital attributable to equity holders" include preserving its overall financial health and strength for the benefit of all stakeholders, maintaining an optimal capital structure in order to provide a high degree of financial flexibility at an attractive cost of capital and safeguarding its ability to continue as a going concern, while generating sustainable long-term profitability. Central to meeting these objectives is maintaining an investment grade credit rating status. Glencore's current credit ratings are Baa1 (positive) from Moody's and BBB+ (positive) from S&P.

DISTRIBUTION POLICY AND OTHER CAPITAL MANAGEMENT INITIATIVES

Glencore's base cash distribution policy comprises two components: (1) a fixed $1 billion component and (2) a variable element representing 25% of free cash flow generated by our industrial assets during the preceding year. Distributions are expected to be formally declared by the Board annually (with the preliminary full-year results). Distributions, when declared, will be settled equally in May/June and September of the year they are declared in. In addition, reflecting the Group's through the cycle Net debt objective of c.$10 billion, and consideration of the cyclical nature of the industry and other relevant factors, the Board could declare additional distributions to be included with the distribution confirmed with respect to the prior year, consider top-up distributions during the year and/or initiate or continue share buy-back programmes. Notwithstanding that the cash distribution is declared and paid in U.S. dollars, shareholders will be able to elect to receive their distribution payments in Pounds Sterling, Euros or Swiss Francs based on the exchange rates in effect around the date of payment. Shareholders on the JSE will receive their distributions in South African Rand.

COMMODITY PRICE RISK

Glencore is exposed to price movements for the inventory it holds and the products it produces which are not held to meet priced forward contract obligations and forward priced purchase or sale contracts. Glencore manages a significant portion of this exposure through futures and options transactions on worldwide commodity exchanges or in over the counter (OTC) markets, to the extent available. Commodity price risk management activities are considered an integral part of Glencore's physical commodity marketing activities and the related assets and liabilities are included in other financial assets from and other financial liabilities to derivative counterparties, including clearing brokers and exchanges. Whilst it is Glencore's policy to substantially hedge its commodity price risks, there remains the possibility that the hedging instruments chosen may not always provide effective mitigation of the underlying price risk. The hedging instruments available to the marketing businesses may differ in specific characteristics to the risk exposure to be hedged, resulting in an ongoing and unavoidable basis risk exposure. Residual basis risk exposures represent a key focus point for Glencore's commodity department teams who actively engage in the management of such.

VALUE AT RISK

One of the tools used by Glencore to monitor and limit its primary market risk exposure, principally commodity price risk related to its physical marketing activities, is a value at risk (VaR) computation. VaR is a risk measurement technique which estimates a threshold for potential loss that could occur on risk positions as a result of movements in risk factors over a specified time horizon, given a specific level of confidence and based on a specific price history. The VaR methodology is a statistically defined, probability-based approach that takes into account market volatilities, as well as risk diversification by recognising offsetting positions and correlations between commodities and markets. In this way, risks can be measured consistently across markets and commodities and risk measures can be aggregated to derive a single risk value.

Glencore uses a VaR approach based on Monte Carlo simulations computed at a 95% confidence level and utilising a weighted data history for a one-day time horizon. Glencore's Board, as part of its annual review process in H2 2021, approved an increase in the Group's consolidated VaR limit (one day 95% confidence level) from $100 million to $150 million, with effect from 1 January 2022, which represents approximately 0.3% of total equity.

Prior to the Russia/Ukraine conflict, Glencore operated within the $150 million limit. Around the time of the invasion, the Group's VaR spiked due to the unprecedented levels of volatility in commodity markets (primarily energy but also certain metals), rather than due to any change in the Group's marketing positions or trading strategies. Given the market backdrop, prior to any likely breach, the Chief Risk Officer proactively consulted with the Board and received a temporary waiver from the application of a Group VaR limit. During the waiver period, the Chief Risk Officer reported regularly to the Board.

In mid-May, as some non-energy markets started to normalise, the temporary waiver was rescinded and replaced with a VaR limit of $200 million, to account for the statistically elevated energy market risk environment.

27. Financial and capital risk management continued

Similarly, prior to any breach, a temporary waiver was approved in mid-August due to increasing LNG volatilities as the European gas market was under significant pressure. In mid-September, following a comprehensive review, the Board determined it was appropriate to revert to the prior VaR limit of $150 million, but to exclude LNG from the Group VaR limit, while maintaining a separate multipronged LNG risk reporting and control structure, including the continued calculation and highlighting of VaR outcomes.

Position sheets are regularly distributed and monitored and daily Monte Carlo simulations are applied to the various business groups' net marketing positions to determine potential losses.

Market risk VaR (one-day 95% confidence level) ranges and year-end positions were as follows:

US$ million (all including LNG)	**2022**	2021
Year-end position[1]	88	72
Average during the year	158	54
High during the year	451	126
Low during the year	66	27

1 The year-end VaR, excluding LNG, was $76 million, comfortably within the Group's $150 million limit. Average Group VaR, excluding LNG since its exclusion in mid-September, was $70 million.

VaR does not purport to represent actual gains or losses in fair value in earnings to be incurred by Glencore, nor does Glencore claim that these VaR results are indicative of future market movements or representative of any actual impact on its future results. VaR should always be viewed in the context of its limitations; notably, the use of historical data as a proxy for estimating future events, market illiquidity risks and tail risks. Glencore recognises these limitations, and thus complements and continuously refines its VaR analysis by analysing forward looking stress scenarios, benchmarking against an alternative VaR computation based on historical simulations and back testing calculated VaR against the hypothetical portfolio returns arising in the next business day.

Glencore's VaR computation currently covers its business in the key base metals (including aluminium, nickel, zinc, copper and lead), cobalt, coal, coal freight, iron ore and oil products and natural gas/LNG, and assesses the open priced positions which are subject to price risk, including inventories of these commodities. Due to the lack of a liquid terminal market, Glencore does not include a VaR calculation for products such as alumina, molybdenum and some risk associated with metals' concentrates as it does not consider the nature of these markets to be suited to this type of analysis. Alternative measures are used to monitor exposures related to these products.

NET PRESENT VALUE AT RISK

Glencore's future cash flows related to its forecast Industrial production activities are also exposed to commodity price movements. Glencore manages this exposure through a combination of portfolio diversification, occasional shorter-term hedging via futures and options transactions, insurance products and continuous internal monitoring, reporting and quantification of the underlying operations' estimated cash flows and valuations.

INTEREST RATE RISK

Glencore is exposed to various risks associated with the effects of fluctuations in the prevailing levels of market interest rates on its assets and liabilities and cash flows. Matching of assets and liabilities is utilised as the dominant method to hedge interest rate risks; other methods include the use of interest rate swaps and similar derivative instruments with the same critical terms as the underlying interest rate exposures. See details on swap instruments used below.

Floating rate debt which is predominantly used to fund fast turning working capital (interest is internally charged on the funding of this working capital) is now primarily based on SOFR plus an appropriate premium. Accordingly, prevailing market interest rates are continuously factored into transactional pricing and terms.

Assuming the amount of floating rate liabilities at the reporting period end were outstanding for the whole year, interest rates were 100 basis points higher/lower and all other variables held constant, Glencore's income for the year ended 31 December 2022 would decrease/increase by $188 million (2021: $197 million).

Interest rate benchmark reform

The Group established a multidisciplinary working group to assess the impact of LIBOR reform and prepare and implement a LIBOR transition plan. This transition plan included updating policies, systems and processes.

The Group is primarily exposed to the transition of USD LIBOR into an alternative reference rate. Exposures arise on derivatives and non-derivative financial assets and liabilities.

To cater for the transition of interest rate hedging arrangements, the Group has adhered to the ISDA Fallback Protocol. All USD LIBOR derivative contracts will transition to the Secured Overnight Funding Rate (SOFR) upon cessation date and in accordance with the terms of the Protocol. Starting from 1 January 2022, all newly executed interest rate hedging arrangements directly reference an alternative reference rate/SOFR.

27. Financial and capital risk management continued

To cater for the transition of interest rates within other financial and non-financial assets and liabilities, the group has adopted a combination of Term SOFR, daily SOFR compounded in arrears, and the cost of funds quoted by the bank (if any) involved in such financing. The decision as to which one to adopt is made on a case-by-case basis and generally reflects the need to either have a fixed rate known in advance of the interest period (Term SOFR/cost of funds), or not (SOFR compounded in arrears). It may be that a particular agreement switches from one reference rate to another, with these decisions being made on a case-by-case basis.

As of 31 December 2022, only one financial debt facility had not transitioned to SOFR/cost of funds, being the medium term RCF.

CURRENCY RISK

The U.S. dollar is the predominant functional currency of the Group. Currency risk is the risk of loss from movements in exchange rates related to transactions and balances in currencies other than the U.S. dollar. Such transactions include operating expenditure, capital expenditure and to a lesser extent purchases and sales in currencies other than the functional currency. Purchases or sales of commodities concluded in currencies other than the functional currency, apart from certain limited domestic sales at industrial operations which act as a hedge against local operating costs, are ordinarily economically hedged through forward exchange contracts. Consequently, foreign exchange movements against the U.S. dollar on recognised transactions would have an immaterial financial impact. Glencore enters into currency hedging transactions with leading financial institutions.

Glencore's debt related payments (both principal and interest) are primarily denominated in or swapped using hedging instruments into U.S. dollars. Glencore's operating expenses, being a small portion of its revenue base, are incurred in a mix of currencies of which the U.S. dollar, Swiss Franc, Pound Sterling, Canadian dollar, Australian dollar, Euro, Kazakhstan Tenge, Colombian Peso and South African Rand are the predominant currencies.

Glencore has issued Euro, Swiss Franc, Sterling and Yen denominated bonds (see note 21). Cross currency swaps were concluded to hedge the currency risk on the principal and related interest payments of these bonds. These contracts were designated as fair value or cash flow hedges of the associated foreign currency risks. The critical terms of these swap contracts and their corresponding hedged items are matched and the Group expects a highly effective hedging relationship with the swap contracts and the value of the corresponding hedged items to change systematically in opposite direction in response to movements in the underlying exchange rates. The corresponding fair value and notional amounts of these derivatives is as follows:

	Notional amounts		Average FX rates		Carrying amount Assets (Note 29)		Carrying amount Liabilities (Note 29)		Average maturity[1]
US$ million	**2022**	2021	**2022**	2021	**2022**	2021	**2022**	2021	
Cross currency swap agreements									
Cash flow hedges - currency risk									
Eurobonds	2,907	2,907	1.14	1.14	–	3	203	42	2025
Sterling bonds	–	798	–	1.60	–	–	–	129	2022
Swiss franc bonds	504	504	1.06	1.06	20	12	–	–	2026
Fair value hedges - currency and interest rate risk									
Eurobonds	3,947	3,947	1.22	1.22	3	67	903	285	2027
Yen bonds	–	81	–	0.01	–	5	–	–	2022
Sterling bonds	663	663	1.33	1.33	1	33	106	–	2026
Swiss franc bonds	347	347	1.07	1.07	–	11	24	5	2026
	8,368	9,247			24	131	1,236	461	
Interest rate swap agreements									
Fair value hedges - interest rate risk									
US$ bonds	7,200	6,450	–	–	2	272	507	12	2026
	15,568	**15,697**			**26**	**403**	**1,743**	**473**	

1 Refer to note 21 for details.

27. Financial and capital risk management continued

The carrying amounts of the fair value hedged items are as follows:

US$ million	Carrying amount of the hedged item (Note 21)		Of which, accumulated fair value hedge adjustments and FX	
	2022	2021	**2022**	2021
Foreign exchange and interest rate risk				
Eurobonds	3,017	3,672	(866)	(255)
Yen bonds	–	87	–	5
Swiss franc bonds	326	354	(20)	38
Sterling bonds	541	677	(122)	22
US$ bonds	6,657	6,638	(505)	226
	10,541	**11,428**	**(1,513)**	**36**

CREDIT RISK

Credit risk arises from the possibility that counterparties may not be able to settle obligations due to Glencore within their agreed payment terms. Financial assets which potentially expose Glencore to credit risk consist principally of cash and cash equivalents, receivables and advances, derivative instruments and non-current advances and loans. Glencore's credit management process includes the assessment, monitoring and reporting of counterparty exposure on a regular basis. Glencore's cash and cash equivalents are placed overnight with a diverse group of highly credit rated financial institutions. Margin calls paid are similarly held with credit rated financial institutions. Glencore determines these instruments to have low credit risk at the reporting date. Credit risk with respect to receivables and advances is mitigated by the large number of customers comprising Glencore's customer base, their diversity across various industries and geographical areas, as well as Glencore's policy to mitigate these risks through letters of credit, netting, collateral and insurance arrangements where appropriate. Additionally, it is Glencore's policy that transactions and activities in trade related financial instruments be concluded under master netting agreements or long form confirmations to enable offsetting of balances due to/from a common counterparty in the event of default by the counterparty. Glencore actively and continuously monitors the credit quality of its counterparties through internal reviews and a credit scoring process, which includes, where available, public credit ratings. Balances with counterparties not having a public investment grade or equivalent internal rating are typically enhanced to investment grade through the extensive use of credit enhancement products, such as letters of credit or insurance products. Glencore has a diverse customer base, with no customer representing more than 7.1% (2021: 4.7%) of its trade receivables (taking into account credit enhancements) or accounting for more than 3.2% of its revenues over the year ended 31 December 2022 (2021: 3.6%) (see notes 3 and 14).

The maximum exposure to credit risk (including performance risk – see below), without considering netting agreements or without taking account of any collateral held or other credit enhancements, is equal to the carrying amount of Glencore's financial assets (see note 28) and physically-settled advances (see notes 12 and 14).

Management information used to monitor credit risk indicates that the prima facie risk profile % categories of financial assets which are subject to review for impairment under IFRS 9, is as set out below. The total balance for those assets as at 31 December 2022 is $11,469 million (2021: $10,765 million)(see notes 12, 14 and 15).

in %	**2022**	2021
AAA to AA-	8	8
A+ to A-	55	59
BBB+ to BBB-	17	11
BB+ to BB-	6	3
B+ to B-	8	8
CCC+ and below	6	11

Movements in credit losses for accounts receivable and advances and loans are shown in notes 12 and 14.

Performance risk

Performance risk (part of the broader credit risk subject matter, discussed above) is inherent in contracts, with agreements in the future, to physically purchase or sell commodities with fixed price attributes, and arises from the possibility that counterparties may not be willing or able to meet their future contractual physical sale or purchase obligations to/from Glencore. Glencore undertakes the assessment, monitoring and reporting of performance risk within its overall credit management process. Glencore's market breadth, diversified supplier and customer base as well as the standard pricing mechanism in the vast majority of Glencore's commodity portfolio which does not fix the primary commodity price beyond three months, ensure that performance risk is adequately mitigated. The commodity industry has trended towards shorter term fixed price contract periods, in part to mitigate against such potential performance risk, but also due to the continuous development of transparent and liquid spot commodity markets, with their associated derivative products and indexes.

27. Financial and capital risk management continued

LIQUIDITY RISK

Liquidity risk is the risk that Glencore is unable to meet its payment obligations when due, or that it is unable, on an ongoing basis, to borrow funds in the market on an unsecured or secured basis at an acceptable price to fund actual or proposed commitments. Prudent liquidity risk management implies maintaining sufficient cash and cash equivalents and availability of adequate committed funding facilities. Glencore has set itself an internal minimum liquidity target to maintain at all times, including via available committed undrawn credit facilities, of $3 billion (2021: $3 billion), which has purposely been substantially exceeded in recent years, accounting for the more volatile market backdrop. Glencore's credit profile, diversified funding sources and committed credit facilities, ensure that sufficient liquid funds are maintained to meet its liquidity requirements. As part of its liquidity management, Glencore closely monitors and plans for its future capital expenditure, working capital needs and proposed investments, as well as credit facility refinancing/extension requirements, well ahead of time (see notes 1, 12, 21, 22 and 25).

As at 31 December 2022, Glencore had available committed undrawn credit facilities and cash amounting to $13,000 million (2021: $10,296 million), refer to Other reconciliations section. The maturity profile of Glencore's financial liabilities based on the contractual terms is presented in the table below.

The liquidity risk related to physical forward purchase obligations represents the gross contractual cash outflows expected to be paid upon transfer of control of the underlying physical commodity. Gross cash inflows expected from physical forward sales are not presented in the below table, but would approximate the expected gross cash outflows related to forward purchase obligations plus an appropriate margin. Prior year balances have been restated to conform with current year presentation.

The gross liquidity risk relating to cross currency swaps entered into for the purposes of hedging foreign currency and interest rate risks arising from the Group's non-U.S. dollar denominated bonds is presented below. The amounts reflect the expected gross settlement of the U.S. dollar pay leg of these swaps. The inflows from the related foreign currency receive leg of these swaps are not presented in the below table, but would approximate the foreign currency equivalent of the US dollar pay leg. Counterparty settlement date risk related to these swaps is limited, as the Group has entered into margining arrangements for both the outflow and inflow legs of the swap.

2022

US$ million	After 5 years	Due 3 - 5 years	Due 2 - 3 years	Due 1 - 2 years	Due 0 - 1 year	**Total**
Non-derivative financial liabilities						
Borrowings excluding lease liabilities, fair value hedge adjustments and other non-cash items	8,203	4,330	3,262	3,350	9,821	28,966
Expected future interest payments	2,876	722	456	553	720	5,327
Lease liabilities - undiscounted	637	196	167	328	526	1,854
Accounts payable	–	–	–	–	26,884	26,884
Derivative financial liabilities						
Physical forward purchases	13,078	25,750	26,884	32,321	58,919	156,952
Cross currency swaps	2,840	2,408	1,289	1,138	2,072	9,747
Other financial liabilities[1]	384	242	296	63	2,090	3,075
Total	**28,018**	**33,648**	**32,354**	**37,753**	**101,032**	**232,805**

2021

US$ million	After 5 years	Due 3 - 5 years	Due 2 - 3 years	Due 1 - 2 years	Due 0 - 1 year	**Total**
Non-derivative financial liabilities						
Borrowings excluding lease liabilities, fair value hedge adjustments and other non-cash items	10,310	6,365	3,014	6,106	7,496	33,291
Expected future interest payments	3,219	861	547	716	830	6,173
Lease liabilities - undiscounted	730	257	209	345	596	2,137
Accounts payable	–	–	–	–	26,945	26,945
Derivative financial liabilities						
Physical forward purchases	7,920	16,260	15,023	27,121	54,595	120,919
Cross currency swaps	3,088	3,242	1,034	1,895	1,109	10,368
Other financial liabilities[1]	108	131	21	32	3,743	4,035
Total	**25,375**	**27,116**	**19,848**	**36,215**	**95,314**	**203,868**

1 Other financial liabilities exclude physical forwards and cross currency swaps as separately disclosed.

28. Financial instruments

FAIR VALUE OF FINANCIAL INSTRUMENTS

The following tables present the carrying values and fair values of Glencore's financial instruments. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction in the principal (most advantageous) market at the measurement date under current market conditions. Where available, market values have been used to determine fair values. When market values are not available, fair values have been calculated by discounting expected cash flows at prevailing market interest and exchange rates. The estimated fair values have been determined using market information and appropriate valuation methodologies, but are not necessarily indicative of the amounts that Glencore could realise in the normal course of business.

The financial assets and liabilities are presented by class in the tables below at their carrying values, which generally approximate the fair values with the exception of $27,398 million (2021: $33,023 million) of borrowings, the fair value of which at 31 December 2022 was $26,675 million (2021: $34,169 million). $6,918 million (2021: $10,132 million) represents the listed portion of the borrowing portfolio, based on quoted prices on active markets (a Level 1 fair value measurement), and $19,757 million (2021: $24,037 million) is based on observable market prices (a Level 2 fair value measurement).

2022 US$ million	Amortised cost	FVTPL[1]	FVOCI[2]	**Total**
Assets				
Other investments	–	37	419	456
Non-current other financial assets	–	206	–	206
Advances and loans	729	293	–	1,022
Accounts receivable	16,019	5,627	–	21,646
Other financial assets	–	6,109	–	6,109
Cash and cash equivalents	1,923	–	–	1,923
Total financial assets	**18,671**	**12,272**	**419**	**31,362**
Liabilities				
Borrowings	28,777	–	–	28,777
Non-current other financial liabilities	14	2,041	–	2,055
Accounts payable	12,703	14,181	–	26,884
Other financial liabilities	–	4,882	–	4,882
Total financial liabilities	**41,494**	**21,104**	**–**	**62,598**

2021 US$ million	Amortised cost	FVTPL[1]	FVTOCI[2]	**Total**
Assets				
Other investments	–	–	1,620	1,620
Non-current other financial assets	–	458	–	458
Advances and loans	795	163	–	958
Accounts receivable	11,672	5,523	–	17,195
Other financial assets	–	4,636	–	4,636
Cash and cash equivalents	3,241	–	–	3,241
Total financial assets	**15,708**	**10,780**	**1,620**	**28,108**
Liabilities				
Borrowings	34,641	–	–	34,641
Non-current other financial liabilities	87	623	–	710
Accounts payable	13,139	13,806	–	26,945
Other financial liabilities	–	6,077	–	6,077
Total financial liabilities	**47,867**	**20,506**	**–**	**68,373**

1 FVTPL – Fair value through profit and loss.
2 FVTOCI – Fair value through other comprehensive income.

28. Financial instruments continued

OFFSETTING OF FINANCIAL ASSETS AND LIABILITIES

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 31 December 2022 and 2021 were as follows:

2022 US$ million	Amounts eligible for set off under netting agreements			Related amounts not set off under netting agreements				
	Gross amount	Amounts offset	**Net amount**	Financial instruments	Financial collateral	Net amount	**Amounts not subject to netting agreements**	**Total as presented in the consolidated statement of financial position**
Derivative assets[1]	3,422	(2,141)	**1,281**	(608)	(26)	647	**5,034**	**6,315**
Derivative liabilities[1]	(5,929)	2,141	**(3,788)**	608	2,638	(542)	**(3,149)**	**(6,937)**

2021 US$ million	Amounts eligible for set off under netting agreements			Related amounts not set off under netting agreements				
	Gross amount	Amounts offset	**Net amount**	Financial instruments	Financial collateral	Net amount	**Amounts not subject to netting agreements**	**Total as presented in the consolidated statement of financial position**
Derivative assets[1]	19,327	(17,846)	**1,481**	(437)	(315)	729	**3,613**	**5,094**
Derivative liabilities[1]	(22,166)	17,846	**(4,320)**	437	3,522	(361)	**(2,467)**	**(6,787)**

1 Presented within current and non-current other financial assets and other financial liabilities.

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 in the ordinary course of business. Where practical reasons may prevent net settlement, 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. Per the terms of each agreement, an event of default includes failure by a party to make payment when due, failure by a party to perform any obligation required by the agreement (other than payment) if such failure is not remedied within periods of 30 to 60 days after notice of such failure is given to the party or bankruptcy.

29. Fair value measurements

Fair values are primarily determined using quoted market prices or standard pricing models using observable market inputs where available and are presented to reflect the expected gross future cash in/outflows. Glencore classifies the fair values of its financial instruments into a three level hierarchy based on the degree of the source and observability of the inputs that are used to derive the fair value of the financial asset or liability as follows:

Level 1 Inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that Glencore can assess at the measurement date; or

Level 2 Inputs other than quoted inputs included in Level 1 that are observable for the assets or liabilities, either directly or indirectly; or

Level 3 Unobservable inputs for the assets or liabilities, requiring Glencore to make market-based assumptions.

Level 1 classifications primarily include futures with a tenor of less than one year and options that are exchange traded, whereas Level 2 classifications primarily include futures with a tenor greater than one year, over the counter options, swaps and physical forward transactions which derive their fair value primarily from exchange quotes and readily observable broker quotes. Level 3 classifications primarily include physical forward transactions which derive their fair value predominantly from models that use broker quotes and applicable market-based estimates surrounding location, quality and credit differentials and financial liabilities linked to the fair value of certain mining operations. In circumstances where Glencore 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 Glencore's policy that transactions and activities in trade related financial instruments be concluded under master netting agreements or long form confirmations to enable balances due to/from a common counterparty to be offset in the event of default, insolvency or bankruptcy by the counterparty.

29. Fair value measurements continued

The following tables show the fair values of the derivative financial instruments including trade related financial and physical forward purchase and sale commitments by type of contract and non-current other financial assets and liabilities as at 31 December 2022 and 2021. Other assets and liabilities which are measured at fair value on a recurring basis are marketing inventories, other investments, cash and cash equivalents. There are no non-recurring fair value measurements.

FINANCIAL ASSETS

2022

US$ million	Level 1	Level 2	Level 3	Total
Financial assets				
Trade receivables	–	5,426	–	**5,426**
Contingent consideration	–	–	128	**128**
Other receivables	–	–	73	**73**
Other non-current receivables and loans	–	–	22	**22**
Convertible loan	–	–	168	**168**
Non-current contingent consideration	–	–	103	**103**
Other investments	280	176	–	**456**
Financial assets	**280**	**5,602**	**494**	**6,376**
Other financial assets				
Commodity related contracts				
Futures	809	156	–	**965**
Options	120	4	–	**124**
Swaps	40	165	18	**223**
Physical forwards	–	1,786	2,949	**4,735**
Financial contracts				
Foreign currency and interest rate contracts	–	62	–	**62**
Current other financial assets	**969**	**2,173**	**2,967**	**6,109**
Non-current other financial assets				
Cross currency swaps	–	24	–	**24**
Foreign currency and interest rate contracts	–	1	–	**1**
Purchased call options over Glencore shares[1]	–	181	–	**181**
Non-current other financial assets	**–**	**206**	**–**	**206**
Total	**1,249**	**7,981**	**3,461**	**12,691**

2021

US$ million	Level 1	Level 2	Level 3	Total
Financial assets				
Trade receivables[2]	–	5,269	–	**5,269**
Contingent consideration[2]	–	–	175	**175**
Other receivables[2]	–	–	79	**79**
Other non-current receivables and loans[2]	–	–	28	**28**
Non-current contingent consideration	–	–	135	**135**
Other investments	1,536	84	–	**1,620**
Financial assets	**1,536**	**5,353**	**417**	**7,306**
Other financial assets				
Commodity related contracts				
Futures[3]	420	138	–	**558**
Options	133	31	–	**164**
Swaps[3]	5	245	40	**290**
Physical forwards	–	2,878	646	**3,524**
Financial contracts				
Cross currency swaps	–	5	–	**5**
Foreign currency and interest rate contracts	–	95	–	**95**
Current other financial assets	**558**	**3,392**	**686**	**4,636**
Non-current other financial assets				
Cross currency swaps	–	125	–	**125**
Foreign currency and interest rate contracts	–	272	–	**272**
Purchased call options over Glencore shares[1]	–	61	–	**61**
Non-current other financial assets	**–**	**458**	**–**	**458**
Total	**2,094**	**9,203**	**1,103**	**12,400**

1 Call options over the Company's shares in relation to conversion rights of the $500 million non-dilutive convertible bond, due in 2025.

2 Prior year Level 3 other receivables have increased by $79 million and Level 3 other non-current receivables and loans have increased by $28 million after being restated to conform with current year presentation of financial assets.

3 Commodity related contracts have been restated to conform with current year presentation of financial assets and commodity related contracts classification. $251 million Level 1 and $9 million Level 2 swaps have been reclassified as $240 million Level 1 and $20 million Level 2 futures.

29. Fair value measurements continued

FINANCIAL LIABILITIES

2022

US$ million	Level 1	Level 2	Level 3	**Total**
Financial liabilities				
Accounts payable	–	14,079	–	**14,079**
Non-discretionary dividend obligation[1]	–	–	102	**102**
Financial liabilities	**–**	**14,079**	**102**	**14,181**
Other financial liabilities				
Commodity related contracts				
Futures	714	459	–	**1,173**
Options	32	119	–	**151**
Swaps	–	660	–	**660**
Physical forwards	–	2,498	113	**2,611**
Financial contracts				
Cross currency swaps	–	181	–	**181**
Foreign currency and interest rate contracts	1	105	–	**106**
Current other financial liabilities	**747**	**4,022**	**113**	**4,882**
Non-current other financial liabilities				
Cross currency swaps	–	1,055	–	**1,055**
Foreign currency and interest rate contracts	–	490	–	**490**
Non-discretionary dividend obligation[1]	–	–	219	**219**
Option over non-controlling interest in Ale	–	–	22	**22**
Contingent consideration	–	–	74	**74**
Embedded call options over Glencore shares[2]	–	181	–	**181**
Non-current other financial liabilities	**–**	**1,726**	**315**	**2,041**
Total	**747**	**19,827**	**530**	**21,104**

2021

US$ million	Level 1	Level 2	Level 3	**Total**
Financial liabilities				
Accounts payable	–	13,806	–	**13,806**
Financial liabilities	**–**	**13,806**	**–**	**13,806**
Other financial liabilities				
Commodity related contracts				
Futures[3]	2,126	365	–	**2,491**
Options	52	92	–	**144**
Swaps[3]	859	161	–	**1,020**
Physical forwards	–	1,872	235	**2,107**
Financial contracts				
Cross currency swaps	–	227	–	**227**
Foreign currency and interest rate contracts	–	88	–	**88**
Current other financial liabilities	**3,037**	**2,805**	**235**	**6,077**
Non-current other financial liabilities				
Cross currency swaps	–	331	–	**331**
Foreign currency and interest rate contracts	–	12	–	**12**
Non-discretionary dividend obligation[1]	–	–	148	**148**
Option over non-controlling interest in Ale	–	–	22	**22**
Contingent consideration	–	–	49	**49**
Embedded call options over Glencore shares[2]	–	61	–	**61**
Non-current other financial liabilities	**–**	**404**	**219**	**623**
Total	**3,037**	**17,015**	**454**	**20,506**

1 A ZAR denominated derivative liability payable to ARM Coal, a partner in one of the Group's principal coal joint operations based in South Africa. The liability arises from ARM Coal's rights as an investor to a share of agreed free cash flows from certain coal operations in South Africa and is valued based on those cash flows using a risk-adjusted discount rate. The derivative liability is settled over the life of those operations with a modelled mine life of 13 years as at 31 December 2022.

2 Embedded call option bifurcated from the 2025 convertible bond.

3 Prior year balances have been restated to conform with current year presentation of commodity related contracts classification. $140 million Level 1 and $14 million Level 2 swaps have been reclassified as $133 million Level 1 and $21 million Level 2 futures.

29. Fair value measurements continued

The following table shows the net changes in fair value of Level 3 other financial assets and other financial liabilities:

US$ million	Contingent consideration	Convertible loan	Physical forwards	Swaps	Other[1]	**Total Level 3**
1 January 2022	261	–	411	40	(63)	**649**
Total gain recognised in revenue	–	–	231	67	–	**298**
Total gain/(loss) recognised in cost of goods	–	–	2,403	(70)	–	**2,333**
Acquisition	(20)	200	–	–	–	**180**
Fair value recognised in other income/(expense)	105	(32)	–	–	(173)	**(100)**
Realised	(189)	–	(209)	(19)	(12)	**(429)**
31 December 2022	**157**	**168**	**2,836**	**18**	**(248)**	**2,931**
1 January 2021	376	–	6	–	(70)	**312**
Total gain recognised in revenue	–	–	117	337	–	**454**
Total gain/(loss) recognised in cost of goods	–	–	389	(297)	–	**92**
Fair value recognised in other income/(expense)	26	–	–	–	7	**33**
Realised	(141)	–	(101)	–	–	**(242)**
31 December 2021	**261**	**–**	**411**	**40**	**(63)**	**649**

1 Certain prior year balances have been restated to conform with current year presentation of financial assets.

During the year, no amounts were transferred between Level 1 and Level 2 of the fair value hierarchy and no amounts were transferred into or out of Level 3 of the fair value hierarchy for either other financial assets or other financial liabilities.

FAIR VALUE OF FINANCIAL ASSETS / FINANCIAL LIABILITIES

Some of the Group's financial assets and financial liabilities are measured at fair value at the end of each reporting period.

Futures, options and swaps classified as Level 1 financial assets and liabilities are measured using quoted prices in an active market.

Accounts receivable and payables, and certain futures, options, swaps, physical forwards, cross currency swaps, foreign currency and interest rate contracts classified as Level 2 financial assets and liabilities are measured using discounted cash flow models. Key inputs include observable quoted prices sourced from exchanges or traded reference indices in active markets for identical assets or liabilities. Prices are adjusted by a discount rate which captures the time value of money and counterparty credit considerations, as required.

Call options over Glencore shares classified as Level 2 financial assets and liabilities are measured using an option pricing model. Key inputs include the current price of Glencore shares, strike price, maturity date of the underlying convertible debt security, risk-free rate and volatility.

Given the extent to which the Group recognises financial instrument assets and liabilities at fair value, the preparation of the Group's consolidated financial statements requires management to consider on an on-going basis, the key valuation metrics and judgements involved in the determination of the fair value of financial instruments. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgement. Management reviewed the key valuation metrics, assumptions and methodologies involved in the determination of the Level 3 fair value of financial instruments and determined that the valuations were materially reasonable.

The following table provides information on the valuation techniques and inputs used to determine the fair value of Level 3 financial assets and financial liabilities.

29. Fair value measurements continued

US$ million			2022	2021
Swaps – Level 3		Assets	**18**	**40**
		Liabilities	**–**	**–**
Valuation techniques and key inputs:	Discounted cash flow model			
Significant and other unobservable inputs:	– Long term commodity prices The significant unobservable inputs represent the long-term commodity prices to which the valuation remains sensitive to. A 10% increase/decrease in commodity price assumptions would result in a $2 million (2021: $4 million) adjustment to the current carrying value.			
Physical Forwards – Level 3		Assets	**2,949**	**646**
		Liabilities	**(113)**	**(235)**
Valuation techniques and key inputs:	Discounted cash flow model			
Significant and other unobservable inputs:	Valuation of the Group's commodity physical forward contracts categorised within this level is based on observable market prices that are adjusted by unobservable differentials, as required, including: – Quality; – Geographic location; – Local supply & demand; – Customer requirements; and – Counterparty credit considerations. These unobservable inputs generally represent 1%–30% of the overall value of the instruments. The valuation prices are applied consistently to value physical forward sale and purchase contracts, and changing a particular input to reasonably possible alternative assumptions does not result in a material change in the underlying value of the portfolio. As at 31 December 2022, physical forward Level 3 assets relating to LNG contracts amount to $2,552 million (2021: $322 million) and liabilities of $19 million (2021: $12 million). Valuation of these contracts is based on observable Oil and Global Gas prices that are adjusted by unobservable differentials which collectively represent, but are not limited to, transportation, storage, liquification and regasification premiums. The value of our Level 3 long term LNG physical supply contracts reflects the price dislocation between Europe and other international markets and uncertainty of pricing inputs beyond the observable range. There is limited observable LNG pricing data beyond 2025 and an estimation uncertainty exists over global gas supply and demand and to extent to which the current dislocation impacts long term LNG pricing. For the longer dated portion of the curve, complex modelling techniques are also required where there is limited observable market data. Extrapolation of observable pricing is applied and correlated to third party long term forecast macro pricing assumptions for various Oil and Global Gas indices, on which the long term LNG prices are based. Given the resulting inherent estimation uncertainty, reasonable valuation ranges are developed to reflect the expected transfer value of these arrangements to another market participant in accordance with IFRS 13. The Group considers the risks associated with realising market value from unobservable long term prices in selecting pricing from within those ranges. The potential impact of a 10% favourable and unfavourable change in the unobservable valuation inputs could result in a gain of $0.1 billion and loss of $0.1 billion respectively, both of which would be reflected in the consolidated statement of income.			
Contingent consideration and Other Receivables (Mototolo) – Level 3		Assets	**231**	**282**
		Liabilities	**–**	**–**
Valuation techniques and key inputs:	Discounted cash flow model			
Significant and other unobservable inputs:	– Long-term forecast commodity prices; and – Discount rates using weighted average cost of capital methodology; The significant unobservable inputs represent the long-term forecast commodity prices to which the valuation remains sensitive to. A 10% increase/decrease in commodity price assumptions would result in a $19 million (2021: $27 million) adjustment to the current carrying value.			
Contingent consideration (Orion) – Level 3		Assets	**–**	**28**
		Liabilities	**–**	**–**
Valuation techniques and key inputs:	Discounted cash flow model			
Significant and other unobservable inputs:	– Estimated production plan; – Long-term forecast commodity prices; and – Discount rates using weighted average cost of capital methodology. The significant unobservable inputs represent the long-term forecast commodity prices to which the valuation remains sensitive to. In 2021, a 10% increase in gold price would have resulted in no adjustment to the carrying value of the asset, while a 10% decrease in gold price would have resulted in a $9 million negative adjustment.			

29. Fair value measurements continued

US$ million			2022	2021
Other receivables and non-current receivables and loans – Level 3		Assets	**95**	**107**
		Liabilities	**–**	**–**
Valuation techniques and key inputs:	Discounted cash flow model – Discount rates specific to the operation; and – Underlying business plans and forecasts.			
Significant and other unobservable inputs:	The valuation remains sensitive to repayment cashflows dependent upon the underlying business plans and forecasts. A 1 year delay in the underlying cash flows would result in a $19 million (2021: $9 million) reduction to the current carrying value of the asset while bringing forward repayments by 1 year would result in a $11 million (2021: $8 million) increase.			
Convertible loan (Li-Cycle) – Level 3		Assets	**168**	**–**
		Liabilities	**–**	**–**
Valuation techniques and key inputs:	Discounted cash flow and option pricing model – Share price; and – Risk-free rate and volatility.			
Significant and other unobservable inputs:	The valuation remains sensitive to the share price and a 10% increase/decrease in share price assumptions would result in an $6 million adjustment to the current carrying value.			
Non-discretionary dividend obligation (ARM Coal) – Level 3		Assets	**–**	**–**
		Liabilities	**(321)**	**(148)**
Valuation techniques: Significant and other unobservable inputs:	Discounted cash flow model – Long-term forecast commodity prices; – Discount rates using weighted average cost of capital methodology; – Production models; – Operating costs; and – Capital expenditures. The resultant liability is essentially a discounted cash flow valuation of the underlying mining operation. Increases/decreases in forecast commodity prices will result in an increase/decrease to the value of the liability though this will be partially offset by associated increases/decreases in the assumed production levels, operating costs and capital expenditures, which are inherently linked to forecast commodity prices. The significant unobservable inputs represent the long-term forecast commodity prices to which the valuation remains sensitive to. A 10% increase/decrease in commodity price assumptions would result in an $108 million (2021: $94 million) adjustment to the current carrying value.			
Option over non-controlling interest (AleSat) – Level 3		Assets	**–**	**–**
		Liabilities	**(22)**	**(22)**
Valuation techniques and key inputs: Significant unobservable inputs:	Discounted cash flow model The resultant liability is the value of the remaining minority stake in the subsidiary, measured as the higher value of the acquisition date valuation of the shares, and a discounted future earnings based valuation. The valuation is additionally sensitive to movement in the spot exchange rates between the Brazilian Real and US Dollar.			
Contingent consideration – Level 3		Assets	**–**	**–**
		Liabilities	**(74)**	**(49)**
Valuation techniques and key inputs: Significant and other unobservable inputs:	Discounted cash flow models – Estimated production plans; – Forecast commodity prices; and – Discount rates using weighted average cost of capital methodology. The resultant liabilities was mainly determined using forecasted production estimates and assumed actual coal prices higher than a royalty trigger price. Should production volumes increase/decrease by 10% the value of the liability would increase/decrease by $7 million (2021: $6 million), and for any given quarter should commodity prices be lower than the royalty trigger, no amounts would be due under the price contingent royalty arrangement.			

30. Future commitments

Capital expenditure for the acquisition of property, plant and equipment is generally funded through the cash flow generated by the respective industrial entities. As at 31 December 2022, $1,295 million (2021: $1,111 million), of which 94% (2021: 86%) relates to expenditure to be incurred over the next year, was contractually committed for the acquisition of property, plant and equipment.

Certain of Glencore's exploration tenements and licences require it to spend a minimum amount per year on development activities, a significant portion of which would have been incurred in the ordinary course of operations. As at 31 December 2022, $118 million (2021: $118 million) of such development expenditures are to be incurred, of which 20% (2021: 27%) are for commitments to be settled over the next year.

As part of Glencore's ordinary sourcing and procurement of physical commodities and other ordinary marketing obligations, the selling party may request that a financial institution act as either a) the paying party upon the delivery of product and qualifying documents through the issuance of a letter of credit or b) the guarantor by way of issuing a bank guarantee accepting responsibility for Glencore's contractual obligations. Similarly, Glencore is required to post rehabilitation and pension guarantees in respect of some of these future, primarily industrial, long-term obligations. As at 31 December 2022, $7,965 million (2021: $8,965 million) of procurement and $4,256 million (2021: $4,353 million) of rehabilitation and pension commitments have been issued on behalf of Glencore, which will generally be settled simultaneously with the payment for such commodity and rehabilitation and pension obligations.

ASTRON RELATED COMMITMENTS

As part of the regulatory approval process relating to the acquisition of a 75% shareholding in Astron Energy, Glencore and Astron Energy entered into certain commitments (subject to variation for good cause) with the South Africa Competition Tribunal and the South African Economic Development Department. These commitments include investment expenditure of up to ZAR 6.5 billion ($384 million) over the period to 2024 so as to debottleneck and improve the performance of the Cape Town oil refinery, contribute to the rebranding of certain retail sites and establish a development fund to support small and black-owned businesses in Astron Energy's value chain.

31. Contingent liabilities

There were no corporate guarantees in favour of third parties as at 31 December 2022 (2021: None), except those disclosed in note 11. The Group is subject to various legal and regulatory proceedings as detailed below. These contingent liabilities are reviewed on a regular basis and where appropriate an estimate is made of the potential financial impact on the Group. As at 31 December 2022 and 2021, it was not feasible to make such an assessment.

LEGAL AND REGULATORY PROCEEDINGS

Under IAS 37 Provisions, Contingent Liabilities and Contingent Assets, a provision is recognised when Glencore has a present obligation (legal or constructive), as a result of a past event, and it is probable that an outflow of resources embodying economic benefits, that can be reliably estimated, will be required to settle the liability. A contingent liability is a possible obligation that arises from a past event and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of Glencore. If it is not clear whether there is a present obligation, a past event is deemed to give rise to a present obligation if, taking account of all available evidence, it is more likely than not that a present obligation exists at the end of the reporting period. When a present obligation arises but it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation or the amount of the obligation cannot be measured with sufficient reliability, a contingent liability is disclosed.

INVESTIGATIONS BY REGULATORY AND ENFORCEMENT AUTHORITIES

As described in note 23, the Group remains subject to investigations by the OAG and Dutch authorities. At 31 December 2022, taking account of all available evidence, the Investigations Committee concluded that, with respect to these investigations, it is not probable that a present obligation existed at the end of the reporting period. In addition, the timing and amount, if any, of the possible financial effects (such as fines, penalties or damages, which could be material) or other consequences, including external costs, from the OAG and Dutch investigations and any change in their scope are not currently possible to predict or estimate.

The Group notes that other authorities may commence investigations against the Group in connection with the resolved investigations or the matters under investigation. In respect of these investigations, taking into account all available evidence, the Investigations Committee does not consider it probable that a present obligation existed in relation to these potential investigations as at the balance sheet date, and the amount of any financial effects, which could be material, is not currently possible to predict or estimate.

CLAIMS AGAINST THE COMPANY IN CONNECTION WITH INVESTIGATIONS BY REGULATORY AND ENFORCEMENT AUTHORITIES

Claims have been issued against the Group in the United Kingdom in connection with the various Government investigations, constituting claims on behalf of approximately 400 current and former shareholders. The claims are, inter alia, made under s90 of the Financial Services and Markets Act 2000 ("FSMA") relating to prospectus liability, while two currently include s90A FSMA claims relating to misstatements in other information by the Company. The bases for the claims are that the prospectuses issued in 2011 and 2013 and other published information by the Company were untrue, misleading or contained omissions. The claims are at a very early stage.

The Group may be the subject of further legal claims brought by other parties in connection with the Government investigations, including collective, group or representative actions.

In respect of these claims, taking into account all available evidence, the Investigations Committee does not consider it probable that a present obligation existed in relation to these claims or potential claims as at the balance sheet date, and the amount of any financial effects, which could be material, is not currently possible to predict or estimate.

OTHER LEGAL PROCEEDINGS

Other claims and unresolved disputes are pending against Glencore. However, based on the Group's current assessment of these matters any future individually material financial obligations are considered to be remote.

ENVIRONMENTAL CONTINGENCIES

Glencore's operations are subject to various environmental laws and regulations. Glencore is not aware of any material non-compliance with those laws and regulations. Glencore accrues for environmental contingencies when such contingencies are probable and reasonably estimable. Such accruals are adjusted as new information develops or circumstances change. Recoveries of environmental remediation costs from insurance companies and other parties are recorded as assets when the recoveries are virtually certain. At this time, Glencore is unaware of any material environmental incidents at its locations. Any potential liability arising from environmental incidents in the ordinary course of the Group's business would not usually be expected to have a material adverse effect on its consolidated income, financial position or cash flows.

32. Related party transactions

In the normal course of business, Glencore enters into various arm's length 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 (see notes 12, 14 and 25). There have been no guarantees provided or received for any related party receivables or payables.

All transactions between Glencore and its subsidiaries are eliminated on consolidation along with any unrealised profits and losses between its subsidiaries, associates and joint ventures. In 2022, sales and purchases with associates and joint ventures amounted to $3,941 million (2021: $3,877 million) and $8,091 million (2021: $8,021 million) respectively.

33. Principal subsidiaries with material non-controlling interests

Non-controlling interest is comprised of the following:

US$ million	**2022**	2021
Kazzinc	1,156	1,368
Koniambo	(5,745)	(5,180)
Kamoto Copper Company (KCC)	88	474
Volcan	(201)	(106)
Other[1]	511	430
Total	**(4,191)**	**(3,014)**

1 Other comprises various subsidiaries in which no individual balance attributable to non-controlling interests is material, including a balance of $98 million relating to Mutanda. See below.

RENEWAL OF MUTANDA'S MINING LICENCE AND 5% DILUTION

Three mining permits ("permis d'exploitation") (PE662, PE643 and PE662) were successfully renewed by Mutanda Mining in 2022 for an additional period of 15 years. The renewal of the mining titles triggered the transfer of 5% of the equity of Mutanda Mining to the DRC government in accordance with the DRC Mining Code, which resulted in a $109 million non-controlling interest and an intangible asset related to the right to mine over a 15 year period being recognised (see note 10).

33. Principal subsidiaries with material non-controlling interests continued

Summarised financial information in respect of Glencore's subsidiaries that have material non-controlling interest as at 31 December 2022 and 2021, reflecting 100% of the underlying subsidiary's relevant figures, is set out below.

US$ million	Kazzinc	Koniambo	KCC	Volcan
31 December 2022				
Non-current assets	3,377	507	4,429	1,723
Current assets	1,613	519	1,351	241
Total assets	**4,990**	**1,026**	**5,780**	**1,964**
Non-current liabilities	494	15,019	9,602	1,256
Current liabilities	673	147	1,456	405
Total liabilities	**1,167**	**15,166**	**11,058**	**1,661**
Net assets	**3,823**	**(14,140)**	**(5,278)**	**303**
Equity attributable to owners of the Company	2,667	(8,395)	(5,366)	504
Non-controlling interest	1,156	(5,745)	88	(201)
Non-controlling interest %	30.3%	51.0%	25.0%	76.7%
2022				
Revenue	3,564	713	2,545	1,000
Expenses	(3,615)	(1,823)	(3,127)	(1,124)
Net loss for the year	**(51)**	**(1,110)**	**(582)**	**(124)**
Loss attributable to owners of the Company	(35)	(544)	(407)	(29)
Loss attributable to non-controlling interests	(16)	(566)	(175)	(95)
Total comprehensive loss for the year	**(51)**	**(1,110)**	**(582)**	**(124)**
Dividends paid to non-controlling interests	(196)	–	(211)	–
Net cash inflow/(outflow) from operating activities	549	(78)	898	234
Net cash outflow from investing activities	(335)	(19)	(393)	(245)
Net cash (outflow)/inflow from financing activities	(309)	112	(632)	(146)
Total net cash (outflow)/inflow	**(95)**	**15**	**(127)**	**(157)**

US$ million	Kazzinc	Koniambo	KCC	Volcan
31 December 2021				
Non-current assets	4,210	434	5,266	1,796
Current assets	1,515	461	1,135	400
Total assets	**5,725**	**895**	**6,401**	**2,196**
Non-current liabilities	721	13,822	9,313	980
Current liabilities	480	104	804	789
Total liabilities	**1,201**	**13,926**	**10,117**	**1,769**
Net assets	**4,524**	**(13,031)**	**(3,716)**	**427**
Equity attributable to owners of the Company	3,156	(7,851)	(4,190)	533
Non-controlling interest	1,368	(5,180)	474	(106)
Non-controlling interest %	30.3%	51.0%	25.0%	76.7%
2021				
Revenue	3,502	242	3,899	981
Expenses	(2,940)	(2,364)	(2,820)	(941)
Net profit/(loss) for the year	**562**	**(2,122)**	**1,079**	**40**
Profit/(loss) attributable to owners of the Company	392	(1,040)	837	9
Profit/(loss) attributable to non-controlling interests	170	(1,082)	242	31
Total comprehensive income/(loss) for the year	**562**	**(2,122)**	**1,079**	**40**
Dividends paid to non-controlling interests	(150)	–	–	–
Net cash inflow/(outflow) from operating activities	837	(165)	1,708	318
Net cash outflow from investing activities	(318)	(13)	(301)	(174)
Net cash (outflow)/inflow from financing activities	(394)	193	(1,294)	(28)
Total net cash inflow	**125**	**15**	**113**	**116**

ALTERNATIVE PERFORMANCE MEASURES

Alternative performance measures are denoted by the symbol ◊

When assessing and discussing the Group's reported financial performance, financial position and cash flows, Glencore makes reference to Alternative performance measures (APMs), which are not defined or specified under the requirements of IFRS, but are derived from the financial statements prepared in accordance with IFRS. The APMs are consistent with how business performance is measured and reported within the internal management reporting to the Board and management and assist in providing meaningful analysis of the Group's results both internally and externally in discussions with the financial analyst and investment community.

The Group uses APMs to aid the comparability of information between reporting periods and segments and to aid the understanding of the activity taking place across the Group by adjusting for items that are of an infrequent nature and by aggregating or disaggregating (notably in the case of relevant material associates and joint ventures accounted for on an equity basis) certain IFRS measures. APMs are also used to approximate the underlying operating cash flow generation of the operations (Adjusted EBITDA).

Investments in the extractive industry are typically significant and the initial spend generally occurs over several years, "upfront", prior to the operations generating cash. As a result, the investments are sometimes made with partners and an assessment to approximate the operating cash flow generation/pay-back of the investment (Adjusted EBITDA) is required. Against this backdrop, the key APMs used by Glencore are Adjusted EBITDA, Net funding/Net debt and the disaggregation of the equivalent key APMs of our relevant material associates and joint ventures ("Proportionate adjustment") to enable a consistent evaluation of the financial performance and returns attributable to the Group.

Adjusted EBITDA is a useful approximation of the operating cash flow generation by eliminating depreciation and amortisation adjustments. Adjusted EBITDA is not a direct measure of our liquidity, which is shown by our cash flow statement and needs to be considered in the context of our financial commitments.

Proportionate adjustments are useful to enable a consistent evaluation of the financial performance and returns available to the Group, irrespective of the differing accounting treatments required to account for our minority/joint ownership interests of our relevant material investments.

Net funding is an aggregation of IFRS measures (Borrowings less cash and cash equivalents) and Net debt is Net funding less Readily marketable inventories and provides a measure of our financial leverage and, through Net debt to Adjusted EBITDA relationships, provides an indication of relative financial strength and flexibility.

APMs used by Glencore may not be comparable with similarly titled measures and disclosures by other companies. APMs have limitations as an analytical tool, and a user of the financial statements should not consider these measures in isolation from, or as a substitute for, analysis of the Group's results of operations; and they may not be indicative of the Group's historical operating results, nor are they meant to be a projection or forecast of its future results.

Listed below are the definitions and reconciliations to the underlying IFRS measures of the various APMs used by the Group.

Proportionate adjustment

For internal reporting and analysis, management evaluates the performance of Antamina copper/zinc mine (34% owned) and Collahuasi copper mine (44% owned) under the proportionate consolidation method reflecting Glencore's proportionate share of the revenues, expenses, assets and liabilities of these investments. In January 2022, Glencore completed the acquisition of the remaining 66.67% interest in Cerrejón (coal), that it did not previously own (see note 26), increasing Glencore's ownership to 100% and providing it with the ability to exercise control and fully consolidate Cerrejón. Prior to the transaction, Glencore evaluated the performance of its 33.33% interest in Cerrejón under the proportionate consolidation method, such that 2021 segment comparatives reflect Glencore's proportionate share of the revenues, expenses, assets and liabilities of this investment.

Although Glencore has a voting interest in Volcan of 63%, its total economic interest is only 23.3%. For internal reporting and analysis, management evaluates the performance of Volcan under the equity method, reflecting the Group's relatively low 23.3% economic ownership in this fully ring-fenced listed entity, with its stand-alone, independent and separate capital structure. The impact is that we reflect 23.3% of Volcan's net income in the Group's Adjusted EBIT/EBITDA and its consolidated results are excluded from all other APM's, including production data. In Q4 2022, Glencore commenced a process exploring the possible disposal of its 23.3% economic interest in Volcan. As a result, the carrying amounts of Volcan assets and liabilities as at 31 December 2022 are classified as held for sale (see note 16).

The Viterra joint venture is a stand-alone group with a fully independent capital structure, governance and credit profile, supporting a global business, across many geographies, products and activities. Glencore's management evaluates this investment's financial performance on a net return basis, as opposed to an Adjusted EBITDA basis and thus, the financial results of Viterra are presented on a basis consistent with its underlying IFRS treatment (equity accounting).

See reconciliation of revenue and relevant material associates' and joint ventures' Adjusted EBIT to "Share of net income from associates and joint ventures" below.

APMS DERIVED FROM THE STATEMENT OF INCOME

Revenue

Revenue represents revenue by segment (see note 2 of the financial statements), as reported on the face of the statement of income plus the relevant Proportionate adjustments. See reconciliation table below.

US$ million	**2022**	2021
Revenue – Marketing activities	215,102	177,583
Revenue – Industrial activities	78,332	60,810
Intersegment eliminations	(34,755)	(30,461)
Revenue - segmental	**258,679**	**207,932**
Proportionate adjustment material associates and joint ventures – revenue	(3,695)	(5,162)
Proportionate adjustment Volcan – revenue	1,000	981
Revenue – reported measure	**255,984**	**203,751**

Share of income from relevant material associates and joint ventures

US$ million	**2022**	2021
Associates' and joint ventures' Adjusted EBITDA	2,687	4,001
Depreciation and amortisation	(641)	(687)
Associates' and joint ventures' Adjusted EBIT	2,046	3,314
Net finance costs	(22)	4
Income tax expense	(688)	(1,211)
	(710)	(1,207)
Share of income from relevant material associates and joint ventures	**1,336**	**2,107**
Share of income from other associates and joint ventures	964	511
Share of income from associates and joint ventures[1]	**2,300**	**2,618**

1 Comprises share in earnings of $528 million (2021: $492 million) from Marketing activities and share in earnings of $1,772 million (2021: $2,126 million) from Industrial activities.

Adjusted EBIT/EBITDA

Adjusted EBIT/EBITDA provide insight into our overall business performance (a combination of cost management, seizing market opportunities and growth), and are the corresponding flow drivers towards our objective of achieving industry-leading returns.

Adjusted EBIT is the net result of revenue less cost of goods sold and selling and administrative expenses, plus share of income from associates and joint ventures, dividend income and the attributable share of Adjusted EBIT of relevant material associates and joint ventures, which are accounted for internally by means of proportionate consolidation, excluding Significant items, see below.

Adjusted EBITDA consists of Adjusted EBIT plus depreciation and amortisation, including the related Proportionate adjustments. See reconciliation table below.

US$ million	**2022**	2021
Reported measures		
Revenue	255,984	203,751
Cost of goods sold	(228,723)	(191,370)
Selling and administrative expenses	(2,430)	(2,115)
Share of income from associates and joint ventures	2,300	2,618
Dividend income	45	23
	27,176	**12,907**
Adjustments to reported measures		
Share of associates' significant items	9	11
Movement in unrealised inter-segment profit elimination	(1,176)	549
Proportionate adjustment material associates and joint ventures – net finance and income tax expense	710	1,207
Proportionate adjustment Volcan – net finance, income tax expense and non-controlling interests	(62)	(179)
Adjusted EBIT	**26,657**	**14,495**
Depreciation and amortisation	6,987	6,335
Proportionate adjustment material associates and joint ventures – depreciation	641	687
Proportionate adjustment Volcan – depreciation	(225)	(194)
Adjusted EBITDA	**34,060**	**21,323**

Significant items

Significant items of income and expense which, due to their variable financial impact or the expected infrequency of the events giving rise to them, are separated for internal reporting and analysis of Glencore's results to aid in an understanding and comparative basis of the underlying financial performance. Refer to reconciliation below.

Reconciliation of net significant items 2022

US$ million	Gross significant charges	Non-controlling interests' share	Significant items tax	**Equity holders' share**
Share of Associates' significant items[1]	(9)	–	–	(9)
Movement in unrealised inter-segment profit elimination[1]	1,176	–	(141)	1,035
Gain on acquisitions and disposals of non-current assets[2]	1,287	4	(115)	1,176
Other expense – net[3]	(911)	–	(26)	(937)
Tax significant items in their own right[4]	–	–	(486)	(486)
	1,543	4	(768)	779
Impairments attributable to equity holders				
Impairments[5]	(3,173)	338	521	(2,314)
Impairment Volcan[5]	(164)	89	48	(27)
	(3,337)	427	569	(2,341)
Total significant items	**(1,794)**	**431**	**(199)**	**(1,562)**

1 See note 2 of the financial statements.
2 See note 4 of the financial statements.
3 See note 5 of the financial statements.
4 Relates to foreign exchange fluctuations ($187 million), tax losses not recognised ($98 million) and adjustments in respect of prior years ($201 million), see note 8 of the financial statements.
5 See note 7 of the financial statements.

Reconciliation of net significant items 2021

US$ million	Gross significant charges	Non-controlling interests' share	Significant items tax	**Equity holders' share**
Share of Associates' significant items[1]	(11)	–	–	(11)
Movement in unrealised inter-segment profit elimination[1]	(549)	–	77	(472)
Loss on acquisitions and disposals of non-current assets[2]	(607)	–	(23)	(630)
Other expense – net[3]	(1,947)	(4)	(6)	(1,957)
Tax significant items in their own right[4]	–	–	56	56
	(3,114)	(4)	104	(3,014)
Impairments attributable to equity holders				
Impairments[5]	(1,838)	668	33	(1,137)
Total significant items	**(4,952)**	**664**	**137**	**(4,151)**

1 See note 2 of the financial statements.
2 See note 4 of the financial statements.
3 See note 5 of the financial statements.
4 Relates to foreign exchange fluctuations ($52 million) and tax losses not recognised ($15 million) less adjustments in respect of prior years ($11 million), see note 8 of the financial statements.
5 See note 7 of the financial statements.

Net income attributable to equity holder pre-significant items

Net income attributable to equity holders pre-significant items is a measure of our ability to generate shareholder returns. The calculation of tax items to be excluded from Net income, includes the tax effect of significant items and significant tax items themselves. Refer to reconciliation below.

US$ million	**2022**	2021
Income for the year attributable to equity holders of the Parent	17,320	4,974
Significant items	1,562	4,151
Income attributable to equity holders of the Parent pre-significant items	**18,882**	**9,125**

APMS DERIVED FROM THE STATEMENT OF FINANCIAL POSITION

Net funding/Net debt and Net debt to Adjusted EBITDA

Net funding/debt demonstrates how our debt is being managed and is an important factor in ensuring we maintain investment grade credit rating status and a competitive cost of capital. Net funding is defined as total current and non-current borrowings less cash and cash equivalents and related Proportionate adjustments. Net debt is defined as Net funding less readily marketable inventories and related Proportionate adjustments. Consistent with the general approach in relation to our internal reporting and evaluation of Volcan, its consolidated net debt has also been adjusted to reflect the Group's relatively low 23.3% economic ownership (compared to its 63% voting interest) in this still fully ring-fenced listed entity, with its standalone, independent and separate capital structure. Furthermore, the relationship of Net debt to Adjusted EBITDA provides an indication of financial flexibility. See reconciliation table below.

Readily marketable inventories (RMI)

RMI, comprising the core inventories which underpin and facilitate Glencore's marketing activities, represent inventories, that in Glencore's assessment, are readily convertible into cash in the short term due to their liquid nature, widely available markets and the fact that price risk is primarily covered either by a forward physical sale or hedge transaction. Glencore regularly assesses the composition of these inventories and their applicability, relevance and availability to the marketing activities. As at 31 December 2022, $27,425 million (2021: $24,795 million) of inventories were considered readily marketable. This comprises $19,157 million (2021: $16,073 million) of inventories carried at fair value less costs of disposal and $8,268 million (2021: $8,722 million) carried at the lower of cost or net realisable value. Total readily marketable inventories includes $230 million (2021: $125 million) related to the relevant material associates and joint ventures (see note 2) presented under the proportionate consolidation method, comprising inventory carried at lower of cost or net realisable value. Given the highly liquid nature of these inventories, which represent a significant share of current assets, the Group believes it is appropriate to consider them together with cash equivalents in analysing Group net debt levels and computing certain debt coverage ratios and credit trends.

Net funding/net debt at 31 December 2022

US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Non-current borrowings	18,851	845	–	19,696
Current borrowings	9,926	26	–	9,952
Total borrowings	**28,777**	**871**	**–**	**29,648**
Less: cash and cash equivalents	(1,923)	(225)	–	(2,148)
Net funding[1]	**26,854**	**646**	**–**	**27,500**
Less: Readily marketable inventories	(27,195)	(230)	–	(27,425)
Net debt/(cash)[1]	**(341)**	**416**	**–**	**75**
Adjusted EBITDA				**34,060**
Net debt to Adjusted EBITDA				**0.00**

Net funding/net debt at 31 December 2021

US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Non-current borrowings	26,811	467	(485)	26,793
Current borrowings	7,830	29	(434)	7,425
Total borrowings	**34,641**	**496**	**(919)**	**34,218**
Less: cash and cash equivalents	(3,241)	(371)	231	(3,381)
Net funding[1]	**31,400**	**125**	**(688)**	**30,837**
Less: Readily marketable inventories	(24,670)	(125)	–	(24,795)
Net debt[1]	**6,730**	**–**	**(688)**	**6,042**
Adjusted EBITDA				**21,323**
Net debt to Adjusted EBITDA				**0.28**

1 Includes $595 million (2021: $857 million) of Marketing related lease liabilities.

Capital expenditure ("Capex")

Capital expenditure is expenditure capitalised as property, plant and equipment. For internal reporting and analysis, Capex includes related Proportionate adjustments. See reconciliation table below.

US$ million	**2022**	2021
Capital expenditure – Marketing activities	299	801
Capital expenditure – Industrial activities	4,807	4,423
Capital expenditure - segmental	**5,106**	**5,224**
Proportionate adjustment material associates and joint ventures – capital expenditure	(694)	(713)
Proportionate adjustment Volcan – capital expenditure	233	197
Capital expenditure – reported measure	**4,645**	**4,708**

APMS DERIVED FROM THE STATEMENT OF CASH FLOWS

Net purchase and sale of property, plant and equipment

Net purchase and sale of property, plant and equipment is cash purchase of property, plant and equipment, net of proceeds from sale of property, plant and equipment. For internal reporting and analysis, Net purchase and sale of property, plant and equipment includes proportionate adjustments. See reconciliation table below.

2022 US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Purchase of property, plant and equipment	(4,177)	(674)	245	(4,606)
Proceeds from sale of property, plant and equipment	63	–	–	63
Net purchase and sale of property, plant and equipment	**(4,114)**	**(674)**	**245**	**(4,543)**

2021 US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Purchase of property, plant and equipment	(3,618)	(695)	174	(4,139)
Proceeds from sale of property, plant and equipment	342	3	(8)	337
Net purchase and sale of property, plant and equipment	**(3,276)**	**(692)**	**166**	**(3,802)**

Funds from operations (FFO) and FFO to Net debt

FFO is a measure that reflects our ability to generate cash for investment, debt servicing and returns to shareholders. It comprises cash provided by operating activities before working capital changes, less tax and net interest payments plus dividends received and related Proportionate adjustments. Furthermore, the relationship of FFO to net debt is an indication of our financial flexibility and strength. See reconciliation table below.

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2022 US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Cash generated by operating activities before working capital changes, interest and tax	32,915	–	–	32,915
Addback EBITDA of relevant material associates and joint ventures	–	2,687	(285)	2,402
Non-cash adjustments included within EBITDA	–	46	(11)	35
Adjusted cash generated by operating activities before working capital changes, interest and tax	32,915	2,733	(296)	35,352
Income taxes paid	(4,881)	(1,066)	43	(5,904)
Interest received	234	3	(5)	232
Interest paid	(1,340)	(18)	57	(1,301)
Dividends received from associates and joint ventures	1,691	(1,132)	–	559
Funds from operations (FFO)	**28,619**	**520**	**(201)**	**28,938**

2021 US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Cash generated by operating activities before working capital changes, interest and tax	16,725	–	–	16,725
Addback EBITDA of relevant material associates and joint ventures	–	4,001	(382)	3,619
Adjusted cash generated by operating activities before working capital changes, interest and tax	16,725	4,001	(382)	20,344
Income taxes paid	(1,837)	(855)	16	(2,676)
Interest received	100	–	(1)	99
Interest paid	(1,003)	(9)	60	(952)
Dividends received from associates and joint ventures	2,375	(2,133)	–	242
Funds from operations (FFO)	**16,360**	**1,004**	**(307)**	**17,057**
Net debt				**6,042**
FFO to net debt				**282.3%**

OTHER RECONCILIATIONS

AVAILABLE COMMITTED LIQUIDITY[1]

US$ million	**2022**	2021
Cash and cash equivalents – reported	1,923	3,241
Proportionate adjustment – cash and cash equivalents	225	140
Headline committed syndicated revolving credit facilities	11,185	11,222
Amount drawn under syndicated revolving credit facilities	–	(2,543)
Amounts drawn under U.S. commercial paper programme	(333)	(1,764)
Total	**13,000**	**10,296**

1 Presented on an adjusted measure basis.

CASH FLOW RELATED ADJUSTMENTS 2022

US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Funds from operations (FFO)	28,619	520	(201)	28,938
Net movements in inventories	(5,035)	(111)	(3)	(5,149)
Net other working capital changes	(8,234)	(61)	(39)	(8,334)
Increase in long-term advances and loans	(200)	–	–	(200)
Net cash received in acquisitions of subsidiaries	321	(167)	–	154
Net cash received from disposal of subsidiaries	455	–	–	455
Purchase of investments	(476)	–	–	(476)
Proceeds from sale of investments	604	–	–	604
Purchase of property, plant and equipment	(4,177)	(674)	245	(4,606)
Proceeds from sale of property, plant and equipment	63	–	–	63
Margin payments in respect of financing related hedging activities	(1,824)	–	–	(1,824)
Return of capital/distributions to non-controlling interests	(442)	–	–	(442)
Purchase of own shares	(2,503)	–	–	(2,503)
Disposal of own shares	238	–	–	238
Distributions paid to equity holders of the Parent	(4,832)	–	–	(4,832)
Cash movement in net funding	**2,577**	**(493)**	**2**	**2,086**

CASH FLOW RELATED ADJUSTMENTS 2021

US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Funds from operations (FFO)	16,360	1,004	(307)	17,057
Net movements in inventories	(5,660)	(28)	(1)	(5,689)
Net other working capital changes	535	(151)	16	400
Net cash received from disposal of subsidiaries	252	–	–	252
Purchase of investments	(86)	–	–	(86)
Proceeds from sale of investments	194	–	–	194
Purchase of property, plant and equipment	(3,618)	(695)	174	(4,139)
Proceeds from sale of property, plant and equipment	342	3	(8)	337
Margin payments in respect of financing related hedging activities	(970)	–	–	(970)
Proceeds paid on acquisition of non-controlling interests in subsidiaries	10	–	–	10
Return of capital/distributions to non-controlling interests	(163)	–	–	(163)
Purchase of own shares	(746)	–	–	(746)
Distributions paid to equity holders of the Parent	(2,115)	–	–	(2,115)
Cash movement in net funding	**4,335**	**133**	**(126)**	**4,342**

Applicable tax rate

The applicable tax rate represents the effective tax rate which is computed based on the income tax expense, pre-significant items and related Proportionate adjustments, divided by the earnings before tax, pre-significant items and related Proportionate adjustments. See reconciliation table below.

RECONCILIATION OF TAX EXPENSE 2022

US$ million	**Total**
Adjusted EBIT, pre-significant items	26,657
Net finance costs	(1,336)
Adjustments for:	
Net finance costs from material associates and joint ventures	(22)
Proportional adjustment and net finance costs - Volcan	60
Share of income from other associates pre-significant items	(973)
Profit on a proportionate consolidation basis before tax and pre-significant items	**24,386**
Income tax expense, pre-significant items	(6,169)
Adjustments for:	
Tax expense from material associates and joint ventures	(688)
Tax expense from Volcan	10
Tax expense on a proportionate consolidation basis	**(6,847)**
Applicable tax rate	**28.1%**

US$ million	Pre-significant tax expense	Significant items tax[1]	**Total tax expense**
Tax expense on a proportionate consolidation basis	6,847	247	7,094
Adjustment in respect of material associates and joint ventures – tax	(688)	–	(688)
Adjustment in respect of Volcan – tax	10	(48)	(38)
Tax expense on the basis of the income statement	**6,169**	**199**	**6,368**

1 See table above.

RECONCILIATION OF TAX EXPENSE 2021

US$ million	**Total**
Adjusted EBIT, pre-significant items	14,495
Net finance costs	(1,140)
Adjustments for:	
Net finance costs from material associates and joint ventures	4
Proportional adjustment and net finance costs - Volcan	55
Share of income from other associates pre-significant items	(522)
Profit on a proportionate consolidation basis before tax and pre-significant items	**12,892**
Income tax expense, pre-significant items	(3,163)
Adjustments for:	
Tax expense from material associates and joint ventures	(1,211)
Tax credit from Volcan	54
Tax expense on a proportionate consolidation basis	**(4,320)**
Applicable tax rate	**33.5%**

US$ million	Pre-significant tax expense	Significant items tax[1]	**Total tax expense**
Tax expense/(credit) on a proportionate consolidation basis	4,320	(137)	4,183
Adjustment in respect of material associates and joint ventures – tax	(1,211)	–	(1,211)
Adjustment in respect of Volcan – tax	54	–	54
Tax expense/(credit) on the basis of the income statement	**3,163**	**(137)**	**3,026**

1 See table above.

PRODUCTION BY QUARTER – Q4 2021 TO Q4 2022

Metals and minerals

PRODUCTION FROM OWN SOURCES – TOTAL[1]

		Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Copper	kt	300.2	257.8	252.4	260.3	287.6	1,058.1	1,195.7	(12)	(4)
Cobalt	kt	7.9	9.7	11.0	12.4	10.7	43.8	31.3	40	35
Zinc	kt	262.0	241.5	239.2	218.9	238.9	938.5	1,117.8	(16)	(9)
Lead	kt	48.9	46.8	48.3	41.8	54.7	191.6	222.3	(14)	12
Nickel	kt	31.2	30.7	27.1	23.8	25.9	107.5	102.3	5	(17)
Gold	koz	216	189	145	170	157	661	809	(18)	(27)
Silver	koz	7,725	6,515	6,064	5,299	5,872	23,750	31,519	(25)	(24)
Ferrochrome	kt	397	387	399	324	378	1,488	1,468	1	(5)
Coal	mt	27.0	28.5	26.9	26.5	28.1	110.0	103.3	6	4
Oil (entitlement interest basis)	kboe	1,129	1,500	1,632	1,690	1,309	6,131	5,274	16	16

PRODUCTION FROM OWN SOURCES – COPPER ASSETS[1]

			Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
African Copper (Katanga, Mutanda, Mopani)											
Katanga	Copper metal	kt	61.0	50.3	45.8	56.7	67.3	220.1	264.4	(17)	10
	Cobalt[2]	kt	5.0	4.9	6.4	7.6	6.6	25.5	23.8	7	32
Mutanda	Copper metal	kt	6.3	5.3	8.6	8.2	11.2	33.3	6.3	429	78
	Cobalt[2]	kt	1.8	3.9	3.8	3.8	3.2	14.7	3.9	277	78
Mopani	Copper metal	kt	–	–	–	–	–	–	6.5	(100)	n.m.
	Total Copper metal	**kt**	**67.3**	**55.6**	**54.4**	**64.9**	**78.5**	**253.4**	**277.2**	**(9)**	**17**
	Total Cobalt[2]	**kt**	**6.8**	**8.8**	**10.2**	**11.4**	**9.8**	**40.2**	**27.7**	**45**	**44**
Collahuasi[3]	**Copper in concentrates**	**kt**	**66.0**	**65.7**	**62.1**	**60.4**	**62.9**	**251.1**	**277.2**	**(9)**	**(5)**
	Silver in concentrates	**koz**	**990**	**939**	**864**	**738**	**809**	**3,350**	**4,219**	**(21)**	**(18)**
	Gold in concentrates	**koz**	**12**	**11**	**8**	**9**	**10**	**38**	**45**	**(16)**	**(17)**
Antamina[4]	**Copper in concentrates**	**kt**	**38.7**	**36.8**	**40.4**	**38.9**	**36.4**	**152.5**	**150.0**	**2**	**(6)**
	Zinc in concentrates	**kt**	**34.6**	**37.7**	**34.5**	**39.6**	**32.5**	**144.3**	**153.7**	**(6)**	**(6)**
	Silver in concentrates	**koz**	**1,452**	**1,279**	**1,327**	**1,340**	**1,018**	**4,964**	**6,135**	**(19)**	**(30)**
Other South America (Antapaccay, Lomas Bayas)											
Antapaccay	Copper in concentrates	kt	45.5	37.4	36.3	34.8	42.5	151.0	170.8	(12)	(7)
	Gold in concentrates	koz	22	14	15	13	19	61	90	(32)	(14)
	Silver in concentrates	koz	416	343	300	263	316	1,222	1,382	(12)	(24)
Lomas Bayas	Copper metal	kt	16.5	17.6	17.4	18.2	19.4	72.6	64.3	13	18
	Total Copper metal	**kt**	**16.5**	**17.6**	**17.4**	**18.2**	**19.4**	**72.6**	**64.3**	**13**	**18**
	Total Copper in concentrates	**kt**	**45.5**	**37.4**	**36.3**	**34.8**	**42.5**	**151.0**	**170.8**	**(12)**	**(7)**
	Total Gold in concentrates and in doré	**koz**	**22**	**14**	**15**	**13**	**19**	**61**	**90**	**(32)**	**(14)**
	Total Silver in concentrates and in doré	**koz**	**416**	**343**	**300**	**263**	**316**	**1,222**	**1,382**	**(12)**	**(24)**

Metals and minerals

PRODUCTION FROM OWN SOURCES – COPPER ASSETS[1] CONTINUED

			Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Australia (Ernest Henry, Cobar)											
Ernest Henry											
	Copper metal	kt	10.7	–	–	–	–	–	44.8	(100)	(100)
	Gold	koz	15	–	–	–	–	–	64	(100)	(100)
	Silver	koz	45	–	–	–	–	–	195	(100)	(100)
Cobar	Copper in concentrates	kt	11.8	9.3	9.5	7.3	11.2	37.3	40.5	(8)	(5)
	Silver in concentrates	koz	136	111	101	95	139	446	459	(3)	2
	Total Copper metal	**kt**	**10.7**	**–**	**–**	**–**	**–**	**–**	**44.8**	**(100)**	**(100)**
	Total Copper in concentrates	**kt**	**11.8**	**9.3**	**9.5**	**7.3**	**11.2**	**37.3**	**40.5**	**(8)**	**(5)**
	Total Gold	**koz**	**15**	**–**	**–**	**–**	**–**	**–**	**64**	**(100)**	**(100)**
	Total Silver	**koz**	**181**	**111**	**101**	**95**	**139**	**446**	**654**	**(32)**	**(23)**
Total Copper department											
	Copper	**kt**	**256.5**	**222.4**	**220.1**	**224.5**	**250.9**	**917.9**	**1,024.8**	**(10)**	**(2)**
	Cobalt	**kt**	**6.8**	**8.8**	**10.2**	**11.4**	**9.8**	**40.2**	**27.7**	**45**	**44**
	Zinc	**kt**	**34.6**	**37.7**	**34.5**	**39.6**	**32.5**	**144.3**	**153.7**	**(6)**	**(6)**
	Gold	**koz**	**49**	**25**	**23**	**22**	**29**	**99**	**199**	**(50)**	**(41)**
	Silver	**koz**	**3,039**	**2,672**	**2,592**	**2,436**	**2,282**	**9,982**	**12,390**	**(19)**	**(25)**

Metals and minerals

PRODUCTION FROM OWN SOURCES – ZINC ASSETS[1]

			Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Kazzinc											
	Zinc metal	**kt**	**42.7**	**35.9**	**31.6**	**30.2**	**28.0**	**125.7**	**147.9**	**(15)**	**(34)**
	Zinc in concentrates	**kt**	**–**	**0.3**	**6.1**	**5.7**	**8.6**	**20.7**	**–**	**n.m.**	**n.m.**
	Lead metal	**kt**	**4.9**	**5.4**	**4.4**	**3.3**	**3.8**	**16.9**	**19.8**	**(15)**	**(22)**
	Lead in concentrates	**kt**	**–**	**–**	**–**	**–**	**0.4**	**0.4**	**–**	**n.m.**	**n.m.**
	Copper metal[5]	**kt**	**7.3**	**6.1**	**4.2**	**5.9**	**4.3**	**20.5**	**25.6**	**(20)**	**(41)**
	Gold	**koz**	**163**	**158**	**119**	**144**	**125**	**546**	**595**	**(8)**	**(23)**
	Silver	**koz**	**980**	**837**	**603**	**583**	**698**	**2,721**	**2,921**	**(7)**	**(29)**
	Silver in concentrates	**koz**	**–**	**–**	**–**	**–**	**12**	**12**	**–**	**n.m.**	**n.m.**
Kazzinc – total production including third party feed											
	Zinc metal	*kt*	*76.4*	*71.7*	*68.5*	*61.2*	*55.5*	*256.9*	*291.4*	*(12)*	*(27)*
	Lead metal	*kt*	*28.9*	*27.7*	*28.0*	*26.1*	*25.8*	*107.6*	*111.1*	*(3)*	*(11)*
	Copper metal	*kt*	*15.9*	*15.3*	*12.3*	*14.3*	*13.9*	*55.8*	*52.2*	*7*	*(13)*
	Gold	*koz*	*269*	*216*	*210*	*224*	*262*	*912*	*925*	*(1)*	*(3)*
	Silver	*koz*	*6,378*	*5,731*	*5,517*	*5,798*	*4,959*	*22,005*	*22,454*	*(2)*	*(22)*
Australia (Mount Isa, McArthur River)											
Mount Isa	Zinc in concentrates	kt	75.6	63.7	72.9	66.4	87.2	290.2	329.8	(12)	15
	Copper metal	kt	25.0	16.8	12.2	18.4	23.1	70.5	91.5	(23)	(8)
	Lead in concentrates	kt	24.5	22.6	29.3	26.6	36.0	114.5	132.9	(14)	47
	Silver	koz	235	113	125	112	207	557	625	(11)	(12)
	Silver in concentrates	koz	869	741	1,080	921	1,383	4,125	4,718	(13)	59
Mount Isa, Townsville – total production including third party feed											
	Copper metal	*kt*	*51.9*	*46.7*	*37.0*	51.6	56.2	*191.5*	226.8	*(16)*	*8*
	Gold	*koz*	*42*	*34*	*36*	*35*	*43*	*148*	*161*	*(8)*	*2*
	Silver	*koz*	*700*	*427*	*457*	*423*	*578*	*1,885*	*1,829*	*3*	*(17)*
McArthur River	Zinc in concentrates	kt	72.0	71.6	67.8	63.9	70.5	273.8	279.6	(2)	(2)
	Lead in concentrates	kt	15.7	15.5	12.5	10.3	13.1	51.4	55.2	(7)	(17)
	Silver in concentrates	koz	602	539	330	227	371	1,467	1,803	(19)	(38)
	Total Zinc in concentrates	**kt**	**147.6**	**135.3**	**140.7**	**130.3**	**157.7**	**564.0**	**609.4**	**(7)**	**7**
	Total Copper	**kt**	**25.0**	**16.8**	**12.2**	**18.4**	**23.1**	**70.5**	**91.5**	**(23)**	**(8)**
	Total Lead in concentrates	**kt**	**40.2**	**38.1**	**41.8**	**36.9**	**49.1**	**165.9**	**188.1**	**(12)**	**22**
	Total Silver	**koz**	**235**	**113**	**125**	**112**	**207**	**557**	**625**	**(11)**	**(12)**
	Total Silver in concentrates	**koz**	**1,471**	**1,280**	**1,410**	**1,148**	**1,754**	**5,592**	**6,521**	**(14)**	**19**
North America (Matagami, Kidd)											
Matagami	Zinc in concentrates	kt	10.0	8.9	8.4	–	–	17.3	47.4	(64)	(100)
	Copper in concentrates	kt	1.7	1.5	1.7	–	–	3.2	7.1	(55)	(100)
Kidd	Zinc in concentrates	kt	10.7	9.0	13.6	8.2	8.4	39.2	48.7	(20)	(21)
	Copper in concentrates	kt	3.1	4.8	8.3	7.1	4.9	25.1	23.2	8	58
	Silver in concentrates	koz	307	220	529	305	292	1,346	1,383	(3)	(5)
	Total Zinc in concentrates	**kt**	**20.7**	**17.9**	**22.0**	**8.2**	**8.4**	**56.5**	**96.1**	**(41)**	**(59)**
	Total Copper in concentrates	**kt**	**4.8**	**6.3**	**10.0**	**7.1**	**4.9**	**28.3**	**30.3**	**(7)**	**2**
	Total Silver in concentrates	**koz**	**307**	**220**	**529**	**305**	**292**	**1,346**	**1,383**	**(3)**	**(5)**

Metals and minerals

PRODUCTION FROM OWN SOURCES – ZINC ASSETS[1] CONTINUED

		Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Other Zinc: South America (Argentina, Bolivia, Peru)[6]										
Zinc in concentrates	**kt**	**16.4**	**14.4**	**4.3**	**4.9**	**3.7**	**27.3**	**110.7**	**(75)**	**(77)**
Lead in concentrates	**kt**	**3.8**	**3.3**	**2.1**	**1.6**	**1.4**	**8.4**	**14.4**	**(42)**	**(63)**
Copper in concentrates	**kt**	**0.5**	**0.4**	**0.3**	**0.4**	**0.3**	**1.4**	**1.7**	**(18)**	**(40)**
Silver in concentrates	**koz**	**1,634**	**1,351**	**757**	**670**	**567**	**3,345**	**7,383**	**(55)**	**(65)**
Total Zinc department										
Zinc	**kt**	**227.4**	**203.8**	**204.7**	**179.3**	**206.4**	**794.2**	**964.1**	**(18)**	**(9)**
Lead	**kt**	**48.9**	**46.8**	**48.3**	**41.8**	**54.7**	**191.6**	**222.3**	**(14)**	**12**
Copper	**kt**	**37.6**	**29.6**	**26.7**	**31.8**	**32.6**	**120.7**	**149.1**	**(19)**	**(13)**
Gold	**koz**	**163**	**158**	**119**	**144**	**125**	**546**	**595**	**(8)**	**(23)**
Silver	**koz**	**4,627**	**3,801**	**3,424**	**2,818**	**3,530**	**13,573**	**18,833**	**(28)**	**(24)**

Metals and minerals

PRODUCTION FROM OWN SOURCES – NICKEL ASSETS[1]

			Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Integrated Nickel Operations (Sudbury, Raglan, Nikkelverk)											
	Nickel metal	**kt**	**14.3**	**15.9**	**11.8**	**8.8**	**9.7**	**46.2**	**55.0**	**(16)**	**(32)**
	Nickel in concentrates	**kt**	**–**	**–**	**0.1**	**–**	**0.1**	**0.2**	**0.2**	**–**	**n.m.**
	Copper metal	**kt**	**3.7**	**4.0**	**3.2**	**2.2**	**2.5**	**11.9**	**13.5**	**(12)**	**(32)**
	Copper in concentrates	**kt**	**2.4**	**1.8**	**2.4**	**1.8**	**1.6**	**7.6**	**8.3**	**(8)**	**(33)**
	Cobalt metal	**kt**	**0.3**	**0.2**	**0.1**	**0.2**	**0.1**	**0.6**	**1.1**	**(45)**	**(67)**
	Gold	**koz**	**4**	**6**	**3**	**4**	**3**	**16**	**15**	**7**	**(25)**
	Silver	**koz**	**59**	**42**	**48**	**45**	**60**	**195**	**296**	**(34)**	**2**
	Platinum	**koz**	**9**	**7**	**10**	**7**	**8**	**32**	**33**	**(3)**	**(11)**
	Palladium	**koz**	**23**	**25**	**25**	**17**	**16**	**83**	**83**	**–**	**(30)**
	Rhodium	**koz**	**1**	**1**	**1**	**1**	**1**	**4**	**4**	**–**	**–**
	Nickel metal	*kt*	*21.8*	*22.6*	*19.8*	*15.9*	*23.6*	*81.9*	*91.2*	*(10)*	*8*
	Nickel in concentrates	*kt*	*0.1*	*0.1*	*–*	*0.1*	*–*	*0.2*	*0.3*	*(33)*	*(100)*
	Copper metal	*kt*	*5.2*	*5.1*	*5.0*	*3.7*	*4.7*	*18.5*	*20.1*	*(8)*	*(10)*
	Copper in concentrates	*kt*	*2.5*	*2.2*	*3.3*	*2.4*	*2.7*	*10.6*	*10.3*	*3*	*8*
	Cobalt metal	*kt*	*1.0*	*0.9*	*0.7*	*0.6*	*0.9*	*3.1*	*4.0*	*(23)*	*(10)*
	Gold	*koz*	*8*	*9*	*7*	*7*	*6*	*29*	*29*	*–*	*(25)*
	Silver	*koz*	*121*	*126*	*127*	*111*	*130*	*494*	*511*	*(3)*	*7*
	Platinum	*koz*	*20*	*17*	*22*	*14*	*16*	*69*	*73*	*(5)*	*(20)*
	Palladium	*koz*	*58*	*62*	*63*	*47*	*49*	*221*	*220*	*–*	*(16)*
	Rhodium	*koz*	*1*	*1*	*1*	*1*	*2*	*5*	*4*	*25*	*100*
Murrin Murrin											
	Total Nickel metal	**kt**	**9.6**	**7.7**	**9.4**	**9.5**	**9.1**	**35.7**	**30.1**	**19**	**(5)**
	Total Cobalt metal	**kt**	**0.8**	**0.7**	**0.7**	**0.8**	**0.8**	**3.0**	**2.5**	**20**	**–**
Murrin Murrin – total production including third party feed											
	Total Nickel metal	*kt*	*11.0*	*8.9*	*10.7*	*10.5*	*10.3*	*40.4*	*33.7*	*20*	*(6)*
	Total Cobalt metal	*kt*	*0.9*	*0.8*	*0.8*	*0.8*	*0.9*	*3.3*	*2.8*	*18*	*–*
Koniambo	**Nickel in ferronickel**	**kt**	**7.3**	**7.1**	**5.8**	**5.5**	**7.0**	**25.4**	**17.0**	**49**	**(4)**
Total Nickel department											
	Nickel	**kt**	**31.2**	**30.7**	**27.1**	**23.8**	**25.9**	**107.5**	**102.3**	**5**	**(17)**
	Copper	**kt**	**6.1**	**5.8**	**5.6**	**4.0**	**4.1**	**19.5**	**21.8**	**(11)**	**(33)**
	Cobalt	**kt**	**1.1**	**0.9**	**0.8**	**1.0**	**0.9**	**3.6**	**3.6**	**–**	**(18)**
	Gold	**koz**	**4**	**6**	**3**	**4**	**3**	**16**	**15**	**7**	**(25)**
	Silver	**koz**	**59**	**42**	**48**	**45**	**60**	**195**	**296**	**(34)**	**2**
	Platinum	**koz**	**9**	**7**	**10**	**7**	**8**	**32**	**33**	**(3)**	**(11)**
	Palladium	**koz**	**23**	**25**	**25**	**17**	**16**	**83**	**83**	**–**	**(30)**
	Rhodium	**koz**	**1**	**1**	**1**	**1**	**1**	**4**	**4**	**–**	**–**

Metals and minerals

PRODUCTION FROM OWN SOURCES – FERROALLOYS ASSETS[1]

		Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Ferrochrome[7]	kt	397	387	399	324	378	1,488	1,468	1	(5)
Vanadium pentoxide	mlb	5.3	5.5	4.4	4.4	5.5	19.8	20.5	(3)	4

TOTAL PRODUCTION – CUSTOM METALLURGICAL ASSETS[1]

		Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Copper (Altonorte, Pasar, Horne, CCR)										
Copper metal	kt	114.3	108.8	123.2	94.2	130.7	456.9	490.6	(7)	14
Copper anode	kt	123.4	111.4	126.8	104.8	131.9	474.9	454.0	5	7
Zinc (Portovesme, San Juan de Nieva, Nordenham, Northfleet)										
Zinc metal	kt	195.5	179.0	171.9	176.9	155.2	683.0	800.6	(15)	(21)
Lead metal	kt	80.4	82.0	77.0	57.1	57.3	273.4	244.9	12	(29)

Energy products

PRODUCTION FROM OWN SOURCES – COAL ASSETS[1]

		Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Australian coking coal	mt	2.5	2.1	1.8	2.3	2.5	8.7	9.1	(4)	–
Australian semi-soft coal	mt	1.0	0.9	0.9	1.0	1.2	4.0	4.5	(11)	20
Australian thermal coal (export)	mt	15.4	13.4	14.2	12.1	13.7	53.4	55.9	(4)	(11)
Australian thermal coal (domestic)	mt	1.8	1.4	1.6	2.4	2.4	7.8	6.0	30	33
South African thermal coal (export)	mt	3.1	3.4	2.9	3.5	2.9	12.7	14.7	(14)	(6)
South African thermal coal (domestic)	mt	1.0	1.1	0.9	0.9	0.8	3.7	5.3	(30)	(20)
Cerrejón[8]	mt	2.2	6.2	4.6	4.3	4.6	19.7	7.8	153	109
Total Coal department	**mt**	**27.0**	**28.5**	**26.9**	**26.5**	**28.1**	**110.0**	**103.3**	**6**	**4**

OIL ASSETS

		Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	**2022**	2021	Change 2022 vs 2021 %	Change Q4 22 vs Q4 21 %
Glencore entitlement interest basis										
Equatorial Guinea	kboe	818	1,227	1,318	1,458	1,104	5,107	4,141	23	35
Cameroon	kbbl	311	273	314	232	205	1,024	1,133	(10)	(34)
Total Oil department	**kboe**	**1,129**	**1,500**	**1,632**	**1,690**	**1,309**	**6,131**	**5,274**	**16**	**16**
Gross basis										
Equatorial Guinea	kboe	4,086	5,956	6,406	7,089	6,858	26,309	20,137	31	68
Cameroon	kbbl	730	680	676	571	508	2,435	2,866	(15)	(30)
Total Oil department	**kboe**	**4,816**	**6,636**	**7,082**	**7,660**	**7,366**	**28,744**	**23,003**	**25**	**53**

1 Controlled industrial assets and joint ventures only. Production is on a 100% basis except for joint ventures, where the Group's attributable share of production is included.
2 Cobalt contained in concentrates and hydroxides.
3 The Group's pro-rata share of Collahuasi production (44%).
4 The Group's pro-rata share of Antamina production (33.75%).
5 Copper metal includes copper contained in copper concentrates and blister.
6 South American production excludes Volcan Compania Minera.
7 The Group's attributable 79.5% share of the Glencore-Merafe Chrome Venture.
8 2021 numbers represented the Group's pro-rata share of Cerrejón production (33.3%). Glencore acquired the remaining 66.7% of Cerrejón in January 2022, such that 2022 production is presented on a 100% basis.

FULL YEAR 2023 PRODUCTION GUIDANCE

		Actual FY 2020	Actual FY 2021	**Actual FY 2022**	**Guidance FY 2023**
Copper	kt	1,258	1,196	**1,058**	**1,040 ± 30**
Cobalt	kt	27.4	31.3	**43.8**	**38 ± 5**
Zinc	kt	1,170	1,118	**939**	**950 ± 30** [1]
Nickel	kt	110	102	**108**	**112 ± 5**
Ferrochrome	kt	1,029	1,468	**1,488**	**1,310 ± 30**
Coal	mt	106	103	**110**	**110 ± 5**

1 Excludes Volcan.

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Due to the inherent uncertainty and limitations in measuring greenhouse gas and air emissions and operational energy consumption under the calculation methodologies used in the preparation of such data, all greenhouse gas and air emissions and operational energy consumption data or volume references (including ratios and/or percentages) in this document are estimates. There may also be differences in the manner that third parties calculate or report such data compared to Glencore, which means that third-party data may not be comparable to Glencore’s data. For information on how we calculate our greenhouse gas and air emissions and operational energy consumption data, see our latest Reporting criteria for selected KPIs, Climate Report and Extended ESG Data, which can be found on our website.

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