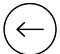
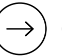
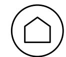
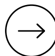
GLENCORE

Annual Report
2021

Our purpose

Responsibly sourcing the commodities that advance **everyday life**


Glencore.com

Living our values

Our values reflect our purpose, our priorities and the beliefs by which we conduct ourselves. They define what it means to work at Glencore, regardless of location or role. They are the heart of our culture and the way we do business.

Safety
We never compromise on safety. We look out for one another and stop work if it's not safe

Responsibility
We take responsibility for our actions. We talk and listen to others to understand what they expect from us. We work to improve our commercial, social and environmental performance

Simplicity
We work efficiently and focus on what's important. We avoid unnecessary complexity and look for simple, pragmatic solutions

Integrity
We have the courage to do what's right, even when it's hard. We do what we say and treat each other fairly and with respect

Openness
We're honest and straightforward when we communicate. We push ourselves to improve by sharing information and encouraging dialogue and feedback

Entrepreneurialism
We encourage new ideas and quickly adapt to change. We're always looking for new opportunities to create value and find better and safer ways of working

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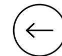
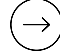
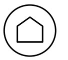
◊ Alternative performance measures
Adjusted measures referred to as Alternative performance measures (APMs) which are not defined or specified under the requirements of International Financial Reporting Standards; refer to APMs section on page 234 for definitions, explanation of use and reconciliations and note 2 of the financial statements for reconciliation of Adjusted EBIT/EBITDA.

See **Page 234**

Our business at a glance

Where we operate

● Head Office ● Industrial assets ● Marketing office/other

One of the world's largest natural resource companies

6 continents

35 countries

c135,000 employees and contractors

>40 offices

Integrating sustainability throughout our business

Sustainability
Page 27

CO_2e Scope 1 and 2 (Million tonnes)

25.7 ↑

2020: 24.2

CO_2e Scope 3 (Million tonnes)

254 ↓

2020: 271

Targeted reductions in total emissions

50% ↓

by 2035

Our Financial Highlights

Financial review
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Adjusted EBITDA◊ (US$ billion)

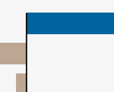
21.3

2020: 11.6

Net income/(loss) attributable to equity holders (US$ billion)

5.0

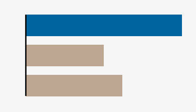
2020: (1.9)



Cash generated by operating activities before working capital changes, interest and tax (US$ billion)

16.7

2020: 8.3



Our business at a glance continued

Two business segments

Industrial business

Adjusted EBITDA◊ Industrial 2021

- Metal 70%
- Energy 30%

$17.1bn

2020: $7.8bn

Marketing business

Adjusted EBITDA◊ Marketing 2021

- Metal 61%
- Energy 39%

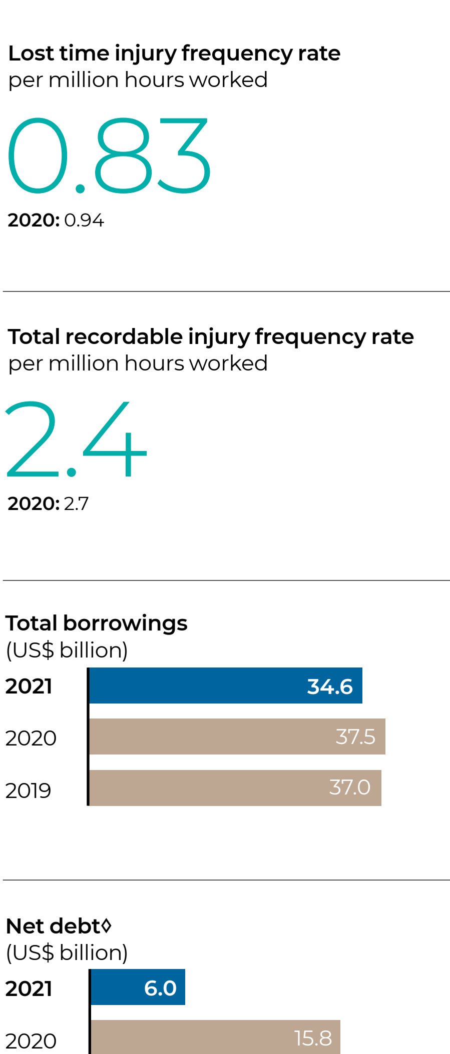
$4.2bn

2020: $3.7bn

Total Adjusted EBITDA◊ 2021

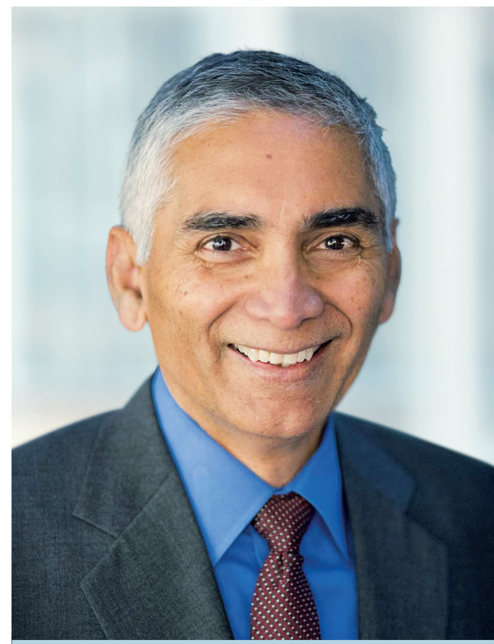
$21.3bn

2020: $11.6bn



Chairman's introduction

Transition, Renewal, Progress and Performance



Kalidas Madhavpeddi, Chairman

Dear Shareholders

I was honoured to be appointed as your Chairman last year.

I have spent my entire working life in the mining and commodities business, having started in 1980 with Phelps Dodge Corp. In that time, I have been fortunate to witness the industry's transformation in many ways. For example, Phelps Dodge was then one of the titans of the global mining industry while Glencore's roots were a trading company with no industrial assets.

Today Glencore is one of the industry giants with large-scale, world-class mining assets and one of the world's most enterprising trading and marketing businesses, while Phelps Dodge has long since disappeared. Scale usually brings bulk and bureaucracy with the stifling of innovation. What is so remarkable about Glencore is that its entrepreneurial spark still burns brightly. The dislocation in markets in the last two years has provided opportunities for our marketing business which led to record earnings for this segment.

We have initiated various business improvements across our operations, ranging from innovations in the processes of individual assets to material new procurement initiatives on equipment purchases. We are excited by our promising and growing recycling business, which extracts metals from spent electric batteries and electronic circuit boards, which we see expanding as an important part of the transition to a low-carbon economy. Along with innovation, we have relentlessly pursued improvements in our ESG performance such as the relaunch of SafeWork. Although we have seen a significant decline in fatalities, we are saddened to report that we lost four of our colleagues in industrial accidents during the year. We will continue our efforts to eliminate such events. We also progressed our continued focus on tailings dams management.

The succession to Gary Nagle and an entire senior business team with a new generation of leaders was completed last year. Gary has hit the ground running and quickly taken over management of all facets of the business leading to a smooth and rapid transition in leadership.

We continue to rejuvenate our Board, with the retirements of Tony Hayward and John Mack last year and we were pleased to welcome Cynthia Carroll and David Wormsley, as well as Gary Nagle as Executive Director.

As reflected in this report, a number of priorities for the Board were met in 2021, including strengthening our balance sheet and establishing a robust and transparent shareholder returns framework. Also, although we cannot forecast the timing with certainty, we hope to resolve a number of our outstanding historical investigations this year and have accordingly provisioned for these resolutions.

Management continued the work that had been started more than a year ago in simplifying our portfolio and in particular looking at disposing of assets that are either non-core or are too small to make an effective contribution, with challenges often disproportionate to such contribution.

We continue to focus on our Values based culture. The Company has invested significant resources over the last few years to build and implement a best-in-class ethics and compliance programme. To provide stakeholders with a better understanding of our programme, starting this year, we will publish a stand-alone report on this vital area for our business and reputation.

On climate change, we continue to be a mining industry leader in our approach and with our plans for the future. Having published our first progress report in December 2021, we will be tabling a resolution on our progress for shareholders to vote on at our AGM.

At the date of this report, the conflict in Ukraine continues. We are looking to see how we can best support humanitarian efforts for the people of Ukraine.

ESG topics led by climate continue to dominate discussion in the industry and more widely. We are pleased to be able to make a meaningful contribution to this dialogue as our industry shows its increasing importance to the green economy of the future. Glencore will be a key player in providing the metals that are the building blocks for the world's energy transformation.

Kalidas Madhavpeddi,
Chairman

Chief Executive Officer's review

Progress and performance through challenge and change

Gary Nagle, Chief Executive Officer

In spite of the ongoing challenges of Covid-19, 2021 was an extraordinary year for Glencore, reflecting rising demand for our metals and energy products, record Adjusted EBITDA and the transition to new leadership.

As in 2020, the pandemic overshadowed our daily lives, remaining an ongoing challenge for colleagues, our families, our local communities and society at large. As a responsible operator, our top priority is to protect the safety and health of our people and the communities that host our businesses. Sadly, we experienced four fatalities in 2021. We believe all fatalities are avoidable, and are committed to our goal of zero fatalities.

While economic activity remained below potential in many key global economies, our sector continued to perform well, given its critical function in delivering the world's energy, food, housing, infrastructure and mobility requirements. Against the backdrop of material global central bank accommodation and government fiscal spending, prices for many of our key commodities rose to multi-year or record highs, reflecting resurgent global demand and widespread supply challenges. Copper prices rose as mine production struggled to meet general industrial expansion and new energy demand. The rapid growth in electric vehicle sales supported double-digit demand growth for nickel and cobalt, while surging power costs and environmental controls disrupted zinc and aluminium supply. Thermal coal, oil and gas markets, impacted by substantial recent underinvestment in supply capacity, and low inventory levels, were unable to efficiently respond to the rapid demand growth, significantly lifting prices.

Although 2022 is likely to see a moderation in global growth, including as authorities seek to tame inflation, many commodity markets currently exhibit low inventories and are prone to supply disruption, which, when set against the significant new investment in electrification and decarbonisation, should support prices for our key metals in 2022 and beyond.

2021 Financial scorecard

Reflecting this environment and leveraging the unique combination of our transition and energy commodities, along with the global reach and scale of our marketing business, the Group has achieved a record Adjusted EBITDA result of $21.3 billion, up 84% over prior year. Net income before significant items increased 267% to $9.1 billion, while significant items reduced Net income attributable to equity holders to $5.0 billion, mainly due to the required accounting recycling to the statement of income of Mopani's non-controlling interests upon its disposal, an impairment charge related to our Koniambo nickel operation and recording a provision for costs currently estimated to resolve the various government investigations.

In marketing, tight physical commodity markets and supply chain challenges, which resulted in elevated levels of volatility, generated ideal trading conditions, with Adjusted EBIT growing 11% to a record $3.7 billion. Strong trading performances were delivered across all commodity departments. Agricultural markets also offered favourable market conditions, with our 49.9% share of Viterra's earnings contributing $473 million.

Industrial Adjusted EBITDA of $17.1 billion was 118% higher than 2020, primarily reflecting strong margin expansion at our copper, ferroalloys and coal assets. Coal (Newc), cobalt, copper, nickel and zinc average year-over-year price increases were 125%, 60%, 51%, 34% and 32% respectively.

Aided by strong cash generation, Net debt reduced during the year by $9.8 billion to $6.0 billion. Net funding also declined, however down by a lesser $4.6 billion to $30.8 billion, due to increased readily marketable inventories on hand, on account of the significantly higher prices noted above. With Net debt/Adjusted EBITDA and FFO/Net debt metrics of 0.28x and 282.3% respectively, we currently enjoy significant financial headroom and strength.

Shareholder returns

At our investor update in December 2021, we refined our capital allocation policy to manage Net debt, in the ordinary course of business, to around a c.$10 billion cap, with deleveraging below such cap (after the base distribution), being periodically returned to shareholders via special cash distributions and/or share buybacks as appropriate.

In 2021, we delivered c.$2.8 billion of shareholder returns, comprising a $1.6 billion base cash distribution (in respect of 2020 cash flows), a c.$500 million special cash distribution and $750 million of share purchases.

For 2022, basis 2021 cash flows, we are recommending to shareholders a $0.26 per share (c.$3.4 billion) base cash distribution, payable in two equal instalments, comprising $1 billion from Marketing cash flows and 25% ($2.4 billion) of Industrial attributable cash flows.

The application of our 'Top up' returns framework generates an additional payment of c.$550 million to restore Net debt to our target optimal cap level of c.$10 billion. We are therefore announcing a new $550 million share buyback programme to be completed before release of our 2022 interim results, representing an additional c.$0.04 per share.

Chief Executive Officer's review
continued

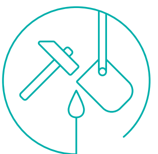
Pathway to succeed in a net zero economy

During 2021 we identified further carbon reduction opportunities across the portfolio and significantly expanded our Marginal Abatement Cost Curve. Additionally, our assessment of the impact of carbon prices on industry cost curves for our key commodities illustrated that our portfolio is resilient to a range of carbon pricing scenarios given our assessment that these costs will be passed onto the consumer and the favourable emissions intensity positions that our overall weighted average industrial portfolio occupies on these curves.

Reflecting additional work on our emissions profile and opportunities to deliver reductions, we strengthened our medium-term emissions reduction target and introduced a new short-term target. We are now committed to reducing total emissions (Scope 1+2+3) by 15% by 2026 and 50% by 2035, both on 2019 levels. Post 2035, our ambition remains to achieve net zero total emissions by 2050 with a supporting policy environment.

Our targets and ambition reflect our commitment to align our business strategy with the goals of the Paris Agreement. Our strategy of responsibly depleting our coal portfolio over time reflects our belief that the energy transition will be non-linear across time and geography, with the responsible decline of our coal portfolio meeting critical regional energy needs and affordability through this evolution.

Many of our shareholders have expressed the importance they attach to climate change considerations and their expectation for Glencore to align its business strategy with the goals of the Paris Agreement. Our 2026 target lies within the range of IPCC 1.5°C scenarios and our 2035 target is aligned with the IEA NZE 2050 scenario, itself consistent with IPCC.

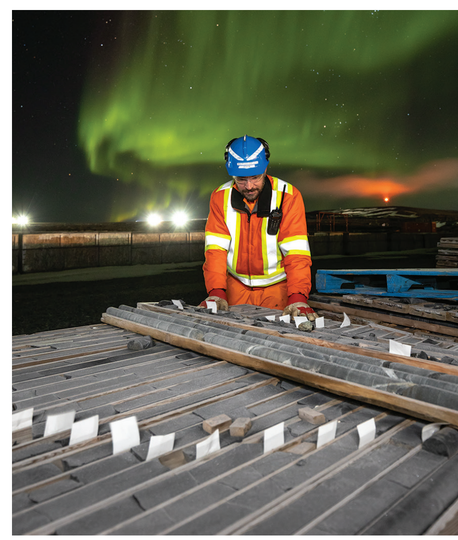


Year end net debt◊

$6.0bn

Returns to shareholders

$4.0bn



At our 2021 AGM, we provided our shareholders with their first advisory vote on our climate action transition plan, with more than 94% of shareholders voting in favour. I look forward to continued engagement with our stakeholders as we progress the implementation of our strategy and respond to the global challenges of climate change and meeting the UN's Sustainable Development Goals.

Governance

We continue to cooperate extensively with the various authorities investigating Glencore in order to resolve these investigations as expeditiously as possible. While we cannot forecast with certainty the cost, extent, timing or terms of the outcomes of the investigations, we presently expect to resolve the US, UK and Brazilian investigations in 2022. Accordingly, and based on our current information and understanding, we have recorded a provision as at 31 December 2021 of $1,500 million representing the Company's current best estimate of the costs to resolve these investigations. In addition, we continue to cooperate with the previously disclosed investigation by the Office of the Attorney General of Switzerland (OAG) and are also in contact with the Dutch authorities in connection with an investigation which has a similar scope to that of the OAG investigation and is being coordinated with the OAG. The timing and outcome of these investigations remain uncertain, but we would expect any possible resolution to avoid duplicative penalties for the same conduct.

We are committed to upholding a culture of ethics and compliance across our business. We have taken a number of remedial measures in light of what we have learned during the investigations and have dedicated substantial resources over the last few years to upgrade and implement a best-in-class Ethics and Compliance programme. This includes significant investments in compliance personnel, systems and external assurance.

We have strengthened our Values and Code of Conduct and rolled these out through a comprehensive global campaign designed to embed them throughout our business. Our Values of safety, integrity, responsibility, openness, simplicity and entrepreneurialism guide us in everything that we do. We expect all employees to commit to our Code regardless of who they are or where they work. We have also strengthened our policy framework which comprises a suite of policies, standards, procedures and guidelines. The policies are publicly available on our website and set out the commitments through which we strive to be a responsible and ethical operator.

The safety and security of our workforce and the communities living around our assets are a priority recognised across our operational activities. Our ambition is to prevent all fatalities, occupational diseases and injuries wherever we operate. We relaunched 'SafeWork' during the year to address underlying issues in historical safety performance. We believe that consistent application of SafeWork through strong visible leadership will drive a culture of safe operating discipline and get our people home safe.

Chief Executive Officer's review
continued

We are also very pleased to have appointed Kalidas Madhavpeddi as Chairman of the Board as well as Cynthia Carroll and David Wormsley as new independent Non-Executive Directors during the year.

Kalidas' 40 years of experience in the international mining industry is instrumental to Glencore as we focus on achieving our objectives of delivering sustainable shareholder returns, playing a leading role in the green energy transition and securing our ambition of being a net zero total emissions company by 2050. David brings 35 years of extensive experience in investment banking, both in the UK and internationally. We look forward to their continued contribution to our Board.

Outlook

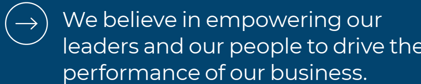
We are focused on continuing to position our portfolio towards larger, higher-margin, longer-life assets essential to the transition. In this regard, we have progressively announced a series of transactions (primarily disposals) delivering further portfolio alignment and simplification.

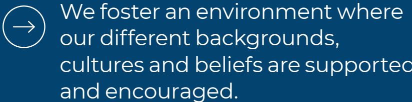
In January 2022, Viterra announced that, subject to customary regulatory approvals, it would acquire Gavilon, a major US based origination and handling business, for $1.125 billion, plus working capital, with funding provided from its own balance sheet. The acquisition will give scale in this key producing region, largely completing Viterra's coveted geographic network coverage.

Our low-carbon advantaged commodities, geographies and recycling capabilities give us the unique ability to supply the sustainable commodities that our customers increasingly need. We have the right strategy and the right business model to generate sustainable long-term value for all stakeholders.

Gary Nagle,
Chief Executive Officer

Our culture


We believe in empowering our leaders and our people to drive the performance of our business.


We foster an environment where our different backgrounds, cultures and beliefs are supported and encouraged.

Read more page 34

Investment case

A major supplier of energy and transition metals and solutions that support the journey to Net zero emissions

- Our business model covers the production, recycling, sourcing, marketing and distribution of the commodities needed by our suppliers and customers to decarbonise, while simultaneously reducing our own emissions
- Leading climate strategy: targeting total Scope 1, 2 and 3 reductions relative to 2019 of 15% by 2026 and 50% by 2035, alongside a total emissions net zero ambition by 2050
- Responsible stewardship of declining coal business

2

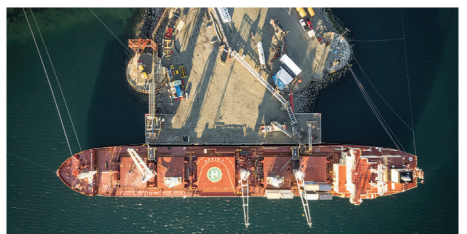
Our asset portfolio is populated with large, long-life and low-carbon advantaged commodities

- We are focusing our portfolio on larger, higher-margin, longer-life assets essential to the transition
- We are a leading producer of key transition metals, including copper, cobalt, nickel, zinc and vanadium
- Our low-carbon advantaged commodities, geographies and recycling capability supply our marketing business with the products that our customers increasingly need
- Our coal portfolio will supply critical regional energy needs as the transition evolves along a non-linear path through time and geography, in line with our decarbonisation commitments

3

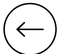
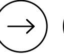
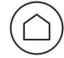
Unique capability to supply the sustainable commodities of the future

- Our Marketing segment's carbon strategy is expected to create additional value over time as markets/demand for carbon solutions in the commodity supply chain evolves/matures
- As a vertically integrated extractive and marketing business, we will leverage our own carbon reduction efforts and market expertise to meet the increasing needs for attestable low-carbon products



Highly resilient and cash generative business model

- Our diversified business model and strong balance sheet support enhanced shareholder payouts
- 2021 Adjusted EBITDA up 84% to $21.3bn; Net Debt down 62% to $6.0bn. Shareholder returns basis 2021 cash flows: $3.4bn ($0.26/share) payable in 2022, plus $0.6bn of new share buybacks
- We are uniquely positioned to generate sustainable and growing returns in the transition to a low-carbon economy

Our market drivers

We are dependent upon the supply, demand and pricing for our commodities.

Key market drivers

Net zero emissions by 2050

Efforts to limit global temperature rises will impact fossil fuel demand

- Momentum to decarbonise the global economy has accelerated as nations increasingly coordinate efforts aimed at minimising greenhouse gas emissions, including the targeting of net zero emissions by 2050
- The Paris Agreement aims to keep the global temperature rise this century to well below 2°C

Future commodity supply

Timing within the economic cycle is very important when bringing new mine supply to market

- The pro-cyclical nature of mining investment means that new mines are usually approved when commodity prices are higher
- Given the long development time frames required to bring new mine supply on line, the timing as to when this becomes available in the economic cycle is difficult to predict and could become available at low points in the economic cycle, creating excess supply in the market

Demand for the commodities we produce

Changes in population and growth of developing economies is generally impactful on commodity demand

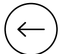
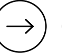
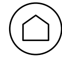
- The industrialisation and urbanisation of developing economies over almost two decades has driven significant growth in commodity demand
- China's rapid growth over this period now means that it accounts for up to half of global demand for many commodities
- Looking forward, the world is forecast to add 1.9 billion people by 2050, with much of this growth in highly populous industrialising economies
- All potential decarbonisation pathways require significantly more non-fossil fuel commodities

Emerging drivers

Substitution

Higher commodity prices and resource scarcity increases the risk of material substitution

- Widespread adoption of renewable energy sources as a means of decarbonising energy supply will create significant new demand for the current key enabling commodities, including copper, nickel and cobalt
- The quantum of potential new demand is generally of a size that is large relative to the current annual production and known defined global resources of that commodity

Our market drivers continued

Key market drivers

Net zero emissions by 2050

Impact on our industry

- This transition is likely to increase the cost for fossil fuels, impose levies for emissions, increase costs for monitoring and reporting and reduce demand
- Third parties, including potential or actual investors, may introduce policies materially adverse to Glencore due to our interest in fossil fuels, particularly coal
- Technological advances are making renewable energy sources more competitive with fossil fuels, which is likely to increase renewable energy's market share over the longer run

How we are responding

- We recognise our responsibility to contribute to the global effort to achieve the goals of the Paris Agreement by decarbonising our own operational footprint
- We believe that our contribution should take a holistic approach and have considered our commitment through the lens of our total emissions footprint
- Against a 2019 base line, we are committing to decline our total emissions (Scope 1+2+3) 15% by 2026, 50% by 2035 and we have an ambition of net zero by 2050

Future commodity supply

Impact on our industry

- Over-investment creates over-supply and, with it, potentially prolonged periods of low commodity prices
- Although commodity prices have increased from the lows seen in early 2020, the experience of the last economic cycles has increased investor pressure on companies to be more cautious about investing in new supply
- Balancing a finite, declining resource base with the need to grow to meet expected future demand is an inherent challenge for companies in the resource sector

How we are responding

- Our disciplined approach to capital allocation seeks to reflect market supply and demand dynamics
- Given the unpredictability of costs, risks and timing of large-scale greenfield projects, we prefer to add supply via targeted capital efficient/lower risk brownfield expansions when required
- With the expectation that growth drivers in the global economy will become weighted towards decarbonisation spending, in addition to the commodities needed for everyday life, our large-scale metals' portfolio is well placed to benefit from this transition

Demand for the commodities we produce

Impact on our industry

- Current levels of industrialisation and urbanisation suggest, in isolation, that demand growth rates for commodities could be lower in the future.
- Lower or negative demand growth could generate excess supply along with lower commodity prices. However, post Covid-19, large-scale government stimulus, particularly if directed towards general and decarbonisation related infrastructure, could be supportive for commodity demand
- Continued population growth, particularly in Africa and South East Asia could generate additional demand for commodities

How we are responding

- Energy transition commodities such as copper, nickel, cobalt, zinc and vanadium could become substantially more important given their role in the technologies/infrastructure that underpin low or no carbon energy sources
- We are a leading producer of metals that enable low-carbon and carbon-neutral technologies
- We are prioritising capex towards transition commodities, including our Collahuasi copper JV, our African copper / cobalt operations and our Canadian INO nickel life extension projects
- All energy demand decarbonisation pathways require our enabling commodities

Emerging drivers

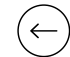
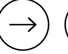
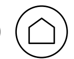
Substitution

Impact on our industry

- Revenue and earnings of substantial parts of our industrial asset activities, and to a lesser extent, our marketing activities, are dependent on prevailing commodity prices
- Under a rapid decarbonisation scenario, a significant increase in demand for the commodities that currently underpin renewable technologies is likely to result in significantly higher prices for those commodities
- Higher sustained commodity prices will increase the risk of accelerating efforts to either reduce the quantity of material needed for a certain application or substitute an alternative that provides similar performance at a lower price. For example, demand for cobalt could fall if newer battery technologies provide similar results with less or no cobalt content

How we are responding

- Diversification of our portfolio of commodities, currencies, assets and liabilities is likely to mitigate the financial impact of a negative demand shift in the event of a particular commodity substitution
- Our market research teams continue to assess the underlying demand for our commodities as well as the new materials that could impact current renewable technology solutions

Our business model

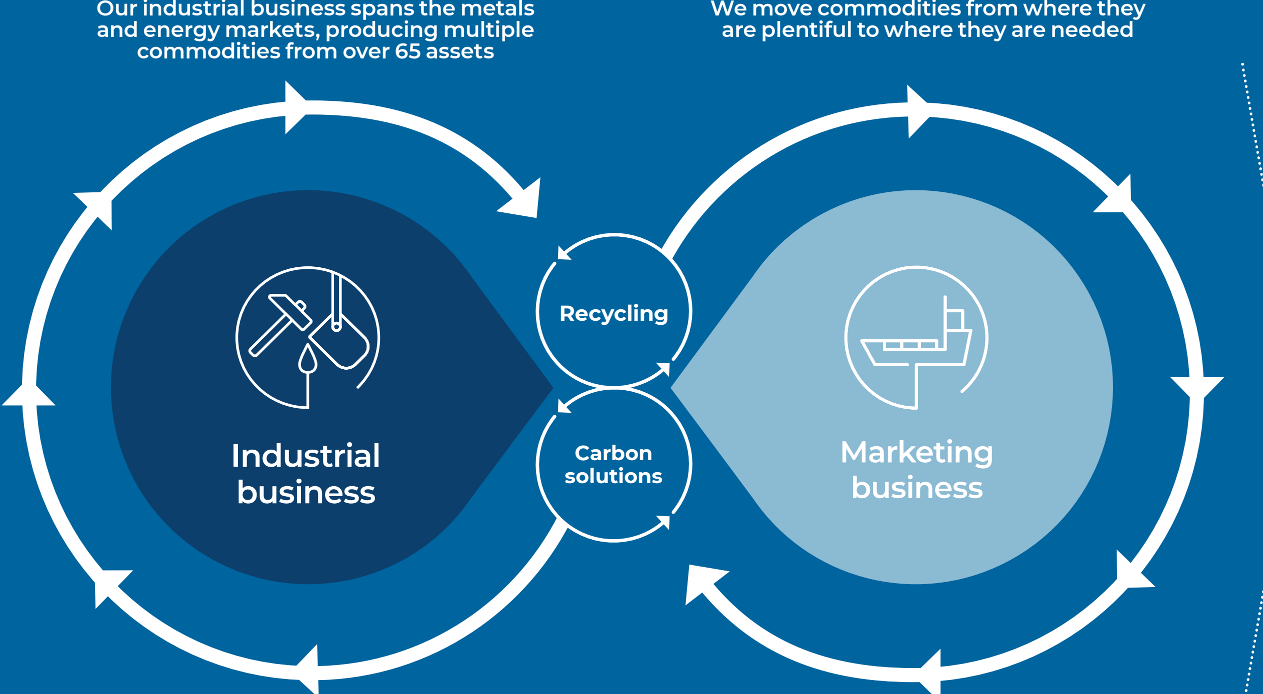
Inputs and resources on which our business model depends:

Assets and natural resources
- Many long-life and high-quality assets
- Value over volume approach
- Embedded network and knowledge in Marketing operations

Our people and partners
- Established long-term relationships with customers and suppliers
- Major employer with c.135,000 people globally

Financial discipline
- Capital deployed in disciplined manner
- Marketing hedges out the majority of absolute price risk
- Marketing profitability driven by volume-driven activities and value-added services

Unique market knowledge
- Finding value at every stage in the commodity chain



Outputs and impact on key stakeholders:

Investors

$21.3bn
2021 Adjusted EBITDA◊

$13.1bn
Equity free cash flow (FFO◊ less net purchases of property, plant and equipment and dividends to minorities)

Our people

11%
Reduction in Total Recordable Injury Frequency Rate

Climate change

5%
Reduction in total emissions versus 2020

Payments to governments

$7.6bn

Our purpose
Responsibly sourcing the commodities that advance everyday life.

Our values
- Safety
- Responsibility
- Entrepreneurialism
- Integrity
- Openness
- Simplicity

Industrial business activities
Exploration, acquisition and development
We focus on brownfield opportunities, cost control and synergies.

Extraction and production
We diversify our product offering and have wide geographical presence.

Processing and refining
We optimise end products to suit a wider customer base.

Marketing business activities
Logistics and delivery
We fulfil customer orders and take advantage of demand and supply imbalances, aided by the scale of our network.

Blending and optimisation
We offer a wide range of product specifications, seeking to meet customer-specific requirements and provide a high-quality service.

Strategic priorities
- Responsible production and supply
- Responsible portfolio management
- Responsible product use

Our strategy for a sustainable future

Aligned with our purpose, our portfolio enables the transition to a low-carbon economy, while meeting society's energy needs as it progresses through the transition.

Our Purpose

Responsibly sourcing the commodities that advance everyday life.

Strategic objective

To be a leader in enabling decarbonisation of energy usage and help meet continued demand for the metals needed in everyday life while responsibly meeting the energy needs of today.

Strategic Priorities

Responsible production and supply

Our core values are embedded in everything we do. We are committed to operating ethically, responsibly, and to contributing to socioeconomic development in the countries where we operate.

We will continue to focus on reducing the carbon footprint of our operations and will allocate financial returns towards fulfilment of our business strategy.

Our commitment is delivered through our operational excellence, health and safety and ethics and compliance programmes, advancing our environmental performance, respecting human rights and by developing, maintaining and strengthening our relationships with all of our stakeholders.

Responsible portfolio management

We will prioritise investment in metals that support the decarbonisation of energy usage as well as help meet demand for metals needed in everyday life. We will also reduce our coal production in line with our various climate action commitments and the electrification and decarbonisation of energy systems.

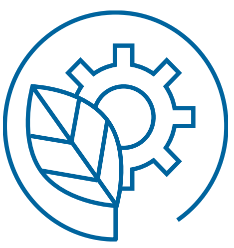
Our capital allocation supports this strategy through the optimal balance of debt and equity, distributions to shareholders and business reinvestment in transition commodities and value accretive Scope 1+2 abatement opportunities that help achieve our climate commitments.

Responsible product use

A low-carbon future requires responsibly produced low-carbon metals. We will seek opportunities to increase the proportion of green metals we can supply to customers from our own operations and through our extensive marketing activities. Supporting this, we are scaling up our power and carbon trading teams to help provide carbon solutions for commodity supply chains as these markets evolve and mature.

We will participate in global efforts to improve abatement technologies and availability, as well as resource use efficiency by contributing to the circular economy.

Our strategy for a sustainable future continued



Responsible production and supply

Performance in 2021

Operational performance

Solid performance across the asset base. Previous voluntary reductions in coal production, in line with weak demand, were progressively unwound during the year as the world's energy needs changed. In copper, Katanga delivered towards its potential, while Mutanda restarted processing operations in Q4.

Safety

Regrettably, there were four fatalities during the year. We implemented an enhanced fatality reduction programme, including via relaunching our 'SafeWork' programme in H1 2021 to address underlying issues in historical safety performance.

Our ambition is to prevent all fatalities, occupational diseases and injuries wherever we operate.

Our TRIFR and LTIFR each decreased by 11% compared to 2020.

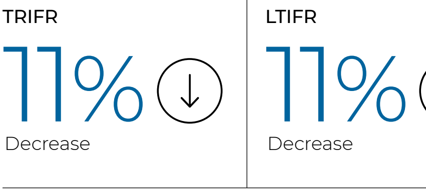
Climate change

We recognise our responsibility to contribute to the global effort to achieve the goals of the Paris Agreement by decarbonising our own operational emissions footprint and responsibly managing the depletion of our fossil fuels portfolio.

In line with the ambitions of the 1.5-degree Celsius (°C) scenarios set out by the Intergovernmental Panel on Climate Change (IPCC), against a 2019 baseline, we have set ourselves the target of reducing our total (Scope 1, 2 and 3) emissions in the shorter term by 15% by 2026, and in the medium term by 50% by 2035. Post-2035, our ambition is to achieve, with a supportive policy environment, net zero total emissions by 2050.

Community engagement

Our community development programmes are an integral part of our community and stakeholder engagement strategies. In 2021, we spent $68 million on these support programmes (2020: $95 million, including significant amounts on Covid-19 related initiatives).



Priorities going forward

Operational excellence

Continued focus on operational efficiencies and improvements to optimise operating costs and margins.

Sustainability

We continue to implement activities that promote integration of sustainability throughout our business to support our commitment to continuously improve our standards of health, safety, environmental and community and human rights performance.

Managing emissions

We are working with global specialists and draw on local expertise within our operational teams to identify value accretive abatement opportunities to further reduce our carbon footprint.

In 2021, we almost doubled the volume of NPV positive abatement opportunities and are working to identify additional MACC initiatives to close the remaining gap on meeting our medium-term target and net zero ambition.

Under all credible scenarios, fossil fuels (coal, gas and oil) will continue to be a part of the global energy mix for many years to come. We will responsibly steward the decline of our coal business as it meets society's energy needs through the energy transition.

Transparency

We are committed to operating transparently, responsibly and meeting or exceeding applicable laws.

KPIs

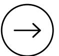
- Value for our shareholders – Adjusted EBIT/EBITDA, Net income attributable to equity holders
- Safe and healthy workplace – fatalities, FFR, TRIFR, LTIFR and occupational disease cases
- Environmental performance – total carbon emissions, meeting our commitments on climate change
- Long-term value for communities – community investment spend

See **Page 16**

Principal risks

- Health, safety and environment
- Climate change
- Community relations and human rights

See **Pages 81 - 84**



Our strategy for a sustainable future continued

Responsible portfolio management

Performance in 2021

Conservatively positioned

The capital structure and credit profile is managed around a $10bn Net debt cap, with sustainable deleveraging (after base distribution) below the cap periodically returned to shareholders via special distributions/buy backs as appropriate.

The Net debt cap may be flexed temporarily up to $16bn for M&A opportunities, subject to accelerated deleveraging to reposition Net debt back to optimal levels. Year-end Net debt and Net debt to Adjusted EBITDA were $6.0 billion and 0.28x, respectively.

This allows for $4.0 billion of shareholder returns to restore the $10 billion optimal level.

Bonds

We issued $3.4 billion, EUR 1.1 billion and CHF 150 million of bonds across a range of maturities from 5 to 30 years. Maturities are managed around a cap of c.$3 billion in any one year.

Reinvestment

Our net 2021 cash capital expenditure of $3.8 billion was weighted towards transition commodities with c.80% of our expansionary capital invested in our metals business, including the INO life extension projects (nickel), Collahuasi desalination infrastructure and the Zhairem zinc project.

Credit rating

The Group's credit ratings are currently Baa1 (stable outlook) from Moody's and BBB+ (stable) from Standard & Poor's.

Credit facility

During the year, revolving credit facilities were extended and voluntarily reduced to $11.2 billion, in line with lower financing needs. Committed available liquidity of $10.3 billion at year-end covers more than three years of upcoming bond maturities.

December 2021 net debt◊

$6.0bn

Committed available liquidity

$10.3bn

Priorities going forward

Balance sheet

We are committed to maintaining a strong balance sheet capable of supporting our Purpose and Strategy.

Investment grade rating

We will preserve a robust capital structure and business portfolio that reflects our commitment to maintaining a strong BBB/Baa investment grade rating.

Our optimal leverage target of a $10bn cap provides significant current rating headroom at Net debt/Adjusted EBITDA levels <1x.

Reinvestment

Prioritise investment in transition commodities and value accretive Scope 1+2 abatement opportunities that help achieve our medium-term Paris alignment and 2050 net-zero ambition.

KPIs

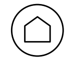
- Returns to shareholders – Funds from operations, Net funding and Net debt and annual capital returns/distributions
- Value for our shareholders – Adjusted EBIT/EBITDA, Net income attributable to equity holders

See **Page 16**

Principal risks

- Supply, demand and prices of commodities
- Currency exchange rates
- Liquidity
- Counterparty credit and performance

See **Pages 73 - 78**



Our strategy for a sustainable future continued

Responsible product use

Performance in 2021

Collaborating with our value chains

As a vertically integrated extractive and marketing business, we are leveraging our own carbon reduction efforts and market expertise to meet the increasing needs for attestable low-carbon products.

Power and carbon trading

We are scaling up our power and carbon trading teams, establishing enhanced transactional expertise and capabilities in power, low carbon and environmental products, and origination and structuring in relation to both regulatory and voluntary products.

Strategic partnerships

Recognising the need for strategic partnerships between raw material and battery producers, in 2021 we signed a number of long-term supply agreements for responsibly sourced low-carbon aluminium and cobalt.

These include:

- Five-year supply of Century Aluminum's Natur-Al low-carbon aluminium to Hammerer of Austria
- Supply of up to 1,500 tonnes of cobalt to FREYR in the form of cobalt cut cathodes made from partially recycled cobalt at our Nikkelwerk facility in Norway
- Investment in and long-term supply of responsibly sourced cobalt to Britishvolt

Priorities going forward

Partnerships

Working with our customers and supply-chain to enable greater use of low-carbon metals and support progress towards technological solutions.

Abatement

Supporting uptake and integration of abatement – an essential contributor to achieving low or net zero carbon objectives.

Circular economy

Leveraging our value chain to expand the volumes of recyclable commodities for processing through our global network of metallurgical assets.

Responsible sourcing

Pursuing strategic long-term agreements to provide a reliable supply of responsibly-produced commodities essential to the low-carbon economy.

KPIs

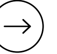
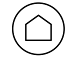
- Returns to shareholders – Funds from operations, Net funding and Net debt and annual capital returns/distributions
- Value for our shareholders – Adjusted EBIT/EBITDA, Net income attributable to equity holders

See **Page 16**

Principal risks

- Geopolitical, permits and licence to operate
- Laws and enforcement
- Operating

See **Pages 74 – 80**

Key performance indicators

Our financial and non-financial key performance indicators (KPIs) provide a measure of our performance against the key drivers of our strategy

Strategic priorities

Responsible production and supply

Responsible portfolio management

Responsible product use

*Non-financial indicators includes information and data from our industrial activities in respect of assets where we have operational control, and excludes investment, marketing and holding companies.

Non-financial key performance indicators*

Safety: number of fatalities

Four ↓

2020: Eight

Link to strategy

Policy

We take a proactive, preventative approach towards health and safety. We require an effective safety management system at each asset to ensure the integrity of plant and equipment, structures, processes and protective systems, as well as the monitoring and review of critical controls.

We believe that every work-related incident, illness and injury is preventable and we are committed to providing a safe workplace.

2021 Performance

We are saddened to report that four people lost their lives at our operations during 2021 (2020: eight). All loss of life is unacceptable and we are determined to eliminate fatalities across our business.

Our 2021 fatality frequency rate, the total number of fatalities from incidents and occupational diseases per 1 million man-hours worked, was 0.014 (2020: 0.027). Through strong safety leadership, we can create and maintain safe workplaces for all our people. The vast majority of our assets have been fatality free for many years.

Total carbon emissions (Scope 1, 2 and 3)

(million tonnes CO_2e)

280 ↓

2020: 295

Link to strategy

Policy

In line with the ambitions of the 1.5-degree Celsius scenarios set out by the IPCC, against a 2019 baseline, we have set ourselves the target of reducing our total (Scope 1, 2 and 3) emissions in the short-term by 15% by 2026, and in the medium term by 50% by 2035. Post 2035, our ambition is to achieve, with a supportive policy environment, net zero total emissions by 2050.

2021 Performance

Our 2021 total emissions decreased by 5% compared to 2020. This is a 25% reduction on our 2019 baseline, reflecting pandemic, market and weather-related coal and ferroalloys production cuts across 2020 and 2021. We expect our total emissions to rise in 2022 with the unwinding of the earlier demand-led coal production cuts. We remain committed to delivering emissions reductions of 15% by 2026 and 50% by 2035.

Community investment

(US$ million)

2020: 95

Link to strategy

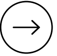
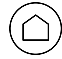
Definition

Community investments are our contributions to, and financial support of, the broader communities in the regions where we operate.

Funds are set aside to support initiatives that benefit communities and local sustainable development. We also make in-kind contributions, such as equipment and management. We support programmes for community development, enterprise and job creation, health, education and the environment.

2021 Performance

In 2021, we spent $68 million on community development programmes (2020: $95 million), including $20.7 million spent during 2020 and 2021 on Covid-19 related initiatives. The decrease reflects a number of initiatives being temporarily placed on hold due to the global pandemic, as well as the divestment of Mopani and relinquishment of Prodeco.

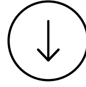
Key performance indicators continued

Financial key performance indicators

Adjusted EBITDA◊

(US$ billion)

21.3



2020: 11.6

Link to strategy

Definition

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.

Adjusted EBITDA consists of Adjusted EBIT plus depreciation and amortisation, including the related Proportionate adjustments.

2021 Performance

Adjusted EBITDA was $21.3 billion, a record level, underpinned by significantly higher commodity prices with many reaching record or multi-year highs, amid widespread supply/demand deficits.

Marketing's results reflected a strong broad-based performance, as many key markets exhibited strong demand, supply constraints and inventory drawdowns.

Net debt◊

(US$ billion)

6.0

2020: 15.8

Link to strategy

Definition

Net funding/Net debt demonstrates how our debt is being managed and is an important factor in ensuring we maintain an investment grade 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.

The relationship of Net debt to Adjusted EBITDA is an indication of our financial flexibility and strength.

2021 Performance

Net funding as at 31 December 2021 decreased by $4.6 billion to $30.8 billion, while Net debt decreased by $9.8 billion to $6.0 billion.

Net debt is being managed around a $10 billion cap, with deleveraging below such cap returned to shareholders.

Year end net debt allows for $4.0 billion of such returns structured as a $3.4 billion distribution and $0.6 billion share buyback.

Funds from operations (FFO)◊

(US$ billion)

17.1

2020: 8.3

Link to strategy

Definition

Funds from operations (FFO) is a measure that reflects our ability to generate cash for investment, debt servicing and distributions 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, as appropriate.

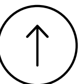
2021 Performance

FFO was up $8.7 billion (105%) on 2020, driven by strong Adjusted EBITDA. Cash taxes totalled $2.7 billion and net interest cash flows were $0.9 billion, the latter reflecting lower average costs of financing and levels of net funding.

Net income attributable to equity holders

(US$ billion)

5.0



2020: (1.9)

Link to strategy

Definition

Net income attributable to equity shareholders is a measure of our ability to generate shareholder returns.

2021 Performance

Net income attributable to equity holders before significant items was $9.1 billion.

Significant items of $4.1 billion principally comprised:

- the required accounting recycling to the income statement of Mopani's non-controlling interests on disposal ($1.0 billion);
- impairment charges of $1.8 billion mainly attributable to Koniambo; and
- a $1.5 billion provision raised with respect to regulatory investigations.

Net income attributable to equity holders was $5.0 billion in 2021, equivalent to 38¢ per share.

Stories of the year

Circular copper – ensuring supply through smart value chain cooperation

The world is facing the challenge of meeting the increasing energy needs of a growing population, while drastically reducing its carbon footprint. As the world reduces dependency on fossil-based fuels, the demand for refined metals that support battery and renewable energy production, such as copper, cobalt and nickel, is expected to grow markedly.

Part of this change will come from a smarter use of resources, as well as evolving technology and changing consumer behaviours. Although we will still need mining to meet global demand, recycling will play an ever more essential role.

Recycling end-of-life electronics has been an important part of Glencore's business since the 1980s. Further industrialisation and urbanisation in the developed and developing world creates significant demand for energy infrastructure; at the same time nationally-determined contributions (NDCs) to decarbonisation demand a reduction in energy intensity. The resulting question for society is how effectively to incentivise circularity, and ultimately a closed-loop economy with production, use, disposal and recycling fully integrated.

Recycling is an increasingly important part of Glencore's business and reflects our Purpose of responsibly sourcing the commodities that advance everyday life.

One of the key metals needed to support a low carbon future is copper. Copper demand is expected to double over the next decades to about 60 million tonnes per year in 2050.

While mining remains likely the most important source for this additional metal demand, the current project pipeline for copper mine production is not sufficient to fill the gap, meaning recycling has an important role to play in making up for the shortfall.

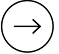
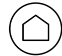
As a founding member of the World Economic Forum-backed Circular Electronics Partnership (CEP), launched in 2021, we are moving this process along with Dell, Microsoft, Google, Vodafone, Cisco, SIMS, and many other companies and partner organisations.

Where product design used to be linear, today's environmental targets and future supply shortfalls mean that thinking about how best to recycle a product after its use needs to start during the design process. Recycled content has to translate into downstream capacity.

Traditionally, recycling sits at the end of this chain, managing the transport of sometimes hazardous materials safely to recycling sites and then bringing the recycled and refined metals back to market. However, we are increasingly finding opportunities to have 'Circular Conversations' – with big tech, OEMs, recyclers, policy makers, and other stakeholders in this ecosystem to discuss how to best design products that can be easily recycled at the end of their lifetime. That is also why Glencore continues to develop, market, and support state-of-the-art technology and is adapting existing technology. By working together across the entire end-to-end electronics supply chain, we can help upstream stakeholders achieve their, and eventually the world's, net zero goals.

"We need to change the paradigm – if you want to achieve a circular economy, you have to think of post-consumer materials as a resource, not as waste. Copper is a great example. It has a dual role to play on the path to net zero. For one, it is vital to powering electrification. But it is also an easily recyclable commodity that doesn't lose any of its properties in the process, meaning we can produce more low carbon copper to fuel the low carbon energy transition."

Kunal Sinha
Global Lead, Recycling business

Climate change

As one of the world's largest diversified natural resource companies, we have a key role to play in enabling the global transition to a low carbon economy.

Pathway to net zero

In late 2020, we published our climate change strategy, *Pathway to Net Zero*. This set out our pathway to delivering our climate-related targets and longer-term ambition of becoming a net zero total emissions company by 2050. In December 2021, we published our *Pathway to Net Zero: 2021 Progress Report* detailing the steps we took during the year to identify and implement emission reduction opportunities and to make progress in the seven priority areas we identified in our climate strategy. This report also includes a full discussion of Glencore's approach to climate change governance, risk management and engagement with industry organisations.

These publications are available on our website at: **glencore.com/sustainability/reports-and-presentations**

This section of the annual report includes a summary of the developments in the year to provide for concise text. The fuller discussion from our Progress Report has not been reproduced.
Taken together, these publications represent Glencore's compliance with the requirements of Listing Rule 9.8.6R. A cross-reference to the TCFD recommendations is included later in this section.

1 Coordinated government policies, including incentives to drive accelerated uptake of lower carbon and decarbonisation technologies, and market-based regulations governing industrial practices that drive a competitive, least-cost emissions reduction approach.

Our targets and ambition

We take a holistic approach to carbon reduction, recognising that a meaningful contribution to addressing climate change is only possible through total (Scope 1, 2 and 3) emissions reductions.

We recognise the need for action. We have set ourselves a short-term target of an absolute 15% reduction of our total emissions by 2026 and a medium-term target of a 50% reduction by 2035, both on our 2019 level of emissions. Post 2035, our ambition is to be a net zero total emissions company by 2050, assuming a supportive policy environment.[1]

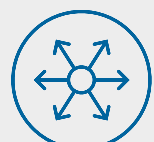
We use the Intergovernmental Panel on Climate Change (IPCC) scenarios to illustrate our compliance with the net zero ambition. Our 2026 target lies within the range of IPCC's 1.5°C scenarios and our 2035 target aligns to the International Energy Agency's (IEA) Net Zero Emissions by 2050 Scenario (NZE 2050), which is consistent with IPCC Shared Socio-economic Pathway 1-1.9. While being aligned with the respective scenarios, our base case and scenario assumptions take into account the different rates of progression that developed and developing economies may achieve in reducing emissions by decreasing dependency on fossil fuels and shifting to renewables energy supply.

The graphic opposite illustrates our pathway to achieve our targets and long-term ambition.

Managing our footprint

Footprint
Managing our operational footprint
Reducing our Scope 1 and 2 emissions

Reduction
Reducing Scope 3 emissions
Our diverse portfolio uniquely allows us to address this portion of our footprint through investing in our metals portfolio, reducing our coal production and supporting deployment of low emission technologies

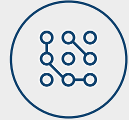


Capital
Allocating capital to prioritise transition metals
Investing in the metals that the world needs

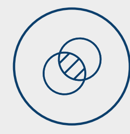
Contributing to global decarbonisation

Partnership
Collaborating with our value chains
Working in partnership with our customers and supply chain to enable greater use of low-carbon metals and support progress towards technological solutions to address climate change

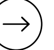
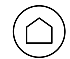
Abatement
Supporting uptake and integration of abatement
An essential contributor to achieving low or net zero carbon objectives



Technology
Utilising technology to improve resource use efficiency
Contributing to the circular economy



Transparency
Transparent approach
Reporting on our progress and performance

Climate change continued

Our position on climate change

We recognise climate change science as set out by the IPCC. We support the global climate change goals outlined in the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement.

We believe that only through collective inclusive action can the world achieve the goals of the Paris Agreement and limit the impact of climate change.

The global response to climate change should pursue twin objectives: limiting temperatures in line with the goals of the Paris Agreement and supporting the United Nations Sustainable Development Goals.

In order to achieve these goals, the world requires a global transformation in energy networks, industrial best practices and how land is used and conserved. We believe this transition is a key part of the global response to the increasing risks posed by climate change.

In response to the ongoing decarbonisation of global energy supply and electrification of key sectors, including mobility and its associated infrastructure, we expect demand to grow exponentially for renewable energy technologies, and the metals and minerals required to build them.

As one of the largest diversified natural resource companies in the world, we can support the delivery of the goals by producing, recycling, marketing, and supplying the metals and minerals that are essential to the transition to a low-carbon economy and to meeting the needs of everyday life.

Our focus remains on our total emissions footprint, including our Scope 3 emissions, which is critical in order to achieve the goals of the Paris Agreement. We have linked our capital allocation strategy to the achievement of our climate targets.

Executive oversight and Board involvement

During 2021, we revised our internal climate change governance framework to drive implementation of the climate strategy and the supporting work programmes.

Our new Climate Change Taskforce (CCT) is accountable to our Board of Directors, to whom it provides regular progress and status updates. Its members include our Chief Executive Officer, Chief Financial Officer, Head of Industrial Assets and General Counsel, as well as representatives from key corporate functions including investor relations, finance and sustainable development. Commodity departments, including heads of the departments and nominated representatives, participate in the working groups that support the CCT.

The CCT is responsible for overseeing our climate strategy and progress against our climate commitments. In 2021, the CCT met on four occasions and established four working groups to drive the delivery of our targets and net zero ambition.

The working groups focus on areas specific to our industrial activities, marketing activities, climate-related data and its disclosure and external stakeholder engagement and advocacy activities.

It is through these working groups that we assess initiatives to reduce our carbon footprint, identify and leverage carbon marketing opportunities, design and implement systems to support complete, accurate and attestable reporting and monitor external trends while coordinating and overseeing advocacy and communication efforts.

Strategic decisions, including those on capital allocation and portfolio management, are decided on by Group management and the Board.

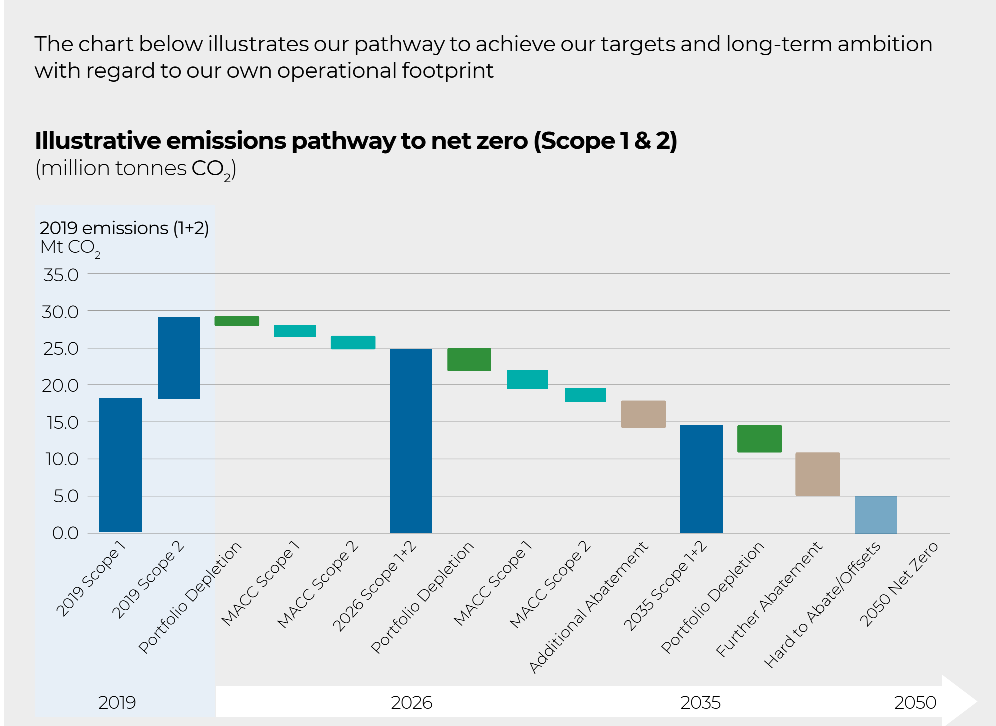
Our Chief Executive Officer is the named executive for driving the climate strategy within our Board. This is reflected in his remuneration package. Of the scorecard for his annual variable compensation, 30% is for KPIs relating to HSEC matters: 15% for safety performance and 15% for progress towards our short- and medium-term absolute emission reduction targets.

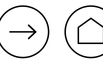
Climate change governance including an organisational chart is further discussed in our *Pathway to Net Zero: 2021 Progress Report*.

> We work with global specialists and draw on the local expertise within our operational teams to identify ways to reduce our Scope 1 and 2 emissions

The chart below illustrates our pathway to achieve our targets and long-term ambition with regard to our own operational footprint

Illustrative emissions pathway to net zero (Scope 1 & 2)
(million tonnes CO_2)

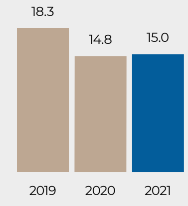




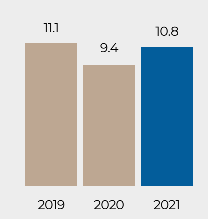
Climate change continued

Our performance

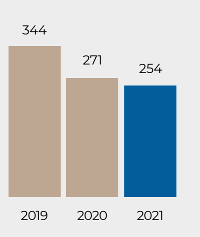
Scope 1 (direct emissions)[1] (CO_2e million tonnes)



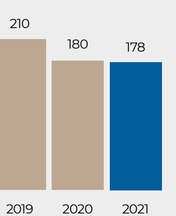
Scope 2 location-based[2] (CO_2 million tonnes)



Scope 3 (CO_2e million tonnes)



Total global energy use at our operated assets[3] (petajoules)



1 This includes emissions from reductants used in our metallurgical smelters. It also includes CO_2e of methane emissions from our operations, which is around 20% of our Scope 1 emissions.
2 We apply appropriate country-by-country grid emission factors to all of our purchased electricity, regardless of specific renewable electricity contracts.
3 Renewable energy sources deliver 13.4% of our total energy needs (2020: 13.3%). In Australia, we use coal seam gas from our mines to supplement power generation at a number of our assets and have flares installed at those underground coal mines with the necessary supply and concentration of methane.

Reducing our operational footprint

We work with global specialists and draw on the local expertise within our operational teams to identify ways to reduce our Scope 1 and 2 emissions. Our approach has led to the implementation of initiatives that reduce these emissions, while continuing to meet our obligations to our customers.

Our Group-wide marginal abatement cost curve (MACC) enables an assessment of viable and economic abatement opportunities, supporting our assessment and, when appropriate, implementation of such opportunities. For example, identifying when increases to carbon taxes make the building of renewable power installations more cost effective than purchasing grid-generated power.

We undertake a uniform approach to MACCs at a commodity department level. This enables a group-wide aggregation of key decarbonisation actions, which in turn supports a holistic approach to reviewing the pipeline of initiatives from concept to execution stages.

Through understanding the impact of the different carbon prices from the key climate scenarios on our assets' cost curves and emission profiles, we can identify where and when to make capital expenditure in abatement opportunities. This ensures that we make value-accretive investments thereby incorporating climate change considerations into our business strategy rather than considering emissions reduction as a standalone work stream.

We divide CO_2 emissions reporting into three different scopes, in line with the Greenhouse Gas Protocol, and measure both the direct and indirect emissions generated by the industrial activities, entities and facilities where we have operational control, as well as emissions resulting from activities within our value chain.

- Scope 1 (measured in CO_2e) includes emissions from combustion in owned or controlled boilers, furnaces, and vehicles/vessels, from the use of reductants and fugitive emissions from the production of coal and oil (direct emissions).
- Scope 2 location-based emissions (measured in CO_2) principally relate to purchased electricity for our operations, in particular our metals processing assets, which require secure and reliable energy 24 hours a day, 365 days a year. For the calculation of the Scope 2-location-based emissions we apply the relevant grid emission factors to all our purchased electricity, regardless of specific renewable electricity contracts (indirect emissions).
- Scope 3 emissions (measured in CO_2e) relate to the indirect greenhouse gas emissions further up and down our value chain. These include upstream emissions associated with the products and services we purchase from suppliers and downstream emissions that include emissions resulting from our customers' use of the fossil fuels that we produce, their processing of our metals and concentrates, the emissions resulting from time-chartered vessels and emissions resulting from joint ventures that we do not operate.

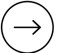
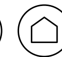
Our performance in 2021

During the year, we completed our work on enhancing our climate governance process. This included an updated Environmental Policy with clear commitments on energy efficiency and climate change, supported by global working groups and a new Energy & Climate Change Standard.

During 2021, we emitted 15.0 million tonnes CO_2e of Scope 1 (direct emissions) from our consumed fuel (2020: 14.8 million tonnes). This figure includes emissions from reductants used in our metallurgical smelters. It also includes CO_2e of methane emissions from our coal and oil operations, which is around 20% of our Scope 1 emissions.

The consumption of electricity purchased by our assets, our Scope 2 emissions, is also a major action area within our decarbonisation plans. In 2021, we emitted 10.8 million tonnes CO_2 of Scope 2 location-based (indirect emissions) (2020: 9.4 million tonnes).

The increase between 2020 and 2021 Scope 1 and 2 emissions reflects an increase in some production volumes, in line with the global economic recovery from the Covid-19 pandemic, notably at the grid-powered Ferroalloys smelters in South Africa, which were idled during the national lockdown in 2020. Our Scope 1 and 2 emissions have decreased by 13% from our baseline year of 2019, and we remain confident of our progress in meeting our short-term and medium-term absolute reduction targets.

Climate change continued

Reducing Scope 3 emissions

Our Scope 3 emissions are the indirect GHG emissions across our value chain. They include emissions from upstream supply chains, downstream customer use of our products, third-party logistics and transportation, and emissions associated with joint ventures that we do not operate. While these emissions are the result of activities outside of our direct control, we can exert an indirect influence through taking a collaborative approach with our value chain stakeholders and by making changes to our product portfolio.

For the extractive sector, Scope 3 emissions tend to be the largest proportion of total emissions. For Glencore, these emissions represent over 90% of our total carbon footprint and including a reduction in Scope 3 emissions is essential for making a meaningful contribution to reducing global emissions.

The most significant contributor to our Scope 3 emissions is our customers' usage of the fossil fuels we produce (predominantly coal). In the Asia-Pacific region, the key destination for our Australian and South African coal production, coal is generally the largest source of fuel for power generation and, we believe, will remain a vital fuel until such time as alternative energy infrastructure can be approved, financed, and constructed.

Our performance in 2021

During 2021, we increased our engagement with our key equipment manufacturing suppliers and customers to improve our understanding of the emissions within our value chain. We are actively looking for opportunities to partner with our stakeholders to drive the uptake of carbon neutral solutions and low emission technologies, as well as to develop robust and consistent emission tracking and data collection throughout our value chain.

In the short term, we are actively monitoring our stakeholders' decarbonisation efforts and exploring partnership opportunities to develop and commercialise carbon-neutral goods, services, and processes. Over the medium term, we plan to systemise the integration of our climate targets into our supplier selection criteria and to develop internal systems that more accurately track value chain emissions that will feed into our annual Scope 3 inventory reporting.

Our total Scope 3 emissions in 2021 were 254 million tonnes CO_2e, compared to 271 million tonnes CO_2e in 2020. The decrease was principally due to pandemic-driven lower coal volumes. We expect our Scope 3 emissions to rise in 2022 with the unwinding of such cuts, and remain committed to delivering emissions reductions of at least 15% by 2026.

Our customers' usage of the fossil fuels we produced totalled 237 million tonnes CO_2e (2020: 253 million tonnes CO_2e), being around 93% of our total Scope 3 emissions.

Our 2021 Sustainability Report will provide a full disclosure of all the Scope 3 categories that are relevant and material to our activities.

Investing in transition metals

We recognise the importance of disclosing how we ensure our material capital expenditure and investments align with delivering our short- and medium-term targets and longer-term ambition, as well as the goals of the Paris Agreement. This includes transparently reporting in our annual report on our capital expenditure to develop, maintain and expand the production of metals associated with the transition to a low-carbon economy. We also disclose the costs associated with the responsible depletion of our coal assets.

Our current and forecast capital expenditure aligns with our emissions-reduction targets, reflecting our commitment to prioritise the development of our portfolio's transition metals. Running down our coal business will contribute to the reduction of our total emissions. Going forward, we have allocated capital to deplete our coal business in a responsible manner that is consistent with our Values and our climate strategy. We expect that our capital spend on our coal business will decline in line with lower production.

In support of the delivery of our targets, we have committed expansionary capital for:

- Construction of the next generation of nickel mines in Canada (Onaping Depth and Raglan); we expect to commission these in 2024-25;
- Our attributable share of Collahuasi's desalination plant and associated pipeline and pumping infrastructure;
- Progressive ramp-up of the Mutanda copper/cobalt operation; and
- Feasibility stage work on certain longer-dated copper and zinc resources.

In addition, we are assessing further value-accretive opportunities within our project pipeline. We base our investment decisions on several factors, including carbon considerations and impact on delivering our emissions-reductions targets. We test our investment decisions against Paris-aligned carbon prices which in advanced economies are projected at $180/t CO_2e by 2035.

Our assessment of the acceleration of metals demand under all scenarios has been corroborated with work completed by the IEA and others. The energy transition relies heavily on the electrification of systems together with rapid adoption of wind, solar and energy storage solutions. These solutions are metals intensive and will require significant investment to new mines and expansion of existing assets to access the resources.

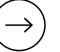
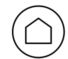
The IEA shows that by 2050 the metals requirements for clean energy technologies will require between 2.1 and 3.4 times more copper than in 2020, between 10.8 and 30.1 times more nickel and between 9.9 and 32.9 times more cobalt*.

Responding to carbon pricing

We operate successfully in multiple jurisdictions that have direct and indirect carbon pricing or regulation. We take a systematic approach to local regulation and carbon price sensitivities as part of our ongoing business planning for existing industrial assets, new investments and as part of our marketing activities.

We use carbon price scenarios to assess the potential impacts on operating costs arising from existing and future potential carbon pricing regulation. We assess these impacts through applying emission costs to the carbon emissions and cost curves for the various

* Derived from IEA WEO 2021 figure 6.14

Climate change continued

industries in which we operate. This enables us to understand how underlying cost structures will change over time and allows us to identify where costs can be passed on. In the Radical Transformation scenario we have assumed the carbon price assumptions as shown in the Carbon Price table.

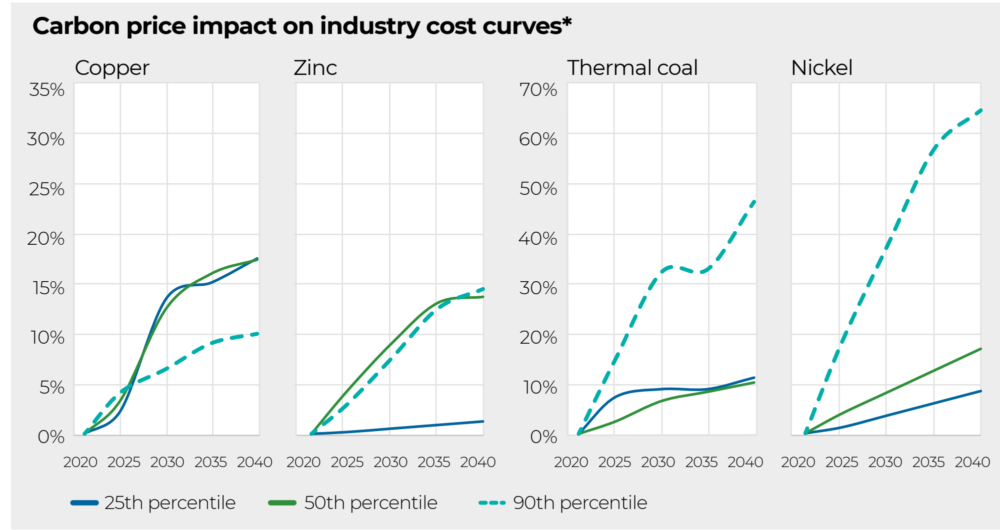
Applying these carbon prices to each of our major commodities shows marginal supply costs (90th percentile) would increase by 10% to over 60%.

Assuming supply and demand are broadly balanced, this implies commodity prices rising to account for the additional input costs (in this case, carbon). For a fourth-quartile producer, the increase is unlikely to compensate for the additional costs of production; whereas for a top-quartile producer the net financial effect may be beneficial.

Most of our assets lie in the lower to middle part of their respective industry costs curves and would benefit from a higher marginal supply cost. Against a backdrop of rapidly increasing demand, we anticipate that cost and demand forces will drive prices higher

Carbon price – US$/t	2021	2025	2030	2035	2040
Advanced economies	As legislated	80	130	180	200
Emerging markets	As legislated	40	90	140	160
Developing economies	As legislated	5	15	25	35

Source: Carbon prices reflect Our Radical Transformation Scenario (equivalent to IEA NZE2050)



* Glencore carbon cost analysis

and be passed through to consumers, resulting in little impact on our business.

In fact, current first and second quartile emission intensity producers are likely to see margin expansion, the area of the emission intensity curves in which we see our copper/ cobalt and zinc portfolio currently residing, together with our Canadian nickel assets.

As carbon border adjustment mechanisms are imposed, we expect global supply chains to adjust to minimise the exposure to carbon costs. We are well positioned through our marketing business to respond to revised commodity market flows.

We anticipate that our thermal coal business, which primarily delivers high energy coal, will be less impacted than producers of lower energy, high moisture coals.

2021 capital allocation, including capex allocated to coal and oil

Our disciplined approach to capital allocation seeks to reflect market supply and demand dynamics. As a major producer of the commodities that underpin the current battery chemistry and infrastructure growth initiatives that are expected to power electric vehicles and energy storage systems, our capital expenditure (currently and into the future) is heavily weighted towards energy transition metals, including various South American copper projects, African copper and cobalt, Kazakhstan polymetallic investments and nickel projects in Canada.

In 2021, industrial capital expenditure was $4.4 billion (2020: $4.1 billion), of which $724 million or 16% related to coal (2020: $787 million). The currently approved capital programme for the coal business is limited to stay-in-business capital expenditure and extensions at existing mines.

The remaining 84% of our 2021 industrial capital expenditure was weighted towards copper and cobalt (together 43%), zinc (20%) and nickel (14%). Key projects during the year were approval of a major water management project at the Collahuasi JV; progression of the Zhairem zinc mine in Kazakhstan; significant fleet replacements at our South American copper assets; and development of new nickel mines in Canada.

> Effective and strategic management of climate change-related risks and opportunities across all aspects of our business is considered vital to our continued ability to operate

Managing risk and opportunity

Climate change-related impacts present both risks and opportunities to our operations, which we must identify and manage to ensure the long-term sustainability and resilience of our business.

Assessing climate change-related risks is part of our Group risk management and strategy development processes. Effective and strategic management of climate change-related risks and opportunities across all aspects of our business is considered vital to our continued ability to operate.

We take an integrated approach to risk management throughout our business through a structured process that establishes a common methodology for identifying, assessing, managing, and monitoring risks. We assess climate, operational and financial risks holistically.

We require our commodity departments to annually update their climate change risk

Climate change continued

assessments. They utilise a bottom-up approach to consider regulatory risks, including carbon taxes, project approval considerations, impact on license to operate, and physical risks, such as flooding, droughts and extreme weather events. Identified material risks are incorporated into each asset's lifecycle planning. The risks are assessed and characterised in accordance with the Group's Risk Matrix and consider the period from now until 2035 (or the end of an asset's lifecycle).

A detailed analysis of the climate-related risks most significant to Glencore, and mitigations of those risks, is set out in our *Pathway to Net Zero: 2021 Progress Report*.

During the year, our climate change risk assessments utilised the World Bank's Climate Change Knowledge Portal to assess each of our operating jurisdiction's risk of material impacts from weather-related events. The country profile consolidates the most relevant data and information on climate change, disaster risk reduction, and adaptation actions and policies for individual countries, drawing on information from the World Bank's portal as well as the latest IPCC reports and datasets.

This year's risk assessments found no fundamental changes to the risks identified or for the assets that we have assessed as being most at risk.

Engagement and disclosure

We are committed to reporting transparently on our progress in meeting our climate change objectives and data on our total emissions.

We support the Task Force on Climate-related Financial Disclosures (TCFD) framework for the reporting of climate-related financial risk disclosures for use by lenders, insurers, investors and other stakeholders.

Industry association review

We take an active and constructive role in public policy development and participate in relevant industry associations. We acknowledge the IIGCC Investor Expectations on Corporate Climate Lobbying and recognise the importance of ensuring that our membership in relevant industry associations does not undermine our support for the Paris Goals.

Our *Pathway to Net Zero: 2021 Progress Report* includes our annual Review of our Industry Organisation's Positions on Climate Change. The Review considered these industry organisations' advocacy activities and public statements and whether they aligned with our support for the goals of the Paris Agreement.

Our assessment of these activities identified three regions/countries with significant discussion on climate policies over the last few years: Australia, Europe, and South Africa. As such, we focused our 2021 review on our direct and indirect advocacy activities in these jurisdictions, recognising the importance of concerted and pragmatic policy action to help achieve the goals of the Paris Agreement.

COP26

We welcome the Glasgow Climate Pact that was agreed during the COP26 proceedings in November 2021. The Pact signals a continued ambition to keep the average rise in global temperatures to below 1.5°C. Our existing strategy of responsibly depleting our coal portfolio over time, as we prioritise investment in metals needed for the transition, is consistent with the Pact's commitment to phase down the use of fossil fuels.

Scenario testing

We have considered the resilience of our portfolio against scenarios / pathways as set out in *Climate Report 2020: Pathway to Net Zero* and summarised on the following pages.

Our scenarios are defined below. In line with TCFD guidance that they be reviewed periodically, we shall review and, if needed, update them during 2023.

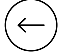
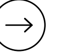
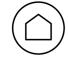
No single pathway can define how individual economies and the world will transition. These scenarios describe a range of potential outcomes dependent on the rate at which transition policies are implemented. While our approach draws principally on IEA scenarios, our benchmarking of these against those of other experts, including Bloomberg New Energy Finance and the International Renewable Energy Agency (IRENA), shows broad alignment on the energy and emissions trajectory being fashioned by current policy and ambition.

The scenarios are:

Current Pathway: Adopting the IEA's Stated Energy Policies Scenario (STEPS), which takes into account long-term energy and climate targets only to the extent that they are backed up by specific policies and measures. The Current Pathway has been assessed as being consistent with global temperatures rising on average by 2.7°C by the end of the century.

Rapid Transition: Adopting the IEA's Sustainable Development Scenario (SDS). The SDS is based on the same economic outlook as STEPS but works backwards from climate, clean air and energy access goals, examining what actions would be necessary to achieve those goals. This requires accelerated adoption of renewables delivering global net zero emissions in 2070 and limiting the rise of global temperatures to 1.5°C by the end of the century.

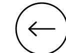
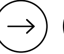
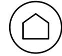
Radical Transformation: Adopting the IEA's Net Zero Emissions by 2050 Scenario (NZE2050), which the IEA states, "sets out what additional measures would be required over the next ten years to put the world as a whole on track for net zero emissions by mid-century. Achieving this goal would involve a significant further acceleration in the deployment of clean energy technologies together with wide-ranging behavioural changes." This Radical Transformation would place the world on a pathway consistent with delivering global net zero emissions in 2050 and limiting the rise of global temperatures to 1.5°C by the end of the century.

Climate change continued

Results of scenario testing

Commodity businesses and outlook	**Scenarios as set out in Climate Report 2020:** Pathway to Net Zero	
	Current pathway	**Rapid Transition and Radical Transformation**
Copper (37% of 2021 Adjusted EBITDA) *Outlook: positive*	Growth in renewables power generation capacity, electric vehicle sales and associated infrastructure to underpin our forecasted 15% increase in copper demand by 2025 on 2019 levels. The Current Pathway is projected to increase demand by 45% by 2035 and 95% by 2050.	The required greater acceleration in investments to decarbonise economies under the Rapid Transition and Radical Transformation could further drive copper demand and support rises of 50% and 100% on 2019 levels in 2035 and 2050 respectively.
Ferroalloys (4%) *Outlook: neutral*	In South Africa, rising electricity prices and carbon taxes will exacerbate the pressure currently felt in ferrochrome smelting. Continuing demand for chrome will support the ongoing operation of ferrochrome mines in South Africa.	The accelerated adoption of renewable technologies such as solar and wind power generation, which depend on chrome and vanadium, amongst other metals, for the generation, transmission and storage of low-carbon energy underpins demand growth for our ferroalloys business, balanced by pressures on ferrochrome smelting in South Africa.
Nickel (4%) *Outlook: positive*	Nickel's use in batteries, EVs and energy storage systems will result in its demand rising in the Current Pathway to 130% of 2019 levels by 2025. By 2035, the scenario requires 135% more nickel and by 2050, cobalt displacement leads to increases in nickel demand of 250% above 2019 levels.	The adoption of policies needed for the Rapid Transition and Radical Transformation could drive a 200% increase in demand growth by 2035 on 2019 levels and a continued growth to 270% by 2050.
Zinc (12%) *Outlook: positive*	The electrification, industrialisation and urbanisation of developing economies supports demand growth for zinc, due to its anti-corrosive properties and use as an alloy in materials used in automobiles, electrical components, and household fixtures. This leads to zinc demand rising to 106% of 2019 levels by 2025. By 2035, the Current Pathway requires 20% more zinc, and by 2050 demand reaches 145% of 2019 levels.	The major transformation of the global energy system necessary to achieve the goals of the Paris Agreement is supported by zinc's use in offshore wind-energy generating facilities. These scenarios show zinc demand growing to 150% of 2019 levels by 2035 and to 200% by 2050.
Coal (24%) *Outlook: neutral to negative*	Up to 2030, the Current Pathway sees coal demand growth in Asia offsetting further declines in the Atlantic markets and demand exceeding supply capacity in the absence of substantial investment to mine extensions.	Policies supporting the Rapid Transition and Radical Transformation will lead to significant coal demand decline over the longer term. The ongoing use of existing coal power generation facilities will require negative carbon technologies, including Carbon Capture, Utilisation and Storage and Direct Air Capture to achieve net zero emissions and limit global temperature increases. Sensitivity analysis of the carrying values of our coal assets to such scenarios is presented in note 1 to the financial statements.
Marketing (20%) *Outlook: positive*	Marketing remains core to our business model, differentiating Glencore from its mining peers. Marketing and trading margins are expected to adapt with climate initiatives. The agility of our marketing business enables it to adapt to changing circumstances and benefit from various trading and arbitrage opportunities that will inevitably arise as economies transition at different rates. Our marketing business will continue to expand into new areas, as already evidenced with the addition of LNG and carbon trading into our portfolio. Under any scenario, our marketing business is well-positioned to support the responsible sourcing and delivery of products needed for the low-carbon economy. Goodwill of circa $1.7 billion has been allocated to the coal marketing business. Sensitivity analysis of this balance to lower valuation multiples is presented in note 1 to the financial statements.	

Climate change continued

Cross reference to Task Force on Climate-related Financial Disclosures

Governance

Disclose the organisation's governance around climate-related risks and opportunities

a) Describe the Board's oversight of climate-related risks and opportunities
- Corporate governance report: page 93
- Strategic Report – Climate change: page 20
- *Pathway to Net Zero: 2021 Progress Report*: page 7

b) Describe management's role in assessing and managing climate-related risks and opportunities
- *Pathway to Net Zero: 2021 Progress Report*: pages 7-8

Strategy

Disclose the actual and potential impact of climate-related risks and opportunities on the organisation's business, strategy, and financial planning where such information is material

a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term
- Risk management – Climate change: pages 82-83
- *Pathway to Net Zero: 2021 Progress Report*: pages 9-11

b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning
- Strategic Report – Climate change: page 25
- *Pathway to Net Zero: 2021 Progress Report*: pages 9-11, 13-31

c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C lower scenario
- Strategic Report – Climate change: pages 23-25
- *Climate Report 2020: Pathway to Net Zero*: pages 12-21

Risk management

Disclose how the organisation identifies, assesses and manages climate-related risks

a) Describe the organisation's processes for identifying and assessing climate-related risks
- *Pathway to Net Zero: 2021 Progress Report*: pages 9-11

b) Describe the organisation's processes for managing climate-related risks
- Risk management – Climate change: pages 82-83
- *Pathway to Net Zero: 2021 Progress Report*: pages 9-11

c) Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organisation's overall risk management
- Risk management – Climate change: pages 82-83
- *Pathway to Net Zero: 2021 Progress Report*: pages 9-11

Metrics and Targets

Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material

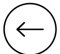
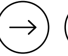
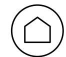
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process
- Strategic Report – Climate change: pages 20-23
- *Pathway to Net Zero: 2021 Progress Report*: pages 15-21

b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks
- Strategic Report – Climate change: page 21

c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets
- Strategic Report – Climate change: pages 19-23
- *Pathway to Net Zero: 2021 Progress Report*: pages 1, 5, 6

Climate Report 2020: Pathway to Net Zero

Pathway to Net Zero: 2021 Progress Report

Sustainability

Our approach to sustainability reflects our Purpose to responsibly source the commodities that advance everyday life. We take our responsibilities to our people, to society and to the environment seriously, and align our activities with relevant international standards.

Strategic approach

Our primary strategic objective is to be a leader in enabling decarbonisation of energy usage and help meet continued demand for the metals needed in everyday life while responsibly meeting the energy needs of today. This strategic objective drives our sustainability strategy.

Our sustainability strategy sets out our ambitions against four core pillars: health, safety, environment, and community and human rights (HSEC&HR) and drives positive change throughout our business. Each pillar has clearly defined strategic imperatives, objectives, policies, priority areas and targets. We review our approach annually to confirm that it continues to fulfil the needs of our business.

Through our HSEC&HR governance, policies, standards, procedures, and guidelines, we establish and implement ethical and consistent business practices and standards. These support our commitment to be a responsible operator and our aspiration to maintain our reputation for doing things the right way.

Governance of our Group sustainability strategy and framework rests with the Board's HSEC Committee, who sets the strategic direction for our sustainability activities and oversees the development and implementation of our strategic HSEC&HR programmes.

Oversight and ultimate responsibility for our Group sustainability strategy and framework as well as its implementation across the Group rests with our senior management team, including the CEO and heads of our commodity departments. They take a hands-on approach to monitoring and managing sustainability activities around the Group.

Further details on our sustainability strategy, our approach to its implementation, as well as its performance and ambitions, are available in our sustainability-related publications. These include a sustainability report published annually in accordance with the core requirements of the Global Reporting Initiative (GRI), as well as the following publications:

- Sustainability Summary
- 2020 Climate Report: Pathway to Net Zero
- Pathway to Net Zero: 2021 Progress Report
- Payments to Governments Report
- Modern Slavery Statement
- ESG A-Z section on our website
- Water microsite

Our sustainability communications are available on our website: **glencore.com/sustainability**

Sustainability framework

Corporate strategy

Responsible production and supply | Responsible portfolio management | Responsible product use

Values

Safety **Integrity** **Responsibility** **Openness** **Simplicity** **Entrepreneurialism**

Code of Conduct

Group sustainability strategy

Health
Become a leader in protecting and improving the wellness of our people and communities

Safety
Become a leader in safety and create a workplace free from fatalities and injuries

Environment
Become a leader in environmental performance

Community and human rights
Foster socio-economic resilient communities and respect human rights where we operate

Material topics

- Internal and external materiality assessment process to identify material topics
- Material topics are the focus of our sustainability strategy review and reporting
- Operational activities focus on addressing and progressing the material topics

Group HSEC-HR governance

Policies, Standards, Procedures, Guidelines

Metrics, reporting and assurance

Board HSEC Committee has oversight and ultimate responsibility. It receives regular updates and has oversight of how our business is performing across all our internally defined, sustainability related material risk areas.

Sustainability continued

Strengthening our Group policy architecture

In 2020, we initiated a cross-functional project to develop and implement a more streamlined and consistent approach to our Group policy architecture and the underlying policies, standards, procedures, and guidelines.

The project considered the commitments we are required to meet through our membership and support for external organisations such as the UN Global Compact, International Labour Organization Declaration on Fundamental Principles and Rights at Work, and the UN Guiding Principles on Business and Human Rights. It also took into account the International Council for Mining and Metal's (ICMM) Performance Expectations.

During 2021, we conducted a Group-wide roll out of the new and revised Group policies, as well as their supporting governance documents such as standards and guidelines. In 2021, we also rolled out nine new standards, covering areas such as Health, Environment, Social performance, and Human Rights. We are tracking implementation progress through a gap analysis for each asset and targeting a substantial implementation by the end of 2023.

Engaging with our stakeholders

We engage with relevant stakeholder groups to build meaningful relationships and understand their expectations and aspirations. Further information on our stakeholder engagement activities is available on page 38 and in our annual sustainability report.

External commitments

We participate in a wide range of external initiatives, supporting our commitment to ongoing improvements to our approach and performance across sustainability topics. Our engagement varies from reporting on our progress to taking a role in driving strategic change.

We are signatories to the United Nations Global Compact (UNGC), aligning our strategies and operations with its principles, which cover human rights, labour, environment, and anti-corruption. We recognise the UNGC's Sustainable Development Goals (SDGs) and their systematic global approach to society's overall development. We believe that we can play a role in supporting our host governments to meet the SDGs.

We uphold the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, the UN Universal Declaration of Human Rights, and the UN Guiding Principles on Business and Human Rights.

We are members of the Plenary of the Voluntary Principles on Security and Human Rights.

We have been a member of the ICMM since 2014. We endorse its Mining Principles, are active in its working groups and are currently undertaking work to prepare to report against its Performance Expectations in 2023.

We strongly support transparency in the redistribution and reinvestment of the payments we make to local and national governments. We are active participants, both in our operating countries and at a global level, in the Extractive Industries Transparency Initiative (EITI). We comply with the EU Accounting and Transparency Directives; in line with those provisions, we publish a separate report annually, detailing material payments made to governments, broken down by country and project.

As part of our commitment to responsible product stewardship, we follow the UN globally harmonised system for classification and labelling of chemicals (GHS), the EU REACH regulations on the registration, evaluation, authorisation and restriction of chemicals, and the London Bullion Market Association Responsible Gold guidance. Where appropriate, we participate in the REACH consortia related to the materials we produce; these include the consortia for zinc, cobalt, cadmium, sulphuric acid, lead, and precious metals.

Our responsible sourcing strategy considers production, sourcing of metals and minerals and procuring goods and services. Our Supplier Standards form the basis of our risk-based supply chain due diligence programme and adheres to the Organization of Economic Cooperation and Development's (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

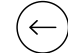
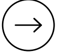
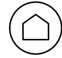
Risk management and assurance

Our management of HSEC&HR-related risks aligns with Glencore's approach to the identification, assessment, and mitigation of risk. Our assets use the risk framework to identify hazards, including those with potentially major or catastrophic consequences, and to develop plans to address and eliminate, or mitigate, the related risks. For each of the identified catastrophic hazards we have implemented a standardised approach to identifying and understanding their causes and controls.

Our internal HSEC assurance programme primarily focuses on our systematic management of the catastrophic hazards and their controls. Internal and external senior subject matter experts participate in this programme.

Multi-disciplinary assessments allow us to audit complex issues from a range of viewpoints for a more robust appraisal. We use these assessments to review operations and activities with different risk factors, such as underground operations, open pit mines and metal processing plants.

The HSEC Committee reviews the results of all the audits, together with their key findings, observations and good practice.

Sustainability continued

Materiality assessment

We regularly undertake a sustainability-related materiality assessment that considers input from within our business and from other stakeholders. We use this assessment to inform our HSEC&HR strategic overview and our sustainability-related disclosures and publications. This assessment identifies topics that are material to our development, performance, and current position as well as for our future prospects.

We identified the following material topics for the 2019–21 period: catastrophic hazards, safety and health, climate change (see page 19), water, land stewardship, human rights, responsible citizenship, responsible sourcing and supply and our people (see page 34).

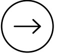
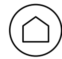
In 2021, we initiated a materiality assessment that we expect to conclude during the first half of 2022. This assessment will determine our material topics for the 2022 and 2023 reporting periods.

Performance overview

The rollout and implementation of our new Policies and their supporting standards have strengthened our governance for overseeing the achievement of our Group targets. Both the HSEC&HR corporate team and commodity departments review progress on a monthly and quarterly basis, depending on the target.

Group targets	2021 progress
Risk management and governance Implement a proactive risk-based approach to prevent HSEC&HR incidents.	During 2021 we updated our Enterprise Risk Management Standard and introduced a number of technical standards to manage our group material risks.
Compliance with Global Industry Standard for Tailings Management (GISTM) for 'Very High' and 'Extreme' consequence by 5 August 2023 (all others by 5 August 2025).	We progressed our reporting and auditing platforms to support implementation and conformance to the requirements of the GISTM. We are on track to meet the GISTM's deadlines.
Health Year-on-year reduction in the number of new occupational disease cases (excluding new cases from legacy exposures).	During the year, we recorded a decrease in the number of new cases of occupational disease, 109 cases, compared to 124 in 2020.
Safety No fatalities[1].	We did not achieve our target of zero fatalities. Four people lost their lives at our operations during 2021, compared to eight during 2020.
Environment 15% absolute reduction in Scope 1, 2 and 3 emissions by the end of 2026 against a 2019 baseline. 50% absolute reduction in Scope 1, 2 and 3 emissions by the end of 2035 against a 2019 baseline. Ambition of achieving net zero for Scope 1, 2 and 3 emissions by the end of 2050.	Our 2021 total emissions decreased by 5% compared to 2020. This is a 25% reduction on our 2019 baseline, reflecting pandemic, market and weather-related coal and ferroalloys production cuts across 2020 and 2021. We expect our total emissions to rise in 2022 with the unwinding of the earlier demand-led coal production cuts. We remain committed to delivering emissions reductions of 15% by 2026 and 50% by 2035.
By 2023, all managed operations located in water stressed regions[2] to finalise the assessment of their material water-related risks, setting local targets and implementing actions to reduce impacts and improve performance.	We are on track for all managed operations located in water stressed regions to finalise the assessment of their material water-related risks, setting local targets and implementing actions to reduce impacts and improve performance by 2023.
No major or catastrophic[3] environmental incidents.	No major or catastrophic environmental incidents occurred during 2021.
Community and Human Rights Do not cause or contribute to incidents resulting in severe[4] human rights impacts	During 2021, our operating assets did not cause or contribute to incidents resulting in severe human rights impacts.

1 Refer to the Basis of Reporting on our homepage for how fatalities are defined.
2 Water stressed regions are defined as having a medium to extremely high or arid and low water-use baseline, as per the World Resources Institute definitions.
3 For environment, major or catastrophic incidents refers to incidents causing both widespread irreversible and reversible environmental impact to ecosystems, habitat or species.
4 Severe is the equivalent of Catastrophic and Major on Glencore's incident classification scale. For human rights, a Catastrophic incident is one with a gross human rights violation or grave systemic human rights impacts and a Major incident involves an isolated grave or serious systemic abuses on economic, social and cultural rights.

Sustainability continued

Our material topics

Catastrophic hazard management

We define catastrophic events as those with a low probability but severe consequences that could cause widespread loss of life or significant environmental harm, or result in major reputational or financial damage. We are committed to eliminating catastrophic incidents at our industrial assets.

We recognise the exceptional nature of such events and we have developed specific programmes to actively identify, monitor and mitigate catastrophic hazards within our business. We review our catastrophic risks to understand whether they are adequately controlled. We require our assets to put in place appropriate management and mitigation measures.

Our HSEC audit programme focuses on catastrophic hazards and critical control management, using both internal and external expert assessors. It gives particular attention to identifying catastrophic hazards, their critical controls and management plans, as well as the effectiveness of verification and reporting processes. The Board receives and reviews all assurance findings.

Managing our tailing storage facilities

Tailings, the fine waste materials left over after the processing of ore, are stored in tailings storage facilities (TSFs). In recent years, a small number of high-profile TSFs failures at the operations of large mining companies have resulted in catastrophic consequences.

We have a robust governance process and in 2021 released a new Group Tailings Storage Facilities Policy and updated our Standard to align with the Global Industry Standard for Tailings Management.

We monitor our TSFs for integrity and structural stability. Our industrial assets evaluate natural phenomena and incorporate these considerations into their tailings facility designs where relevant. Flooding and seismic activity are the main natural phenomena that may affect TSFs. In addition, our TSFs undergo regular external inspections.

We continue to manage closed TSFs responsibly post-closure. We regularly inspect our facilities and external experts conduct independent inspections and reviews.

Performance during 2021

We target zero major or catastrophic incidents, which we achieved during 2021.

Further information on our approach to tailings management is available on our website (**glencore.com/sustainability/tailings**). It provides an overview of our approach towards managing our TSFs and includes details on each of our TSFs.

Safety and health

In line with Glencore's values, our first priority in the workplace is to protect the safety, health and wellbeing of all our people. We take a proactive, preventative approach towards health and safety. We believe that all fatalities, injuries and occupational diseases are preventable. Through strong safety leadership, we can create and maintain safe workplaces for all our people. A large number of our assets have been fatality free for many years.

We require an effective safety management system at each asset to ensure the integrity of plant and equipment, structures, processes and protective systems, as well as the monitoring and review of critical controls.

SafeWork is Glencore's approach to eliminating fatalities, however, our overall safety performance across our business signalled that SafeWork had not reached all assets in its full potential and that a step change was needed to achieve our goal.

To understand our gaps, we conducted reviews and engaged with the business. The results showed that SafeWork was the right approach. However, we also identified the need to clarify and reset expectations around SafeWork so it reaches every part of our business. As a result, in 2021, a revised version of SafeWork was launched through a change project called 'SafeWork 2.0'. It is still SafeWork, but with more clarity on roles and accountabilities, defined requirements and resources that are easier to access and adapt to the risks in our work environment.

SafeWork is built on a set of minimum expectations and mandatory Fatal Hazard Protocols, Life-Saving Behaviours, and safety tools. These must be fully implemented by our assets. We believe consistent application of SafeWork through strong visible leadership will drive a culture of safe operating discipline and get our people home safe.

Our occupational health management strategy addresses the health risks facing our workforce, their families and the communities inside and outside our gates. We use a variety of on-site programmes to manage occupational diseases and exposure to health hazards; we extend many of these health programmes to our host communities, to combat regional health problems and promote healthy lifestyles.

Performance during 2021

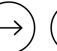
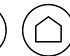
We are saddened to report the loss of four lives at our operations during 2021, compared to eight during 2020. All loss of life is unacceptable and we are determined to eliminate fatalities across our business.

During the year, both our lost time injury frequency rate[1,2] (LTIFR) and total recordable injury frequency rate[3] (TRIFR) were lower than the previous year at 0.83 (2020: 0.94) and 2.4 (2020: 2.7) respectively.

In 2021, our high potential risk incidents (HPRIs) fell to 385 (2020: 399). The reporting of HPRIs represents a supportive part of our strategy to reduce fatalities and, as such, we do not target a reduction in this metric. They allow the identification of activities that need prioritising in order to advance further our learning and safety performance. The majority of HPRIs related to mobile equipment and working at height, ground/strata failure and nearly 80% resulted in no injuries.

We recorded a decrease in the number of new cases of occupational disease, 109 cases (2020: 124).

1 Lost time injuries (LTIs) are recorded when an employee or contractor is unable to work following an incident. We record lost days as beginning on the first rostered day that the worker is absent after the day of the injury. The day of the injury is not included. LTIs do not include restricted work injuries (RWIs) and fatalities.
2 The lost time injury frequency rate (LTIFR) is the total number of LTIs recorded per million hours worked.
3 The total recordable injury frequency rate (TRIFR) is the sum of fatalities, lost time injuries (LTIs), restricted work injuries (RWIs) and medical treatment injuries (MTIs) per million hours worked. The metric represents all injuries that require medical treatment beyond first aid.

Sustainability continued

Water

Water is an essential resource for many of our industrial activities. Some of our assets are located in areas with high to extremely high water baseline stress and share access to water with other local water users. Other industrial assets manage surplus water that may involve dewatering activities and flood protection measures. Regardless of their location, our industrial assets undertake detailed assessments of their local environmental conditions during the operational changes in lifecycle, to develop water management strategies that maximise the efficient and sustainable use of this important natural resource.

We recognise access to safe and clean water and sanitation as a salient human right. We seek to fully understand and minimise our operational water footprint and manage our activities in a way that protects our shared water resources. We are committed to ensuring good water management is in place at all of our assets and undertake detailed assessments, target setting, monitoring and implementation of corrective actions. Our assets consult their host communities and other relevant local water users to understand local priorities and to collaborate on sustainable solutions.

Performance during 2021

In 2021, we withdrew 999 million m^3 of water (2020: 1,033 million m^3). The decrease is primarily related to the sale of Mopani and maintenance activities at some sites, as well as Covid-related impacts.

Our total water withdrawal includes 40 million m^3 moved from one site to another through dedicated sharing networks that were installed to increase our overall water efficiency.

Land stewardship

We are committed to managing our land in a productive and sustainable manner ensuring proactive stewardship of our landholdings, including those that have not undergone industrial activity. We align our approach to cultural heritage and archaeologically sensitive locations on our landholdings with local regulatory requirements and best practice. We respect legally designated areas and commit to neither mine nor explore in World Heritage Sites.

We require our industrial assets to implement land stewardship management systems, including progressive land rehabilitation target setting tied to life of asset planning, that includes standard elements such as an environmental policy, data collection and monitoring, adaptive management, and continuous improvement.

We are committed to identifying and addressing the potential impacts of our business on ecosystems services and achieving no net loss of biodiversity through the application of mitigation hierarchy. We require all operations to develop risk-based biodiversity action plans and site-level biodiversity targets, to drive progress in this critical area.

Biodiversity

Mining activities directly impact the surrounding land, flora and fauna throughout their lifecycle; our goal is to minimise and manage those impacts. Our industrial assets' land stewardship and biodiversity management plans can include measures for preliminary clearing works, habitat relocation, flora and fauna conservation, weed and pest control and fire and grazing management.

Where possible, these plans support the continuation of existing land practices, including grazing and other agricultural activities.

As an ICMM member, we commit to not conduct any exploration, drilling or mining in World Heritage areas and International Union for Conservation of Nature (IUCN) category I-IV protected areas ('no-go' areas), and not to put the integrity of such properties at risk. Our industrial assets work to avoid the loss of any IUCN Red List threatened species.

Rehabilitation

A core component of our operations' lifecycle is progressive rehabilitation. Where active operations have ceased, we review opportunities for restoration in the previously operated areas. Progressive rehabilitation has many benefits, including reducing an operation's footprint, improving the visual appeal of the landscape and reducing dust, erosion and sedimentation, as well as improving conditions for local communities and future land users.

To support progressive rehabilitation, our industrial assets may excavate and reserve topsoil and overburden from areas prior to development.

Closure management

Unlike many other industrial uses of the land, mining has a finite life and transitions to post-mining land use at the end of its operational lifecycle. We require our industrial assets to have a closure plan that could be initiated at any time whether on planned life of asset closure or for an earlier 'unplanned' or temporary closure. The plans must include financial provision and, where possible, progressive rehabilitation, to support a responsible exit. Our industrial assets regularly review their closure plan to ensure it remains fit-for-purpose, and aligns with the asset's lifecycle.

The closure plans align with good practice, such as the ICMM's Integrated Mine Closure Good Practice Guide. Our industrial assets are required to consult with local communities on the development of their closure plans and monitor the societal risks and opportunities associated with closure.

Glencore has acquired, through mergers and acquisitions, a number of older mines and legacy operations. We have a specialised management process for these legacy operations, which supports the identification and implementation of appropriate monitoring and responsible restoration.

Performance during 2021

We actively participated in the development and refinement of ICMM's Closure Maturity Framework, a tool for building a common understanding of closure concepts across an asset's lifecycle and across mining disciplines. In 2020, as part of the Framework development process, we conducted pilot testing of the tool at six representative assets. In 2021, we expanded testing to include an additional 25 operations, representative of various regions, remaining life of assets, and across all commodity groups. In addition, requirements related to the implementation of the Closure Maturity Framework were included in the enhanced Closure Planning governance, rolled out in 2021, to advance consistent performance improvements across our global operations.

Sustainability continued

Human rights

We recognise that we have the potential to impact human rights directly through our operations, or through our relationships with joint ventures, contractors, and suppliers. We are committed to respecting human rights and actively support our employees, business partners and others to understand and meet this commitment.

We uphold the dignity, fundamental freedoms and human rights of our people, communities and others potentially affected by our activities.

We seek to align with relevant international standards to understand, control and mitigate our impacts. Our policies and practices align with the Universal Declaration of Human Rights, the United Nations (UN) Guiding Principles, the UN Global Compact and International Labour Organization's core conventions and we articulate these in our Code of Conduct and Group Human Rights Policy. In addition, we operate in accordance with the Voluntary Principles on Security and Human Rights, and International Finance Corporation's Standard 5 on Involuntary Resettlement.

We respect the rights, interests and aspirations of Indigenous Peoples and acknowledge their right to maintain their culture, identity, traditions, and customs, and operate in accordance with the ICMM Position Statement on Indigenous Peoples and Mining.

Our assets are required to conduct regular human rights training for their workforces, with a focus on those employees in positions exposed to human rights concerns, such as security. This covers general human rights awareness during day-to-day activities for our wider workforce, as well as focused training on the Voluntary Principles on Security and Human Rights for our security employees and contractors.

Enabling complaints and grievance processes

All our operations are required to have in place local complaints and grievance processes designed to be legitimate, accessible, predictable, equitable, transparent, rights compatible and in line with the United Nations Guiding Principles' effectiveness criteria. These processes encourage people to raise concerns in a manner that respects the rights of the complainant. Where people have complaints or grievances, we aim to investigate and resolve them at the local level. Assets are required to investigate and record all complaints.

We do not allow any form of punishment, discipline, or retaliatory action to be taken against people for speaking up or cooperating with an investigation.

Indigenous Peoples

Some of our industrial assets are located on or near the traditional territories of Indigenous Peoples. Our approach aligns with the ICMM Position Statement on Indigenous People and Mining, which requires mining projects located on lands traditionally owned by or under customary use of Indigenous Peoples to respect Indigenous Peoples' rights, interests, special connections to lands and waters, and perspectives.

ICMM Members must adopt and apply engagement and consultation processes that ensure the meaningful participation of Indigenous communities in decision making, through a process consistent with their traditional decision-making processes. We seek, through good faith negotiation, to reach agreements with Indigenous Peoples who maintain an interest in, or connection to the land on which we operate, formalising engagement processes and sustainable benefits.

Performance during 2021

During 2021, we commenced an internal campaign to strengthen our management of local-level complaints and grievances. We conducted a Group-wide desktop review of local processes against the United Nations effectiveness criteria. Areas for improvement were identified and assets have a target to close these gaps by the end of 2021.

To support improved understanding of challenges and good practices in the implementation of grievance processes, we conducted an interactive webinar series in early 2021. Over 150 operational managers and social, environment and legal professionals attended the sessions that spanned seven geographical regions and four languages.

Following events in Western Australia in 2020, where mining activities impacted on significant cultural heritage, we undertook an internal review of our own heritage risks, with the intent of addressing any deficient areas during 2021. The review was supported by independent cultural heritage experts. In 2021 McArthur River Mine (MRM) in Australia commenced negotiation with Traditional Owners, facilitated by the Northern Land Council (NLC), on an Indigenous Land Use Agreement (ILUA), and commissioned an independent third-party review of their Cultural Heritage Management Plan in line with leading practice.

We also developed and launched a Group-wide Cultural Heritage Standard that requires all our industrial assets to identify and review Cultural Heritage risks and opportunities, integrating them into business decision-making and managing them effectively and consistently.

Responsible citizenship

Our activities can make a significant contribution to the national, regional, and local economies through the production and marketing of commodities that provide the basic building blocks for development. We provide employment and training, business partner opportunities, tax and royalty payments to governments that help provide essential services, socio-economic, development and environmental stewardship.

We aim to minimise adverse impacts from our activities and to build partnerships to support sustainable development and growth.

Stakeholder engagement

Through meaningful stakeholder engagement and integration of social performance into our core business, we support the advancement of the mutual interests of our host communities, broader society, and our assets. With activities ranging from exploration to mines and mineral processing facilities to assets in closure, we are present in a hugely diverse range of geographies and cultures around the world. Some of our businesses operate in challenging socio-political contexts and we remain committed to working with others to help find and implement solutions to social issues and to build resilient and peaceful communities.

We work hard to get to know our local communities and identify the individuals, groups, or organisations with an interest in our business or who are affected by it. We implement a range of engagement activities designed to be relevant and appropriate for different stakeholders, including vulnerable groups, with access to local level complaints and grievance processes (see Human Rights).

Sustainability continued

Social investment

In addition to our employment, local procurement and taxes and royalties payments, we seek to make a positive contribution to social and economic development of our host communities and society more broadly through our voluntary social investment programmes.

Our strategic objective is to support initiatives that build resilient communities and regions by reducing dependency on our operations. This is challenging when the immediate, short-term needs in many of our communities are high. Our aim is to focus our efforts on developing programmes that contribute to longer-term social objectives through activities such as enterprise and job creation, education, health and wellbeing and capacity building.

Our socio-economic development activities are founded on the resources, needs and plans identified at a local or regional level and are informed by relevant data gathering and community engagement.

Performance during 2021

In 2021, we spent $68 million on community development programmes (2020: $95 million). $20.7 million was spent during 2020 and 2021 on specific Covid-19 related initiatives.

Responsible sourcing and supply

Our responsible sourcing strategy considers the production and sourcing of metals and minerals and procurement of goods and services. An integral part of our responsible sourcing approach is supply chain due diligence for our metals and minerals supply chain.

For our suppliers of metals and minerals, we conduct due diligence in accordance with the five-step approach framework defined in Annex I of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict Affected and High Risk Areas (CAHRAs) 3rd Edition.

Our risk assessment and management strategy identifies and assesses risks, including those relating to CAHRAs. We take a collaborative risk management and mitigation approach to the identified human rights risks within our supply chain.

As part of our system of controls and transparency, we have an online platform that manages due diligence-related information, supplier assessment, collection and retention.

Our responsible sourcing team engages with internal stakeholders to increase awareness on the responsible sourcing of metals and minerals.

Performance overview 2021

During the year, we reviewed and revised our Supplier Standards and developed a Responsible Sourcing Policy. These will be rolled out Group-wide during 2022.

In 2021, Glencore did not produce, process or market any ‘conflict minerals’ originating from the conflict areas as defined under the Dodd-Frank Act (tin, tungsten, tantalum and gold from the DRC and adjoining countries).

All of our sustainability communications are available on our website: **glencore.com/sustainability**

Lomas Bayas supports reforestation

In October, Lomas Bayas in northern Chile renewed an important agreement between our operation and the National Forestry Corporation of Chile, CONAF.

In 1996, Compañía Minera Lomas Bayas began to develop a reforestation and conservation strategy to help address the issue of desertification around Calama in northern Chile. Since then, it has supported efforts to conserve the Calama Oasis which includes the 20-hectare Explora Lomas Park.

In 2009, Lomas Bayas established a partnership with CONAF to continue the park’s conservation efforts and offer an extensive environmental education programme. Visitors can participate in guided tours of the park to learn more about biodiversity, efficient water use, forest fire prevention and environmental care. Cultural activities are also available, such as storytelling competitions and performances.

There are more than 2,000 trees in Explora Lomas Park, including varieties of Prosopis alba – the white carob tree – and Prosopis tamarugo – a flowering tree from the pea family known simply as Tamarugo. Both species are native to the desert and can survive in the most arid regions in the world.

This next phase of collaboration between Lomas Bayas and CONAF will continue to strengthen the traditional activities of environmental education, research and forestry development, as well as promote a new phase of the management of the white carob forest, benefiting the local agricultural communities.

Our People

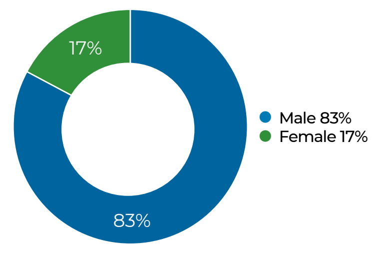
We are proud of the role we play in our industry and our communities and believe that our strategy is an essential element in the decarbonisation of our world.

We also recognise that our contribution relies on the skills, behaviours and individual decisions of our 135,000 workers every day. Following last year's successful rollout of our Purpose and Values campaign, our focus this year has shifted from the organisation to the individual; making our expectations clear to our employees and our managers wherever they are in the world.

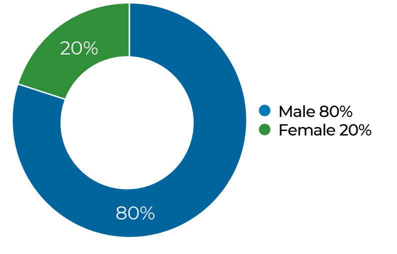
Our revised Code of Conduct spells out our expectations regarding employee behaviour, operating responsibly and safely, acting with integrity and protecting our assets and information. The code operates in conjunction with our Group Policies to promote inclusion, fairness and equality and prohibits discrimination based on race, nationality, gender, age, sexual orientation, disability, ancestry, social origin, trade union membership, political belief or any other potential bias.

During the year we transitioned to a new CEO and leadership team and these senior leaders led our campaign to launch the Code both internally and externally. As well as global video and written messages, a Code of Conduct toolbox was developed with 25 separate communications resources, translated into 12 languages which could be deployed through various channels. 800 individual pieces of content were produced across the globe and leadership teams in all our business participated in making sure everyone in our business knows what is expected of us.

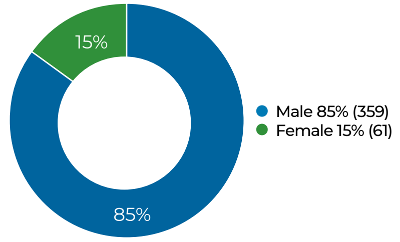
Diversity



Management diversity in 2021



Senior manager* diversity in 2021



2020: 87% male – 13% female
2019: 87% male – 13% female

* a senior manager as defined in section 414C of the UK Companies Act 2006 to include members of the management team and Glencore appointed directors on the boards of subsidiaries. This definition is only relevant to this data and does not apply to other references of 'senior management' that are included in this Annual Report.

Generating consistent and high standards of performance

Our Group policy framework encompasses our Values, Code of Conduct and a suite of policies, standards, procedures and guidelines on various key matters and risks to Glencore. This framework reflects our commitment to uphold responsible and ethical business practices.

In 2020, we embarked on a comprehensive review of our entire Group policy framework. This was a collaborative, cross-functional project to develop and implement a more streamlined and consistent approach to policy governance at Glencore. Throughout 2021 we have continued to reinforce our commitment to good governance by defining and implementing a set of Human Resources standards across our business. These bring more granularity and clarity to our overarching policy commitments.

Whilst maintaining our decentralised and autonomous culture, the standards ensure we develop as an organisation with consistently high-levels of expectations and performance. The standards set out the specific requirements we expect our businesses to conform to across a range of HR topics including but not limited to:

- performance management requirements;
- recruitment practices, including mandatory reference and background checks for all new joiners;
- the measurement of pay equity including gender pay gaps in all of our businesses;
- transparent disciplinary and grievance procedures;
- Group reporting requirements.

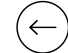
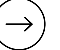
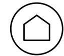
A process of assurance against the standards will be implemented in 2022.

The Group has a very well established process for employees to raise concerns, including our Raising Concerns programme, and a committee comprised of the CEO, CFO, Head of Industrial Assets, General Counsel and Head of Group HR reviews the process and outcomes relating to concerns received into the programme on a quarterly basis. This enables management to ensure patterns of issues are spotted at the Group level and that disciplinary outcomes are being implemented consistently. A summary of the material concerns and any associated disciplinary action is also regularly reported to and reviewed by the Board.

Creating a more diverse and equitable organisation

We believe that a diverse business is a strong business. Operating globally requires us to understand and adapt to different cultures whilst maintaining our corporate culture and standards. Around 950 people work at our corporate headquarters in Switzerland, of whom around half are Swiss and half from 57 other nations. The male:female ratio is 56:44 and the gender pay gap is 6%. We are keen to further narrow the gender pay gap and this will remain a central focus of our strategy.

20% of managers are women, a modest improvement on previous years. We recognise we are still some way short of the 33% target from the Hampton-Alexander review and will continue to look for opportunities to diversify our most senior teams.

Our People continued

Our next steps

During 2021 we developed a Diversity and Inclusion strategy at Group level. Whilst many of our business units have pursued such objectives separately, this is the first time the business has come together to develop a unified strategy and framework for the coming years.

The objectives of our **IDEAL** Framework are to:

- Build a culture of intentional inclusion throughout the organisation
- Better reflect society by increasing diversity of our workforce
- Ensure fair treatment and access to opportunities for all in our programmes, processes and practices
- Remove perceived barriers and enable all groups to advance throughout the organisation

In developing this Group strategy, we undertook a review of the work underway in each of our businesses and assessed their level of maturity in relation to Diversity and Inclusion. This bottom-up process will enable us to set relevant and contextual targets for each of our businesses and our leaders. Human Resources is currently finalising the global and local actions that will define the work programme and the specific targets for each element of the strategy over the coming year. Most or all businesses are likely to have gender-based targets in the first wave.

The strategy and its delivery will be governed by a special diversity taskforce with representatives from management, Human Resources and staff. Progress against actions will be reviewed quarterly and reported to the Board and will be disclosed in future Annual Reports.

Our IDEAL framework spells out our commitment to creating an environment where employees can achieve their potential, wherever they are:

Inclusion

How we all behave

The behaviours we consistently and intentionally demonstrate to create a collaborative culture that values our differences, encourages our people to be themselves and enables them to participate and contribute to their full potential.

Diversity

Who we all are

The collection of unique visible characteristics that make each of us different including, but not limited to, sexual orientation, education, age, ethnicity, cultural background, family status, experience and beliefs.

Equity

How we all succeed

The actions necessary to ensure fair treatment and access to opportunities, resources, programmes and practices for all, especially those who are under-represented or have been historically disadvantaged, such that they can participate fully, regardless of their identity.

Advancement

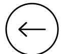
How we all grow

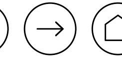
The removing of barriers that might prevent any person or group of people from developing to their full potential. Different steps may be required to facilitate growth opportunities for under-represented groups.

Local

Where it all happens

There is no 'one size fits all'. Building a more inclusive work environment and removing barriers requires that we set some global priorities and a framework that is customised locally and implemented according to the local context.





Our People continued

Kazzinc

Kazzinc actively creates and supports an environment of equal opportunities across its 20,000 strong workforce, and at all levels of the organisation. It has undertaken a number of initiatives to attract, retain and grow the number of female employees.

In a traditionally male dominated industry, and where legislation in Kazakhstan prevents certain job roles being staffed by women, our efforts are showing positive progress. 22% of the total workforce of Kazzinc are women, matched by 21% representation in line management.

McArthur River

McArthur River is in the Northern Territory of Australia. In this remote location, accepting and celebrating Indigenous culture is key to making the workplace a safe and inclusive environment for all its people.

In 2021, the mine increased its Indigenous employment ratio from 18% to 24% of the workforce, with the majority of new employees coming from the local community. The number of Indigenous employees grew from 80 to 125 while the number of employees from the local region almost doubled from 23 to 45.

Our people by region

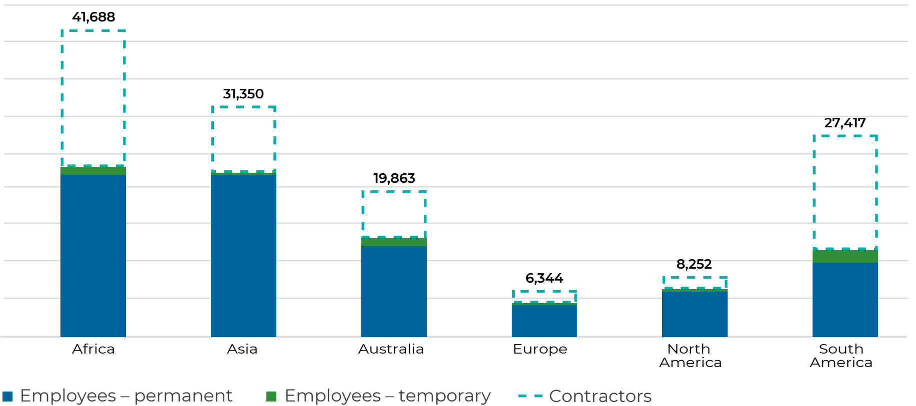
The majority of our employees work on mine and smelter sites and are employed through full time employment contracts. Contractors represent approximately 35-40% of our workforce, many of which operate alongside our full time staff, providing essential service and specialist maintenance support to our operations. In Africa our major employment hubs are in South Africa and the DRC. In Asia, the majority of our people work in our operations in Kazakhstan.

Workforce Composition and Development

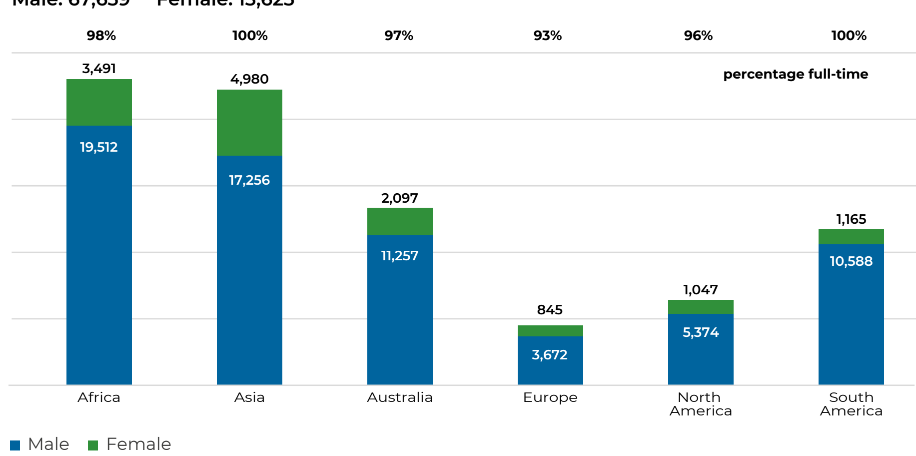
Our business is deliberately decentralised as we believe this gives greater accountability and ownership to our managers. However, the decentralised nature of the business creates challenges for the collection and management of Group-wide data and trends. We understand that good data is a central element of a diversity strategy and began to capture more data regarding diversity from 2020. Further work is underway to provide greater detail in future years.

We have seen a modest increase in the representation of female workers in our operations but have made greater progress at management levels. Employee turnover in continuing operations is 9.1%, with statistically insignificant differences between the retention rates for men and women.

Employment type



Gender balance of employees / Percentage full-time



Our People continued

Listening to employees

Our global Zinc business has focused on improving the communication of training and development opportunities and on improving the systems and processes that drive development planning and succession. Action plans flowing from the 2020 People Survey are reviewed quarterly to ensure momentum is maintained.

At Nikkelverk in Norway, management and union representatives collaborated to prepare Mission 2022; a revitalised business strategy with the goal of making Nikkelverk a more attractive workplace. Status, progress and results are communicated monthly to the management team and quarterly to the employees, and periodically to the unions.

The 'Home from Home' programme in our Ferroalloys business in South Africa aims to create a more inclusive culture, building on our Openness value. There was a significant increase in communications activities and elevated levels of visibility and sponsorship from the senior management group. Next steps in 2022 are enhanced communications training for leaders and a focus on respectful behaviour and fairness in the workplace.

Investing in our people

During the year we completed a seamless transition to a new CEO and completed the change in leadership in a number of our Marketing departments. The vast majority of the positions have been filled through internal succession – testament to the strength in depth of talent in the business.

We completed a global People Survey in 2020 which identified a number of shared concerns, including training and development opportunities, open communications with management, and succession planning. At a Group and business unit level, we have reviewed our training and development offerings to ensure they deliver value for the business and opportunities for staff.

Maintaining a strong pipeline of talent to staff our operations remains an area of significant focus for some of our assets, especially those in developed economies such as Australia. Each of our business units has targeted recruitment programmes aimed at school leavers and graduates, for example bursaries for study and vacation work experience. We offer apprenticeships and graduate employment programmes that equip people with the operational and commercial skills they need to be effective in business.

Mental Health

Raising awareness of the importance of mental health is a continued priority for the business. Mental health issues arising from the pandemic provided an additional challenge. Our newly-updated Health Standard requires each asset to identify and assess the physical and psychosocial wellbeing of workers through the use of tools such as our Health Needs Assessment (HNA). Where key health issues, needs and interests of workers are identified, we develop and implement a Fit for Life wellness strategy. Our businesses are also required to provide health promotion and education in line with the HNA including measures around maintaining work-life balance.

At a Group level our communication strategy has continued to raise awareness of mental health issues throughout the year. As part of this year's campaign, a global webinar was recorded in both English and French with experts from International SOS (ISOS) providing practical tips on how to recognise the signs of stress and build mental resilience in the workplace and at home, and focused in particular on some of the challenges of working remotely.

COVID

Our business and staff continue to operate despite the challenges presented by the pandemic. Many of our businesses have had to continue to operate flexibly in response to changing rates of infection and restrictions. We have participated in vaccination programmes and aided governments and health authorities where appropriate. In some locations this included our own vaccination programmes, which complement the efforts of local health authorities.

We continue to utilise the expert resources at ISOS to guide our decision making and work closely with them to assess current and potential impacts on the business. We host regular updates for our global HSEC community. The Group has continued to communicate with staff to ensure they are aware of their obligations in an ever-changing landscape of restrictions.

Section 172 Statement and Stakeholder Engagement

Statement regarding Section 172 of the UK Companies Act 2006 and how the Board complied with its Section 172 duty

The UK Corporate Governance Code (the Code) requires the Board to understand the views of the Company's other key stakeholders and report how their interests and the matters set out in section 172 of the UK Companies Act 2006 have been considered in Board discussions and decision-making. The Board considers the interests of a range of stakeholders in its discussions, decision making and implementation of strategy, and considers the impact of decision-making on the long-term success of the Group.

During the year, the Directors consider that they have acted in a way, and have made decisions that would most likely promote the success of the Group for the benefit of its members as a whole, with particular regard for:

- the likely consequences of any decision in the long term: see Strategy on pages 12-15, and Risk Management from page 68.
- the interests of the Group's employees: see Our People section from page 34, ECC Committee Report on page 96, and Directors' Remuneration Report from page 101.
- the need to foster the Company's business relationships with suppliers, customers and others: refer to next pages where we provide further details on stakeholder engagement.
- the impact of the Company's operations on the community and environment: see our Sustainability section from page 27 and our Sustainability Report (to be released in April 2022), Climate section from page 19 and Risk Management section from pages 81 - 84.
- the desirability of the Company maintaining a reputation for high standards of business conduct: see our Ethics and Compliance section from page 43, our Ethics and Compliance report (to be released in March 2022), Climate change section from page 19, Sustainability section from page 27 and Sustainability Report, and discussion of risks around permitting, licence to operate, and laws and enforcement on pages 74-76.
- the need to act fairly between members of the Company: the Corporate Governance section, page 95, outlines the material ways in which the Board and management interact with and communicate to shareholders

When discharging their duty under Section 172, the Directors have focussed on mapping out the Company's key stakeholder groups and reviewing our level of engagement with them. We operate assets in 35 countries and have around 135,000 employees and contractors. Engaging and responding to our stakeholder groups, regardless of their location or opinion, is fundamental to how we operate. In addition to direct Board engagement, engagement by management at different levels of the Group, with appropriate feedback and reporting, enables the Board to understand the perspectives of our stakeholders and consider the likely consequences of decisions in the long term.

To enable and ensure stakeholder considerations are reflected in our decision-making, the Board:

- Oversees a strategy than can achieve lasting success and generate sustainable returns for business, whilst maintaining our licence to operate
- Has standing agenda items at Board and Committee meetings that reflect our different stakeholder groups' interests.
- Remains focused on its stakeholder awareness and strengthening its understanding of the broad range of views expressed by Glencore's stakeholders.
- Holds management to account on their commitments, particularly in relation to matters relating to climate, local communities, and health and safety, ensuring they are acting in accordance with our Purpose and Values.

The Board is aware that some of the decisions that are made have an adverse impact on certain stakeholder groups, however, those considerations are integral to decision-making and the Board encourages transparent and constructive stakeholder engagement and consultation, particularly where difficult decisions have to be made.

For example, one of the principal decisions made by the Board during the year was the acquisition of the remaining two-thirds of Cerrejon when our joint venture (JV) partners notified us that they intended to sell their stakes. The options available to Glencore were essentially to buy out the partners, stand to one side while they sold their stakes, or join them in selling. Various stakeholder groups were considered and the Board carefully reviewed how to respond to the sale notice in a manner that was consistent with our Paris aligned coal depletion strategy, recognising our obligation to act as a responsible steward of assets. A key consideration was the consolidation of control under our sustainable operating philosophy and commitment to operating responsibly, versus the risk of a new venturer joining, with equal or greater rights, who might not agree to this approach.

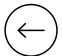
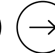
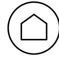
- This decision was therefore considered to contribute to the long-term success of the Company. Further details on key topics considered and principal decisions taken by the Board in the year are detailed on page 94.

Unfortunately, as a result of the global pandemic, some planned interactions between the designated Non-Executive Directors and our workforce had to be curtailed. However, virtual town hall meetings were organised, giving our workforce the opportunity to engage directly with them (see Our people and ECC Committee report).

In addition, the designated workforce engagement Directors held focus groups with a cross section of employees across the Group. The Directors gained valuable insight into company culture and issues that are important to the workforce, including diversity, training and development, safety, and the transition to green energy. The feedback from the sessions was discussed at the ECC meetings and fed back to the Board and senior management where follow-up actions were recommended.

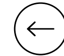
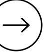
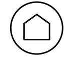
The following pages outline our key stakeholder groups, how we interact with them and how the Board considers their interests and opinions during its discussions and decision-making processes.

As a global resources business, we recognise that robust, respectful and two-way relationships with stakeholders are essential for our social licence to operate.

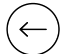
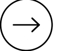
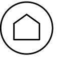
Section 172 Statement and Stakeholder Engagement continued

Stakeholder	Why they are important to the Company	What is important to the stakeholder	How the Group maintains engagement	How the Board takes account of these interests
Our people	The success of our industrial assets and marketing offices would not be possible without the dedication of our workforce	• Training, compensation and career opportunities • Health, safety and wellbeing • Company culture and reputation • Industrial relations	• Covid-19 engagement • Intranet, emails, newsletter updates • Posters and leaflets • Virtual town hall meetings and forums • Pre-shift 'toolbox' talks • Culture surveys • Webinars • Raising Concerns platform	• Workforce engagement by designated Non-Executive Directors • Regular updates from the Group Head of Human Resources • Regular updates on progress and actions on the Raising Concerns programme by the General Counsel • Results of culture surveys
Communities	Mutually beneficial relationships with communities are crucial to our Licence to operate within communities	• Local employment and procurement opportunities • Socio-economic development projects • Environmental management • Operational impacts • Potential site closure • Tailings storage facilities • Security and its engagement with civil society • Artisanal and small-scale mining (ASM)	• Community liaison teams • Various meeting formats to reflect local expectations • Radio and television broadcasts • Social media channels and asset's websites • Asset-specific publications	• Group HSEC-HR provides the Board HSEC Committee with regular updates on Glencore's impact on the communities living around its operations • Asset management provide details of community considerations as input into Directors' discussions on operational matters • Updates on ASM

Section 172 Statement and Stakeholder Engagement continued

Stakeholder	Why they are important to the Company	What is important to the stakeholder	How the Group maintains engagement	How the Board takes account of these interests
Investors, financial analysts and the media	Our strategy and long-term success depends on the support of our investors. Financial analysts and the media are important in ensuring all investors have equal access to quality information	• Financial and operational performance • Climate change • Compliance with laws and regulations • Presence in developing countries • Tailings storage management • Transparent payments to government • Human rights • Industrial relations	• Regular calls, one-on-one meetings and group events/ presentations • Corporate Affairs teams regularly speak to media at global, national and local levels • Site visits (Covid permitting) • Webinars and online Q&A sessions • Annual report, sustainability report, modern slavery statement, payments to governments report and other reports and presentations • AGM • Website, social media channels, media releases, and listing regulatory announcements	• Results meetings • AGM • Meetings with shareholders, analysts and key media • Group Investor Relations provide analysts' reports and investor feedback • Following any major announcements, Group Corporate Communications provides feedback to the Board • Board resolution on Climate Change
Governments and regulators	Governments and regulators provide the legal and policy framework that supports our businesses and ensure that our communities and people are protected	• Tax and royalty payments • Compliance with laws and regulations • Local employment and procurement • Operational environmental management, including tailings storage • Climate change • Socio-economic development projects • Transparency and human rights • Public health • Security	• Provide information and updates on key topics, either directly or as part of industry associations • Participation in multi-stakeholder organisations, initiatives and roundtables, such as the Voluntary Principles on Security and Human Rights, the OECD and the Extractive Industries Transparency Initiative (EITI) • Direct engagement with national, regional and local government on key topics • Site visits • Public reporting	• Reports on material regulatory issues and emerging legislation • Reports on engagement with governments and regulators

Section 172 Statement and Stakeholder Engagement continued

Stakeholder	Why they are important to the Company	What is important to the stakeholder	How the Group maintains engagement	How the Board takes account of these interests
Suppliers and customers	Well established relationships with suppliers and customers are essential to the long-term viability of the business model and strategy	• Responsible sourcing and supply • Transparency in the supply chain • Procurement spend • Human rights • Compliance with laws and regulations • Competitive pricing • Performance	• Regular meetings and updates • Customer site visits (Covid permitting) • Participation in commodity-specific responsible sourcing initiatives • Local procurement initiatives	• Oversight of the implementation of the Group Supplier Standards • Discussions as to relationships with and comments from suppliers and customers
Unions	Unions provide the workforce with representation where required and our workforce is critical to our success	• Health, safety and wellbeing • Negotiation of workplace agreements • Industrial relations	• Regular meetings with asset management • Union participation in asset safety committees	• Periodic updates from the Group Head of Human Resources and Head of Industrial Assets on material workforce issues
NGOs and civil society groups	Maintaining effective engagement with NGOs is vital in ensuring we continue to operate ethically and sustainably	• Human rights • Tailings storage facilities • Social incidents • Public health • Operational and environmental management • Socio-economic development projects • Transparency in payments to governments • Security and its engagement with civil society • Compliance with laws and regulations	• Direct engagement with global and local NGOs and civil society groups • Sustainability Reporting, including Sustainability Report, Modern Slavery Statement, Payments to Government Report, and Human Rights Report • Social media channels and corporate website • External forums and organisations, such as the Voluntary Principles on Security and Human Rights, the OECD and the EITI	• Group Sustainable Development provides regular updates to the Directors on the opinions and activities of NGOs and civil society groups • Regular discussions on major issues of concern to NGOs and civil society groups and engagement with them

Stories of the year

Mpumalanga Winter Wheat Pilot Project

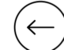
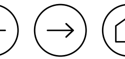
Glencore's South African flagship food security social investment is the Mpumalanga Winter Wheat initiative, a pilot project repurposing remediated coal mine land and using mine water for subsistence and commercial farming in an area not known for winter cropping. This is aimed at improving smallholder subsistence agricultural practices with facilitated market access for surplus produce. With an initial one-year time frame and potential five year extension, the pilot aims to test:

- the feasibility of utilising remediated mine land and mine water to grow commercially viable winter wheat crops
- the community desirability of winter wheat cropping
- the viability of commercial cropping and capacity to meet market requirements.

The Mpumalanga Winter Wheat pilot is being undertaken in partnership with the Mine Water Coordinating Body (MWCB), a multi-stakeholder organisation formed in 2016 to incubate collaboration between public and private stakeholders of the Upper Olifants Catchment in the Mpumalanga Coalfields, of which Glencore is a founding financial partner.

Other partners of the Winter Wheat project include the ICMM (financial and advocacy), Kelloggs (technical assistance, access to seed and market facilitation), and Business for Development (project execution, monitoring and reporting).

Glencore's contribution comprises access to land, water for irrigation, funding, and support for communities, with potential to scale to commercial levels. A multi-stakeholder approach, facilitated by the MWCB, is expected to yield sustainable transformation as it leverages collective partner capabilities to address the crop-to-market agricultural supply chain.

Ethics and compliance

We fulfil our purpose and remain a business partner of choice by upholding our commitment to ethical business practices

Our approach

We are committed to maintaining a culture of ethics and compliance throughout the Group, rather than simply performing the minimum required by law. We do not knowingly assist any third party in breaching the law, or participate in any criminal, fraudulent or corrupt practice in any country.

To support this, our Group Ethics and Compliance programme includes risk assessments, policies, standards, procedures and guidelines, training and awareness, advice, monitoring, speaking openly and investigations. We consider guidance from relevant authorities and international organisations and work with leading advisers to ensure we are aligned with international best practices.

Our employees, directors and officers, as well as contractors under Glencore's direct supervision, working for a Glencore office or industrial asset directly or indirectly controlled or operated by Glencore worldwide, must comply with our Code and policies, as well as applicable laws and regulations, regardless of location. Our Supplier Standards set out the expectations we have for all suppliers, including expectations regarding ethical business practices. We assert our influence over joint ventures we don't control to encourage them to act in a manner consistent with our Values and Code.

Glencore Ethics and Compliance programme

Board oversight and governance

Discipline and incentives: Together with other functions, ensuring an appropriate system for discipline and incentives

Risk assessments: Identifying, assessing and evaluating compliance risks and controls

Investigations: Coordinating objective and consistent internal investigations, whilst maintaining confidentiality and protecting against retaliation

Policies, standards, procedures and guidelines: Establishing approaches and requirements to mitigate compliance risks and reflect ethical and legal expectations and requirements

Speaking openly and raising concerns: Providing safe channels to raise concerns regarding potential misconduct including our Group Raising Concerns Programme

Training and awareness: Training and raising awareness on ethics / compliance risks

Monitoring: Assessing the effectiveness of programme implementation and identifying opportunities for improvement

Advice: Providing advice and guidance to employees on ethics and compliance matters

VALUES
Safety
Integrity
Responsibility
Openness
Simplicity
Entrepreneurialism

Ethics and compliance
continued

Board and management oversight and support

Our Board of Directors plays a critical role in overseeing and assessing our culture of ethics and compliance, and ensuring policies, practices and behaviour are consistent with our Values. Our Board has established a separate Ethics, Compliance and Culture (ECC) committee, dedicated to overseeing and approving key ethics, compliance and culture-related matters within the Group.

The Board's role in ethics and compliance continues to evolve. Members of the Board regularly engage with Compliance Function leadership. Members of the Board have also been designated as Engagement Directors who, through 'town-hall' engagements with employees, promote the Company's compliance culture, connect with employees through question and answer sessions, and facilitate the Ethics and Compliance programme. Board members are also featured in Company communications on specific compliance initiatives and participate in events where ethics and compliance topics are covered.

We provide training to the Board, emphasising to Directors their role in ethics and compliance oversight and programme implementation. Furthermore, the ECC committee receives regular updates covering topics such as the Compliance team structure, status of risk assessments, policies, standards, procedures or guidelines under development or review, updates on training and awareness activities, overviews of monitoring visits and key findings. Board members also receive updates on material reports that have come in via our Raising Concerns platform and the progress of investigations.

The following management committees also support the implementation of our Ethics and Compliance programme and report to the Board:

The Environment, Social and Governance (ESG) committee, comprises Glencore's CEO, CFO, Head of Industrial Assets, General Counsel, Head of Compliance, Head of Human Resources, Head of HSEC and Human Rights, and Head of Sustainability. It also includes senior members of executive management representing marketing and industrial assets across different commodities. The ESG committee considers issues relevant to the Group's corporate functions regarding the various ESG programmes and projects implemented across the Group. It also reviews and approves policies, standards, procedures, systems and controls relevant to the corporate functions.

The Business Approval Committee (BAC), a sub-committee of the ESG, comprises Glencore's CEO, CFO, General Counsel, Head of Sustainable Development and other relevant corporate or business heads as required. It determines, sets guidance and criteria, and reviews business relationships, transactions or counterparties that may give rise to ethical or reputational concerns.

The Raising Concerns Investigations Committee (RCIC), comprises Glencore's CEO, CFO, General Counsel, Head of Industrial Assets and Head of Human Resources. The RCIC oversees the operation of our Raising Concerns Programme and the conduct of investigations, ensuring recommendations and sanctions are applied consistently across the Group.

Group compliance function structure

Our Group Compliance team supports the implementation of our Ethics and Compliance programme and is comprised of our full-time Corporate and Regional teams, as well as local Compliance Officers in our offices and industrial assets.

The Corporate Compliance team is responsible for designing, monitoring and continuously improving the Ethics and Compliance programme. The Corporate team includes subject matter experts for each element of our programme and the various compliance risks that it covers. The Regional Compliance teams are responsible for implementation of the programme across regions and commodities. They provide guidance to the business and support the local Compliance Officers and a network of part-time Compliance Coordinators based in our offices and industrial assets. The Compliance Coordinators have a compliance role in addition to their primary business or corporate role. We appoint full-time specialist local Compliance Officers or part-time Compliance Coordinators depending on the nature and risks identified at the relevant office or industrial asset and have a formal process for nominating, assessing and appointing qualified individuals for the Compliance Coordinator role.

Both roles support our employees in day-to-day business considerations, particularly those seeking advice on ethical and lawful behaviour or policy implementation.

Group ethics and compliance programme

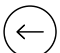
Risk assessments

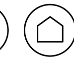
In order to ensure the Ethics and Compliance programme is appropriately designed, tailored to our business and that resources are adequately allocated, we identify, assess and evaluate compliance risks faced by our business.

We achieve this by performing an annual Group Compliance risk assessment to identify, record and assess risks relevant to the entire Group. We document these risks consistently in the Group Compliance Risk Register which covers several risk areas, but focuses in particular on anti-corruption given the nature of our business and the geographies in which we operate.

In addition, these risks are assessed at appropriate intervals within each office and industrial asset across the Group. These local risk assessments help us understand and document the specific compliance risks faced by each of our businesses, as well as identify and assess the controls in place to mitigate those risks.

These risk assessments also form the basis for drafting and updating Group policies, standards, procedures and guidelines, as well as determining our training programme and compliance team resourcing needs.





Ethics and compliance
continued

Group policy framework

Our Group policy framework encompasses our Values, Code of Conduct and a suite of policies, standards, procedures and guidelines on various compliance matters and risks. These include bribery and corruption, conflicts of interest, sanctions, anti-money laundering, market conduct, the prevention of the facilitation of tax evasion, competition law, fraud and information governance. This framework reflects our commitment to uphold ethical business practices and to meet, or exceed, applicable laws and external requirements.

Employees can access our compliance policies, standards, procedures, and guidelines in up to 11 languages, through various channels, including the Group and local intranets. Our managers and supervisors are responsible for ensuring employees understand and comply with the policies, standards and procedures. Employees who have access to a work computer must confirm their awareness and understanding of our compliance requirements when they begin working at Glencore and annually thereafter. Our offices and industrial assets are responsible for implementing Group procedures in their domains and developing and implementing local procedures, consistent with Group policies and standards, but adapted for local risks and requirements. We look to implement system and financial controls to ensure that our requirements are operationalised and embedded in our business.

Our policy framework is comprehensive and addresses relevant compliance risks, with a strong emphasis on key risks such as anti-corruption, sanctions and money laundering.

Anti-corruption and bribery

Our Anti-Corruption and Bribery Policy is clear: the offering, providing, authorising, requesting or receiving of bribes is unacceptable, and we do not engage in corruption or bribery, including facilitation payments. We assess corruption risk within our businesses and work to address these risks through policies, standards, procedures, and guidelines on various topics. These cover:

Political contributions

We do not contribute any of our funds or resources as contributions to any political campaign, political party, political candidate or any such affiliated organisations.

Political engagement

Although we do not directly participate in party politics, we do engage in policy debate on subjects of legitimate concern to our business, employees, customers, end users and the communities in which we operate. All officers, employees and persons who lobby on our behalf must comply with all relevant Glencore policy and procedural requirements and all applicable legislation, including, but not limited to, the laws and regulations relating to registration and reporting.

Sponsorships, charitable contributions and community investments

We never make a sponsorship, charitable contribution or community investment in order to disguise a bribe, or to gain an improper business advantage.

We ensure that when we make sponsorships, charitable contributions or community investments, we conduct risk-based due diligence and, when required, monitor the appropriate use of our funds or resources.

Gifts and entertainment

We only give and accept reasonable, appropriate and lawful gifts and entertainment that satisfy the general principles of our Anti-Corruption and Bribery Policy and are not given or received with the intent or prospect of influencing the recipient's decision-making or other conduct. We have requirements for pre-approval of gifts and entertainment based on localised thresholds, and additional requirements regarding public officials.

Interactions with public officials

Dealings with public officials bring a higher risk of perceived bribery, so we are especially careful in our interactions with them, and have various requirements that guide how we interact with public officials in order to mitigate corruption risks.

Participation in external anti-corruption organisations

We are a member of the Partnering Against Corruption Initiative (PACI) whose members collaborate on collective action and share leading practice in organisational compliance. The initiative has a commitment of zero tolerance to bribery and requires its members to implement practical and effective anti-corruption programmes. We are also an associate member of the Maritime Anti-Corruption Network (MACN).

We actively participate in PACI and MACN's annual events and have incorporated guidelines from both organisations into our programme. We are an active supporter of the Extractive Industries Transparency Initiative, which is a multi-stakeholder initiative between governments, companies and civil society, which promotes the open and accountable management of extractive resources.

Transparency

Each year we report our total payments to governments and provide country-by-country and project-by-project information. Additionally, and where applicable, we have aligned our reporting on such payments with the requirements of Chapter 10 of the European Union accounting directive.

Sanctions and trade controls

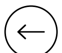
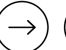
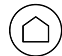
Our Sanctions Policy sets out our commitment to complying with all applicable sanctions, appropriately managing sanctions risk and not participating in transactions designed or intended to evade applicable sanctions.

To manage our sanctions risk exposure and ensure compliance, we implement a range of controls and processes. These include screening and conducting due diligence on our counterparties and vessels using a risk-based approach to determine whether they are a sanctions target, subject to sectoral sanctions or otherwise attract sanctions risk.

Anti-money laundering

Our Anti-Money Laundering Policy sets out our approach to ensuring that we comply with all applicable laws and regulations to prevent tax evasion and money laundering, and appropriately manage the related risks. We do not tolerate tax evasion of any kind and we do not knowingly or wilfully facilitate tax evasion.

To manage our money laundering and tax evasion risk exposure and ensure compliance, we implement a number of controls and processes including in respect of payments to third parties.

Ethics and compliance
continued

Business partners

We work with a range of business partners and expect them to share our commitment to ethical business practices. Business partners include our suppliers, customers, joint ventures (JVs), JV partners, service providers and other counterparties. We have a comprehensive framework for managing the key risks associated with our business partners, from onboarding through to offboarding, and including continuous monitoring. Through this framework, we seek to comply with applicable laws (including bribery and corruption, sanctions and money laundering) and to manage the reputational risks that can arise from engaging with certain categories of counterparties.

Our framework seeks to ensure that all counterparties are assessed based on their risk and then directed to the most appropriate due diligence and management process for their risk level – either Know Your Counterparty (KYC) or Third Party Due Diligence and Management. All our procedures require beneficial ownership identification.

Our KYC programme differs for our offices and industrial assets due to the different risk profile of the business, but each applies a risk-based approach to due diligence for suppliers, customers and service providers. Our Third Party Due Diligence and Management Procedure is a standardised procedure across offices and industrial assets. It sets out a detailed, risk-based assessment process whereby we identify, assess and mitigate the corruption risk exposure of third party relationships that present the highest risk to Glencore. This applies particularly to intermediaries, government facing third parties, charitable contributions, sponsorships and community investments. The procedure also requires ongoing training, monitoring and review of the relationships.

Through our Joint Ventures and Mergers and Acquisitions Procedure, we ensure that our Ethics and Compliance programme is implemented at all JVs that we control or operate. For JVs which we do not control or operate, we seek to influence our JV partners to adopt our commitment to responsible business practices and implement appropriate compliance programmes.

In respect of mergers, acquisitions and disposals, we conduct thorough pre-transaction due diligence. We incorporate acquired or merged entities which we control or operate, into our Ethics and Compliance programme.

Training and awareness

Training

Training on and awareness of our policies, standards, procedures, and guidelines are critical components of our Ethics and Compliance programme. They ensure our employees and relevant contractors understand the behaviour expected of them and provide guidance on how they can identify and practically approach ethics and compliance dilemmas in their daily work.

Our training programmes mix eLearning with live training. eLearning sessions are designed for employees and contractors with regular access to a work computer. Where regular access to a work computer is not available, employees and contractors receive training in other ways, including induction sessions, pre-shift training and toolbox talks.

We carefully consider the audience of our training and awareness materials to make the training effective and have established a process for assigning employees a compliance risk rating based on their function or role, which rating we use when we roll out our training and awareness materials. We tailor our training and awareness materials to the audience and make them relevant by including hypothetical scenarios illustrating how ethics and compliance dilemmas might manifest themselves in employees' daily work.

New joiners receive in-person compliance training sessions on our Values, Code of Conduct, and key compliance risks including how to raise concerns.

A critical element of our training programme is measuring its effectiveness. We do this through soliciting post-course feedback from employees themselves and testing employees' understanding and retention of key messages through various (pre-/post) knowledge quizzes.

We actively monitor compliance training completions. Compliance escalates non-completions to management. Employees who fail to complete training may be subject to disciplinary action according to the Mandatory Compliance Training Escalation Procedure.

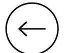
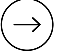
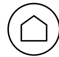
We also train and develop our own compliance personnel to increase their understanding of key compliance risks and important developments. We encourage them to participate in relevant conferences, lectures, webinars and podcasts, where possible, to continuously enhance their knowledge and skills.

For training statistics please refer to the separately issued Glencore Ethics and Compliance Report.

Awareness

Awareness-raising activities and initiatives, in addition to online and in-person training, are key to reminding employees of the importance of ethics and compliance. While in-person activities and initiatives have been heavily impacted by Covid-19, we have continued to develop awareness materials in the form of electronic guides, checklists, newsletters, videos and intranet communications.

We also continue to develop content for the Glencore Ethics and Compliance app which supports employees in making choices in line with our Values, our Code of Conduct and the law. It provides easy, user-friendly mobile access to key ethics and compliance principles, and allows for easy access to our Raising Concerns platform, Conflicts of Interest declaration platform, and Gifts and Entertainment register.

Ethics and compliance
continued

Monitoring

We continuously monitor and test the implementation of our Ethics and Compliance programme in order to determine its effectiveness, and that it is operationalised and embedded into business operations. These monitoring activities also enable us to identify opportunities for improvement that help develop and evolve the programme and respond to changes in our business, the environments we operate in and applicable laws and regulations.

We have implemented a number of systems across the Group to ensure that we consistently manage and track our compliance data across our different modules. This includes risk assessment, training and policies and gives us an overall picture of the risks in each of our offices and industrial assets and the status of implementation of our programme.

Our Annual Monitoring Plan comprises on-site and desktop reviews. On-site reviews are visits to our offices and/or industrial assets to assess the implementation of our Ethics and Compliance programme. In light of the Covid-19 pandemic, these reviews have been performed remotely. Desktop reviews focus on the analysis, sampling and transaction testing of either compliance processes and controls or other business processes, systems and controls that the Monitoring team can access centrally. Over the last few years, we have worked with external advisers to execute data analytics over our systems. In 2021, we implemented an in-house data analytics programme across our Marketing ERP system, trading platforms and expense management systems to monitor for transactions and activities that represent an elevated level of bribery and corruption risk. We will continue to develop and enhance our systems analytics capability across the Group.

Speaking openly and raising concerns

We are committed to creating a culture where everyone feels free to speak about concerns in a secure and confidential way. We do not tolerate retaliation against anyone who speaks openly about conduct they believe is unethical, illegal or not in line with our Code and policies, even if the concern is not substantiated.

We have a comprehensive suite of documents which establish a framework for managing concerns, including our Whistleblowing policy. This policy encourages employees to report concerns, explains the process for reporting, escalating, investigating, and remedying concerns, and makes clear that retaliation is absolutely prohibited, regardless of whether the reported concern is ultimately substantiated.

We encourage whistleblowers to first raise concerns with relevant managers or supervisors as they are usually best equipped to resolve concerns quickly and effectively. Reporters also have the option of reaching out to nominated whistleblowing contacts, who are members of senior management at the office or industrial asset.

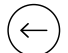
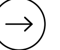
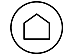
If a concern remains unresolved or a whistleblower is uncomfortable using local channels, concerns can also be reported via our Raising Concerns programme, our corporate whistleblowing programme, managed in Switzerland.

Raising Concerns allows whistleblowers to raise concerns anonymously in any of 15 languages, by internet or phone. Hotlines are available in most of the countries where we operate, and details are published on the platform's website and on posters at offices and industrial assets.

All concerns are taken seriously and handled promptly, using an objective, fact-based rationale. Concerns are investigated either by our corporate office in Switzerland, or locally, depending on factors such as the nature and severity of the concern.

Where disciplinary action is taken, this depends in each case on the behaviour exhibited, the effects of that behaviour and the different disciplinary measures applicable to employees, contractors and other third parties on-site.

For statistics on our Raising Concerns programme, please refer to the separately issued Glencore Ethics and Compliance Report.

Financial review

Financial results

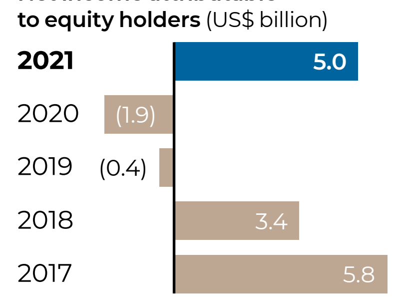
Following Covid-19's severe economic impacts in 2020, a recovery in demand, together with multiple supply-side issues, resulted in generally significant inventory drawdowns and prices for most of our key commodities reaching multi-year highs. These higher prices, along with our industrial portfolio's competitive cost structure, gave rise to a record Adjusted EBITDA contribution for our industrial asset segment. Our marketing segment also delivered a record performance, owing to tight physical supply/demand fundamentals for our core commodities and the associated improvement in arbitrage opportunities. Group net income attributable to equity holders improved from a loss of $1,903 million in 2020 to an income of $4,974 million in 2021, after recognising various significant items discussed below. EPS increased from negative $0.14 per share to positive $0.38 per share.

The economic recovery seen in late 2020 continued into 2021, helped significantly by major governments and central banks initiating and sustaining the provision of material stimulus to the global economy. Average year-over-year price increases for coal (Newc), cobalt, copper, nickel and zinc were 125%, 60%, 51%, 34% and 32% respectively. Owing mainly to such higher prices, Adjusted EBITDA set a record of $21,323 million and Adjusted EBIT was $14,495 million in 2021, compared to $11,560 million and $4,416 million in 2020. The positive impact of the higher commodity prices on Adjusted EBITDA was somewhat tempered by higher costs (mainly energy), the effects of a weaker US dollar against most of our producer currencies, including average year-over-year declines against the Australian dollar (9%) and the South African rand (10%) and modestly lower production levels. Adjusted EBITDA mining margins improved to 45% (2020: 36%) in our metal operations and to 47% (2020: 17%) in our energy operations. See page 61.

Group Adjusted EBITDA◊
(US$ billion)

2021	**21.3**
2020	11.6
2019	11.6
2018	15.8
2017	14.5

Net income attributable to equity holders (US$ billion)



Market conditions

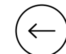
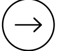
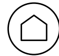
Select average commodity prices

Highlights

	Spot 31 Dec 2021	Spot 31 Dec 2020	**Average 2021**	Average 2020	Change in average %
S&P GSCI Industrial Metals Index	499	382	457	318	44
S&P GSCI Energy Index	252	164	230	138	67
LME (cash) copper price ($/t)	9,741	7,749	9,320	6,186	51
LME (cash) zinc price ($/t)	3,590	2,729	3,005	2,269	32
LME (cash) lead price ($/t)	2,338	1,976	2,202	1,826	21
LME (cash) nickel price ($/t)	20,881	16,554	18,474	13,803	34
Gold price ($/oz)	1,829	1,898	1,799	1,771	2
Silver price ($/oz)	23	26	25	21	19
Metal Bulletin cobalt standard grade, in-warehouse Rotterdam ($/lb)	34	15	24	15	60
Ferro-chrome 50% Cr import, CIF main Chinese ports, contained Cr (¢/lb)	114	73	113	70	61
Iron ore (Platts 62% CFR North China) price ($/DMT)	113	154	156	105	49
Coal API4 ($/t)	126	93	125	65	92
Coal Newcastle (6,000) ($/t)	166	82	137	61	125
Oil price – Brent ($/bbl)	78	52	71	43	65

Currency table

	Spot 31 Dec 2021	Spot 31 Dec 2020	**Average 2021**	Average 2020	Change in average %
AUD : USD	0.72	0.77	0.75	0.69	9
USD : CAD	1.26	1.27	1.25	1.34	(7)
EUR : USD	1.14	1.22	1.18	1.14	3
GBP : USD	1.35	1.37	1.37	1.28	7
USD : CHF	0.91	0.89	0.91	0.94	(3)
USD : KZT	435	421	427	414	3
USD : ZAR	15.94	14.69	14.79	16.46	(10)

Financial review continued

Marketing activities

Marketing delivered record results as the scale of commodity demand recovery, intersecting with numerous primary supply and supply chain shocks and constraints, resulted in elevated levels of market volatility and rapidly and materially changing underlying supply and demand scenarios. This backdrop provided overall supportive physical commodity marketing conditions, with Adjusted EBITDA and EBIT increasing by 13% to $4,223 million and by 11% to $3,695 million, respectively. Metals and minerals Adjusted EBIT was up 50% with nearly all departments contributing double-digit % increases over the prior year. Energy products Adjusted EBIT was down 21% over 2020, with a strong 2021 coal result limiting the net overall reduction, given oil's lower contribution relative to the prior year, wherein it capitalised on the exceptional price movements and dislocations across crude oil, refined products, storage and logistics.

Across 2021, agricultural markets also saw record prices for many commodities. On the back of strong global demand and solid production in most major origins, Viterra reported an EBITDA and Net Income of approximately $2.2 billion and $1 billion respectively. Accordingly, our 49.99% share of its net earnings (captured within Corporate and Other) was $473 million (post-interest and tax) compared to $211 million in 2020. Viterra paid Glencore a dividend of $150 million in H2 2021.

Industrial activities

Industrial Adjusted EBITDA increased by 118% to $17,100 million (Adjusted EBIT was $10,800 million, compared to $1,077 million in 2020). As noted above, the increase was primarily driven by stronger average year-over-year commodity prices, particularly related to our copper, cobalt, ferrochrome, nickel and coal operations, driven by recovery of global demand and various supply challenges, most notably seen across the energy spectrum (gas, coal and oil), impacting product availability and cost.

Net finance costs

Net finance costs were $1,140 million during 2021, a 22% decrease compared to $1,453 million in the comparable reporting period, due to lower average base rates (mainly US$ Libor) and lower net funding levels year-over-year. Interest expense for 2021 was $1,348 million, down 14% over 2020 and interest income was $208 million compared to $120 million in the prior year. See note 6.

Income taxes

An income tax expense of $3,026 million was recognised during 2021, compared to a credit of $1,170 million in 2020. The effective tax rate is 63.6%, and when adjusting for significant items (primarily impairments, foreign exchange adjustments and tax losses not recognised), the effective tax rate reduces to 33.5% (29.7% in 2020).

Adjusted EBITDA/EBIT

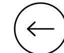
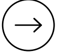
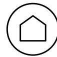
Adjusted EBITDA by business segment is as follows:

US$ million	**2021** Marketing activities	**2021** Industrial activities	**2021** Adjusted EBITDA	2020 Marketing activities	2020 Industrial activities	2020 Adjusted EBITDA	Change %
Metals and minerals	2,588	12,017	14,605	1,768	7,285	9,053	61
Energy products	1,829	5,603	7,432	2,053	1,039	3,092	140
Corporate and other*	(194)	(520)	(714)	(89)	(496)	(585)	22
Total	**4,223**	**17,100**	**21,323**	**3,732**	**7,828**	**11,560**	**84**

Adjusted EBIT by business segment is as follows:

US$ million	**2021** Marketing activities	**2021** Industrial activities	**2021** Adjusted EBIT	2020 Marketing activities	2020 Industrial activities	2020 Adjusted EBIT	Change %
Metals and minerals	2,494	8,128	10,622	1,667	3,054	4,721	125
Energy products	1,395	3,252	4,647	1,761	(1,365)	396	1,073
Corporate and other*	(194)	(580)	(774)	(89)	(612)	(701)	10
Total	**3,695**	**10,800**	**14,495**	**3,339**	**1,077**	**4,416**	**228**

* Corporate and other Marketing activities includes $473 million (2020: $211 million) of Glencore's equity accounted share of Viterra.

Financial review continued

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 2021, Glencore recognised a net expense, after tax and non-controlling interests, of $4,151 million (2020: $4,388 million) in significant items comprised of:

- Expenses of $11 million (2020: $92 million) relating to Glencore's share of significant expenses recognised directly by our associates.
- Loss on disposals of non-current assets of $607 million (2020: $36 million) primarily related to the required accounting recycling to the statement of income of Mopani's non-controlling interests upon disposal (see note 26), net of gains recognised on disposal of other investments/operations of $208 million and gains on disposal of property, plant and equipment of $207 million.
- Income tax credit of $137 million (2020: credit of $1,476 million) – see income taxes below.
- Other income/(expense) – net expense of $1,947 million (2020: $173 million) see note 5. Balance primarily comprises:
  - $64 million (2020: $438 million) of mark-to-market gains 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.
  - $187 million net loss (2020: $192 million) of net foreign exchange movements.
  - $1,640 million (2020: $113 million) relating to various legal matters, including the provision and related costs (legal, expert and compliance) for the ongoing investigations (see notes 23 and 32).
  - $Nil (2020: $214 million) of closure and severance costs. 2020 related primarily to suspension of operations at Prodeco coal in Colombia and the closure of the Aguilar zinc mine in Argentina.
- Impairments of $1,838 million (2020: $6,392 million), see note 7. The corresponding net impact, after income taxes and non-controlling interests was $1,137 million (2020: $3,805 million). The 2021 charge primarily relates to:
  - Koniambo ($1,170 million), due to lower throughput and higher cost assumptions, and the emergence of higher discounts on non-battery application nickel relative to the LME benchmark, such having been reassessed following failures at the power plant and a slag leak at the metallurgical plant over H1 2021.
  - HG Storage ($331 million) our 49% interest in an oil storage and terminals business, following review of the carrying value against valuations benchmarks.
  - Net $98 million reversal of impairments following an improvement in the underlying financial condition of various counterparties and the restructuring of certain loans and physical advances.
  - $151 million relating to continued challenge and non-performance by certain government authorities in settling long outstanding VAT claims.

The 2020 impairment related primarily to the Mopani copper operations ($1,041 million), the Volcan zinc operations ($2,347 million), the Prodeco coal operations ($835 million), the Chad oil operations ($673 million) and the Astron oil refinery ($480 million).

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	**2021**	2020
Adjusted EBIT◊	14,495	4,416
Net finance and income tax expense in relevant material associates and joint ventures[1]	(1,207)	(580)
Proportionate adjustment Volcan[1]	179	(46)
Net finance costs	(1,140)	(1,453)
Income tax expense[2]	(3,163)	(306)
Non-controlling interests	(39)	454
Income attributable to equity holders of the Parent pre-significant items◊	**9,125**	**2,485**
Earnings per share (Basic) pre-significant items (US$)[3◊]	0.68	0.19
Significant items◊		
Share of Associates' significant items[4]	(11)	(92)
Movement in unrealised inter-segment profit elimination[5]	(549)	(760)
Net loss on disposals of non-current assets[6]	(607)	(36)
Other expense – net[7]	(1,947)	(173)
Impairments[8]	(1,838)	(6,392)
Income tax credit[2]	137	1,476
Non-controlling interests' share of significant items[9]	664	1,589
Total significant items	**(4,151)**	**(4,388)**
Income/(loss) attributable to equity holders of the Parent	**4,974**	**(1,903)**
Earnings/(loss) per share (Basic) (US$)[3]	0.38	(0.14)

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 note 7 of the financial statements and to APMs section for reconciliations.
9 Recognised within non-controlling interests, refer to APMs section.

Financial review continued

Statement of financial position

Current and non-current assets

Total assets were $127,510 million as at 31 December 2021, compared to $118,000 million as at 31 December 2020. Current assets increased from $43,212 million to $57,776 million, due primarily to an increase in marketing inventories and receivables, including margin calls paid in respect of the Group's hedging activities, owing mainly to the significantly higher year-end commodity prices compared to prior-year (aluminium, copper, zinc, nickel and oil-Brent up 42%, 26%, 32%, 26% and 50% respectively). Non-current assets decreased from $74,788 million to $69,734 million, primarily due to capital expenditure over the period being below depreciation and amortisation expense, $1,452 million of impairments to property, plant and equipment and $1,321 million of asset values reclassified to held for sale (see note 16).

Current and non-current liabilities

Total liabilities were $90,593 million as at 31 December 2021, compared to $83,598 million as at 31 December 2020. Current liabilities increased from $39,441 million to $49,459 million, primarily due to an increase in accounts payable and fair value of our derivative hedging instruments (other financial liabilities), on account of the higher commodity prices noted above and a provision for the on-going investigations of $1,500 million (see note 5), offset by a decrease in current borrowings (see note 21). Non-current liabilities decreased from $44,157 million to $41,134 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 $36,917 million as at 31 December 2021, compared to $34,402 million as at 31 December 2020, the movements being primarily the income for the year of $4,349 million, including non-controlling interests and a modest increase in other comprehensive income noted below, offset by shareholder distributions and buybacks ($2,688 million) concluded during the year.

Other comprehensive income/(loss)

An income of $42 million was recognised during 2021, compared to a loss of $885 million in 2020 primarily relating to remeasurements on defined benefit plans of $223 million, net of mark-to-market adjustments of $56 million with respect to various minority investments (see note 11) and exchange losses on translation of foreign operations of $87 million, primarily our South African ZAR-denominated subsidiaries.

Cash and non-cash movements in net funding

The reconciliation in the table adjacent 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 2021 decreased by $4.6 billion to $30,837 million and net debt (net funding less readily marketable inventories) decreased by $9.8 billion to $6,042 million, as funds from operations of $17,057 million significantly exceeded the $3,802 million of net capital

Cash flow and net funding/debt

Net funding

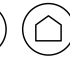
US$ million	**31.12.2021**	31.12.2020
Total borrowings as per financial statements	34,641	37,479
Proportionate adjustment – net funding[1]	(563)	(553)
Cash and cash equivalents	(3,241)	(1,498)
Net funding◊	**30,837**	**35,428**

1 Refer to APMs section for definition and reconciliations.

Cash and non-cash movements in net funding

US$ million	**2021**	2020
Cash generated by operating activities before working capital changes, interest and tax	16,725	8,568
Proportionate adjustment – Adjusted EBITDA[1]	3,619	1,930
Non-cash adjustments included within EBITDA	–	15
Net interest paid[1]	(853)	(1,042)
Tax paid[1]	(2,676)	(1,189)
Dividends received from associates[1]	242	43
Funds from operations◊	**17,057**	**8,325**
Net working capital changes[2]	(5,289)	(4,318)
Acquisition and disposal of subsidiaries – net[2]	252	(222)
Purchase and sale of investments – net[2]	108	13
Purchase and sale of property, plant and equipment – net[2]	(3,802)	(3,921)
Net margin (payments)/receipts in respect of financing related hedging activities	(970)	1,040
Proceeds received/(paid) on acquisition of non-controlling interests in subsidiaries	10	(56)
Distributions paid and transactions of own shares – net	(3,024)	(127)
Cash movement in net funding	**4,342**	**734**
Change in lease obligations	(915)	(457)
Foreign currency revaluation of borrowings and other non-cash items	1,164	(1,339)
Total movement in net funding	**4,591**	**(1,062)**
Net funding◊, beginning of the year	(35,428)	(34,366)
Net funding◊, end of year	**(30,837)**	**(35,428)**
Less: Readily marketable inventories[2]	24,795	19,584
Net debt◊, end of year	**(6,042)**	**(15,844)**

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



Financial review continued

expenditure and $3,024 million of distribution to shareholders, non-controlling interests and purchase of own shares.

Business and investment acquisitions and disposals

Net inflows from business and investment disposals/acquisitions were $370 million over the year, compared to an outflow of $265 million in 2020. The net inflow comprises disposals of a number of minority interest investments, none of which were individually material and proceeds from the sale of Chemoil Terminals (oil storage facilities in the US) for $248 million (see note 26). The net outflow in 2020 was primarily cash derecognised upon disposal of Minera Alumbera, the acquisition of a 30% interest in PT CITA Mineral Investindo Tbk and the acquisition of the remaining 0.5% minority interest held in Katanga Mining Limited.

Liquidity and funding activities

In 2021, the following significant financing activities took place:

- 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

In March 2021, Glencore extended and voluntarily cancelled a portion of its committed revolving credit facilities, such that as at 31 December 2021, the facilities comprise:

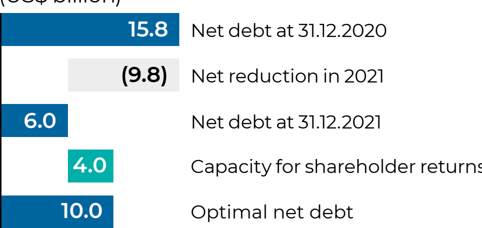
- a $6,572 million one year revolving credit facility with a one-year borrower's term-out option (to May 2023);
- a $450 million medium-term revolving credit facility (to May 2025); and
- a $4,200 million medium-term revolving credit facility (to May 2026).

As at 31 December 2021, Glencore had available committed liquidity amounting to $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 (stable) from Moody's and BBB+ (stable) from Standard & Poor's. Glencore's publicly stated objective, as part of its overall financial policy package, is to seek and maintain 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 objective of c.$10 billion.

Shareholder returns
(US$ billion)



Distributions

The Directors have recommended a 2021 financial year base cash distribution of $0.26 per share amounting to some $3.4 billion, accounting for own shares held as at 31 December 2021. Payment will be effected as a $0.13 per share distribution in May 2022 and a $0.13 per share distribution in September 2022 (in accordance with the Company's announcement of the 2022 Distribution timetable made on 15 February 2022). The Company will also conduct a buy-back of its own shares to the value of up to $550 million, with intended completion by the time of the Group's interim results announcement in August 2022.

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 2021, Glencore plc had CHF 25 billion of such capital contribution reserves in its statutory accounts. The distribution is subject to shareholders' approval at Glencore's AGM on 28 April 2022.

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.

Basis of presentation

The financial information in the Financial Review and sections headed *Our Marketing Business* and *Our Industrial Business* 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 above) 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.

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 234.

Our Marketing business

We responsibly source the commodities that advance everyday life – this means moving them from where they are plentiful to where they are needed

Market insight and customer understanding

Our global scale and presence in more than 60 commodities across 35 countries gives us extensive market knowledge and insight to help us fully understand the needs of our customers.

Anticipating supply and demand

Our strategy seeks to maximise value through our integrated marketing and industrial businesses working side-by-side to give us presence across the entire supply chain, delivering in-depth knowledge of physical market supply and demand dynamics and an ability to rapidly adjust to market conditions.

Creating opportunities

The significant scale of both our own production and the volumes secured from third parties allows us to create margin opportunities from our ability to supply the exact commodities the market needs through processing and/or blending and optimisation of qualities.

Generating returns

We generate returns as a fee-like income from distribution of physical commodities and arbitrage, including blending and other optimisation opportunities. Our use of hedging instruments results in profitability being largely determined by these activities rather than by absolute price movements.

Arbitrage opportunities

Many of the physical commodity markets in which we operate are fragmented or periodically volatile. This can result in arbitrage: price discrepancies between the prices for the same commodities in different geographic locations or time periods. Other factors with arbitrage opportunities include freight and product quality.

Geographic Arbitrage

Disparity

Different prices for the same product in different geographic regions, taking into account transportation and transaction costs.

Execution

Leverage global relationships and production, processing and logistical capabilities to source product in one location and deliver in another.

Product Arbitrage

Disparity

Pricing differences between blends, grades or types of commodity, taking into account processing and substitution costs.

Execution

Ensure optionality with commodity supply contracts, and look to lock-in profitable price differentials through blending, processing or end-product substitution.

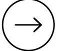
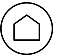
Time Arbitrage

Disparity

Different prices for a commodity depending on whether delivery is immediate or at a future date, taking into account storage and financing costs.

Execution

Book 'carry trades' that benefit from competitive sources of storage, insurance and financing.

Market review and outlook

Highlights

Commodity markets generally performed well throughout the year, bolstered by a widespread economic recovery, following the pandemic's severe economic impacts in 2020, characterised by the imposition of lengthy lockdowns. In the context of resurgent industrial demand and generally low inventory balances, any supply-side issues (from primary production and supply chain) exacerbated the market tightness. The energy supply shortages and price increases that intensified in H2 2021 not only required careful risk (market and counterparty) management by our energy marketing units, but also had profound indirect impacts on metals marketing, as smelters globally faced higher energy costs and/or limitations on energy use. Overall market volatilities, measured both in relation to primary commodity prices and their associated pricing adjustments, such as premiums, refining margins, quality adjustments etc, were extremely elevated during 2021.

In this context, Marketing performed strongly across all major commodity groups. Marketing Adjusted EBIT was $3,695 million, up 11% over the prior period. Metals and minerals Adjusted EBIT increased by 50% to $2,494 million, while Energy Products was down 21% on an outsized 2020 result to $1,395 million. Our 49.9% interest in the Viterra agricultural products business recorded earnings of $473 million, on a share of net income basis.

Financial overview

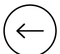
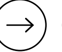
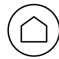
US$ million	**Metals and minerals**	**Energy products**	**Corporate and other[1]**	**2021**	Metals and minerals	Energy products	Corporate and other[1]	2020
Revenue	74,727	107,037	–	181,764	54,847	69,290	–	124,137
Adjusted EBITDA◊	2,588	1,829	(194)	4,223	1,768	2,053	(89)	3,732
Adjusted EBIT◊	2,494	1,395	(194)	3,695	1,667	1,761	(89)	3,339
Adjusted EBITDA margin	3.5%	1.7%	n.m.	2.3%	3.2%	3.0%	n.m.	3.0%

1 Corporate and other Marketing activities includes $473 million (2020: $211 million) of Glencore's equity accounted share of Viterra.

Selected marketing volumes sold

	Units	**2021**	2020	Change %
Copper metal and concentrates[1]	mt	3.1	3.4	(9)
Zinc metal and concentrates[1]	mt	2.7	2.8	(4)
Lead metal and concentrates[1]	mt	1.1	1.0	10
Gold	moz	1.8	2.0	(10)
Silver	moz	65.5	64.9	1
Nickel	kt	202	149	36
Ferroalloys (including agency)	mt	9.3	8.5	9
Alumina/aluminium	mt	8.9	7.2	24
Iron ore	mt	49.9	57.6	(13)
Thermal coal[2]	mt	67.7	67.1	1
Metallurgical coal[2]	mt	4.6	1.3	254
Crude oil	mbbl	706	791	(11)
Oil products	mbbl	704	738	(5)

1 Estimated metal unit contained.
2 Includes agency volumes.

Market review and outlook
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Copper

LME copper ($/t)

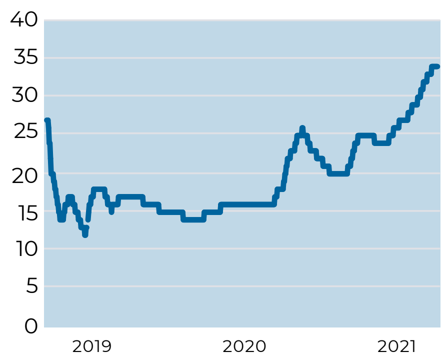
Starting the year below $8,000/t, copper prices set a record high of $10,748/t in May, basis improved physical demand conditions, continued financial stimulus and high speculative positioning. Global copper demand remained strong during H2, particularly in North America and Europe where consumption had recovered to pre-Covid levels. Mine supply growth in 2021, however, was nominal, given the challenges faced in returning to pre-Covid operating rates. Against this backdrop, refined copper inventories reached multi-year lows in H2 2021, with exchange inventories drawing to their lowest levels since 2008. Cathode premiums moved to their highest levels in five years, while LME cash copper traded at a premium to the three-month price, with a difference of over $1,000/t in October. During 2021, net imports of refined copper to the USA were at levels not seen in more than 10 years.

Spot smelter treatment and refining charges, the fee paid by mines to smelters, reached multi-year lows in 2021, as competition for available concentrates increased. The 2022 benchmark level, however, increased year-over-year, following six years of steady declines, reflecting the market's anticipation of concentrate mine supply growth.

Looking forward, we expect mine supply growth to be constrained by ageing assets, declining ore grades, a diminished project pipeline and the measures taken to contain the spread of Covid-19, with various new projects likely to experience delays. In the near term, we expect global demand to remain strong, with steady growth rates longer term, driven by population growth and rising living standards in emerging economies. Climate change policies will also be a key driver for copper growth sectors, given its crucial role in accelerating the clean energy transition, from renewable power generation and distribution, to energy storage and electric vehicles (EVs).

Cobalt

MB cobalt ($/lb)

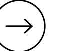
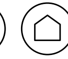


2021 started strongly from a demand and pricing perspective, with positive momentum in Chinese and European EV demand and a level of stockpiling key strategic materials, particularly in China. Commencing 2021 at $15.30/lb, prices rallied 65% through Q1 to reach a H1 high of $25.30/lb. Prices then cooled off somewhat before a strong recovery in H2 saw the year-end price at $33.50/lb. While the EV sector has been the main demand catalyst for cobalt, a number of metal demand segments exhibited post-Covid recovery.

The cobalt hydroxide supply bottlenecks witnessed during H2 2020 eased in early 2021, but stronger lithium-ion battery demand from both EV and non-EV applications (e.g. phones) resulted in hydroxide payables marking a high of 94% early in the year, with major producers having limited spot availability. Payables averaged 90% during H1 and remained within a stable band of c.88-90% for H2.

There is mounting EV investment and adoption. The Chinese and European EV sales markets have developed strongly, while the North American market is emerging as a major EV growth region with key manufacturers deploying tens of billions of dollars in investment. The diminishing cobalt per kWh requirement through R&D gains is being outstripped by the rate of EV sales growth, underpinning strong cobalt demand.

Various cobalt supply projects are due to commission over the coming years, however elevated execution risk is likely to temper the rate at which new cobalt units are available, while incumbent production may also be impacted by continued logistical challenges. As a result, the cobalt market fundamental outlook remains robust.

Market review and outlook
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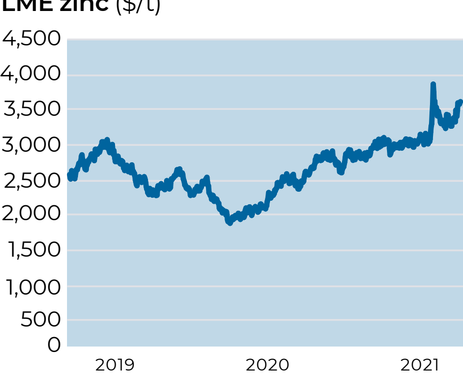
Zinc

LME zinc ($/t)



The zinc market recorded a deficit in 2021, driven by strong recovery in global demand (+6%), combined with production disruptions and supply chain bottlenecks. Zinc price, metal premiums, market backwardation, concentrates spot TCs and metal exchange inventory levels all signalled tight market conditions at year end.

Average zinc prices increased 32% from $2,269/t in 2020 to $3,005/t in 2021, closing the year at around $3,600/t. Metal premiums were particularly strong outside China (Q4 2021: USA >$300/mt and EU c.$250/mt). At the same time, China required a significant amount of metal, with China's State Reserves Bureau (SRB) releasing 180kt in 2021. At year-end, stocks remained at low levels, both in visible metal (~350kt or c.10 days of global consumption) and concentrates (only c.4 days above typical smelter requirements of 30 days).

Mine supply ex-China is estimated to have grown c.0.5mt–0.6mt, missing higher predictions earlier in the year. The continuation in mine disruptions eroded concentrates spot TCs, which dropped by c.$100/dmt to $78/dmt on average in 2021.

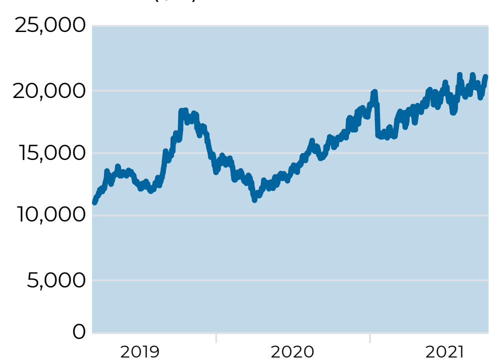
The energy price environment in Europe, where c.2.3mt p.a. of zinc metal is produced (c.17% of global supply), poses risk of further metal production cutbacks in the region. Should these materialise, both zinc price and premiums could rise as there is no SRB parallel in the EU/US to ease the market.

Looking ahead into 2022, refined zinc consumption is expected to increase, albeit not matching the percentage increase in 2021. There are risks to demand, including any Chinese construction slowdown and/or power-related demand destruction in Europe, however, there is upside from the potential comeback of the automotive sector as semiconductor shortages recede. Bottlenecks in logistics are expected to continue in the short and medium-term, creating regional differences.

Regional differences and supply disruptions were also evident in the lead market. LME stocks reduced c.60% since December 2020 and the average price increased by 20% year-over-year to $2,204/t.

Nickel

LME nickel ($/t)

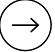
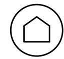


Primary nickel consumption rebounded sharply in 2021 (+17.5%), driven by record levels of stainless steel production in China and Indonesia and accelerating growth in the battery sector. The nickel market was in a substantial deficit in H1 2021, which narrowed in H2 as Indonesian nickel production continued to ramp up. Nickel stocks in LME warehouses fell by 60% in 2021.

Stainless steel production in China, accounting for more than half of global primary demand, reached historic highs driven by strong global demand. Also, in a policy change aimed at reducing pollution and carbon emissions, the Chinese government eliminated tax incentives on stainless steel exports and initiated a tax removal on imports. The resulting increase in Indonesian production was particularly pronounced, while in other regions, stainless steel production also reached multi-year highs.

Nickel demand from alloys and specialty steels continued to gradually recover towards pre-pandemic levels. Despite signs of recovery, commercial aerospace remains challenged by travel restrictions and lack of forward visibility, further delaying the recovery in the superalloys segment.

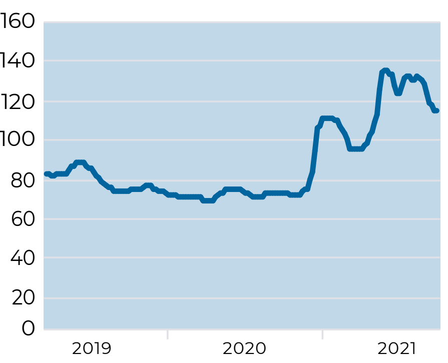
EV sales grew strongly, despite a global slowdown in total automotive sales amid a shortage of parts and semiconductors. Automakers have broadly committed to electric mobility and are actively sourcing battery cells and raw materials. Stringent ESG requirements throughout the EV supply chain have resulted in a preference for high-grade nickel with a low carbon footprint.

Market review and outlook
continued

Ferroalloys

MB ferrochrome (c/lb)

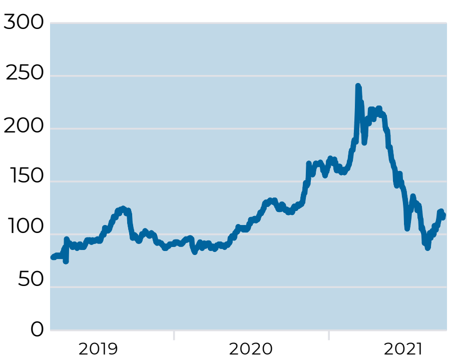


Ferrochrome supply from South Africa, India and Europe recovered to pre-pandemic levels, resulting in global production growth of 15% year-on-year. This supply growth was met by a strong increase in global stainless steel melt rates, with Indonesian stainless steel production increasing by 87% year-on-year to 5mt, becoming the world's second largest producer.

Vanadium demand recovered to pre-pandemic levels with stronger carbon steel markets absorbing excess inventory. The aerospace demand sector remained weak as previously noted.

Iron ore

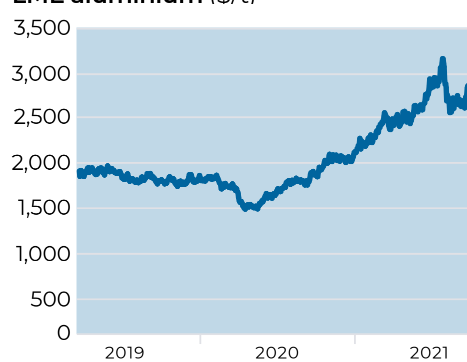
Platts iron ore ($/t)



Iron ore prices were extremely volatile throughout the year, driven by shifting policy initiatives and supply/demand rebalancing. Global resumption of construction activities and Chinese mills' post winter restocking saw strong demand in H1 2021, supported by positive steel margins, with iron ore prices reaching 10-year highs in June. Chinese steel production cuts, instituted in large part to achieve annual environmental goals, led to a demand decrease in H2 while seaborne supply improved. Iron ore quickly became over-supplied, resulting in a significant price correction.

Aluminium

LME aluminium ($/t)

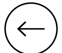
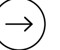
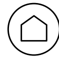


The aluminium market continued its strong recovery from the initial Covid-19 shock, backed by strong fundamentals, including a supply deficit. The price environment was volatile, as a surge in demand during H1 2021 was followed by rising energy costs first in China (Q2-Q3 2021) and then Europe during Q4 2021. Chinese imports of primary aluminium reached record levels, leading to a price rise on the LME, peaking at a decade-high of $3,229/t in mid-October. Prices retreated after China's timely and effective coal reform, with the rally resuming towards year-end, mainly due to the European power crisis and subsequent smelter shutdowns.

Supported by physical tightness, Chinese imports and high logistics costs, premiums across the Americas, Asia and Europe increased significantly during 2021. The Midwest premium rose to an all-time-high of 35.4c/lb, ending the year at 30c/lb, while the Main Japanese Port premium finished the year at $170/t, up from $125/t at the beginning of the year.

Alumina prices in H1 2021 underperformed aluminium prices, which supported smelting margins. A fire at the Jamalco refinery in August and Chinese energy and emission policies led to price increases during H2, with ex-China FOB Australia alumina prices increasing by c.60% in less than two months to peak at c.$480/t before closing the year at c.$345/t.

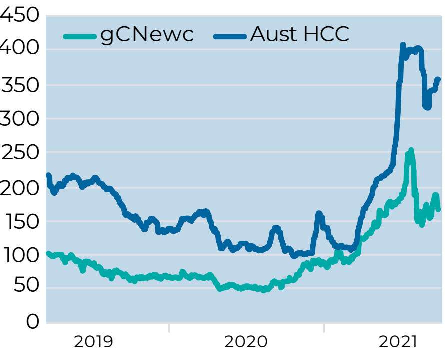
The global bauxite market continued to be well-supplied. The military coup in Guinea in September raised concerns around supply-side risks, but these had largely eased by the end of the year, given alternative sources of supply.

Market review and outlook
continued

Coal

FOB coal ($/t)



Strong demand driven by economic recovery and constrained supply chains beset by weather, geological and mining incidents resulted in a substantial draw on coal stocks and record high coal prices.

Global seaborne thermal coal demand rose by c.43mt (5%) during 2021. Chinese seaborne demand increased by 64mt with supply from Australia falling from 31mt to zero as Australian coal restrictions persisted. The bulk of the 95mt swing in trade flows to China was supplied by Indonesia (+71mt) and Russia (+15mt). High gas prices supported increased thermal coal demand in Europe (+11mt), Korea (+5mt) and Taiwan (+4mt).

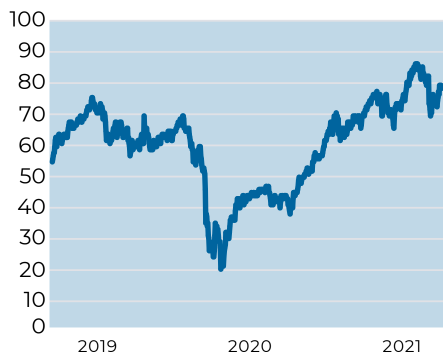
2021 saw record high average thermal coal prices for gCNewc ($137) and API4 ($125). API2 averaged $120/t, marginally below 2011. Coal prices peaked during October which was also a high point for LNG, as consumers looked to restock ahead of the winter period. GCNewc, API4 and API2 monthly prices peaked at 258%, 232% and 341% respectively above January's price levels, before closing the year at $170/t (198%), $136/t (150%) and $137/t (202%) respectively.

Although Chinese seaborne coking coal demand declined by 15mt during 2021, Japan, India, Europe and Brazil saw increased seaborne demand, as record global steel prices supported improved blast furnace capacity utilisation. Together with a number of temporary mine closures, the net overall increase in global seaborne coking coal demand, led spot HCC prices higher from $124/t during January to a peak of $398/t in October before moderating to close at $342/t in December, 175% above January price levels.

Forward gas prices are at relatively high levels, with thermal coal remaining the lowest cost baseload fuel for power generation in all major seaborne markets. Weather-related supply impacts in Australia during December 2021 resulted in production and export shortfalls, which together with Indonesia's temporary ban on coal exports, substantially limited spot coal availability in early 2022.

Oil

Brent crude oil ($/bbl)



2021 marked another year of elevated volatility as the recovery from Covid-19 drove strong underlying demand growth for oil and gas. Prices were further supported by favourable financial markets and fiscal conditions. Further outbreaks of Covid-19 related strains in Q3 (Delta) and in Q4 (Omicron) threatened the trajectory of oil demand recovery, however such concerns proved short-lived, with Brent closing the year at $78 per barrel. The rising oil price through the year also prompted some releases of strategic petroleum reserves, led by the USA. This was absorbed by the market and did little to halt the price trajectory.

In Q3, European and UK energy markets came under severe pressure due to a multitude of factors including low output from renewable energy sources during the summer and low-running gas inventories heading into winter. This was the catalyst for further disruption in global energy markets, with prices impacted throughout the energy chain. The European TTF natural gas benchmark price jumped more than 300% to over EUR100/MWh and shortages of natural gas, LNG and coal caused some utilities and major industrial users to switch to oil as a source of power.

The oil price forward curve structure remained in varying degrees of backwardation throughout the year. This steepened considerably during H2 as the energy crisis took hold and global inventories dropped below the closely tracked five-year range levels.

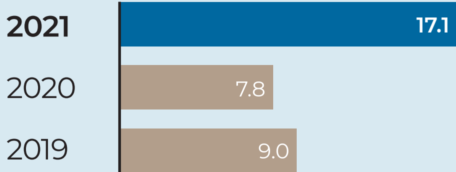
Refining margins in all regions continued to improve during 2021, largely driven by the recovery in transportation fuel markets as mobility restrictions eased and refined product inventories needed to be restocked. Other factors were Hurricane Ida disrupting refining operations in the US, elevated natural gas input costs in H2 2021 and China curbing oil product exports as part of its reforms to reduce carbon emissions and protect domestic supplies.

In shipping, tanker freight markets remained depressed for most of the year. Whilst they lifted in Q4, particularly in the 'clean' refined products segment, market expectations of a year-end upward momentum failed to materialise.

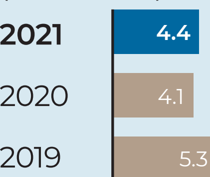
Our Industrial business

We are a major producer of commodities that support the energy and mobility transition, including copper, cobalt, nickel and zinc, while our high-quality coal provides affordable and reliable energy

Industrial activities Adjusted EBITDA◊ (US$ billion)

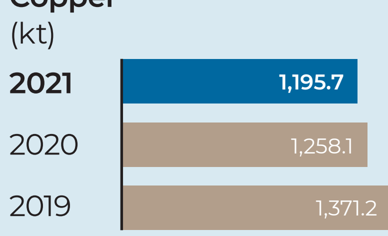


Industrial activities capex (US$ billion)

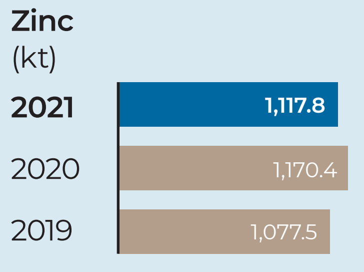


Production highlights (own sourced)

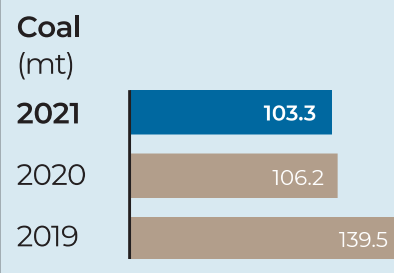
Copper (kt)



Zinc (kt)



Coal (mt)



Metals and minerals mining margin◊

45%

2020: 36%
Resurgent demand in major industrial sectors

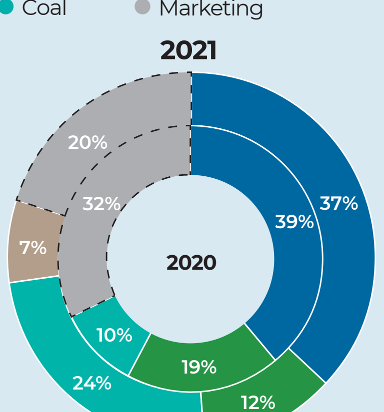
Energy products margin◊

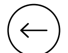
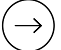
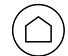
47%

2020: 17%
Volatility in energy markets precipitated demand for coal

Adjusted EBITDA◊ weighting

Copper
Zinc
Coal
Other industrial activities
Marketing



Our Industrial business
continued

Highlights

Industrial Adjusted EBITDA increased by 118% to a record $17,100 million compared to the $7,828 million in 2020. The increase was primarily driven by higher commodity prices, offset by higher costs (mainly energy) and the effects of a weaker US dollar (on average) against many of our key producer country currencies.

Adjusted EBITDA contribution from metals and minerals assets was $12,017 million, up 65% compared to the prior year, with substantial improvements across most operations, owing to higher average commodity prices over the year. Noteworthy were the increased contributions from the African copper assets (up $1,462 million), aided by higher cobalt production, Collahuasi (up $832 million) and the Ferroalloys assets (total contribution of $809 million, up 508% over prior year) owing to higher prices and recovery of production, following South Africa's national Covid lockdown in 2020.

The Mount Isa copper mine, smelter and Townsville copper refinery were transferred for management purposes from the Copper department to the Zinc department, to be managed as an overall Mount Isa polymetallic integrated complex.

Adjusted EBITDA contribution from Energy products assets was $5,603 million, up 439% compared to 2020, mainly due to the significant increase in average realised export thermal and coking coal prices year over year and to a lesser extent, higher oil and gas prices.

US$ million	**Metals and minerals**	**Energy products**	**Corporate and other**	**2021**	Metals and minerals	Energy products	Corporate and other	2020
Revenue◊	41,535	19,269	6	60,810	30,303	11,145	5	41,453
Adjusted EBITDA◊	12,017	5,603	(520)	17,100	7,285	1,039	(496)	7,828
Adjusted EBIT◊	8,128	3,252	(580)	10,800	3,054	(1,365)	(612)	1,077
Adjusted EBITDA mining margin	45%	47%		44%	36%	17%		29%

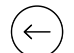
Production from own sources – Total[1]

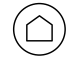
		2021	2020	Change %
Copper	kt	1,195.7	1,258.1	(5)
Cobalt	kt	31.3	27.4	14
Zinc	kt	1,117.8	1,170.4	(4)
Lead	kt	222.3	259.4	(14)
Nickel	kt	102.3	110.2	(7)
Gold	koz	809	916	(12)
Silver	koz	31,519	32,766	(4)
Ferrochrome	kt	1,468	1,029	43
Coal – coking	mt	9.1	7.6	20
Coal – semi-soft	mt	4.5	4.6	(2)
Coal – thermal	mt	89.7	94.0	(5)
Coal	mt	103.3	106.2	(3)
Oil (entitlement interest basis)	kboe	5,274	3,944	34

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.

Reflecting the above, Adjusted EBITDA mining margins were 45% (2020: 36%) in our metals operations and 47% (2020: 17%) in our energy operations.

Capex of $4,423 million (2020: $4,082 million) was 8% higher year over year reflecting a normalisation of sustaining activities, following delays/deferrals in the prior year, brought on by many severe pandemic-related restrictions.



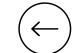
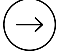
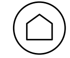


Our Industrial business
continued

1. Represents the Group's share of these JVs.
2. Mount Isa copper operations (including Townsville) previously recorded under copper department moved to zinc department. Prior year was restated accordingly.
3. Adjusted EBITDA mining margin for Metals and Minerals is Adjusted EBITDA excluding non-mining assets as described below ($11,422 million (2020: $6,448 million)) divided by Revenue excluding non-mining assets and intergroup revenue elimination ($ 25,609 million (2020: $18,139 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) ($5,455 million (2020: $1,144 million)), divided by the sum of coal revenue from own production and Oil E&P revenue ($11,504 million (2020: $6,647 million)).

Financial information 2021

2021						Capital expenditure		
US$ million	Revenue◊	Adjusted EBITDA◊	Adjusted EBITDA mining margin[3,4◊]	Depreciation and amortisation	Adjusted EBIT◊	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[2]	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[2]	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
Prodeco	–	(18)		(11)	(29)	–	–	–
Cerrejón[1]	772	452	59%	(89)	363	30	–	30
Coal revenue (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
Industrial activities	**60,810**	**17,100**	**44%**	**(6,300)**	**10,800**	**3,546**	**877**	**4,423**

Our Industrial business
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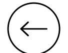
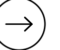
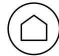
Financial information 2020

2020 US$ million	Revenue◊	Adjusted EBITDA◊	Adjusted EBITDA mining margin[3,4]◊	Depreciation and amortisation	Adjusted EBIT◊	Capital expenditure		
						Sustaining	Expansionary	Total
Copper assets								
Africa	3,105	712	23%	(564)	148	220	196	416
Collahuasi[1]	1,732	1,301	75%	(290)	1,011	287	44	331
Antamina[1]	1,055	755	72%	(283)	472	180	10	190
Other South America	2,025	1,042	51%	(524)	518	309	12	321
Australia[2]	714	317	44%	(142)	175	87	–	87
Polymet	n.a.	(20)		–	(20)	8	–	8
Custom metallurgical	7,842	336		(174)	162	144	–	144
Intergroup revenue elimination	(308)	–		–	–	–	–	–
Copper	**16,165**	**4,443**	**48%**	**(1,977)**	**2,466**	**1,235**	**262**	**1,497**
Zinc assets								
Kazzinc	3,031	1,228	41%	(404)	824	201	193	394
Australia[2]	2,493	452	18%	(611)	(159)	294	–	294
European custom metallurgical	2,883	327		(146)	181	80	25	105
North America	1,746	240		(166)	74	52	–	52
Volcan	–	(33)		–	(33)	–	–	–
Other Zinc	317	(21)	(7%)	(271)	(292)	47	–	47
Intergroup revenue elimination	–	–		–	–	–	–	–
Zinc	**10,470**	**2,193**	**28%**	**(1,598)**	**595**	**674**	**218**	**892**
Nickel assets								
Integrated Nickel Operations	1,461	670	46%	(435)	235	142	306	448
Australia	646	117	18%	(25)	92	33	–	33
Koniambo	239	(196)	(82%)	(102)	(298)	38	–	38
Nickel	**2,346**	**591**	**25%**	**(562)**	**29**	**213**	**306**	**519**
Ferroalloys	1,321	133	10%	(94)	39	87	28	115
Aluminium/Alumina	1	(73)		–	(73)	–	–	–
Iron ore	–	(2)		–	(2)	–	–	–
Metals and minerals	**30,303**	**7,285**	**36%**	**(4,231)**	**3,054**	**2,209**	**814**	**3,023**
Coking Australia[5]	971	244	25%	(245)	(1)	138	39	178
Thermal Australia[5]	4,031	799	20%	(1,327)	(528)	256	113	368
Thermal South Africa	969	183	19%	(347)	(164)	147	28	175
Prodeco	357	(72)		(61)	(133)	44	–	44
Cerrejón[1]	208	5	2%	(110)	(105)	22	–	22
Coal revenue (own production)	**6,536**	**1,159**	**18%**	**(2,090)**	**(931)**	**607**	**180**	**787**
Coal other revenue (buy-in coal)	400	–		–	–	–	–	–
Oil E&P assets	111	(15)	(14%)	(172)	(187)	119	–	119
Oil refining assets	4,098	(105)		(142	(247)	125	–	125
Energy products	**11,145**	**1,039**	**17%**	**(2,404)**	**(1,365)**	**851**	**180**	**1,031**
Corporate and other	5	(496)		(116)	(612)	–	28	28
Industrial activities	**41,453**	**7,828**	**29%**	**(6,751)**	**(1,077)**	**3,060**	**1,022**	**4,082**

Our Industrial business
continued

Operating highlights

Copper assets

Own sourced copper production of 1,195,700 tonnes was 62,400 tonnes (5%) lower than 2020, mainly due to the Mopani disposal (23,800 tonnes), expected lower copper grades at Antapaccay (14,800 tonnes) and lower copper by-products from our mature zinc and nickel mines (26,600 tonnes).

Own sourced cobalt production of 31,300 tonnes was 3,900 tonnes (14%) higher than 2020 due to the limited restart of production at Mutanda in 2021.

African Copper

Own sourced copper production of 277,200 tonnes was 23,800 tonnes (8%) lower than 2020, mainly reflecting the disposal of Mopani. The contribution from Mutanda's limited restart was largely offset by the impact of intermittent power outages at Katanga.

Own sourced cobalt production of 27,700 tonnes was 3,800 tonnes (16%) higher than 2020, reflecting Mutanda's restart.

Collahuasi

Attributable copper production of 277,200 tonnes was in line with 2020.

Antamina

Attributable copper production of 150,000 tonnes and zinc production of 153,700 tonnes was respectively 22,300 tonnes (17%) and 11,300 tonnes (8%) higher than 2020 reflecting Covid-relating mining suspensions in the base period.

Other South America

Own sourced copper production of 235,200 tonnes was 24,600 tonnes (9%) lower than 2020, reflecting expected lower copper grades at Antapaccay and temporarily reduced production at Lomas Bayas due to short-term leach pad issues, now rectified.

Australia

Own sourced copper production of 85,300 tonnes was 10,100 tonnes (11%) lower than 2020 due to expected changes in mine sequencing at Ernest Henry and additional mine development at Cobar.

Custom metallurgical assets

Copper cathode production of 490,600 tonnes was in line with 2020.

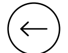
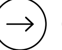
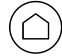
Copper anode production of 454,000 tonnes was 36,100 tonnes (7%) lower than 2020, mainly reflecting scheduled maintenance at Altonorte in July 2021.

Production from own sources – Copper assets[1]

		2021	2020	Change %
African Copper (Katanga, Mutanda, Mopani)				
Copper metal	kt	277.2	301.0	(8)
Cobalt[2]	kt	27.7	23.9	16
Collahuasi[3]				
Copper in concentrates	kt	277.2	276.8	–
Silver in concentrates	koz	4,219	3,961	7
Gold in concentrates	koz	45	53	(15)
Antamina[4]				
Copper in concentrates	kt	150.0	127.7	17
Zinc in concentrates	kt	153.7	142.4	8
Silver in concentrates	koz	6,135	5,535	11
Other South America (Antapaccay, Lomas Bayas)				
Copper metal	kt	64.3	74.1	(13)
Copper in concentrates	kt	170.8	185.6	(8)
Gold in concentrates and in doré	koz	90	90	–
Silver in concentrates and in doré	koz	1,382	1,298	6
Australia (Ernest Henry, Cobar)[5]				
Copper metal	kt	44.8	49.2	(9)
Copper in concentrates	kt	40.5	46.2	(12)
Gold	koz	64	93	(31)
Silver	koz	654	714	(8)
Total Copper department				
Copper	**kt**	**1,024.8**	**1,060.6**	**(3)**
Cobalt	**kt**	**27.7**	**23.9**	**16**
Zinc	**kt**	**153.7**	**142.4**	**8**
Gold	**koz**	**199**	**236**	**(16)**
Silver	**koz**	**12,390**	**11,508**	**8**

Total production – Custom metallurgical assets[1]

		2021	2020	Change %
Copper (Altonorte, Pasar, Horne, CCR)				
Copper metal	kt	490.6	482.6	2
Copper anode	kt	454.0	490.1	(7)

Our Industrial business
continued

Zinc assets

Own sourced zinc production of 1,117,800 tonnes was 52,600 tonnes (4%) lower than 2020, mainly reflecting: (i) the expected decline of Maleevsky mine in Kazakhstan, being lagged by the slower than expected ramp-up of replacement Zhairem mine tonnage (19,600 tonnes); (ii) Mount Isa producing additional metal from ore stockpile drawdowns in the base period (24,400 tonnes); and (iii) Kidd lower grades (13,800 tonnes). These factors were partly offset by stronger zinc production at Antamina, which was suspended for part of 2020 due to Covid restrictions.

Kazzinc

Own sourced zinc production of 147,900 tonnes was 19,600 tonnes (12%) lower than 2020, reflecting expected lower grades from Maleevsky mine (also affecting lead and copper noted below).

Own sourced lead production of 19,800 tonnes was 5,800 tonnes (23%) lower than 2020, and own sourced copper production of 25,600 tonnes was 11,400 tonnes (31%) down, also due to Maleevsky's progressive depletion.

Own sourced gold production of 595,000 ounces was 64,000 ounces (10%) lower than the comparable 2020 period, mainly reflecting expected lower grades at Vasilkovsky.

The new Zhairem zinc/lead mine was commissioned in May 2021, with ramp up through 2022 and steady-state annualised production expected by 2023.

Australia

Zinc production of 609,400 tonnes was 24,100 tonnes (4%) lower than 2020, mainly reflecting Mount Isa processing additional metal from ore stockpile drawdowns in 2020.

Lead production of 188,100 tonnes was 28,700 tonnes (13%) down on 2020 reflecting lower Mount Isa grades.

The Mount Isa copper operations are now reported within the Zinc business unit. Own sourced copper production of 91,500 tonnes was broadly in line with 2020, noting that this figure excludes units from the held-for-sale Ernest Henry mine.

North America

Zinc production of 96,100 tonnes was 18,600 tonnes (16%) lower than 2020, reflecting the reducing production profile of both assets as they approach end of mine life.

South America

Zinc production of 110,700 tonnes was 1,600 tonnes below 2020 mainly reflecting the planned cessation of mining at Aguilar (Argentina) and Iscaycruz (Peru), partly offset by higher production in Bolivia following Covid-related suspensions in 2020.

European custom metallurgical assets

Zinc metal production of 800,600 tonnes was modestly higher than 2020.

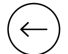
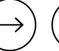
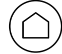
Lead metal production of 244,900 tonnes was 46,900 tonnes (24%) higher than 2020, mainly reflecting the contribution of the Nordenham Metall lead smelter that was acquired in September 2021 (38,200 tonnes).

Production from own sources – Zinc assets[1]

		2021	2020	Change %
Kazzinc				
Zinc metal	kt	147.9	167.5	(12)
Lead metal	kt	19.8	25.6	(23)
Copper metal[6]	kt	25.6	37.0	(31)
Gold	koz	595	659	(10)
Silver	koz	2,921	4,712	(38)
Australia (Mount Isa, Townsville, McArthur River)[5]				
Zinc in concentrates	kt	609.4	633.5	(4)
Copper metal	kt	91.5	89.6	2
Lead in concentrates	kt	188.1	216.8	(13)
Silver	koz	625	557	12
Silver in concentrates	koz	6,521	7,404	(12)
North America (Matagami, Kidd)				
Zinc in concentrates	kt	96.1	114.7	(16)
Copper in concentrates	kt	30.3	40.7	(26)
Silver in concentrates	koz	1,383	2,125	(35)
Other Zinc: South America (Argentina, Bolivia, Peru)[7]				
Zinc in concentrates	kt	110.7	112.3	(1)
Lead in concentrates	kt	14.4	17.0	(15)
Copper in concentrates	kt	1.7	1.6	6
Silver in concentrates	koz	7,383	6,121	21
Total Zinc department				
Zinc	**kt**	**964.1**	**1,028.0**	**(6)**
Lead	**kt**	**222.3**	**259.4**	**(14)**
Copper	**kt**	**149.1**	**168.9**	**(12)**
Gold	**koz**	**595**	**659**	**(10)**
Silver	**koz**	**18,833**	**20,919**	**(10)**

Total production – European custom metallurgical assets[1]

		2021	2020	Change %
Zinc (Portovesme, San Juan de Nieva, Nordenham, Northfleet)				
Zinc metal	kt	800.6	787.2	2
Lead metal	kt	244.9	198.0	24

Our Industrial business
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Nickel assets

Nickel production of 102,300 tonnes was 7,900 tonnes (7%) lower than in 2020, mainly due to the lengthy scheduled statutory shutdown and maintenance issues at Murrin Murrin earlier in the year.

Integrated Nickel Operations (INO)

Own sourced nickel production of 55,200 tonnes was 1,700 tonnes (3%) below 2020.

Murrin Murrin

Own sourced nickel production of 30,100 tonnes was 6,300 tonnes (17%) below 2020, reflecting the lengthy scheduled statutory shutdown in May/June and various maintenance issues earlier in the year.

Koniambo

Nickel production of 17,000 tonnes was In line with 2020 production, following a much improved Q4 2021 performance.

Ferroalloys assets

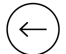
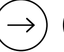
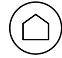
Attributable ferrochrome production of 1,468,000 tonnes was 439,000 tonnes (43%) higher than 2020 mainly due to the South African national lockdown in the prior year, and a strong operating performance.

Production from own sources – Nickel assets[1]

		2021	2020	Change %
Integrated Nickel Operations (INO) (Sudbury, Raglan, Nikkelverk)				
Nickel metal	kt	55.0	56.5	(3)
Nickel in concentrates	kt	0.2	0.4	(50)
Copper metal	kt	13.5	13.5	–
Copper in concentrates	kt	8.3	15.1	(45)
Cobalt metal	kt	1.1	0.6	83
Gold	koz	15	21	(29)
Silver	koz	296	339	(13)
Platinum	koz	33	40	(18)
Palladium	koz	83	101	(18)
Rhodium	koz	4	4	–
Murrin Murrin				
Nickel metal	kt	30.1	36.4	(17)
Cobalt metal	kt	2.5	2.9	(14)
Koniambo				
Nickel in ferronickel	kt	17.0	16.9	1
Total Nickel department				
Nickel	**kt**	**102.3**	**110.2**	**(7)**
Copper	**kt**	**21.8**	**28.6**	**(24)**
Cobalt	**kt**	**3.6**	**3.5**	**3**
Gold	**koz**	**15**	**21**	**(29)**
Silver	**koz**	**296**	**339**	**(13)**
Platinum	**koz**	**33**	**40**	**(18)**
Palladium	**koz**	**83**	**101**	**(18)**
Rhodium	**koz**	**4**	**4**	**–**

Production from own sources – Ferroalloys assets[1]

		2021	2020	Change %
Ferrochrome[8]	kt	1,468	1,029	43
Vanadium Pentoxide	mlb	20.5	19.5	5

Our Industrial business
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Coal assets

Coal production of 103.3 million tonnes was 2.9 million tonnes (3%) lower than 2020, reflecting Prodeco's care and maintenance status and lower domestic power demand/export rail capacity constraints in South Africa, offset by higher production at Cerrejón, following a Covid suspension and strike in 2020.

Australian coking

Production of 9.1 million tonnes was 1.5 million tonnes (20%) higher than 2020 reflecting additional coking-quality production from the Collinsville mine, and various planned maintenance activities in 2020.

Australian thermal and semi-soft

Production of 66.4 million tonnes was broadly in line with 2020.

South African thermal

Production of 20.0 million tonnes was 4.0 million tonnes (17%) under 2020, reflecting lower domestic power demand and export rail capacity constraints.

Cerrejón

Attributable production of 7.8 million tonnes was 3.7 million tonnes (90%) higher than 2020, reflecting the base period being disrupted by both a Covid-related temporary suspension and strike action.

Oil assets

Exploration and production

Entitlement interest production of 5.3 million boe was 1.3 million boe (34%) higher than 2020 mainly due to commencement of the gas phase of the Alen project in Equatorial Guinea. There was no production from the Chad fields in 2021.

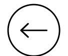
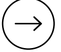
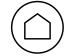
Coal assets[1]

		2021	2020	Change %
Australian coking coal	mt	9.1	7.6	20
Australian semi-soft coal	mt	4.5	4.6	(2)
Australian thermal coal (export)	mt	55.9	55.7	–
Australian thermal coal (domestic)	mt	6.0	6.4	(6)
South African thermal coal (export)	mt	14.7	14.8	(1)
South African thermal coal (domestic)	mt	5.3	9.2	(42)
Cerrejón[9]	mt	7.8	4.1	90
Prodeco	mt	–	3.8	(100)
Total Coal department	**mt**	**103.3**	**106.2**	**(3)**

Oil assets

		2021	2020	Change %
Glencore entitlement interest basis				
Equatorial Guinea	kboe	4,141	1,960	111
Chad	kbbl	–	1,112	(100)
Cameroon	kbbl	1,133	872	30
Total Oil department	**kboe**	**5,274**	**3,944**	**34**
Gross basis				
Equatorial Guinea	kboe	20,137	10,435	93
Chad	kbbl	–	1,521	(100)
Cameroon	kbbl	2,866	2,528	13
Total Oil department	**kboe**	**23,003**	**14,484**	**59**

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 Mount Isa copper operations (including Townsville) previously recorded under copper department moved to zinc department.
6 Copper metal includes copper contained in copper concentrates and blister.
7 South American production excludes Volcan Compania Minera.
8 The Group's attributable 79.5% share of the Glencore-Merafe Chrome Venture.
9 The Group's pro rata share of Cerrejón production (33.3%).

Our Industrial business
continued

Carbon intensity of Industrial Activities

We show the carbon intensity of our operations as Scope 1 and 2 emissions compared to production from those operations. We have shown metals mining, coal mining, metals smelting and oil refining separately. Emissions data is collected on a site-by-site rather than activity-by-activity basis. Integrated sites with mining and smelting capability have therefore been allocated to the most appropriate category.

Around 40-50% of Glencore's operational CO_2 footprint relates to the smelter portfolio. The South African national lockdown in 2020 resulted in significantly lower production and emissions from the Ferroalloys business. These tonnes and emissions were largely restored in 2021. Power supplies for the smelter assets are almost exclusively from national grids and therefore dependent on the mix of fuel sources in the respective jurisdiction. Scope 1 smelter emissions also include reductants which are hard to abate.

Mining operations are mainly operated with diesel-fuelled equipment. Lower absolute Scope 1 emissions in mining operations compared to pre-Covid (2019) levels mainly reflects the closure of mining operations at Prodeco and the sale of Mopani copper mines, plus temporary demand-led production cuts in the coal portfolio during 2020-21.

Metals mining[1]

			2021	2020	2019
Reported own sourced metals production	Copper	kt	1,195.7	1,258.1	1,371.2
	Zinc	kt	1,117.8	1,170.4	1,077.5
	Cobalt	kt	31.3	27.4	46.3
	Nickel	kt	102.3	110.2	120.6
	Lead	kt	222.3	259.4	280.0
	Gold	koz	809	916	886
	Silver	koz	31,519	32,766	32,018
Converted to copper equivalents[3]		kt	2,465	2,592	2,803
Less: attributable Cu-equivalent production from JVs		kt	(530)	(503)	(474)
Add: Cu-equivalent production from Volcan		kt	157	120	164
Relevant Cu-equivalent production		**kt**	**2,092**	**2,209**	**2,493**
CO_2 emissions of managed assets (Scope 1)		mt	5.0	5.2	5.6
CO_2 emissions of managed assets (Scope 2)		mt	2.4	2.6	2.6
CO_2 emissions of managed assets (Scope 1 & 2)		**mt**	**7.4**	**7.8**	**8.3**
Carbon intensity of metals mining		t CO_2/t Cu-equiv	3.6	3.5	3.6

Metals smelting[2]

			2021	2020	2019
Reported smelter production	Copper anode	kt	454.0	490.1	510.7
	Copper cathode	kt	490.6	482.6	432.9
	Lead	kt	244.9	198.0	190.5
	Zinc	kt	800.6	787.2	805.7
	Ferroalloys	kt	1,468.3	1,028.8	1,438.4
Converted to copper equivalents[3]		kt	1,573	1,518	1,552
Add: minority interests share of managed JVs		kt	54	37	52
Relevant Cu-equivalent production		**kt**	**1,627**	**1,556**	**1,605**
CO_2 emissions of managed assets (Scope 1)		mt	4.8	3.7	5.0
CO_2 emissions of managed assets (Scope 2)		mt	7.2	5.6	7.2
CO_2 emissions of managed assets (Scope 1 & 2)		**mt**	**12.0**	**9.3**	**12.2**
Carbon intensity of metals smelting		t CO_2/t Cu-equiv	7.4	6.0	7.6

1 Includes integrated mine/smelter operations: Mount Isa, Kazzinc, INO, Murrin Murrin, Koniambo, Mopani (disposed 2021).
2 Includes integrated mine/smelter operations: Ferroalloys.
3 Converted to Cu-equivalents on the basis of 2019 (baseline year) average prices.

Coal mining

		2021	2020	2019
Reported coal production	mt	103.3	106.2	139.5
Add: minority interests share of managed JVs	mt	17.9	18.7	23.0
Less: Cerrejon JV	mt	(7.8)	(4.1)	(8.6)
Less: other non-managed JVs	mt	(5.6)	(7.5)	(8.5)
Relevant coal production	**mt**	**107.7**	**113.2**	**145.5**
Converted to copper equivalents[3]	mt	1,238	1,301	1,671
CO_2 emissions of managed assets (Scope 1)	mt	5.1	5.7	6.7
CO_2 emissions of managed assets (Scope 2)	mt	1.1	1.2	1.2
CO_2 emissions of managed assets (Scope 1 & 2)	**mt**	**6.2**	**6.8**	**7.9**
Carbon intensity of coal mining	t CO_2/t coal	0.058	0.060	0.054
Carbon intensity of coal mining	t CO_2/t Cu-equiv	5.0	5.3	4.7

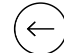
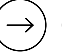
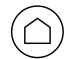
Oil refining and distribution

		2021	2020	2019
Astron Energy oil products sold	million litres	6,386	5,149	3,877
CO_2 emissions of Astron Energy (Scope 1)	mt	–	0.1	0.6
CO_2 emissions of Astron Energy (Scope 2)	mt	–	–	0.1
CO_2 emissions of Astron Energy (Scope 1 & 2)	**mt**	**–**	**0.1**	**0.7**
Carbon intensity of Astron Energy[4]	t CO_2/million litres	3.7	27.6	177.2

CO_2 emissions of managed assets (Scope 1 & 2)

		2021	2020	2019
Metals	mt	7.4	7.8	8.3
Coal	mt	6.2	6.8	7.9
Smelters	mt	12.0	9.3	12.2
Astron Energy	mt	0.0	0.1	0.7
Add: Chad E&P (held for sale) and other assets	mt	–	0.1	0.4
Total reported CO_2 emissions (Scope 1 & 2)	**mt**	**25.7**	**24.2**	**29.4**
Change vs 2019 baseline		-13%	-18%	

4 Astron Energy's refining operations have been suspended since early 2020. While the refinery is being repaired and upgraded, Astron Energy has imported refined products for distribution in South Africa and Botswana.

Risk management

Risk management is one of the core responsibilities of the Group's leadership and it is central to our decision-making processes. The Group leadership's fundamental duties as to risk management are:

- making a robust assessment of emerging and principal risks
- monitoring risk management and internal controls
- promoting a risk aware culture

Effective risk management is crucial in helping the Group achieve its objectives of preserving its overall financial strength for the benefit of all stakeholders and safeguarding its ability to continue as a going concern, while generating sustainable long-term returns.

The Board assesses and approves our overall risk appetite, monitors our risk exposure and overall evaluation of internal controls. This process is supported by the Audit, HSEC and ECC Committees, whose roles include evaluating and monitoring the risks inherent in their respective areas via reporting from the Group corporate functions:

- Industrial and Marketing risk functions (Group Risk Functions)
- Compliance
- Legal
- Finance
- Internal Audit
- HSEC-HR / HSEC audit
- Sustainable Development
- Human Resources
- IT

The Committees' work concerning these various risks is set out in their reports on pages 96 to 100.

The Board actively manages and monitors the Group's risks, financial exposure and related internal controls to mitigate these risks. Monitoring and reporting are the responsibility of the Group Risk Functions and the Heads of corporate functions who provide regular updates to the Board and its Committees covering various risks and the performance of the relevant controls in place. These reports cover various topics, including Group VaR, credit exposure, material risks from the risk register, internal audit findings, compliance monitoring, HSEC-HR matters and HSEC assurance. The Board also receives updates from the ESG committee and on the Raising Concerns programme.

As well as the ongoing work of the Board and its Committees on the various major areas of risk, the Board undertakes a complete review of the Group's principal and emerging risks in its main Q4 meeting, which is then updated and considered in subsequent meetings for the purposes of this report and the interim report.

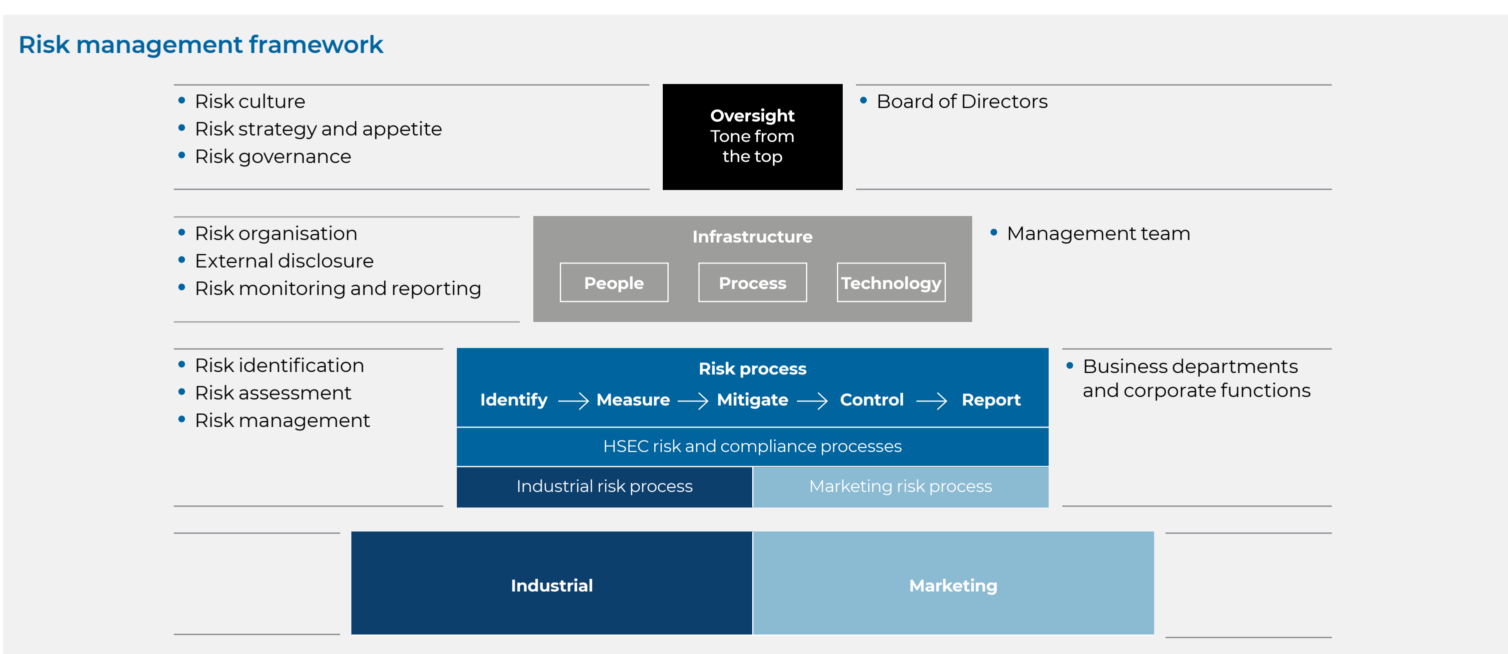
Risk management framework

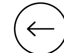
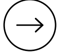
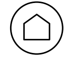
Our Group functions support senior management and those with responsibilities for risk within the business, in the development and maintenance of an appropriate institutional risk culture of managing and mitigating risk across the Group, as appropriate.

Industrial risk management

Responsibilities for business risk management are decentralised across the departments and assets and supported by the Industrial Assets' Risk Management teams. We believe that all employees should be accountable for the risks related to their roles. As a result, we encourage our employees to escalate risks (not limited to hazards), whether potential or realised, to their immediate supervisors. This enables risks to be tackled and mitigated at an early stage by the team with the relevant level of expertise.

Led by the Head of Industrial Assets and the Industrial Leads across each commodity department, management teams at each industrial operation are responsible for



Risk management continued

implementing processes that identify, assess and manage risk.

The industrial risk process is driven by ongoing risk assessment informing risk registers maintained at asset, department and Group levels based on risk rating and controls evaluation, with risks owned, escalated and approved according to materiality and following the guidance contained in the Glencore enterprise risk matrix.

HSEC-HR & sustainability risk management

These risk management processes are managed at asset level, with the support and guidance from the central Sustainability and HSEC and Human Rights (HSEC-HR) teams, and subject to the leadership and oversight of the HSEC Committee. The Head of Industrial Assets drives the risk management framework for all industrial assets, covering HSEC-HR, and his team monitors its implementation across the Group.

Our risk management framework allows us to identify, assess and mitigate HSEC-HR related risks. The framework identifies material matters and supports our ongoing assessment of what matters most to our business and to our stakeholders. The framework is supported by our HSEC assurance process. On a quarterly basis we monitor and review the progress to close out the corrective actions and address any outstanding issues with the local management teams. The Group's internal HSEC assurance programme focuses on catastrophic risks, assessing and monitoring compliance with leading practices.

Further information is provided in the report from the HSEC Committee on page 97 and will be published in the Group's Sustainability Report for 2021.

Marketing risk (MR) management

Glencore's marketing activities are exposed to a variety of risks, such as commodity price, basis, volatility, foreign exchange, interest rate, credit and performance, liquidity and regulatory. Glencore devotes significant resources to developing and implementing policies and procedures to identify, monitor and manage these risks.

Glencore's MR is managed at an individual, business and central level. Initial responsibility for risk management is provided by the businesses in accordance with and complementing their commercial decision-making. A support, challenge and verification role is provided by the central MR function headed by the Chief Risk Officer (CRO) via its daily risk reporting and analysis which is split by market and credit risk.

The MR function monitors and analyses the large transactional flows across many locations using its timely and comprehensive recording and reporting of resultant exposures, which provides the encompassing positional analysis, and continued assessment of universal counterparty credit exposure.

The MR team provides a wide array of daily and weekly reporting. For example, daily risk reports showing Group Value at Risk (VaR), back testing results and various stress tests and analysis are distributed to the CEO, CFO and CRO. Additionally, business risk summaries showing positional exposure and other relevant metrics, together with potential margin call requirements, are also

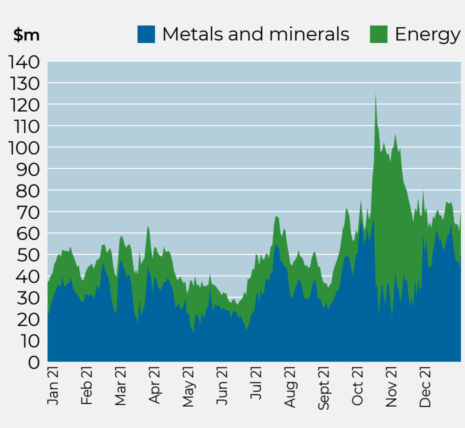
Value at risk

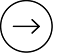
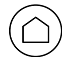
One of the tools used by Glencore to monitor and limit its primary market risk exposure, namely commodity price risk related to its physical marketing activities, is the use of a value at risk (VaR) computation. VaR is a risk measurement technique, which estimates the potential loss that could occur 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 all markets and commodities and risk measures can be aggregated to derive a single risk value. Glencore's Board has set a consolidated VaR limit (one day 95% confidence level) of $150 million (2020: $100 million) representing less than 0.4% of total equity, which the Board reviews annually. Given 2021's elevated implied market volatilities, together with statistically higher commodity correlations and the nature / extent (e.g. increased size and tenor of the LNG business) of transaction volumes, the Board approved an increase in the VaR limit in H2 2021, initially to $130 million on a temporary basis and then to $150 million going forward, with effect from 1 January 2022.

Glencore uses a one-day VaR approach based on a Monte Carlo simulation with a weighted data history computed at a 95% confidence level. Average market risk VaR (1 day 95%) during 2021 was $54 million, with an observable high of $126 million and low of $27 million, while average equivalent VaR during 2020 was $39 million. There were no limit breaches during the period.

The Group remains aware of the extent of coverage of risk exposures and their limitations. In addition, VaR does not purport to represent actual gains or losses in fair value on earnings to be incurred by the Group, nor are these VaR results considered indicative of future market movements or representative of any actual impact on its future results. VaR remains viewed in the context of its limitations; notably, the use of historical data as a proxy for estimating future events, market illiquidity risks and risks associated with longer time horizons as well as tail risks. Recognising these limitations, the Group complements and refines this risk analysis through the use of stress and scenario analysis. The Group regularly back-tests its VaR to establish adequacy of accuracy and to facilitate analysis of significant differences, if any.

The Board has approved the Audit Committee's recommendation of a one day, 95% VaR limit of $150 million for 2022.



Risk management continued

circulated daily. The MR function strives to continuously enhance its stress and scenario testing as well as improve measures to capture additional risk exposure within the specific areas of the business.

The Group makes extensive use of credit enhancement tools, seeking letters of credit, insurance cover, discounting and other means of reducing credit risk from counterparts. In addition, mark-to-market exposures in relation to hedging contracts are regularly and substantially collateralised (primarily with cash) pursuant to margining agreements in place with such hedge counterparts.

The Group-wide credit risk policy governs higher levels of credit risk exposure, with an established threshold for referral of credit decisions by business heads to the CRO, CFO and the CEO (relating to unsecured amounts in excess of $75 million with BBB- (or equivalent) or lower rated counterparts). At lower levels of materiality, decisions may be taken by the business heads where key strategic transactions or established relationships, together with credit analysis, suggest that some level of open account exposure may be warranted.

Managing risk for joint ventures (JVs)

The Board, through the ECC and HSEC Committees, reviews and determines the appropriate level of risk management oversight for the Group's material JVs. We ensure that our material risk management programmes are implemented at the JVs that we operate. In other JVs, we seek to influence our JV partners to adopt our commitment to responsible business practices and implement appropriate programmes in respect of their main business risks.

Legal and compliance

For legal and compliance risk, see Ethics and Compliance section on page 43, and the laws and enforcement risk on page 75.

Internal audit

Glencore's Internal Audit function reports directly to the Audit Committee. Its role is to evaluate and improve the effectiveness of business risk management, internal control, and business governance processes.

A risk-based audit approach is applied in order to focus on high-risk areas during the audit process. It involves discussions with management on key risk areas identified in the Group's budgeting process, emerging risks, operational changes, new investments and capital projects. On an annual basis, Internal Audit also performs reviews at the direction of senior management and the Audit Committee. Internal Audit reviews these areas of potential risk, and suggests controls to mitigate exposures identified.

The Audit Committee considers and approves the risk-based Internal Audit plan, areas of audit focus and resources and is regularly updated on audits performed and relevant findings, as well as the progress on implementing the actions arising. In particular, the Committee considers Internal Audit's main conclusions, its KPIs and the effectiveness and timeliness of management's responses to its findings. The Audit Committee has concluded that the Internal Audit function remains effective.

Principal and emerging risks

Our approach is framed by the ongoing understanding of the risks that we are exposed to, emerging trends that could seriously impact our business model, our risk appetite in respect of these risks, how these risks change over time and ensuring risk monitoring takes place across multiple organisational levels.

In accordance with UK Financial Reporting Council guidance, we define a principal risk as a risk or combination of risks that could seriously affect the performance, future prospects or reputation of Glencore. These include those risks which would threaten the business model, future performance, solvency, or liquidity of the Group.

The Group understands an emerging risk as a risk that has not yet fully crystallised but is at an early stage of becoming known and/or coming into being and expected to grow in significance in the longer term.

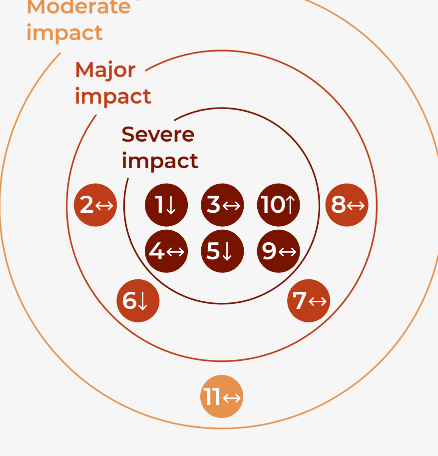
Emerging risks typically have their origin outside Glencore and there is often insufficient information for these risks to be fully understood and prevention by the Group may not be possible.

The Board mandates its ECC, HSEC and Audit Committees to identify, assess and monitor the principal and emerging risks relevant to their respective remits. These Committees usually meet five times a year and are always followed by a meeting of the Board to review and discuss their work.

The assessment of our principal risks, according to exposure and impact, is detailed on the following pages.

The commentary on the risks in this section should be read in conjunction with the explanatory text under *Understanding our risks* information which is set out on page 72.

2021 developments and overview of principal risks and uncertainties

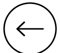
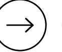
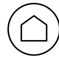


Risk probability change in 2021 v 2020

↑ Increase ↔ Stable ↓ Decrease

Principal risks

1. Supply, demand and prices of commodities
2. Currency exchange rates
3. Geopolitical, permits and licences to operate
4. Laws and enforcement
5. Liquidity
6. Counterparty credit and performance
7. Operating
8. Cyber
9. Health, safety and environment
10. Climate change
11. Community relations and human rights

Risk management continued

Evolution in principal and emerging risks

Covid-19

Globally, Covid-19 has continued to disrupt and affect our business. The main issues this year have been:

- the implementation of several new health and safety measures at our industrial sites and offices around the globe
- further mandatory shutdowns imposed by governments and shifts to remote working
- the various restrictions in travel, domestically and internationally, and
- strained supply chains.

Notwithstanding these challenges and their related impact on our risks, Covid-19's impact on our industry and the Company has been uneven. Global trading flows continue to operate and no critical infrastructure assets have been suspended. The benefits of global policy responses to tackle the impacts of the pandemic have helped reduce the negative consequences on the global economy.

This year has also seen significant increases in energy prices.

Russia/Ukraine conflict

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. 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. Glencore complies with all sanctions applicable to our business activities.

Given the importance of Russian/Ukrainian supply to a number of key commodities including oil, natural gas, coal, grain, aluminium and nickel, volatilities in all of these have spiked. Applicable Sanctions are also significantly impacting traditional commodity trade flows.

Glencore has no operational footprint in Russia and our trading exposure is not significant. We are reviewing all our business activities in the country including our equity stakes in En+ and Rosneft (see note 35).

Over time, global commodity trade flows will need to adapt to some or all of Russian/Ukrainian supply being unavailable, whether due to infrastructure damage, sanctions or ethical concerns.

2021 update

Consistent with the prior year, there are 11 principal risks of the Group, of which the following six are the most significant and may potentially give rise to the most material and adverse effects on the Group:

- supply, demand, and prices of commodities
- geopolitical, permits and licences to operate
- laws and enforcement
- health, safety, environment, including catastrophic hazards
- liquidity, and
- climate change risks.

The pages which follow provide a detailed analysis of each of the principal risks and uncertainties with comments on changes of impact, mitigation, controls, actions, and other relevant comments.

Longer-term viability

In accordance with the requirements of the UK Corporate Governance Code, the Board has assessed the prospects of the Group's viability over the four-year period from 1 January 2022. This period is consistent with the Group's established annual business planning and forecasting processes and cycle, which is subject to review and approval each year by the Board.

The Board also assessed the medium- and long-term impact of climate change on the outlook for our commodity businesses, under a range of possible scenarios, as set out on pages 24-25. Such impacts are uncertain, being particularly dependent on long-term changes in the energy mix related to power generation and transportation, as well as consumption efficiencies, behavioural change and co-ordinated implementation of government policy and regulation frameworks, which will materially fall outside the four-year period selected for assessment of longer term viability. This analysis, however, indicates stable or improving opportunities across the portfolio in the Current Pathway scenario. In the Rapid Transformation and Radical Transition scenarios, we project significant coal demand decline over the longer term, more than compensated however (from a financial perspective) by materially stronger demand for battery and new energy infrastructure required metals.

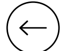
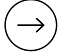
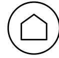
The four-year plan considers Glencore's Adjusted EBITDA, capital expenditure, funds from operations (FFO) and Net debt, and the key financial ratios of Net debt to adjusted EBITDA and FFO to Net debt over the forecast years and incorporates stress tests to simulate the potential impacts of exposure to the Group's principal risks and uncertainties.

For the 2022-25 plan these scenarios included:

- a prolonged downturn in the price and demand of commodities most impacting Glencore's operations. Prices and FX over Q2 2020 (lowest average quarter in recent history, accounting for Covid-19) are assumed to prevail for the outlook period to 2025;
- foreign exchange movements to which the Group is exposed as a result of its global operations;
- actions at the Group's disposal to mitigate the adverse impacts of the above, principally the ability to defer or cancel capital expenditure, to manage the working capital cycle and to reduce or stop distributions to shareholders; and
- consideration of the potential impact of adverse movements in macroeconomic assumptions and their effect on the above key financial KPIs and ratios which could increase the Group's access to or cost of funding.

The scenarios were assessed taking into account current risk appetite and any mitigating actions Glencore could take, as required, in response to the potential realisation of any of the stressed scenarios.

Based on the results of the related analysis, the Directors have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the four-year period of this assessment. They also believe that the review period of four years is appropriate having regard to the Group's business model, strategy, principal risks and uncertainties, and viability.

Risk management continued

Understanding our risks information

There are many risks and uncertainties which have the potential to significantly impact our business. The order in which these risks and uncertainties appear does not necessarily reflect the likelihood of their occurrence or the relative magnitude of their potential material adverse effect on our business.

We have sought to provide examples of specific risks. However, in every case these do not attempt to be an exhaustive list. These principal risks and uncertainties should be considered in connection with any forward looking statements in this document as explained on page 259.

Identifying, quantifying and managing risk is complex and challenging. Although it is our policy to identify and, where appropriate and practical, actively manage risk, our policies and procedures may not adequately identify, monitor and quantify all risks.

This section describes our attempts to manage, balance or offset risk. Risk is, however, by its very nature uncertain and inevitably events may lead to our policies and procedures not having a material mitigating effect on the negative impacts of the occurrence of a particular event. Our scenario planning and stress testing may accordingly prove to be optimistic, particularly in situations where material negative events occur in close proximity. Since many risks are connected, our analysis should be read against all risks to which it may be relevant.

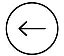
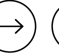
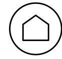
In this section, we have sought to update our explanations, reflecting our current outlook. Mostly this entails emphasising certain risks more strongly than other risks rather than the elimination of, or creation of, risks. Certain investors may also be familiar with the risk factors that are published in the Group debt or equity prospectuses or listing documents. These provide in part some differing descriptions of our principal risks.

Our latest documentation for debt investors and their related risk disclosures is available at: **glencore.com/investors/debt-investors**

In addition, more information on our risks is available in the relevant sections of our website.

To provide for concise text:

- where we hold minority interests in certain businesses, although these entities are not generally subsidiaries and would not usually be subject to the Group's operational control, these interests should be assumed to be subject to these risks. 'Business' refers to these and any business of the Group
- where we refer to natural hazards, events of nature or similar phraseology we are referring to matters such as earthquake, flood, severe weather and other natural phenomena
- where we refer to 'mitigation' we do not intend to suggest that we eliminate the risk, but rather it refers to the Group's attempt to reduce or manage the risk. Our mitigation of risks will usually include the taking out of insurance where it is customary and economic to do so
- this section should be read as a whole – often commentary in one section is relevant to other risks
- 'commodity/ies' will usually refer to those commodities which the Group produces or sells
- 'law' includes regulation of any type
- 'risk' includes uncertainty and hazard and together with 'material adverse effect on the business' should be understood as a negative change which can seriously affect the performance, future prospects or reputation of the Group. These include those risks which would threaten the business model, future performance, reputation, solvency or liquidity of the Group
- a reference to a note is a note to the 2021 financial statements
- a reference to the sustainability report is our 2021 sustainability report to be published in April 2022.

Risk management continued

Strategic priorities

Responsible production and supply

Responsible portfolio management

Responsible product use

1. Supply, demand, and prices of commodities

2021 vs 2020	Risk appetite	Link to strategy
	High **Medium** Low	

Being a resources company, we are subject to the inherent risk of sustained low prices of our main commodities, particularly affecting our industrial business.

Description and potential impact

The revenue and earnings of substantial parts of our industrial asset activities and, to a lesser extent, our marketing activities, are dependent upon prevailing commodity prices. Commodity prices are influenced by several external factors, including the supply of and demand for commodities, speculative activities by market participants, global political and economic conditions, related industry cycles and production costs in major producing countries.

The dependence of the Group (especially our industrial business) on commodity prices, supply, and demand of commodities, make this the Group's foremost risk.

We are dependent on the expected volumes of supply or demand for commodities which can vary for many reasons, such as competitor supply, changes in resource availability, government policies and regulation, costs of production, global and regional economic conditions and demand in end markets for products in which the commodities are used. Supply and demand volumes can also be impacted by technological developments, e.g. commodity substitutions, fluctuations in global production capacity, geopolitical events, global and regional weather conditions, natural disasters, and diseases, all of which impact global markets and demand for commodities.

Future demand for certain commodities might decline (e.g. fossil fuels), whereas others might increase (e.g. copper, cobalt, and nickel for their use in electric vehicles and batteries more broadly), taking into consideration the transition to a low carbon economy.

Furthermore, changes in expected supply and demand conditions impact the expected future prices (and thus the price curve) of each commodity and significant falls in the prices of certain commodities (e.g. copper, coal, zinc and cobalt) can have a severe drag on our financial performance, impede shareholder returns and could lead to concerns by external stakeholders as to the strength of the Group's balance sheet.

This risk is more prevalent in fossil fuels, given the drive towards net zero emissions over the long term. Net zero emissions requires demand for unabated coal and other hydrocarbon fuel sources to materially reduce over time, driven on by political pressures, societal expectations, and generally increased access to, and cost competitiveness of, lower carbon alternatives (i.e. renewables) and the likelihood of increased and broader implementation of carbon pricing/taxes across the geographies where the Group operates.

The new or improved energy production possibilities and/or technologies are likely to reduce the demand for some commodities such as coal, however, at the same time, are likely to materially increase demand for other commodities.

Any adverse economic developments, particularly those impacting China and fast growing developing countries, could lead to reductions in demand for, and consequently price reductions of, commodities, with particular risk to commodities used in steelmaking such as iron ore, metallurgical coal and zinc.

Developments

Energy markets tightened significantly in H2 2021 leading to energy price increases across the board. Industrial metals prices remained at strong levels throughout the year.

In this environment, our long-term plans for our industrial operations remained appropriate with no market-driven corrections required. Material portfolio changes were the acquisition of the two-thirds of the Cerrejon thermal coal business we did not already own, and the restart of the Mutanda copper/cobalt operation.

Marketing operations benefited from underlying supply/demand tightness and volatility spikes across a number of commodities, also leading to the Board approving a temporary (and ultimately permanent) increase request to the Group's Value at Risk limit.

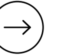
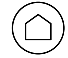
The Russia/Ukraine conflict in 2022 has led to elevated volatility across many asset classes, including commodities. Depending on the duration of the conflict and the sanctions regime, global commodity flows may change materially from their pre-2022 situation.

Mitigating factors

We continue to maintain focus on cost discipline and achieving greater operational efficiency, and we actively manage marketing risk, including daily analysis of Group value at risk (VaR).

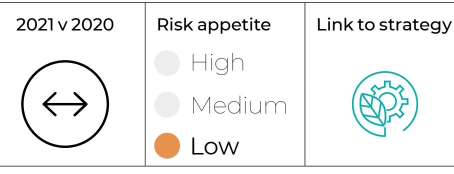
We maintain both a diverse portfolio of commodities, geographies, currencies, assets and liabilities and a global portfolio of customers and contracts.

We seek to prepare for anticipated shifts in commodity demand, for example by putting a special focus on the parts of the business that will potentially grow with increases in usage of electric vehicles and battery production and recycling, and by closely monitoring fossil fuel (particularly thermal coal) demands. We can also reduce the production of any commodity within our portfolio in response to changing market conditions.

Risk management continued

2. Currency exchange (FX) rates



This affects us as a global company usually selling in US dollars but having costs in a large variety of other currencies.

Description and potential impact

FX changes happen all the time but are often difficult to predict. Producer country currencies tend to increase in correlation with relevant higher commodity prices. Similarly, decreases in commodity prices are generally associated with increases in the US dollar relative to local producer currencies.

The vast majority of our sales transactions are denominated in US dollars, while operating costs are spread across many different countries, the currencies of which fluctuate against the US dollar. A depreciation in the value of the US dollar against one or more of these currencies will result in an increase in the cost base of the relevant operations in US dollar terms.

The main currency exchange rate exposure is through our industrial assets, as a large proportion of the costs incurred by these operations is denominated in the currency of the country in which each asset is located.

Developments

Higher commodity prices supported a level of producer currency strengthening versus the US dollar in 2021.

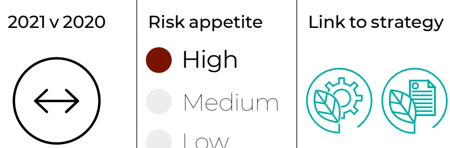
Near term confidence in stability of global demand (and thus indirectly FX rates for relevant producer countries) hinges on many factors, particularly those that relate to the prospects of global economic recovery and growth, including U.S./China trade relationship, political/economic tension across the CIS and the ongoing disruption caused by the coronavirus pandemic.

Mitigating factors

Ordinarily, where material, FX exposure to non-operating FX risks is hedged. The inverse FX correlation (against USD commodity prices) usually provides a partial natural FX hedge for the industrial business. In respect of commodity purchase and sale transactions denominated in currencies other than US dollars, the Group's policy is usually to hedge the specific future commitment through a forward exchange contract. From time to time, the Group may hedge a portion of its currency exposures and requirements in an attempt to limit any adverse effect of exchange rate fluctuations.

We continuously monitor and report on financial impacts resulting from foreign currency movements.

3. Geopolitical, permits and licences to operate



We operate in many countries across the globe. Regulatory regimes applicable to resource companies can often be subject to adverse and short-term changes.

Description and potential impact

We operate and own assets in a large number of geographic regions and countries, some of which are categorised as developing, complex or having unstable political or social environments. As a result, we are exposed to a wide range of political, economic, regulatory, social and tax environments. The Group transacts business in locations where it is exposed to a risk of overt or effective expropriation or nationalisation. Our operations may also be affected by political and economic instability, including terrorism, civil disorder, violent crime, war, and social unrest.

Increased scrutiny by governments and tax authorities in pursuit of perceived aggressive tax structuring by multinational companies has elevated potential tax exposures for the Group. Additionally, governments have sought additional sources of revenue by increasing rates of taxation, royalties or resource rent taxes or may increase sustainability obligations. The tax codes of some countries can be uncertain in their application and the access to impartial administrative and judicial redress may be limited. In certain cases, a government authority may make material demands without robust justification with a view to negotiating a settlement.

The terms attaching to any permit or licence to operate may be onerous and obtaining these and other approvals, which may be revoked, can be particularly difficult. Furthermore, in certain countries, title to land and rights and permits in respect of resources are not always clear or may be challenged.

Adverse actions by governments and others can result in operational/project delays or loss of permits or licences to operate. Policies or laws in the countries in which we do business may change in a manner that may negatively affect the Group.

The suspension or loss of our permits or licences to operate could have a material adverse effect on the Group and could also preclude Glencore from participating in bids and tenders for future business and projects, therefore affecting the Group's long-term viability.

Our licences to operate through mining rights are dependent on a number of factors, including compliance with regulations and constructive relationships with a wide and diverse range of stakeholders.

The continued operation of our existing assets and future plans are in part dependent upon broad support, our 'social licence to operate', and a healthy relationship with the respective local communities – see further Community Relations and Operating risks concerning workforce disputes.

Risk management continued

Developments

The Group has increased its engagement, including due to Covid-19 with employees, relevant governmental authorities, regulators, and other stakeholders.

Resource nationalism continues to be a challenging issue in many countries.

Emerging uncertainty regarding global supply of commodities due to the Russia/Ukraine conflict may disrupt certain global trade flows and place significant upwards pressure on commodity prices and input costs as seen through early March 2022. Challenges for market participants may include availability of funding to ensure access to raw materials, ability to finance margin payments and heightened risk of contractual non-performance.

Ongoing scrutiny by governments and tax authorities has maintained potential tax exposures for the Group at elevated levels, with some tax authorities taking an aggressive approach to engaging with the Group, which has in some cases led to litigation.

In 2021, we published our annual Payments to Governments report. This detailed total government contributions in 2020 of $5.8 billion. It also set out details of payments on a project by project basis.

Also see Community relations and Human Rights risk below.

Mitigating factors

We endeavour to operate our businesses according to high legal, ethical, social, and human rights standards, and to ensure that our presence in host countries leaves a positive lasting legacy (see sustainability risks later in this section). This commitment is essential to enable us to effectively manage these risks and to maintain our permits and licences to operate.

We operate under a Group Tax Policy, annually reviewed by the Board, which sets out the Group's commitment to comply with all applicable tax laws, rules and regulations, without exception, and to be characterised as a 'good corporate fiscal citizen'.

The Group's industrial assets are diversified across various countries. The Group has an active engagement strategy with the governments, regulators, and other stakeholders in the countries in which it operates or intends to operate. Through strong relationships with stakeholders we endeavour to secure and maintain our licences to operate.

4. Laws and Enforcement

2021 v 2020	Risk appetite	Link to strategy
↔	High **Medium** Low	

Some of our existing industrial and marketing activities are located in countries that are categorised as developing or as having challenging political or social climates or where the legal system is uncertain, and/or where corruption is generally understood to exist, and therefore there will always be residual risk in relation to our compliance with laws and external requirements.

Description and potential impact

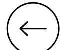
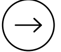
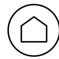
We are exposed to extensive laws, including those relating to bribery and corruption, sanctions, taxation, anti-trust, financial markets regulation and rules, environmental protection, use of hazardous substances, product safety and dangerous goods regulations, development of natural resources, licences over resources, exploration, production and post-closure reclamation, employment of labour and occupational health and safety standards. The legal system and dispute resolution mechanisms in some countries in which we operate may be uncertain, meaning that we may be unable to enforce our understanding of our rights and obligations under these laws.

The costs associated with compliance with these laws and regulations, including the costs of regulatory permits, are substantial and increasing. Any changes to these laws or their more stringent enforcement or restrictive interpretation could cause additional significant expenditure to be incurred and/or cause suspensions of operations and delays in the development of industrial assets. Failure to obtain or renew a necessary permit or the occurrence of other disputes could mean that we would be unable to proceed with the development or continued operation of an industrial asset and/or impede our ability to develop new industrial assets.

As a diversified sourcing, marketing and distribution company conducting complex transactions globally, we are particularly exposed to the risks of fraud, corruption, sanctions, and other unlawful activities both internally and externally. Our marketing activities are large in scale, which may make fraudulent, corrupt, or other unlawful transactions difficult to detect.

In addition, some of our industrial activities are located in countries where corruption is more prevalent; and some of our counterparties have in the past, and may in the future, become the targets of sanctions. Corruption and sanctions risks remain highly relevant for businesses operating in international markets, as shown by recent enforcement actions both inside and outside the resources sector.

Governmental and other authorities have commenced, and may in the future commence, investigations against the Group (including those listed in note 23 to the financial statements) in relation to alleged non-compliance with these laws, and/or may bring proceedings against the Group in relation to alleged non-compliance. The cost of cooperating with investigations and/or

Risk management continued

defending proceedings can be substantial. Investigations or proceedings could lead to reputational damage, the imposition of material fines, penalties, redress or other restitution requirements, or other civil or criminal sanctions on the Group (and/or on individual employees of the Group), the curtailment or cessation of operations, orders to pay compensation, orders to remedy the effects of violations and/or orders to take preventative steps against possible future violations. The impact of any monetary fines, penalties, redress or other restitution requirements, and the reputational damage that could be associated with them as a result of proceedings that are decided adversely to the Group, could be material.

In addition, the Group may be the subject of legal claims brought by private parties in connection with alleged non-compliance with these laws, including class or collective action suits in connection with governmental and other investigations and proceedings, and lawsuits based upon damage resulting from our operations. Any successful claims brought against the Group could result in material damages being awarded against the Group, the cessation of operations, compensation and remedial and/or preventative orders.

Developments

The Group has been cooperating extensively with the relevant authorities in order to resolve as expeditiously as possible the government investigations disclosed in note 23 to the financial statements. The Investigations Committee ('Committee') of the Board manages the Group's responses to these investigations. While the Committee cannot forecast with certainty the cost, extent, timing or terms of the outcomes of the investigations, the Committee presently expects to resolve the US, UK and Brazilian investigations in 2022. Accordingly, and based on the Company's current information and understanding, the Group has raised a provision as at 31 December 2021 in the amount of $1.5 billion representing the Committee's current best estimate of the costs to resolve these investigations (included in other expenses, see note 5).

Glencore continues to cooperate with a previously disclosed investigation by the Office of the Attorney General of Switzerland (OAG) into Glencore International AG for failure to have the organisational measures in place to prevent alleged corruption. The timing and outcome of this investigation remain uncertain.

Glencore has also been notified by the Dutch authorities of a criminal investigation into Glencore International AG related to potential corruption pertaining to the DRC and is in contact with the Dutch authorities in respect of this investigation. The scope of the investigation is similar to that of the OAG investigation. The Dutch authorities are coordinating their investigation with the OAG and we would expect any possible resolution to avoid duplicative penalties for the same conduct.

Mitigating factors

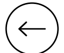
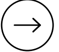
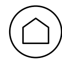
We seek to ensure compliance through our commitment to complying with or exceeding the laws and regulations applicable to our operations and products and through monitoring of legislative requirements, engagement with government and regulators, and compliance with the terms of permits and licences.

We seek to mitigate the risk of breaching applicable laws and external requirements through our risk management framework.

We have implemented a Group Ethics and Compliance programme that includes risk assessments, a range of policies, standards, procedures, guidelines, training and awareness, monitoring and investigations. See also the Ethics and Compliance section of this report on page 43.

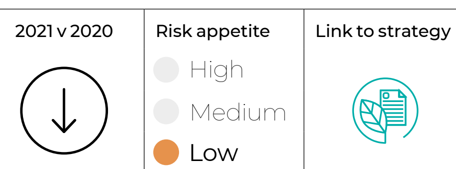
We have increased in recent years our focus on, and resources dedicated to, the Group Ethics and Compliance programme, including through increasing the number of dedicated compliance professionals, enhancing our compliance policies and procedures and controls, increasing our training and awareness activities and strengthening the Group's Raising Concerns programme and investigations function. We engage with reputable external legal firms and consultants as necessary to support these efforts.

However, there can be no assurance that such policies, standards, procedures, and controls will adequately protect the Group against fraud, bribery and corruption, market abuse, sanctions breaches or other unlawful activities.

Risk management continued

5. Liquidity



Liquidity risk is the risk that we are unable to meet our payment obligations when due, or are unable, on an ongoing basis, to borrow funds in the market at an acceptable price to fund our commitments.

Description and potential impact

While we adjust our minimum internal liquidity threshold from time to time in response to changes in market conditions, this minimum internal liquidity target may be breached due to circumstances we are unable to control, such as general market disruptions, sharp movements in commodity prices or an operational problem that affects our suppliers, customers or ourselves.

Our failure to access funds (liquidity) would severely limit our ability to engage in desired activities and may mean that we will not have sufficient funds available for our marketing and industrial activities, both of which employ substantial amounts of capital. If we do not have funds available for these activities, then they will decrease.

Funding costs may rise owing to ratings agency downgrades and the possibility of more restricted access to funding.

Developments

Note 28 details the fair value of our financial assets and liabilities. Note 27 details our financial and capital risk management including liquidity risk.

The Group's strong 2021 profitability and cash flows led to the reduction of Net debt from $15.8 billion at 31 December 2020 to $6.0 billion at 31 December 2021. Our net funding at 31 December 2021 was $30.8 billion (31 December 2020: $35.4 billion).

The Group's business model relies on ready access to substantial borrowings at reasonable cost, which has continued to be forthcoming, noting the Group's successful issuance of some $4.3 billion of long-term bonds in 2021 at attractive interest rates, and the ongoing availability of supplier financing arrangements in the form of extended letters of credit provided by the Group's various banks.

During 2021 the Group issued $2.95 billion in US markets and EUR 1.1 billion debt under its EMTN programme. Certain tranches of the refinancing were longer dated than the instruments they replaced, up to 30 year maturities. This provided the opportunity to lock in attractive funding rates for the long term while maintaining our overall maturity profile of no more than approximately $3 billion in any one year.

In September, Moody's affirmed its Baa1 rating for the Group and changed its outlook to stable from negative. The outlook from S&P (BBB+) is also stable.

Mitigating factors

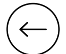
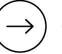
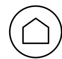
It is the Group's policy to operate a strong BBB/Baa rated balance sheet and to ensure that a minimum level of cash and/or committed funding is available at any given time.

Diversification of funding sources is sought via bank borrowings, bonds, and trade finance, further diversified by currency, interest rate and maturity.

In light of the Group's extensive funding activities, maintaining investment grade credit rating status is a financial priority.

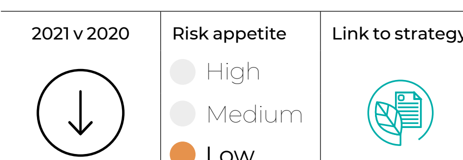
In support of this, Glencore targets a maximum 2x Net debt/Adjusted EBITDA ratio through the cycle, and a c.$10 billion net debt cap in the ordinary course of business. The net debt cap may be extended to $16 billion for M&A opportunities with swift deleveraging back to the $10 billion level being a key part of our assessment of any such opportunity. Deleveraging below the $10 billion cap is periodically returned to shareholders. Our financial policies seek to ensure access to funds, even in periods of elevated market volatility.

It should be noted that the credit ratings agencies make certain adjustments, including a discount to the value of our Readily Marketable Inventories, so that their calculated net debt is higher.

Risk management continued

6. Counterparty credit and performance



We are subject to non-performance risk by our suppliers, customers, and hedging counterparties, in particular via our marketing activities.

Description and potential impact

Financial assets consisting principally of receivables and advances, derivative instruments and long-term advances and loans can expose us to concentrations of credit risk.

Non-performance by suppliers, customers and hedging counterparties may occur and cause losses in a range of situations, such as:

- a significant increase in commodity prices resulting in suppliers being unwilling to honour their contractual commitments to sell commodities at pre-agreed prices;
- a significant reduction in commodity prices resulting in customers being unwilling or unable to honour their contractual commitments to purchase commodities at pre-agreed prices; and
- suppliers subject to prepayment may find themselves unable to honour their contractual obligations due to financial distress or other reasons

Open account risk is taken but this is governed by the Group-wide Corporate Credit Risk Management procedure for higher levels of credit risk exposure, with an established threshold for referral of credit decisions by department heads to the CEO, CFO and CRO, relating to unsecured amounts in excess of $75 million with BBB- or lower rated counterparts.

Developments

Some of our customers and suppliers are experiencing financial difficulties particularly arising from Covid-19 or the recent material price volatility in some commodity markets. However, the overall credit quality of our counterparty portfolio significantly improved in 2021 as global economic growth improved, Covid-19 restrictions eased and, in particular, energy prices rebounded strongly. We have regular contact with our key counterparties and, in the vast majority of cases, deliveries and payments have continued in the normal course of business.

The Group's accounts receivable balance, including assessment of doubtful accounts, is set out in note 14.

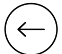
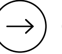
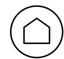
Mitigating factors

We seek to diversify our counterparties and to ensure adherence to open account limits.

The Group makes extensive use of credit enhancement tools, seeking letters of credit, insurance cover, discounting, and other means of reducing credit risk with counterparts. Where desirable and possible, credit exposures are to be covered through credit mitigation products.

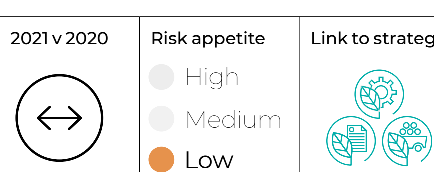
We monitor the credit quality of our physical and hedge counterparties and seek to reduce the risk of customer default or non-performance by requiring credit support from creditworthy financial institutions.

Specific credit risk rules apply to open account risk with an established threshold for referral of credit positions by departments to central management.

Risk management continued

7. Operating



Our industrial activities are subject to a level of significant residual risk throughout each operation's life cycle, from initiation through development, operation and/or expansion and ultimate closure

Description and potential impact

Notwithstanding our enterprise risk management practices, some of these risks are beyond our control. These include a level of geological risk relating to factors such as structure and grade as well as geotechnical and hydrological risks, natural hazards, processing problems, technical malfunctions, unavailability of materials and equipment, unreliability and/or constraints of infrastructure, industrial accidents, labour force challenges, disasters, protests, force majeure factors, cost overruns, delays in permitting or other regulatory matters, vandalism and crime.

The maintenance of positive employee and union relations and engagement, and the ability to attract and retain skilled workers, including senior management, are key to our success. This attraction and retention of highly qualified and skilled personnel can be challenging, especially in locations experiencing political or civil unrest, or in which employees may be exposed to other hazardous conditions.

Many employees, especially at the Group's industrial activities, are represented by labour unions under various collective labour agreements. Their employing company may not be able to satisfactorily renegotiate its collective labour agreements when they expire and may face tougher negotiations or higher wage demands than would be the case for non-unionised labour. In addition, existing labour agreements may not prevent a strike or work stoppage.

The development and operating of assets may lead to future upward revisions in estimated costs, delays or other operational difficulties or damage to properties or facilities. This may cause production to be reduced or to cease and may further result in personal injury or death, third party damage or loss or require greater infrastructure spending. Also, the realisation of these risks could require significant additional capital and operating expenditures.

Some of the Group's interests in industrial assets do not constitute controlling stakes. Although the Group has various agreements in place which seek to protect its position where it does not exercise control, the other shareholders in these entities may have interests or goals that are inconsistent with ours and may take action contrary to the Group's interests or be unable or unwilling to fulfil their obligations.

Severe operating or market difficulties may result in impairments, details of which are recorded in note 7.

Developments

Businesses continued to be affected by the Covid-19 pandemic. The response to the pandemic has varied by jurisdiction, with authorities imposing different requirements, often changing as the pandemic evolves. Operations sought to develop protocols/ working practices to minimise virus transmission risks in the workplace. Some businesses continued to be affected as a result of new outbreaks which led to challenges such as the inability to mobilise skilled resources when required.

Glencore's Nickel operations in New Caledonia continued to face particular operating challenges; in 2021 there was a significantly extended shutdown on a furnace because of the pandemic leading to an extended run time on the other furnace resulting in difficulties being experienced with this furnace. We continue to experience challenges with this complex operation.

Following a detailed business review, Glencore disposed of its majority stake in Mopani in Zambia. The structure of the transaction should result in some recovery of the residual economic value in the asset whilst reducing operating and country risks that had proven to be challenging.

Cost control remains a significant area of management focus, noting that in the context of mineral resources, absolute costs tend to increase over time as incremental resources are likely further away from the processing plant and/or deeper with sometimes decreasing grades. A number of operations have adopted structured programmes to analyse their costs and identify marginal savings which are then implemented. Maintenance and, where possible, reduction of unit costs is regularly reviewed by management.

Infrastructure availability remains a key risk. Exposures continue to include the delivery of reliable electrical power to our DRC operations. This has improved over the last several years but is not yet at a consistent level of reliability, and management continues to work with local entities to improve the service. Our South African operations have been significantly adversely affected by local rail and power issues. Our Astron Energy refinery continues to carry out repairs to the refinery following the 2020 explosion which tragically also resulted in the loss of two lives. Improved governance and operating management systems are being developed and implemented to address the underlying issues that led to the incident.

Despite the challenges created by the global pandemic, we have maintained engagement campaigns with employees to receive direct feedback on the Group's culture and practices.

Risk management continued

Mitigating factors

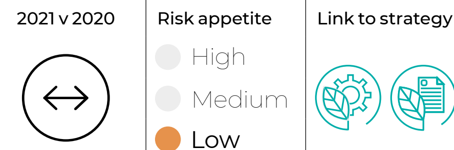
Development and operating risks and hazards are managed through our continuous project status evaluation and reporting processes and ongoing assessment, reporting and communication of the risks that affect our operations along with updates to the risk register.

We publish our production results quarterly and our assessment of reserves and resources based on available drilling and other data sources annually. Conversion of resources to reserves and, eventually, reserves to production is an ongoing process that takes into account technical and operational factors, economics of the particular commodities concerned and the impact on the communities in which we operate.

Local cost control measures are complemented by global procurement that leverages our scale to seek to achieve favourable terms on high-consumption materials such as fuel, explosives, and tyres.

One of the key factors in our success is a good and trustworthy relationship with our people. This priority is reflected in the principles of our sustainability programme and related guidance, which require regular, open, fair, and respectful communication, zero tolerance for human rights violations, fair remuneration and, above all, a safe working environment as outlined in the Our people section on page 34 and our website at: **glencore.com/careers/our-culture**

8. Cyber



A cyber security breach, incident or failure of Glencore's IT systems could disrupt our businesses, put employees at risk, result in the disclosure of confidential information, damage our reputation, and create significant financial and legal exposure for the Group.

Description and potential impact

Cyber risks for firms have increased significantly in recent years owing in part to the proliferation of new digital technologies (e.g. ransomware), nation-state activity, increasing degree of connectivity and a material increase in monetisation of cybercrime.

Our activities depend on digital capabilities for industrial production, efficient operations, environmental management, health and safety, communications, transaction processing and risk management. We also depend on third parties in long supply chains that are exposed to the same cyber risks, but which are largely outside our control.

The security of long interconnected commodity supply chains is an area of concern that we monitor closely to reduce the impact on the Group.

The emergence of machine learning and artificial intelligence increases the volume and sophistication of fraud attempts. The rise of 'Deepfake' technology using machine learning makes it easier to manipulate audio content that could be used in phishing or fraud attacks by impersonating senior executives.

Although Glencore invests heavily to monitor, maintain, and regularly upgrade its systems, processes and networks, absolute security is not possible.

Developments

Our cyber security monitoring platforms frequently detect attempts to breach our networks and systems. During 2021, none of these events resulted in a significant breach of our IT environment nor resulted in any material business impact.

Covid-19 has increased the degree of remote working and the potential attack surface area. We continue to witness a heightened level of sophistication and frequency of cyberattacks against all firms.

We anticipate that 'supply chain cyberattacks' through which legitimate third party software is manipulated in an attempt to spread malware or gain access to systems will increase. We also expect that ransomware will remain an area of heightened threat focus.

Mitigating factors

We publish IT security standards and proactively educate our employees in order to raise awareness of cyber security threats.

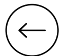
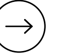
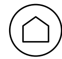
Where possible, cyber exposure risks are mitigated through layered cyber security, proactive monitoring, and independent cyber security penetration tests to confirm the security of systems.

We seek to keep our system software patches up to date and have global platforms to proactively manage patch compliance. We have adopted strict privileged access management to ensure administrator rights on critical systems are protected. We have multiple layers of email security and harden our computers and servers to protect against malware. Corporate applications and communications are secured with multiple layers of security including two-factor authentication and virtual private network (VPN) technology for remote access.

We use global IT security platforms to proactively monitor and manage our cyber risks. We routinely conduct third party penetration tests to independently assess the security of our IT systems. We have a dedicated programme to enhance the monitoring and security of our Operational Technology (OT) platforms.

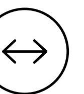
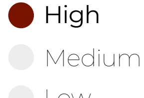
Our IT Security Council sets the global cyber security strategy, conducts regular risk assessments, and designs cyber security solutions that seek to protect against emerging malware, viruses, vulnerabilities, and other cyber threats. Our Cyber Defence Centre is responsible for day-to-day monitoring of cyber vulnerabilities across the Group and driving remediation of threats. We have an incident response team that is accountable for coordinating the response in the event of a major cyber incident.

During 2021, we continued to implement new capabilities to further enhance protection against ransomware, enhance perimeter security and enhance the security of our OT platforms.

Risk management continued

9. Health, safety, and environment

2021 v 2020	Risk appetite	Link to strategy
	 High Medium Low	

Industrial operations are inherently dangerous. Catastrophic events that take place in the natural resource sector can have disastrous impacts on workers, communities, the environment, and corporate reputation, as well as a substantial financial cost.

Description and potential impact

The success of our business is dependent on a safe and healthy workforce. Identifying and managing risks to the safety and health of our people is essential for their long-term wellbeing. It also helps us to maintain our productivity.

A number of our assets are in regions with poor approaches towards personal safety, little or no access to health facilities, and poor working conditions, and organisational cultures.

Our operations around the world can have direct and indirect impacts on the environment and host communities. Our ability to manage and mitigate these may impact maintenance of our operating licences as well as affect future projects, acquisitions, and our reputation.

Environmental, safety and health regulations may result in increased costs or, in the event of non-compliance or incidents causing injury or death or other damage at or to our facilities or surrounding areas, may result in significant losses. Failure to perform well may have long-term negative impacts for host communities and erode trust in the integrity of our organisation. Examples include, those arising from (1) interruptions in production, litigation and imposition of penalties and sanctions, (2) having licences and permits withdrawn or suspended while being forced to undertake extensive remedial clean-up action or to pay for government-ordered remedial clean-up actions, and (3) paying compensation and reparations to negatively impacted communities.

Liability may also arise from the actions of any previous or subsequent owners or operators of the property, by any past or present owners of adjacent properties, or by third parties.

We operate in some countries characterised with complex and challenging political and/or social climates. This results in a residual risk for compliance with our HSEC&HR policies and standards, as well as with external laws and regulations.

Developments

In response to Covid-19, Glencore focused on efforts to ensure the resilience of the business, including daily monitoring of global conditions, anticipation of potential impacts, and development of action plans and controls to mitigate risks. At the start of the crisis, the corporate Covid-19 Global Response Incident Management Team and Steering Committee were established to maintain continuous communication and response support for our global industrial and marketing teams, resolving potential threats to business continuity, and focusing on the health and well-being of our workforce. In June 2021, Glencore developed its Covid-19 Vaccination Policy and Guiding Principles, in consultation with leading medical experts and released it to the business.

Starting In 2020 and continuing through 2021, we conducted a review of our SafeWork programme, which is Glencore's approach to eliminating fatalities. SafeWork focuses on identifying and managing the hazards in every workplace and is built on a set of minimum expectations and mandatory protocols, standards, behaviours, and safety tools. Well-led, consistent application of SafeWork drives operating discipline and prevents fatal incidents.

Reflecting the review's findings, we launched a refreshed SafeWork in early 2021, which included performance expectations and 2022 and 2023 targets. The Group continues to invest in its sustainability risks assurance process and its focus continues to be on the Group's HSEC catastrophic hazards.

We continued the implementation of our Group-wide Tailings Storage Facility and Dam Management Standard throughout the business and participated in the development of the new Global Industry Standard on Tailings Management, in association with International Council on Mining & Metals member companies. In collaboration with industry tailings experts, we also initiated the development of our Tailings Management Academy, to provide training and capacity-building for our employees in tailings management, and environmental, closure, and community-related practices.

We regret that we have recorded 4 fatalities at our operations (2020: 8). Our Board and senior management are committed to ongoing efforts to improve practices to provide a safe working environment. No major or catastrophic environmental, community or human rights incidents have occurred during the year.

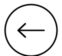
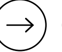
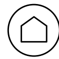
Mitigating factors

We are committed to ensuring the safety and wellbeing of our people, communities, and environment around us.

We implement Health, Safety, Environment, Community and Human Rights (HSEC&HR) policies and standards designed to (1) protect our people, communities, and the environment, and (2) ensure we comply with laws and external regulations.

Our approach to the management of health, safety and the environment and our expectations of our workers and our business partners, are outlined in our policies and standards. These underpin our approach towards social, environmental, health, safety, and compliance indicators, providing clear guidance on the standards we expect all our operations to achieve.

During 2021, the corporate HSEC&HR team continued its work in enhancing Group-level HSEC&HR governance and technical standards to ensure an efficient and consistent approach to managing HSEC&HR related issues across the business.

Risk management continued

We are working towards creating a workplace without fatalities, injuries, or occupational diseases through establishing a positive safety culture. We strive to achieve our ambitions of zero workplace fatalities and no major or catastrophic environmental incidents.

Our commitment to complying with or exceeding the health, safety and environmental laws, regulations, and best practice guidelines applicable to our operations and products is driven through our sustainability and policies frameworks.

We remain focused on the significant risks facing our industry arising from operational catastrophic events and take steps to implement appropriate controls to mitigate them.

We work with local authorities, local community representatives and other partners, such as NGOs, to help overcome major public health issues in the regions where we work, such as Covid-19, HIV/AIDS, malaria and tuberculosis.

Further details will also be published in our 2021 Sustainability Report.

There can be no assurances that our policies, standards, procedures and guidelines will protect the Group against health, safety, and environmental risks.

10. Climate change

Climate change is a material issue that can affect our business through regulations to reduce emissions, carbon pricing mechanisms, extreme climatic events, access to capital, permitting risks and fluctuating energy costs, as well as changing demand for the commodities we produce and market. We consider our risk appetite as high due to our significant exposure to coal producing assets.

Description and potential impact

A number of governments have already introduced or are contemplating the introduction of regulatory responses to support the achievement of the goals of the Paris Agreement and the transition to a low-carbon economy. This includes countries where we have assets such as Australia, Canada, Chile, and South Africa, as well as our customer markets such as China, South Korea, Japan, United States and Europe.

A transition to a low-carbon economy and its associated public policy and regulatory developments may lead to:

- the imposition of new regulations, and climate change related policies on fossil fuels by actual or potential investors, customers, and banks, that potentially impacts Glencore's reputation, access to capital and financial performance
- import duties / carbon taxes in our customer's markets potentially affect our access to those markets as well as our commodities' delivery costs
- increased costs for energy and for other resources, which may impact the productivity of our assets and associated costs
- the imposition of levies related to greenhouse gas emissions
- impacts on the development or maintenance of our assets due to restrictions in operating permits, licences, or similar authorisations.

These cost increases are likely to reduce demand for fossil fuels and could lead to coal assets no longer being economically viable.

Variations in commodity use from emerging technologies, moves towards renewable energy generation and policy changes may affect demand for our products, both positively and negatively. Some may choose not to invest in or transact with us, due to our fossil fuels operations.

Climate change may increase physical risks to our assets and related infrastructure, largely driven from extreme weather events and water related risks such as flooding or water scarcity.

Implementing low-carbon processes and technologies at our assets may increase our operating costs, while also potentially growing/changing our customer base.

Social concerns may increase pressure to divest our coal assets, limit/stop our access to finance, close assets and impact our ability to optimise our portfolio.

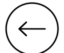
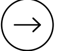
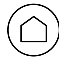
Socio-economic concerns associated with the transition to a low-carbon economy may increase expectations of our closure plans and increase closure liabilities.

There has been a significant increase in litigation (including class actions), in which climate change and its impacts are a contributing or key consideration, including administrative law cases, tortious cases and claims brought by investors. In particular, a number of lawsuits have been brought against companies with fossil fuel operations in various jurisdictions seeking damages related to climate change.

Developments

The commitments made by a number of countries, including China, Australia and the US, to achieve carbon neutrality by 2050 or 2060, and subsequent introduction of supporting policies, such as import taxes and carbon trading mechanisms, are a strong indicator of the pace of change and the longer-term global trajectory. New European regulation, particularly the 'EU Taxonomy' and the 'EU Green Deal' is likely to accelerate the flow of capital to products and technologies needed in the low-carbon economy, and place greater scrutiny on the carbon footprint of European industrial companies, as well as on those importing products into the Eurozone. This is relevant for Glencore because of the carbon footprint of our products.

While the transition to renewables technologies continues to accelerate, the global economic recovery from Covid-19 has highlighted the ongoing importance in the short term of traditional fuels in meeting global energy needs.

Risk management continued

Mitigating factors

We seek to integrate climate considerations, such as energy and climate policies in countries where we operate and sell our products, expectations of our value chains, and the various commitments to achieve the goals of the Paris Agreement, into our strategic decisions and day-to-day operational management.

We balance our ownership of coal assets with our interests in our metals' businesses which are considered crucial to the green economy such as copper, nickel, and cobalt.

Our internal Climate Change Taskforce, led by our CEO, co-ordinates our analysis and planning of the effects of climate change on our business.

We have set ourselves a short-term target of an absolute 15% reduction of our total emissions (Scope 1, 2 and 3) by 2026, and a medium-term target of an absolute 50% reduction of our total emissions by 2035. Our medium-term target is consistent with the midpoint of Intergovernmental Panel on Climate Change's 1.5°C scenarios, and with the Net Zero scenario set out by the International Energy Agency. Post 2035, we have set ourselves the ambition to achieve, with a supportive policy environment, net zero total emissions by 2050.

We monitor and report our Scope 1, 2 and 3 emissions, and use this data in managing our operational carbon footprint, as well as for the development and tracking of our targets.

To better understand and plan for the effects of climate change on our business, we have a framework for identifying, understanding, quantifying and, ultimately, managing climate-related challenges and opportunities facing our portfolio which covers Government policy, lobbying activities, carbon pricing, energy costs, physical impacts, access to capital, permitting risk, product demand and litigation risks.

Further information is available at:
glencore.com/sustainability/climate-change

11. Community relations and human rights

We have a geographically diverse business, operating in both developed and developing countries in an array of different contexts. A perception that we are not respecting human rights or generating local sustainable benefits could have a negative impact on our ability to operate effectively, our reputation with stakeholders, our ability to secure access to new resources, our capacity to attract and retain the best talent and ultimately, our financial performance.

Description and potential impact

Respecting human rights and building strong relationships are fundamental to the current and future viability of our business.

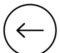
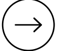
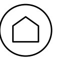
Areas that may be affected negatively include the health and safety of our workforce and surrounding communities, environmental damage and interactions with individuals and groups who live and work in or near our local communities. Poor performance can contribute to social instability and the perceived and real value of our assets.

We have a geographically diverse business, operating in both developed and developing countries in an array of different contexts. In a number of regions where we operate, the socio-political environment is complex which presents additional business, social and security risks if not well understood and managed.

The consequences of adverse community reactions or allegations of human rights incidents could also have a material adverse impact on the cost, profitability, ability to finance or even the viability of an operation and the safety and security of our workforce and assets. In addition, global connectivity means that local issues can quickly escalate to a regional, national and global level potentially resulting in reputational damage and social instability.

Some of our mining operations are in remote areas where they are a major employer in the region. This presents particular social challenges when the mine's resources are depleted to an extent that it is no longer economic to operate and must be closed. Robust planning and stakeholder engagement are key to mitigating environmental and social closure risks.

The destruction of indigenous cultural heritage during mining activities in Australia has highlighted the need for effective management processes and engagement, to protect areas and items of cultural significance, and to avoid business and reputation risks.

Risk management continued

Developments

During 2021, Covid-19 continued to impact people's quality-of-life and contributed to localised areas of uncertainty around the world. Our first and foremost priority during the pandemic has been the health and wellbeing of our employees and communities, especially vulnerable groups. We have sought to support our communities by augmenting communication programmes to promote prevention measures, providing basic sanitation and medical materials and supporting local health systems and services.

We continue where possible to work to support local health authorities in encouraging and delivering vaccines, where needed.

The ensuing economic impacts of Covid-19 have amplified existing inequalities around the world, resulting in an escalation of civil unrest in many countries. In the Espinar region of Peru, social protests impacted our Antapaccay operation. The government deployed public security to return law and order in the region around the operation without harm to community members, security forces or our workforce.

Artisanal and small-scale mining (ASM) continues to be a challenge at certain operations, most notably in the DRC. An area of the Mutanda permits, Chabara, has been illegally occupied by ASM cooperatives supported by semi-mechanised operators. We have been engaging with DRC authorities to try to recover control of Chabara following a peaceful relocation of the ASM cooperatives.

Mitigating factors

Our approach is to minimise the local detrimental impacts of our business, engage openly and honestly to build lasting relationships and foster socio-economic resilient communities.

In 2021, we enhanced our Closure Planning expectations and governance through our new Closure Planning Standard to ensure consistent and proactive performance in this important aspect of our operations' lifecycle.

While our Group policies and standards apply to all our businesses, we tailor our community approach to be relevant and appropriate to the local context. We strive to uphold and respect the human rights of our workforce, local communities and others who may be affected by our activities, in line with the United Nations Guiding Principles on Business and human rights (UNGPs), and support resilience and capacity within our host communities. We have processes to identify, prevent and mitigate human rights risks and impacts across our business, and are committed to understanding and documenting the social risk and opportunities in the communities in which we operate. In the event that we cause or contribute to a negative impact on human rights, we strive to provide appropriate remedy to those affected in line with the UNGPs.

We seek to apply the UN Voluntary Principles on Security and Human Rights in regions where there is a high risk to human rights from the deployment of public and private security forces.

We respect communities' perspectives and actively seek to consult with them to inform our decision-making. Our ambition is to be a responsible, engaged and valued company wherever we operate and to contribute to healthy, resilient communities. We support the advancement of the interests of both our host communities and our assets.

We seek to build enduring and trusting relationships by engaging openly and honestly and participating as an active member of society. We focus our social investments on initiatives and programmes to deliver long-term benefits fostering socio-economic resilience.

We implement locally appropriate complaints and grievance processes in line with the UNGPs and welcome feedback and comments on our performance. We review all complaints received and take actions when necessary to address the issues raised.

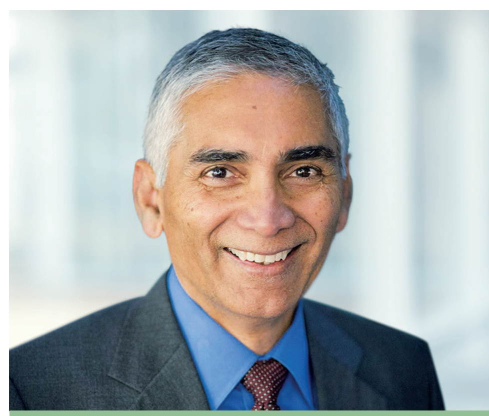
During late 2020, our Social Performance and Human Rights policies were updated following consultation with external subject matter experts and internal and external stakeholders. In 2021 we reviewed and/or updated our Social Performance, Human Rights and Security Standards.

Our approach to ASM considers how ASM and large-scale mining can sustainably co-exist as distinct yet complementary sectors of a successful mining industry. We believe that legal ASM can play an important and sustainable role in many economies when carried out responsibly and transparently, including the DRC. We partner with the Fair Cobalt Coalition, an NGO aiming to positively transform ASM in the DRC. It is working towards eliminating child and forced labour, improving work practices in ASM operations and supporting alternative livelihoods to help increase incomes and reduce poverty.

We continue to review and implement new or revised policies concerning cultural heritage management.

Further information is available on our website at: **glencore.com/sustainability/community-and-human-rights**

Chairman's Governance Statement



Kalidas Madhavpeddi, Chairman

Dear Shareholders

The year 2021 has been one of dynamic change for Glencore. The Company said farewell to Ivan Glasenberg after almost 20 years of remarkable leadership. This was capped with a long planned and effective succession to Gary Nagle who has seamlessly stepped into the very demanding role that being the CEO of Glencore entails.

Shortly afterwards the Board selected me as Tony Hayward's successor as Chairman.

The Board has also continued its process of renewal. Tony left us after more than 10 years on the Board. He had originally been appointed as the Senior Independent Director on the IPO in 2011 and succeeded to the Chair two years later following the Xstrata acquisition. John Mack retired in April following 8 years of service on our Board. We thank them again for their dedication to the Board and the Company. We are pleased to have Cynthia Carroll and David Wormsley join us last year. Cynthia had a long track record in the industry culminating in being the CEO of Anglo American, while David brings a wealth of UK market knowledge and global investment banking experience. Both have made a strong start. We look forward to making a further appointment to the Board this year. Diversity remains an important objective and all except one of our Board Committees are led by diverse directors. While diversity remains a key aim, Boards must also not lose sight of the need to concentrate on core skills.

A complete succession of all the main department leadership roles which had started at the beginning of 2019 was also completed last year in concert with Gary's appointment. It says a lot about Glencore's culture that the original management who are major shareholders had remained at the Company for so long after its IPO in 2011. It is also a testament to the strength of the Company that the succession was completed with all being internal promotions.

We announced last month a provision for our current best estimate of the costs to resolve the U.S., UK and Brazilian investigations of $1.5 billion. We continue to work hard to bring these and the other investigations in the Group to a close.

The report from the Board HSEC committee sets out a summary of the considerable work that continues across all areas of the Group's health, safety, environment and communities' programme. This has always been an area in which the Board has demonstrated strong leadership and this will continue.

Climate remains centre stage for the Board. We have established our industry leading credentials in publishing our Scope 3 targets.

Reflecting additional work on our emissions profile and opportunities to deliver reductions, in 2021 we strengthened our medium-term emissions reduction target and introduced a new short-term target. We are now committed to reducing total emissions (Scope 1+2+3) by 15% by 2026 and 50% by 2035, both on 2019 levels. Post 2035, our ambition is to be a net zero total emissions by 2050, assuming a supportive policy environment.

We were also the first of our peers to provide shareholders with a say on our climate policy in a similar way as we do on pay: having put our policy to a vote at last year's AGM – on which there was a 94% vote in favour – we will this year table our progress report for shareholders to advise the Company as to whether they support the progress or not, in the same way as update votes on the implementation of our remuneration policy are tabled every year to shareholders.

It was a pleasure to be able to engage with many of our large shareholders in the autumn, whether in person or on video. I look forward to continuing this dialogue this year as Glencore seeks to continue to improve in ESG matters to complement its outstanding financial performance. The Board remains determined to ensure all the Group's stakeholders see Glencore not only as the leading resources company but also as a reliable and trusted partner.

Kalidas Madhavpeddi
Chairman
15 March 2022

Directors and officers

Directors

Notes

All the Directors are non-executive apart from the CEO. The Chairman is considered not to be independent due to the nature of his role. Mr Madhavpeddi was independent up to his appoinrment to the role of Chairman. The remaining Non-Executive Directors are designated as independent apart from Mr Coates.

Committee membership is as follows:

Audit

Ethics, Compliance and Culture (ECC)

Health, Safety, Environment and Communities (HSEC)

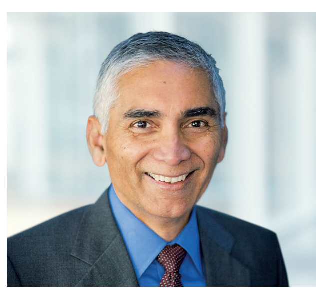
Investigations

Nomination

Renumeration

denotes commitee chair

Board diversity
Pages 89 & 95



Kalidas Madhavpeddi

Chairman (66)

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Appointed in February 2020.

Experience

Kalidas Madhavpeddi has over 40 years of experience in the international mining industry, including being CEO of CMOC International, the operating subsidiary of China Molybdenum Co Ltd (China Moly), from 2008 to 2018.

His career started at Phelps Dodge, where he worked from 1980 to 2006, ultimately becoming senior VP responsible for the company's global business development, acquisitions and divestments, as well as its global exploration programs. Mr Madhavpeddi is currently a director of Novagold Resources (TSX:NG), Trilogy Metals (TSX:TMQ), and Dundee Precious Metals Inc (TSX: DPM). He was formerly director and chair of the governance committee of Capstone Mining (TSX:CS). He has degrees from the Indian Institute of Technology, Madras, India and the University of Iowa and has completed the Advanced Management Program at Harvard Business School.

Gary Nagle

Chief Executive Officer (47)

Joined Glencore in 2000; Chief Executive Officer since July 2021.

Experience

Gary Nagle joined Glencore in 2000 in Switzerland as part of the Coal business development team. He was heavily involved in seeding a portfolio of assets to Xstrata in 2002, in conjunction with its initial listing on the London Stock Exchange.

Mr Nagle worked for five years (2008-2013) in Colombia as CEO of Glencore's Prodeco operation. He then moved to South Africa to be Head of Glencore's Ferroalloys assets (2013-2018). Following that he was the Head of Glencore's Coal Assets based in Australia. He also served on the Board of Lonmin plc from 2013 - 2015 and has represented Glencore on the Minerals Councils of Australia and Colombia.

Mr Nagle has commerce and accounting degrees from the University of the Witwatersrand, and qualified as a Chartered Accountant in South Africa in 1999.

Directors and officers

Directors

Martin Gilbert

Senior Independent Director (66)

Senior Independent Director since May 2018; appointed in May 2017.

Experience

Martin Gilbert is Chairman of AssetCo plc (LON:ASTO) and Revolut Limited.

Mr Gilbert co-founded Aberdeen Asset Management in 1983, leading the company for 34 years and overseeing its 2017 merger with Standard Life. He is also chair of Toscafund and Saranac Partners. He was deputy chair of the board of Sky PLC until 2018. He was formerly co-CEO of Standard Life Aberdeen.

Mr Gilbert is a member of the International Advisory Board of British American Business.

Mr Gilbert was educated in Aberdeen. He has an LLB, an MA in Accountancy and is a Chartered Accountant.

Peter Coates AO

Non-Executive Director (76)

Non-Executive Director since January 2014; previously Executive Director from June to December 2013 and Non-Executive Director from April 2011 to May 2013.

Experience

Peter Coates worked in senior positions in a range of resource companies before joining Glencore's coal unit as a senior executive in 1994. When Glencore sold its Australian and South African coal assets to Xstrata in 2002 he became CEO of Xstrata's coal business, stepping down in December 2007.

He was non-executive chairman of Xstrata Australia (2008–09), Minara Resources Ltd (2008–11) and Santos Ltd (2009–13 and 2015–18). He is currently a non-executive director of Event Hospitality and Entertainment Ltd (ASX:EVT).

Mr Coates holds a Bachelor of Science degree in Mining Engineering from the University of New South Wales.

He was appointed as an Officer of the Order of Australia in June 2009 and awarded the Australasian Institute of Mining and Metallurgy Medal for 2010.

Patrice Merrin

Non-Executive Director (73)

Appointed in June 2014.

Experience

Following initial roles with Molson and Canadian Pacific, Patrice Merrin worked at Sherritt for ten years until 2004, latterly as COO. She then became CEO of Luscar. She is currently non-executive chair of Metals Acquisition Corp. and a non-executive director of Samuel, Son & Co. Limited.

She was non-executive chair of Detour Gold Corporation (TSX:DGC) from June 2019 to January 2020 and non executive director of Stillwater Mining Company (NYSE:SWC) from 2013 to 2017.

Ms Merrin chaired CML Healthcare and was also a director of Arconic Inc., NB Power, and the Alberta Climate Change and Emissions Management Corporation.

Ms Merrin is a graduate of Queen's University, Ontario and completed the Advanced Management Programme at INSEAD.

Directors and officers

Directors

Gill Marcus

Non-Executive Director (72)

Appointed in January 2018.

Experience

Gill Marcus was Governor of the South African Reserve Bank from 2009–14.

She worked in exile for the African National Congress from 1970 before returning to South Africa in 1990. In 1994 she was elected to the South African Parliament. In 1996 she was appointed as the deputy minister of finance and from 1999 to 2004 was deputy governor of the Reserve Bank.

Ms Marcus was the non-executive chair of the Absa Group from 2007–09 and has been a non-executive director of Gold Fields Ltd and Bidvest. She has acted as chair of a number of South African regulatory bodies. From 2018 to 2019, she was appointed to the Judicial Commission of Inquiry into allegations of impropriety at the Public Investment Corporation.

Ms Marcus is a graduate of the University of South Africa.

Cynthia Carroll

Non-Executive Director (65)

Appointed in February 2021.

Experience

Cynthia Carroll has over 30 years' experience in the resources sector. She began her career as an exploration geologist at Amoco before joining Alcan. She held various executive roles there culminating in being CEO of the Primary Metal Group, Alcan's core business. From 2007 to 2013 she served as CEO of Anglo American plc.

Ms Carroll is currently a non-executive director of Hitachi, Ltd (TYO: 6501), Baker Hughes Company (NYSE: BKR) and Pembina Pipeline Corporation (TSE: PPL).

She is a fellow of the Royal Academy of Engineers and a Fellow of the Institute of Materials, Minerals and Mining.

Ms Carroll holds a Bachelor's degree in Geology from Skidmore College (NY), a Master's degree in Geology from the University of Kansas and a Masters in Business Administration from Harvard University.

David Wormsley

Non-Executive Director (61)

Appointed in October 2021.

Experience

David Wormsley worked in investment banking for 35 years. His last position at Citigroup was Chairman, UK banking and broking when he retired in March 2021. Mr Wormsley led a wide variety of corporate transactions in the UK and internationally, including IPOs and equity fundraising, both public and private, mergers & acquisitions and debt financing. During his period of management, Citigroup successfully acquired and integrated the majority of ABN Amro's broking business. Under his leadership, the Citigroup UK M&A franchise was ranked between number 1 and 5 in the market.

Mr Wormsley is currently a non-executive director of Stanhope plc and a Governor of the Museum of London. He holds an economics degree from Downing College, Cambridge.

Directors and officers

Officers

Steven Kalmin

Chief Financial Officer (51)

Appointed as Chief Financial Officer in June 2005.

Experience

Mr Kalmin joined Glencore in September 1999 as general manager of finance and treasury functions at Glencore's coal industrial unit in Sydney. He moved to Glencore's head office in 2003 to oversee Glencore's accounting function, becoming CFO in June 2005. From November 2017 to June 2020 he was a director of Katanga Mining Limited (TSX: KAT).

Mr Kalmin holds a Bachelor of Business (with distinction) from the University of Technology, Sydney and is a member of Chartered Accountants Australia and New Zealand and the Financial Services Institute of Australasia.

Before joining Glencore, Mr Kalmin worked for nine years at Horwath Chartered Accountants.

John Burton

Company Secretary (57)

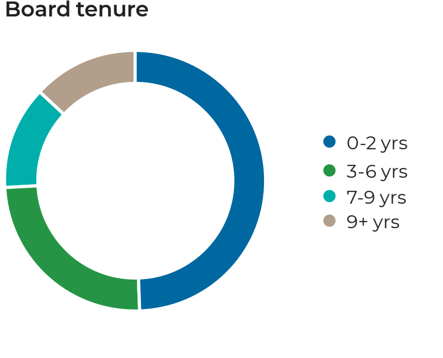
Appointed Company Secretary in September 2011.

Experience

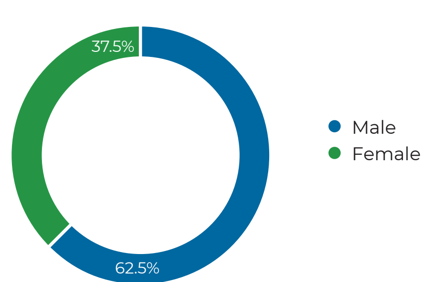
From 2006 to 2011, Mr Burton was company secretary and general counsel of Informa plc, where he established the group legal function and a new company secretarial team. Before that he had been a partner of CMS in London for 8 years, advising on a broad range of corporate and securities law matters.

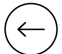
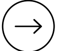
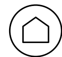
Mr Burton holds a B.A. degree in Law from Durham University. He was admitted as a Solicitor in England and Wales in 1990.

Board tenure



Board diversity



Corporate governance report

This report should be read in conjunction with the Directors' report and the remainder of the Governance section.

Board governance and structure

This Governance report, along with the Strategic report and the Directors' report, sets out how Glencore has complied with the principles and provisions of the 2018 UK Corporate Governance Code (the Code) in a manner which enables shareholders to evaluate how these principles have been applied. The Board believes that the Company has throughout the year complied with all relevant provisions contained in the Code except for:

- Provision 24, regarding membership of Audit Committee – Mr Madhavpeddi became Chairman of the Board on 30 July 2021 and had been Chair of the Audit Committee since August 2020. He remained Chair of the Audit Committee until 1 October 2021 when Ms Marcus was appointed as Chair.
- Provision 17 regarding membership of the Nomination Committee – from 1 October until 31 December 2021 the Committee comprised Mr Madhavpeddi (designated independent on appointment), Mr Coates (considered non-independent), and Ms Marcus (independent). From 1 January 2022, all other remaining Non-Executive Directors (all of whom are independent) were appointed as members of the Nomination Committee.
- Provision 21, regarding externally facilitated Board evaluation – during the year there were broad changes to the Board:
  - the previous Chairman, Tony Hayward, retired from the Board and was replaced by Mr Madhavpeddi;
  - the CEO, Ivan Glasenberg, retired from the Board and was replaced as CEO and Director by Mr Nagle;
  - John Mack retired from the Board;
  - Ms Carroll and Mr Wormsley were appointed to the Board; and
  - there were significant changes to the Committees including a change of Chair of all the Board Committees except for HSEC (see below).

  Therefore, the Directors agreed that it was more appropriate to delay the external evaluation by one year.

  A revamped internal evaluation was conducted instead (see page 94).

In accordance with provision 19 of the Code, the following serves as explanation for the extended tenure of Dr Hayward until 30 July 2021. In early 2020, we consulted with our largest institutional shareholders regarding his tenure on the Board which was to exceed nine years in May 2020. This had clear support and the shareholders vote at the 2020 AGM in favour of his reappointment exceeded 96% of those cast. The Board reconsidered his position prior to the 2021 AGM and continued to believe that, until the management succession was complete, it was in the shareholders' interest that he remained as Chairman for a final period. Following further consultation, shareholders remained supportive and so he was nominated again at the 2021 AGM, receiving a 94% vote in favour. He retired on 30 July.

During 2021, due to the changes listed below, the Board comprised either six, seven or eight Non-Executive Directors (including the Chairman) and one Executive Director. A list of the current Directors, with their brief biographical details and other significant commitments, is provided in the previous pages.

Retirements	Appointments
John Mack, 29 April 2021	Cynthia Carroll, 2 February 2021
Ivan Glasenberg, 30 June 2021	Gary Nagle, 1 July 2021
Anthony Hayward, 30 July 2021	David Wormsley, 15 September 2021

The Chief Financial Officer attends all meetings of the Board and Audit Committee.

The Company Secretary attends all meetings of the Board and its Committees.

Division of responsibilities

As a Jersey incorporated company, Glencore has a unitary Board, meaning all Directors share equal responsibility for decisions taken. Glencore has established a clear division between the respective responsibilities of the Non-Executive Chairman and the Chief Executive Officer, which are set out in a schedule of responsibilities approved by the Board and reviewed annually. While the Non-Executive Chairman is responsible for leading the Board's discussions and decision-making, the CEO is responsible for implementing and executing strategy and for leading Glencore's operating performance and day-to-day management. The Company Secretary is responsible for ensuring that there is clear and effective information flow to the Non-Executive Directors.

The CEO, CFO and General Counsel have line of sight across the Group. Together with the Head of Industrial Assets, they lead our management team supported by the heads of each marketing and industrial department and the heads of corporate functions.

Corporate governance report continued

Roles and responsibilities

Chairman

- Leading the Board
- Shaping the culture in the boardroom
- Promoting sound and effective Board governance
- Ensuring effective communication with shareholders
- Leading the annual performance evaluation of the Board

Senior Independent Director

- Acting as confidant of the Chairman and, when appropriate, as an intermediary for other independent Directors
- Acting as Chair of the Board if the Chairman is unable to attend
- Leading the Chairman's performance appraisal along with other independent Directors
- Answering shareholders' queries when usual channels of communication are unavailable

Chief Executive Officer

- Leading the management team
- Executing the Group's strategy developed in conjuction with the Board
- Implementing the decisions of the Board and its Committees
- Delivering on the Group's commercial objectives
- Developing Group policies and ensuring effective implementation

Other Non-Executive Directors

- Challenging the Chief Executive Officer and senior management constructively
- Bringing an independent mindset and a variety of backgrounds and experience around the Board table
- Providing leadership and challenge as chairs or members of the Board Committees, which comprise only Non-Executive Directors
- Assisting the Senior Independent Director in assessing the Chairman's performance and leadership

Company Secretary

- Ensuring that Board procedures are complied with and that papers are provided in sufficient detail and on time
- Informing and advising the Board on all governance matters
- Informing the Board on all matters reserved to it
- Assisting the Chairman and the Board regarding the annual performance evaluation process

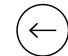
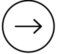
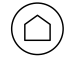
Board attendance throughout the year

Attendance during the year for all scheduled full agenda Board and all permanent Board Committee meetings is set out in the table below:

	Board of 6	HSEC of 5	ECC of 5	Audit of 4	Rem of 4	Nom of 3
Cynthia Carroll[1]	6	4			2	
Peter Coates[3]	6	5	5			2
Martin Gilbert	6			4	4	
Ivan Glasenberg[2]	3	2				
Anthony Hayward[2]	3	2	2			
John Mack[2]	1				2	1
Kalidas Madhavpeddi[3]	6	2	1	3	4	3
Gill Marcus[3]	6		5	4		1
Patrice Merrin[3]	6	5	5			2
Gary Nagle[1]	3					
David Wormsley[1]	2			1		

1 Ms Carroll, Mr Nagle and Mr Wormsley attended all relevant meetings from their appointments on 2 February, 1 July and 15 September 2021 respectively.
2 Mr Mack, Mr Glasenberg and Dr Hayward attended all relevant meetings until their retirements on 29 April, 30 June and 30 July 2021 respectively.
3 Mr Coates, Mr Madhavpeddi, Ms Marcus and Ms Merrin attended all meetings of the relevant Board Committees following their respective appointments as Chair or member.

In addition, there were another 7 limited agenda meetings of the Board, 4 additional Audit Committee meetings and one additional HSEC meeting. Most Directors also attend, by invitation, the meetings of the Committees of which they are not members.

Corporate governance report continued

Board diversity and experience

	Kalidas Madhavpeddi American	**Gary Nagle** S. African	**Martin Gilbert** British	**Cynthia Carroll** American	**Peter Coates** Australian	**Gill Marcus** S. African	**Patrice Merrin** Canadian	**David Wormsley** British
Experience								
Resources	●	●		●	●		●	
Non-executive directorship	●	●	●	●	●	●	●	●
C-suite	●		●	●	●	●	●	
Global transactions	●	●	●	●	●	●	●	●
Technical Skills*								
Leadership & Strategy	●	●	●	●	●	●	●	●
Financial Expertise	●	●	●			●		●
Ethics & Governance	●	●	●	●	●	●	●	●
Health & Safety	●	●	●	●	●		●	
Investor Relations	●		●	●	●		●	●
Communications & Reputation	●	●	●	●	●	●	●	●
Risk Management	●	●	●	●	●	●	●	●

* The majority of these skills have been acquired through exposure and experience at leadership level, rather than as part of a formal education.

Senior Independent Director
Mr Gilbert is the Senior Independent Non-Executive Director. He is available to meet with shareholders and acts as an intermediary between the Chairman and other independent Directors when required. This division of responsibilities, coupled with the schedule of reserved matters for the Board, ensures that no individual has unfettered powers of decision. Further details of these responsibilities are set out on page 91.

Non-Executive Directors
The Company's Non-Executive Directors provide a broad range of skills and experience to the Board (see table above), which assists in their roles in formulating the Company's strategy and in providing constructive challenge to senior management.

Independence of Non-Executive Directors
Glencore regularly assesses its Non-Executive Directors' independence. Except for Peter Coates, who was first appointed to the Board in May 2011 and the Chairman, all are regarded by the Board as Independent Non-Executive Directors within the meaning of 'independent' as defined in the Code and free from any business or other relationship which could materially interfere with the exercise of their independent judgement. Mr Madhavpeddi was considered independent at the time of his appointment as Chairman.

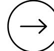
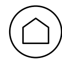
Management of conflicts of interest
All Directors endeavour to avoid any situation of conflict of interest with the Company. Potential conflicts can arise and therefore processes and procedures are in place requiring Directors to identify and declare any actual or potential conflict of interest. Any notifications are required to be made by the Directors prior to, or at, a Board meeting and all Directors have a duty to update the whole Board of any changes in circumstances. Glencore's Articles of Association and Jersey law allow for the Board to authorise potential conflicts and the potentially conflicted Director must abstain from any vote accordingly. During the year, no abstention procedures for conflicts had to be activated.

Related Party Transactions
In the course of its business, the Group enters into transactions with organisations which may constitute related parties.

All material related party transactions are required to be reviewed and approved by the Board. If a conflict exists for a Director, they will not be allowed to vote on the resolution approving the transaction. The Company also seeks advice whenever an assessment is to be made as to whether any material transaction may be a related party transaction under the terms of FCA Listing Rule 11.

During the year the Board reviewed the purchase from BHP and Anglo-American of their one-third interest each in Cerrejon.

Transactions between the Group and its significant joint ventures and associates are summarised in note 33 to the Financial Statements.

Corporate governance report continued

Acquisition and disposal of assets
The Board reviews and approves all material proposed transactions, including acquisitions and disposals of assets. Additionally, there is an assessment as to whether material transactions comply with FCA Listing Rule 10 requirements.

If required, the Board may engage an independent third-party adviser to review the proposed transaction and provide an independent opinion for the Board to assist in its decision making in addition to the requirements to have advice from a sponsor under the FCA Listing Rules.

Board Committees
The following permanent Committees are in place to assist the Board in exercising its functions: Audit, Nomination, Remuneration, HSEC and ECC. The Board is provided with technical and commercial updates as appropriate during the year, including as to our Raising Concerns programme and relevant investigations. The Board may also establish temporary committees for specific purposes, such as the Investigations Committee. As each Committee reports to the Board, meetings are held prior to Board meetings, during which the chair of each Committee leads a discussion concerning the Committee's activities since the previous Board meeting.

A report from each chair of the permanent Committees is set out later in this Corporate Governance report.

All permanent Committees' terms of reference are available at:

glencore.com/who-we-are/governance

Each Committee reports to, and has its terms of reference approved by, the Board and the minutes of the Committee meetings are circulated to the Board. Each Committee regularly reviews its terms of reference to ensure they reflect the Board's expectations as to the Committee's role as well as the latest corporate governance requirements and recommended practices.

Investigations
In July 2018, following receipt of a subpoena from the U.S. Department of Justice (DOJ), the Board reconstituted the then existing Investigations Committee to direct the Company's response. The Investigations Committee's mandate has continued and includes oversight and responsibility for material decision making as to the Company's response to all the investigations listed in notes 23 and 32. It also monitors the Group's exposure arising from the investigations and concludes on the appropriate disclosure in the financial statements.

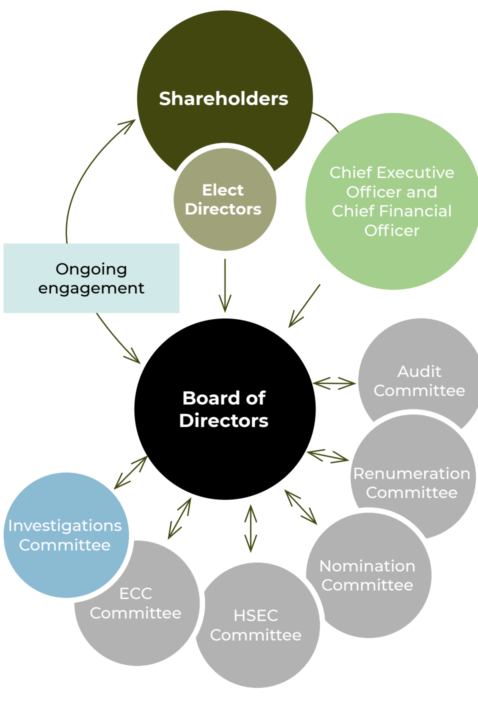
Oversight of management of climate-related risks and opportunities
Climate change is a Board-level standing agenda item. During 2021, we revised our internal climate change governance framework to drive implementation of the climate strategy and the supporting work programmes. Our new Climate Change Taskforce (CCT) is accountable to the Board, to whom it provides regular progress and status updates. It is led by the CEO and other members include the CFO, Head of Industrial Assets, and General Counsel, as well as representatives from key corporate functions including investor relations, finance and sustainable development. Commodity departments, including heads of the departments and nominated representatives, participate in the working groups that support the CCT.

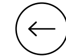
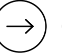
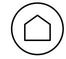
In recognition of the desire of shareholders to have the opportunity directly to advise the Company of their opinion on its plans and their implementation, the Board resolved in 2021 to follow the same shareholder engagement model which it uses for remuneration by which a policy is issued at least every three years and a report is published annually on the implementation of that policy, each of which is put to an advisory vote.

Board meetings
The Board has approved a schedule that sets out the matters reserved for its approval, including Group strategy, financial statements and annual budget, and material acquisitions and disposals. Meetings are usually held at the Company's headquarters in Baar, Switzerland. However, during 2021, due to travel restrictions, some or all Non-Executive Directors were often unable to attend meetings in person.

The Board and its Committees have standing agenda items to cover their proposed business at their scheduled meetings. The Chairman seeks to ensure that the very significant work of the Committees feeds into, and benefits through feedback from, the full Board. The Board and Committee meetings seek to cover all aspects of the Group and, for this purpose, receive input and support from senior management through reports and presentations, which among others cover operational, financial, audit, risk, legal and compliance, governance, and investor relations. These reports and presentations allow Directors to further their understanding of the business and provide the insights necessary for defining the Company's strategy and objectives, in turn contributing to a more effective Board.

Corporate governance



Corporate governance report continued

Board and Committees' main activities and decisions during 2021

Below are details of the main topics which were reviewed, discussed, and when required, approved during 2021:

Regular updates

- Reports from Committee Chairs
- Reports from CEO, CFO, Company Secretary, General Counsel and senior management, including climate strategy
- Group Strategy, including M&A and capital expenditure, including:
  - acquisition of 66.6% of Cerrejon,
  - sale of Ernest Henry Mine, and
  - review of Nickel Canadian Onaping Depth project and Koniambo operations
- Group performance report

Financial & Risk

- Finance reports, forecasts and capital position updates
- 2022 budget and 2023–25 business plan, life of asset planning and costs analysis
- Capital management, debt and returns analysis
- Financial statements
- Group risk appetite
- Group risk management framework, including new ERM policies
- Tax policies and provisions

Governmental investigations

- Regular scheduled and ad hoc meetings of the Investigations Committee to review progress and receive updates on interactions with relevant authorities
- Decisions concerning ongoing investigations and accounting disclosures

Governance & Stakeholders

- Revised Code of Conduct
- Annual report
- AGM, voting results and outcomes
- Investor relations reports
- Analysts updates
- Corporate governance framework
- Stakeholder engagement
- Board and Directors' evaluation
- Chairman's performance

Legal, Regulatory & Compliance

- Group policies
- Legal matters updates
- Regulatory & Compliance updates
- Group Ethics and Compliance Programme
- Raising Concerns reports and analysis
- Analysis of legal risks concerning climate change
- Board training
- Material permitting and licences

Health, Safety, Environment & Communities

- Fatalities, major incidents and other safety issues
- Tailings Storage Facilities reviews
- Environmental incidents reports
- HSEC and Human-Rights policy framework
- Human Rights and Communities analysis
- Supply chain traceability
- Cultural heritage

Succession and Remuneration

- Succession planning for Board and senior management
- Tender and appointment for Remuneration Committee advisor
- Senior management remuneration

Other activities

- Covid-19 related activities including analysis of impact on health & safety, business and audit risks
- External Audit tender

Appointment of Non-Executive Directors

All the Non-Executive Directors have letters of appointment and the details of their terms are set out in the Directors' remuneration report. No other contract with the Company or any subsidiary undertaking of the Company in which any Director was materially interested existed during or at the end of the financial year.

Information, management meetings, site visits and professional development

It is considered essential that the Non-Executive Directors attain a good knowledge of the Company and its business and allocate sufficient time to Glencore to discharge their responsibilities effectively. The Board calendar is planned to ensure that Directors are briefed on a wide range of topics.

During 2021, similarly to the previous year, there were no site visits due to the global pandemic. However, various virtual site engagements took place.

All Directors have access to the advice and services of the Company Secretary, who is responsible to the Board for ensuring that Board procedures are complied with and have access to independent and professional advice at the Company's expense, where they judge this to be necessary to discharge their responsibilities as Directors.

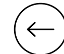
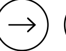
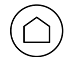
Board performance and effectiveness

For 2021, a performance evaluation was conducted internally. As part of this process, each Director completed questionnaires that covered various key indicators of Board and Committee performance and effectiveness, including the findings from the previous evaluation (summarised in the 2020 Annual Report). Results were provided to the Chairman and the Senior Independent Director by the Company Secretary.

Final results were presented to the Board collectively for discussion.

Issues of focus raised by the Directors included:

- need to resume meetings in person and site visits whenever permitted
- health and safety, and fatalities elimination
- resolving the investigations
- government relations/country risks
- refreshment of the Board with an emphasis on greater ethnic and geographic diversity, strong resource industry experience, and accounting expertise
- senior management transition
- succession planning, including for corporate functions
- workforce diversity and inclusion
- more active remuneration committee
- more work on ESG and carbon strategy
- risk management, compliance, culture and internal audit/controls and whistleblowing arrangements
- divestments of 'tail' assets

Corporate governance report continued

Director induction and information

New Directors receive a full, formal and tailored induction on joining the Board, including meetings with management and a comprehensive introduction to the main aspects of the Group, its business and functions, the roles and responsibilities of a UK premium listed company director, and the Company's Purpose, Values and Code of Conduct.

The Directors receive training on legal and compliance topics and regular updates on relevant business and governance matters.

Ms Carroll and Mr Wormsley both completed their induction during the year.

Diversity

The diversity policy which is applied to appointments to governance bodies with regard to aspects such as age, gender, or education and professional backgrounds is the same as for all Group employees.

The Board is very cognisant of the ongoing desire from stakeholders for greater diversity in senior management and boards. In particular, leading UK institutional shareholders have set a target for women to comprise 33% of senior management and boards of FTSE 100 companies by the end of 2020. This board target was achieved on 2 February 2021 and we remain compliant at the date of this report.

The Board acknowledges that much more needs to be done to achieve greater diversity in the senior management of the Group, including through the development of an internal pipeline of candidates. Accordingly during 2021 it has overseen development of the Group's first Diversity and Inclusion strategy – see further on page 35. While we support the aims of diversity, we do not believe that a one size fits all policy is appropriate or currently achievable. Still today, we find it challenging to find female candidates for senior positions in remote mining locations and for the marketing of commodities.

Accountability and audit

Financial reporting

The Group has in place a comprehensive financial review cycle, which includes a detailed annual planning/budgeting process where business units prepare budgets for overall consolidation and approval by the Board. The Group uses many performance indicators to measure both operational and financial activity in the business. Depending on the measure, these are reported and reviewed on a daily, weekly or monthly basis. In addition, management in the business receives weekly and monthly reports of indicators which are the basis of regular operational meetings, where corrective action is taken if necessary. At a Group level, a well-developed management accounts pack, including income statement, balance sheet, cash flow statement as well as key ratios is prepared and reviewed monthly by management. As part of the monthly reporting process, a reforecast of the current year projections is performed. To ensure consistency of reporting, the Group has a global consolidation system as well as a common accounting policies and procedures manual. Management monitors the publication of new reporting standards and works closely with our external auditor in evaluating any impact.

Risk management and internal control

The Board has complied with provisions 28 to 31 of the Code by establishing an ongoing process for identifying, evaluating and managing the risks that are considered significant by the Group in accordance with the Guidance on Risk Management, Internal Controls and Related Financial and Business Reporting published by the Financial Reporting Council, as detailed on pages 68-71. This process has been in place for the period under review and up to the date of approval of the Annual Report and financial statements. The process is designed to manage and mitigate rather than eliminate risk, and can only provide reasonable and not absolute assurance against material misstatement or loss. This review excludes associates of the Group as Glencore does not have the ability to dictate or modify the internal controls of these entities. The Directors confirm that they have carried out a robust assessment of the principal and emerging risks facing the Group and have reviewed the effectiveness of the risk management and internal control systems, and concluded that there are no significant failings or weaknesses in internal controls other than certain internal control deficiencies noted by the external auditor, see page 98.

Interactions with shareholders

The Board aims to present a balanced and clear view of the Group in communications with shareholders and believes that being transparent in describing how we see the market and the prospects for the business is extremely important.

We communicate with shareholders in a number of different ways. The formal reporting of our full- and half-year results and quarterly production reports is achieved through a combination of releases, presentations, group calls and individual meetings. The full- and half-year reporting is followed by investor meetings across a variety of locations where we meet institutional shareholders. We also regularly meet with existing and prospective shareholders. Absent Covid-19 related travel restrictions, we regularly facilitate visits to parts of the business to give analysts and major shareholders a better understanding of how we manage our operations. These visits and meetings are principally undertaken by a combination of the CEO, CFO, Head of Industrial Assets and Head of Investor Relations.

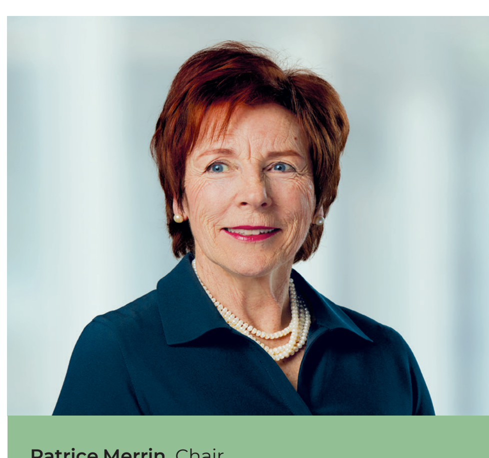
In addition, many major shareholders have meetings with the Chairman and appropriate senior personnel, including other Non-Executive Directors, the Company Secretary and senior members of the Sustainability team. The matters covered by meetings with the Chairman and Company Secretary include the work of the Board's Committees. Unfortunately, in 2021, due to Covid-19 related restrictions, some of these engagements have taken place virtually.

For minor shareholders, the AGM is often the only time when direct interaction with the Board and Management is possible. As we again could not hold an AGM in person this year, and in an attempt to stay close to the spirit of a traditional AGM, all shareholders were able to submit questions, live or in writing, to the Chairman and CEO. Members of the public were able to listen without restrictions and the record of these virtual sessions were published on our website.

AGM

The Company's next AGM is due to be held on 28 April 2022. Full details of the meeting will be set out in the AGM notice of meeting. All documents relating to the AGM will be available on the Company's website at: **glencore.com/agm**

Ethics, Compliance and Culture (ECC) Committee report



Patrice Merrin, Chair

Other members
Gill Marcus
Peter Coates

The Committee met five times during the year. Mr Madhavpeddi temporarily chaired the Committee upon Dr Hayward's retirement on 30 July. On 1 October Ms Merrin was appointed as Chair. Remaining Committee members served throughout the year and attended all of the meetings. Nicola Leigh is the secretary of this Committee.

Responsibilities

The main responsibilities of the Committee are:

- Overseeing the implementation of the Group Ethics and Compliance Programme including Group policies, standards, procedures, guidelines, systems and controls for the prevention of unethical business practices and misconduct.
- Reviewing reports and the activities of relevant management committees: ESG and Business Approval Committees – see page 44.
- Assessing and monitoring culture to ensure alignment with the Company's Purpose and Values.
- Monitoring the Group's stakeholder engagement.

Main activities

During the year, the Committee's activities included the following:

Ethics and Compliance

- Provided oversight of the key elements of the Ethics and Compliance Programme, including risk assessments, policy implementation, training and awareness, internal monitoring, and reviews conducted by third party specialists.
- Reviewed the implementation and effectiveness of the Ethics and Compliance Programme.
- Reviewed the compliance structure and resourcing to assess whether it is sufficient for the Group.
- Considered a variety of other material ethics and compliance issues.
- Reviewed and recommended to the Board policies for Information Governance and Market Conduct.

Stakeholder engagement

- Reviewed and recommended to the Board the new Code of Conduct and received feedback on rollout.
- Reviewed our ESG engagement, including with NGOs and multi-stakeholder organisations that invest or engage on ESG issues, and track the development of reporting on ESG related topics.
- Considered the significant matters on which the Group has made political representations and our use of lobbyists and the conduct and positions of our member organisations during 2021 on material issues in accordance with our Political Engagement Policy. This included a detailed analysis of activities in the main countries in which the Group operates.
- Considered regulatory developments in relation to responsible sourcing and the Group's proposed planned actions.

Workforce Engagement

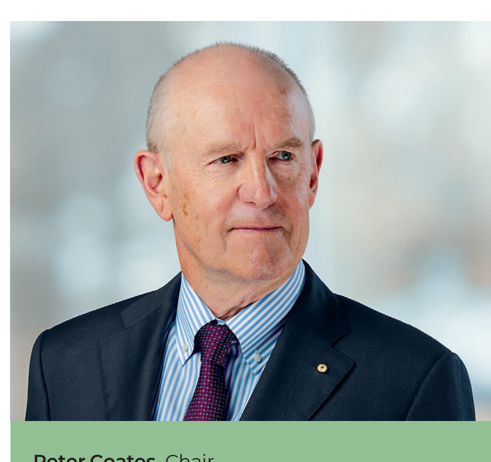
- Considered management of health related concerns, policies and communications with a focus on mental health and wellbeing and providing accurate Covid-19 health advice and support.
- Considered Group HR policies, standards, legislative compliance around the globe and greater use of technology.
- Reviewed policies on Equality of Opportunity, and Diversity and Inclusion, and the related standards.
- Consideration of the employee campaign and launch of the new Code of Conduct, the Group's Purpose and Values and ensuring these are aligned with the Group's culture – see the Ethics and Compliance section starting on page 43.
- Reporting on culture surveys: Employee attitudes toward the Group's Values, its commitment to ethical behaviour and scores covering the compliance programme were considered in particular. The Value and Culture index is reviewed by the Committee and, where necessary, corrective actions are taken. Examples in the last year include promoting mental health wellbeing and awareness and ensuring there is a clear and concise understanding by the workforce of our Purpose, Values and Code of Conduct.
- As part of the Committee's role in assessing and monitoring Group culture, individual Non-Executive Directors held a series of forums with a cross section of employees in different parts of the business, representing different commodities and different levels of responsibility. These forums were attended in-person where possible with virtual engagements being held where travel was still difficult. Discussions were focused on topics such as diversity and inclusion, health and safety, climate change, compliance and Glencore's strategy, Purpose and Values and the feedback from employees was shared with the Committee and notes provided to the Board. Further forums are planned for 2022 given the positive feedback received from employees on this type of Director engagement.

The Board considers having designated workforce engagement Directors as the most constructive method of workforce engagement. In order for this role to be effective, given the vast geographic reach of the Group, the Board has chosen for all members of this Committee to be such workforce engagement directors. Each Director uses the forum of this Committee to provide feedback to the Board on the concerns of the workforce and ensure that employees' voices are heard in the Boardroom.

Engagement by the Board and senior management is covered in the Our people section starting on page 34.

Patrice Merrin
Chair of the ECC Committee
15 March 2022

Health, safety, environment & communities (HSEC) report



Peter Coates, Chair

Other members
Patrice Merrin
Cynthia Carroll
Kalidas Madhavpeddi

The Committee met five times during the year. Ivan Glasenberg retired on 30 June 2021 and Anthony Hayward retired on 30 July 2021. Cynthia Carroll joined the Committee on 2 February 2021 and Kalidas Madhavpeddi joined the Committee on 1 October 2021. Each Committee member attended all meetings during their period of appointment. Every scheduled meeting had a substantial agenda, reflecting the Committee's objective of monitoring the achievement by management of ongoing improvements in HSEC performance.

John Burton is the Secretary of this Committee.

Responsibilities

The main responsibilities of the Committee are:

- Ensuring that appropriate Group policies are developed in line with our Values and Code of Conduct for the identification and management of current and emerging health, safety, environmental, community and human rights risks
- Ensuring that the policies are effectively communicated throughout the Company and that appropriate processes and procedures are developed at an operational level to implement and evaluate the effectiveness of these policies through:
  - assessment of operational performance
  - review of updated internal and external reports
  - independent audits and reviews of performance with regard to HSEC matters, and action plans developed by management in response to issues raised
- Evaluating and overseeing the quality and integrity of any reporting to external stakeholders concerning HSEC matters
- Reporting to the Board

Main activities

During the year, the Committee engaged in the following activities:

- HSEC & Human Rights Strategy: reviewing the Group's annual HSEC & Human Rights strategy and its implementation
- Governance: approved 5 new or updated HSEC and human rights policies:
  - Health and Safety Policy
  - Environmental Policy
  - Social Performance Policy
  - Human Rights Policy
  - Tailings Storage Facility Policy
- Health and Safety: overseeing the Group's fatality reduction programme including SafeWork which is Glencore's approach to eliminating fatalities. In 2021, a revised SafeWork was launched through a change project called 'SafeWork 2.0'. There was a detailed review of KCC given certain challenging issues that had arisen relating to safety and tailings management
- Health and Safety: review of each fatality occurring with emphasis on lessons to be learned across the Group; oversight of a revamping of leadership of fatality investigations including a training programme; reviews of critical incidents and trends in TRIFR, LTIFR, HPRIs and other relevant statistics
- Environment: assessing the Group's strategy concerning GHG emissions, energy, water and stewardship and other impacts
- Communities: reviewing material issues, investigations and complaints
- Social and human rights: monitoring the Group's strategy and reviewing serious incidents
- Assurance: reviewing work of the HSEC Audit function including its training activities
- Enterprise Risk Management: overseeing the development of a revised ERM standard for the industrial business
- Tailings storage facilities: overseeing the work on the new Tailings Management Policy Framework and updated Tailings Storage Facility Standard which is now aligned to the Global Industry Standard for Tailings Management and the internal work on the Group's facilities, particularly those designated as high risk
- External affairs: monitoring the Group's external HSEC reporting, continuing engagement on material issues and stakeholder and investor engagement
- Other matters: Considering a variety of other material HSEC issues.

Peter Coates
Chair of the HSEC Committee
15 March 2022

Audit Committee report

Gill Marcus, Chair

Other members
Martin Gilbert
David Wormsley

The Committee met eight times during the year, four of which related to the audit tender only. In October 2021, Gill Marcus replaced Kalidas Madhavpeddi as Chair of the Committee and David Wormsley was appointed as a member of the Committee. Each Committee member attended all of the meetings during their period of appointment. All current Committee members are considered by the Board to be Independent Non-Executive Directors and to be financially literate by virtue of their relevant financial experience. As a whole, the Committee has the skills and experience relevant to the sector.

John Burton is the Secretary to the Committee.

The Committee usually invites the CEO, CFO, General Counsel, Group Financial Controller, Chief Risk Officer and Head of Internal Audit and the lead partner from the external auditor to attend each meeting. Other members of management and the external auditor may attend as and when required. Other Directors also usually attend its meetings.

Additionally, the Committee holds closed sessions with the external auditors and the Head of Internal Audit without members of management being present. The Committee has adopted guidelines allowing certain non-audit services to be contracted with the external auditors.

Role and responsibilities

The primary function of the Committee is to assist the Board in fulfilling its responsibilities with regard to financial risk management and internal controls, financial reporting, and oversight of external and internal audit.

During the year, the Committee's principal work included the following:

- Reviewing the Group's internal financial controls and financial risk management systems
- Reviewing the Group's financial and accounting policies and practices including discussing material issues with management and the external auditor, especially matters that influence or could affect the presentation of accounts and key figures
- Considering the output from the Group-wide processes used to identify, evaluate and mitigate financial risks, including credit and performance risks, across the industrial and marketing activities
- Reviewing the global audit plan, scope and fees of the audit work to be undertaken by the external auditor
- Reviewing the Internal Audit department's annual audit plan
- Monitoring the progress made in remediating the internal control deficiencies noted by the external auditor (IT access controls and certain review controls over journal entries and complex valuation models). The Committee regularly discusses these matters, the actions to remediate them and the progress being made with management and the external auditor, refer to point 3 below *Internal Controls Review – UK SOX readiness programme*
- Reviewing and agreeing the preparation and scope of the year-end reporting process
- Considering applicable regulatory changes to reporting obligations
- Considering the scope and methodologies to determine the Company's going concern and longer-term viability statements
- Reviewing the full-year and half-year financial statements with management and the external auditor
- Evaluating the Group's procedures for ensuring that the Annual Report and accounts, taken as a whole, are fair, balanced and understandable
- Monitoring the independence of the external auditor and the operation of the Company's policy for the provision of non-audit services by the external auditor
- Conducting a competitive tender for the appointment of an external auditor, details noted below
- Recommending to the Board a resolution to be put to the shareholders for their approval on the appointment of the external auditor and to authorise the Board to fix the remuneration and terms of engagement of the external auditor

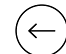
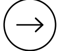
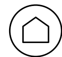
Risk management and internal controls review process

The Committee receives reports and presentations at each meeting on management of marketing and other risks (excluding operational and sustainability risks which are reviewed by the HSEC Committee and compliance risks which are reviewed by the ECC) and at least once a year considers an in-depth study of the perceived main and emerging risks and uncertainties and the Group's risk management framework as a whole.

The Board's internal controls review processes are outlined under *Risk management and internal control* on page 95 and detailed on pages 68-71.

External audit tender

The Audit Committee oversaw a formal and competitive tender process during 2021 in relation to the Group's external auditor. The process started in January with a review of potential audit firms that were independent and could therefore participate in a tender process. After this review, two firms were selected, KPMG LLP and Deloitte LLP, and each was sent a Request for Proposal (RFP). They each met with a number of members of senior management, including regional finance directors and heads of departments and corporate functions. The firms were also invited to present their capabilities that would complement the audit in relation to IT, compliance and sustainability. Written responses to the RFP were submitted to a steering committee which comprised members of the Finance and Company Secretarial teams and the Audit Committee Chair. Areas of consideration included individual and firm audit quality scores, cultural fit, a demonstrable understanding of the Group's business, technical expertise and proposed fee structure and development. The tender was further used as an opportunity to

Audit Committee report continued

seek input on the approach to the audit and the Company's external reporting given the changes in legislation and the enhanced role of the Audit Committee. In relation to the outcome of the tender, the Audit Committee recommended to the Board that Deloitte LLP be reappointed as the Company's external auditor while identifying certain opportunities for improvement by them. The Board approved the Audit Committee's recommendation and the Directors will be proposing the reappointment of Deloitte LLP for the financial year ending 31 December 2022 and the setting of its fees at the Company's 2022 AGM. Deloitte LLP are required to rotate the audit partner responsible for the Group audit every five years and therefore the current lead audit partner, Geoff Pinnock, having served since the 2018 accounting year, will rotate after the 2022 year end.

Significant issues

The Committee assesses whether suitable accounting policies, including the implementation of new accounting standards, have been adopted and whether management has made appropriate estimates and judgements. It also reviews the external auditor's reports outlining audit work performed and conclusions reached in respect of key judgements, as well as identifying any issues in respect of these reports.

During the year, the Committee has focused in particular on these key matters:

1. Audit plan review
The Committee reviewed key developments and audit risks central to planning for the half year review and annual audit. These included asset valuations, DRC matters, internal controls, scaling up of LNG commercial activities, ongoing government investigations and acquisition of the remaining 66.66% interest in Cerrejon.

2. Significant accounting matters
The Committee considered a number of current or prospective significant accounting matters including relating to the disposal of Mopani, TCFD disclosure requirements, accounting for LNG contracts as well as a number of key judgements and estimates.

3. Internal Controls Review – UK SOX readiness programme
In response to the Corporate Reform changes being considered in the UK regarding, amongst other proposals, a Sarbanes-Oxley type internal controls attestation regime, the Committee is overseeing an intensive management review, supported by Ernst & Young, of the Group's internal controls. Initially this focused on compliance related financial controls and then broadened to internal controls related to financial reporting.

4. Covid-19
The Committee continued to consider the risks to management accounting and internal controls processes due to the effects of Covid, including relocation of staff and inaccessibility of some business locations.

5. Impairments
The Committee considered whether the carrying value of goodwill, industrial assets, physical trade positions and material loans and advances may be impaired as a result of commodity price volatility and some asset specific factors including the impact of climate change. The Committee reviewed management's reports, outlining the basis for the key assumptions used in calculating the recoverable value for the Group's assets. Future performance assumptions used are derived from the Board-approved business plan. As part of the process for approval of this plan, the Committee considered the feasibility of strategic plans underpinning future performance expectations, and whether they remain achievable. Considerable focus was applied to management's commodity price and exchange rate assumptions and their sensitivities within the models. The Group's interest in the Cerrejon coal asset (with the remaining two-thirds interests to be acquired) and the Koniambo nickel asset in New Caledonia have been subject to particular scrutiny. In relation to coal, there continues to be particular focus around price outlook and climate change related risks.

The Committee was satisfied with the positions adopted by management.

6. Taxation
Due to its global reach, including operating in many higher-risk jurisdictions, the Group is subject to enhanced complexity and uncertainty in accounting for income taxes, particularly the evaluation of tax exposures and recoverability of deferred tax assets. The Committee has engaged with management to understand the potential tax exposures globally and the key estimates taken in determining the positions recorded, including the status of communications with local tax authorities and the carrying values of deferred tax assets. The African copper assets and tax risk exposures in the UK have been particular areas of focus.

The Committee was satisfied with the positions adopted by management.

7. Counterparty exposures
The Group's global operations expose it to credit and performance risk, which result in the requirement to make estimates around recoverability of receivables, loans, trade advances and contractual non-performance. As part of an ongoing review, the Committee considered material continuing exposures, the robustness of processes followed to evaluate recoverability and whether the amounts recorded in the financial statements are reasonable.

The Committee was satisfied with the positions adopted by management.

8. Other material issues
These included going concern and long-term viability assessments. The Committee was satisfied with the going concern and longer-term viability conclusions reached as set out on page 71.

Internal and external audit

The Committee monitored the internal audit function as described under Internal Audit on page 70.

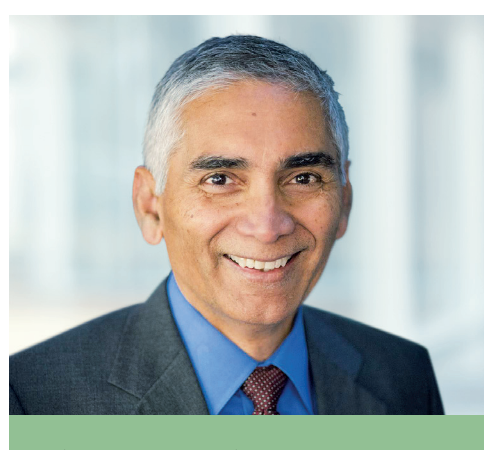
The Committee's assessment of the quality and effectiveness of the external audit process was considered as part of the audit tender process (see previous page).

The application of the FRC's Revised Ethical Standard 2019, from 1 January 2021, has introduced significantly extended restrictions regarding the use of the Company's external auditor for non-audit services, to preserve the auditor's independence and the Group's non-audit services policy has been amended accordingly.

For 2021, fees paid to the external auditor were approximately $26 million. These included audit related assurance services of $3 million and non-audit fees of $1 million; further details are contained in note 30 to the financial statements.

Gill Marcus
Chair of the Audit Committee
15 March 2022

Nomination Committee Report



Kalidas Madhavpeddi, Chair

Other members

All other Non-Executive Directors

During the year, the Committee's composition was initially Patrice Merrin, John Mack and Kalidas Madhavpeddi. Mr Coates replaced Mr Mack on his retirement from the Board. Following his appointment as Chairman, Mr Madhavpeddi became chair of the Committee and Ms Marcus replaced Ms Merrin. From 1 January 2022, all Non-Executive Directors became members of the Committee.

The Committee met three times during the year.

John Burton is the Secretary of this Committee.

Role and responsibilities

The main responsibilities of the Nomination Committee are to assist the Board with succession planning and with the selection process for the appointment of new Directors, both Executive and Non-Executive, including the Chair, and overseeing succession plans for senior management.

This involves:

- Evaluating the balance of skills, knowledge and experience of the Board and identifying the capabilities required for a particular appointment
- Overseeing the search process
- Evaluating the need for Board rejuvenation and succession planning generally
- Overseeing planning for CEO and CFO succession
- Monitoring the CEO's planning for senior management succession to seek to ensure that the Company has a suitable pipeline of candidates
- Considering diversity in appointments

Main activities

The Committee focused on four main tasks during this year.

Firstly, the Committee oversaw the completion of the senior management succession upon the retirement of Mr Glasenberg and the departure of the remaining Marketing department heads such that the CEO and all such business leaders were replaced during the period from the beginning of 2019 to 30 June 2021.

Secondly, prior to the notice of 2021 AGM being compiled, the Committee considered the performance of each Director. It concluded that (other than Mr Mack who had announced his intention not to seek re-election) that each Director is effective in their role and continues to demonstrate the commitment required to remain on the Board. Accordingly, it recommended to the Board that re-election resolutions be put for each continuing Director at the 2021 AGM.

Thirdly, the Committee considered the appointment of a successor to Dr Hayward as Chairman, which led to the appointment of Kalidas Madhavpeddi who was already a member of the Board

Finally, the Committee oversaw overall Board refreshment which led to the appointment of David Wormsley, reflecting the desire for additional financial and UK markets experience.

The Committee acknowledged the recommendations of the Hampton-Alexander Review on gender and the Parker Review on ethnic diversity. It is part of the Committee's policy when making new Board appointments to consider the importance of diversity on the Board, including gender and ethnicity, which is considered in conjunction with experience and qualifications. While the Board satisfies the diversity targets set by the Hampton-Alexander and Parker Reviews, it is acknowledged that more work needs to be done to address diversity at senior management level.

Kalidas Madhavpeddi
Chair of the Nomination Committee
15 March 2022

Directors' Remuneration Report

For the year ended 31 December 2021

Cynthia Carroll, Chair

Other members

Kalidas Madhavpeddi

Martin Gilbert

On behalf of the Board, I am pleased to present Glencore's Remuneration Report for the financial year ended 31 December 2021, my first as Chair of Glencore's Remuneration Committee.

This report is presented to reflect the reporting requirements on remuneration matters for companies with a UK governance profile, particularly the UK's Large and Medium-sized Companies and Groups (Accounts and Reports) (Amendment) Regulations 2013, unless stated otherwise. The report also describes how the Board has complied with the provisions set out in the UK Corporate Governance Code relating to remuneration matters. Our auditors have reported on certain parts of the Directors' Remuneration Report and stated whether, in their opinion, those parts of the report have been properly prepared. Those sections of the report which have been subject to audit are clearly indicated.

Our report is divided into three sections:

- This letter from me as Chair of the Remuneration Committee
- Glencore's Remuneration at a Glance
- Our Annual Report on Remuneration detailing the outcomes from 2021 and how we will implement our Remuneration Policy in 2022.

Introduction

2021 was a year of leadership transition for Glencore as Ivan Glasenberg retired as CEO and as a member of the Glencore Board on 30 June 2021 and Gary Nagle succeeded him in the role of CEO and a member of the Glencore Board on 1 July 2021.

A key focus for the Committee's work during the year was therefore the implementation of the Remuneration Policy for the new CEO, including reviewing shareholders' feedback and the development of frameworks, processes and structures for the measurement and assessment of performance given the unusual nature of the former CEO's pay package.

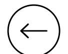
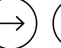
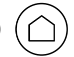
We have been guided in our decision making by the principles of responsible pay and believe that our remuneration policy achieves its intended objectives to provide due recognition and to support Glencore's growth now and into the future. A number of important considerations have informed our decisions this year, including:

- financial and non-financial performance;
- the views and expectations of our stakeholders;
- the Company's sustainability commitment;
- our continued focus on capital projects and maintaining production to meet higher levels of global demand;
- the ongoing impact of the Covid-19 pandemic; and
- Glencore's leadership transition against a challenging operating backdrop.

Remuneration policy

2021 represents the first year of application of the Remuneration Policy for the new CEO, which was developed following extensive consultation with major shareholders and investor bodies in mid-2020. The changes to the Remuneration Policy were guided by a need to support the Company's transition to a more market aligned CEO remuneration package, as well as its future needs as a major global miner and one of the world's largest commodity trading companies.

While the Policy was approved by 74.2% of shareholders at the 2021 Annual General Meeting, the Committee and Board recognise the views of those shareholders who felt they could not support the resolution. Reflecting the Board's philosophy on shareholder engagement, the Board Chairman consulted extensively with the largest shareholders who voted against to discuss their feedback relating to CEO pay quantum compared to predecessor pay levels and the performance orientation of the Restricted Share Plan. The diversity of feedback received was underpinned by an acknowledgement that the Company had sought to implement a fit-for-purpose remuneration policy and an expectation for transparent disclosure of the operation of the Policy in 2021.

Directors' Remuneration Report continued

The Company believes the Policy reflects a more market aligned, competitive, and fit-for-purpose remuneration, comprising:

- a **total remuneration package that is positioned competitively** but not excessively versus the FTSE30 and a peer group that represents the internationality, complexity, and scale of our operations, taking into account Glencore's continued growth;
- an **appropriate mix of rewards for short- and long-term performance**, with a mandatory three-year deferral of 50% of any bonus earned;
- a **Restricted Share Plan** that rewards sustainable value creation and commercial effectiveness, rather than short-term share price volatility primarily driven by commodity price cycles, with **vesting subject to the Committee's assessment of robust performance underpins** aligned with the stakeholder experience;
- **one of the longest LTIP time horizons in the FTSE** to reinforce our ownership ethos, as the CEO is unable to realise value from restricted shares until the later of five years from the date of award or two years post-departure; and
- Annual bonus and Restricted Share awards are subject to **malus and clawback provisions** to mitigate excessive risk-taking and payment for failure.

The Committee strives to implement the Policy in a considered way and will continue to monitor the views of shareholders and engage directly with them as appropriate.

Performance and incentive outcomes in 2021

The social, economic, and political problems presented by the Covid-19 pandemic are without precedent in recent history. In these challenging circumstances, under the leadership of Gary Nagle who assumed his role as CEO on 1 July 2021, Glencore navigated with agility and resiliency to deliver exceptionally strong performance in 2021, while protecting the safety and health of our people and host communities.

The Committee recognises that a record year for Adjusted EBITDA depended on management and employees around the world during a challenging period.

In addition, Glencore remained steadfastly focused on shaping the business for the future, aligning the Company's sustainability ambitions with tangible actions throughout the business.

In line with the new annual bonus scorecard outlined in the Remuneration Policy, which provides consideration for financial, safety, climate and individual performance initiatives, the Remuneration Committee considered Glencore's performance and the CEO's leadership during 2021 and determined that a 93.6% outcome is warranted in respect of the outstanding performance delivered in 2021.

In reaching this decision, the Committee considered the formulaic outcome against the stretching targets for each financial measure (see below) set at the start of the year. In 2021, Glencore delivered record Adjusted EBITDA and significantly deleveraged its balance sheet (see page 48). Additionally, Funds from Operations in 2021 significantly exceeded Glencore's three-year average. In consideration of all those factors, it was determined that a full payout in respect of the financial measures was warranted. The Committee also considered performance against the non-financial categories for which a 96.7% payout was deemed appropriate, including considerations such as:

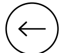
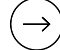
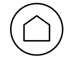
- Demonstrable progress to advance Glencore's safety culture, promote climate change leadership, and embed its climate strategy across its global operations
- Continued portfolio simplification to focus on larger, higher-margin, longer-life assets essential to the transition to a low-carbon economy, including:
  - the sales of Ernest Henry and Mopani;
  - a commitment to responsible ownership and depletion through the Cerrejon acquisition; and
  - investment in energy transition exemplified by various recycling initiatives.
- The roll out of a revised Code of Conduct that set out the business principles and values critical to Glencore's success as a responsible and ethical Company and maintenance of a best-in-class Ethics and Compliance programme
- The CEO's leadership during the 2021 transition year to advance Glencore's strategic priorities; in particular, his role in installing new executive leadership and management across operations and developing a new diversity and inclusion strategy to attract and retain the next generation of leaders for Glencore globally.

The formulaic outcome was therefore 98.5% of maximum opportunity. However, it was noted that despite the strong overall performance delivered and value creation for shareholders, as well as a significant year-over-year improvement in health and safety indicators across the business, including LTIFR and TRIFR, there were unfortunately four tragic fatalities recorded in 2021. Any loss of life is unacceptable and this is an important reminder that there is still work to do to further improve safety across all operations. Additionally, whilst 2021 was a hallmark year of earnings for Glencore, there is work to be done to further bolster production levels globally. Reflecting on Glencore's safety commitment and accountability for sustainable value creation, beyond superior financial returns, the Committee applied downwards discretion to reduce the overall bonus outcome by 5%, resulting in a bonus outcome of 93.6% of maximum. Further details of how the Committee assessed the 2021 annual bonus scorecard for the CEO are provided in the Annual Report on Remuneration.

The vesting outcome for the new RSP will be disclosed for the first time in the 2024 Remuneration Report. Vesting is subject to a holistic assessment of performance underpins (shareholder distributions, overall company performance, and ESG performance) which ensures that vesting outcomes are entirely consistent with the stakeholder experience over the vesting period. Further details of the Committee's interim assessment of these underpins are provided in the section of this report headed 'RSP awards vesting in 2021'.

Wider workforce considerations

The Committee is advised of pay and conditions around the Group and considers such information when considering executive pay. The Head of Group HR also attends meetings by invitation and is able to share

Directors' Remuneration Report continued

information about the wider workforce. In 2021, several virtual focus groups were also conducted with the aim of promoting employee engagement and facilitating direct communication between employees and Board members. Topics and issues discussed include diversity and inclusion, safety, business and strategy, executive and wider workforce pay, compliance, our Purpose and Values, and the Code of Conduct.

Remuneration for the Chairman and Non-Executive Directors

Fees for the Chairman and Non-executive Directors are reviewed annually and are benchmarked against peer companies. Based on our latest review, no changes to the Chairman or Non-Executive Directors' base fees will be made for 2022. In October 2021, adjustments were made to Committee membership fees for some Committees - see page 117.

Remuneration in 2022

2021 was a year of significant change for Glencore during which a more market aligned, competitive, and fit-for-purpose remuneration structure was introduced for the CEO, following extensive consultation with shareholder and investor bodies. Given that Mr Nagle was appointed on 1 July, the Committee was mindful of the fact that his remuneration package has only been in place for 6 months. As a result, no changes to the remuneration are being proposed for the following year.

Fixed Remuneration	Annual Bonus	Long Term Incentive
• $1.8m Base Salary • Benefits/Pension	• 125% target, 250% maximum bonus • 50% deferred into shares vesting on the third anniversary, subject to continuing employment • Scorecard comprises: – 55% Financial – 15% Safety – 15% Climate – 15% Individual targets	• 225% RSUs per year • Comprehensive underpin focused on a holistic review of the overall business and ESG performance • Test of underpin and, subject to satisfactory performance based on the assessment of the underpin, cliff vesting on the third anniversary. Requirement to hold all vested restricted stock until the later of 5-years from the date of grant or 2 years post-employment

Engaging with shareholders

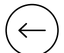
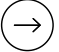
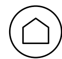
We remain committed to delivering a transparent remuneration framework, supported by strong governance processes, designed to drive the right behaviours across the whole organisation and deliver long-term success, meeting the needs of our stakeholders. As demonstrated by our Board Chairman's leadership in consulting extensively with shareholders following our last AGM, we welcome an open dialogue with shareholders and look forward to receiving your feedback and support at the upcoming AGM.

Summary and priorities for 2022

In closing, I would like to thank the Committee for its support during the challenging year and our shareholders for their constructive engagement and feedback. Thanks also to our management team for their decisive leadership and relentless efforts to continue to deliver exceptional value to our stakeholders and driving positive change, and to our employees who worked tirelessly throughout the year. Finally, I would like to express my gratitude to John Mack, the former Chair of the Remuneration Committee, for his invaluable input and contributions during his tenure and for ensuring an orderly transition.

The Committee's priorities for 2022 will remain the continued implementation of our remuneration policy and ensuring that our approach to executive remuneration is fair, responsible, and provides a dynamic framework that can accommodate the evolving demands of a changing business environment and the priorities of our shareholders and other stakeholders.

Cynthia Carroll
Chair of Remuneration Committee
15 March 2022

Directors' Remuneration Report continued

Remuneration committee

Remuneration Committee meetings in 2021

The Committee formally met 4 times during the year and considered, amongst other matters, the Remuneration Policy and the packages applicable to the Chairman, the CEO and senior management, the content and approval of the remuneration report and the appointment of new independent advisers.

All Committee members were considered independent on their appointment to the Board. Further details concerning independence of the Non-Executive Directors are contained on page 92.

The CEO and CFO are usually invited to attend some or all of the proceedings of Remuneration Committee meetings; however, they do not participate in any decisions concerning their own remuneration. Similarly the Chairman is not involved in discussions regarding his own fees.

Membership and experience of the Remuneration Committee

The members of the Committee provide a useful balance of skills, experience and perspectives to provide the critical analysis required in carrying out the Committee's function. Each Committee Member has had a long career in the management of large organisations and therefore provides considerable experience of remuneration analysis, design and implementation.

Role of the Remuneration Committee

The terms of reference of the Committee set out its role. They are available on the Company's website at:

→ **glencore.com/who-we-are/governance**

Its principal responsibilities are to:

- Regularly review the appropriateness and relevance of the Remuneration Policy
- Determine and agree with the Board the framework for the remuneration of the Company's Chairman and the Chief Executive Officer
- Establish the remuneration package for the CEO including the scope of pension benefits
- Determine the remuneration package for the Chairman, in consultation with the CEO
- Determine the policy for senior management remuneration
- Oversee schemes of performance related remuneration (including share incentive plans), and determine awards for the CEO (as appropriate)
- Ensure that the contractual terms on termination for the CEO are fair and not excessive

The philosophy of the Remuneration Committee is to set the Company's remuneration policies and practices to promote the long-term success of the Company and support the implementation of the Group's strategy, while aligning the interests of the Executive Directors and executives with those of shareholders generally. This policy has consistently underpinned our approach to executive remuneration.

The Committee considers corporate performance on ESG and governance issues when setting remuneration for the Executive Director. Additionally, the Committee seeks to ensure that the incentive structure for the Group's senior management does not raise ESG or governance risks by inadvertently promoting and/or rewarding behaviours that are not aligned with the Group Values, culture and policies.

Advisers to the Remuneration Committee

At the start of the year, the Committee received remuneration advice from FIT Remuneration Consultants LLP ('FIT'). During the year, the Committee conducted a formal tender process following which it appointed and received independent remuneration advice from Mercer UK Limited ('Mercer'), its new independent external adviser. Mercer is a member of the Remuneration Consultants Group (the UK professional body for Remuneration Consultants) and adheres to its code of conduct. The Committee is satisfied that the advice provided by Mercer was objective and independent.

The fees paid for advice in respect of 2021 were: FIT $92,919 (2020: $59,554) and Mercer $96,243 (September to December 2021). Neither FIT or Mercer have any connection with the Company or individual Directors.

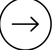
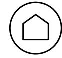
The Head of Group HR also attends meetings at the invitation of the Committee.

AGM Shareholder Voting

The votes cast to approve the Directors' remuneration report, for the year ended 31 December 2020 at the AGM, held on 29 April 2021, were as follows. The factors underpinning the votes against the policy are discussed in the introductory letter from the Chair of the Remuneration Committee.

	Votes 'For'	Votes 'Against'	Votes 'Withheld'[1]
Directors' remuneration policy	74.21%	25.79%	
	(7,295,913,840)	(2,535,818,550)	(229,047,152)
Directors' remuneration report	91.30%	8.70%	
	(9,174,048,114)	(873,699,107)	(13,032,321)

1 A vote withheld is not counted in the calculation of the proportion of votes for and against the resolution.

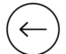
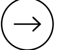
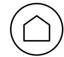



Directors' Remuneration Report continued

UK corporate governance code considerations

The Committee has considered the factors set out in provision 40 of the Corporate Governance Code. In our view, the Remuneration Policy which was approved by shareholders at the 2021 AGM addresses those factors as set out below:

Clarity: remuneration arrangements should be transparent and promote effective engagement with shareholders and the workforce.	Our remuneration policy and pay arrangements are clearly disclosed each year in the Annual Report. The Remuneration Committee proactively seeks engagement with shareholders on remuneration matters.
Simplicity: remuneration structures should avoid complexity and their rationale and operation should be easy to understand.	Our remuneration structure comprises fixed and variable remuneration, with the performance conditions for variable elements clearly communicated to, and understood by, participants. The RSP provides a simple and transparent mechanism for aligning Executive Director and shareholder interests.
Risk: remuneration arrangements should ensure reputational and other risks from excessive rewards, and behavioural risks that can arise from target-based incentive plans, are identified and mitigated.	The rules of the annual bonus scheme and RSP provide suitable mechanisms for the Committee to reduce award levels and are subject to malus and clawback provisions. The RSP reduces the risk of unintended remuneration outcomes associated with complex performance conditions associated with other forms of long-term incentive. The comprehensive RSP underpins also mitigate the risk of payments for failure.
Predictability: the range of possible values of rewards to individual directors and any other limits or discretions should be identified and explained at the time of approving the policy.	The RSP increases the predictability of reward values (removing the risk of potentially unintended outcomes). Maximum award levels and discretions are set out in the policy tables and the policy includes scenario charts showing the potential outcomes on a range of assumptions.
Proportionality: the link between individual awards, the delivery of strategy and the long-term performance of the Company should be clear. Outcomes should not reward poor performance.	Variable performance-related pay represents a significant proportion of the total remuneration opportunity. The Committee considers the appropriate financial and personal performance measures each year to ensure that there is a clear link to strategy. Discretion is available to the Committee with the ability to reduce awards if necessary, to ensure that formulaic outcomes do not reward poor performance.
Alignment to culture: incentive schemes should drive behaviours consistent with company purpose, values and strategy.	The Committee seeks to ensure that personal performance measures under the annual bonus scheme incentivise behaviours consistent with the Company's Purpose, Values and culture. The RSP will clearly align the Executive Director's interests with those of shareholders by ensuring a focus on delivering against strategy including strategy related to environmental, social and governance factors to generate long-term value for shareholders.

Directors' Remuneration Report continued

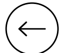
Remuneration at a glance/Policy

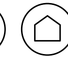
Summary of Remuneration Policy

The table below summarises Glencore's remuneration policy which was approved by shareholders at the 2021 AGM, how we have applied this policy for the CEO for the year ending 31 December 2021 and how we will apply the policy for 2022. The Policy for the Executive Directors currently only applies to Mr Nagle as he is the only Executive Director. Mr Nagle was appointed to the Board on 1 July 2021. Our policy is based on an extensive external benchmarking exercise focused on our UK-listed peer group comprising of Anglo American, BHP, BP, Rio Tinto and Shell. This group was chosen because the mining companies are the best comparators for our industrial business while, for the oil companies, the combined industrial and marketing business model is closely aligned to Glencore's activities. The full text of the policy can be found in our 2020 Annual Report on the Company's website at

glencore.com/investors/reports-results/2020-annual-report

Pay Element	Purpose and link to strategy	Details	2021-22 implementation for Gary Nagle CEO
Base Salary	Provides market competitive fixed remuneration that rewards relevant skills, responsibilities and contribution	Reviewed annually and any increases take account of those applied across the wider workforce	From 1 July 2021: US$1.8m 2022: $1.8m (no change)
Pension and benefits	Provides basic retirement and non-monetary benefits which reflect local market practice	The pension opportunity and retirement age (65) are aligned with the requirements set for other employees based in Switzerland.	Non-monetary benefits include salary loss, (long-term sickness) and accident/travel insurance. For the retirement benefits, an annual cap of $150k has been set
Annual Bonus	Supports delivery of short-term operational, financial and strategic goals	On-target/maximum opportunity (% of salary)	125%/250%
		Performance conditions (and weightings)	• Funds From Operations (30%) • Net debt (15%) • Capex (10%) • Safety (15%) • Progress towards 2035 CO_2 targets (15%) • Individual targets (15%)
		Bonus deferral	50% of annual bonus deferred in shares for three years
Restricted Share Plan	Incentivises the creation of shareholder value over the longer term	Grant (% of salary)	225%
		Vesting conditions	Vesting subject to satisfactory performance assessed with a comprehensive underpin which is based on a holistic review of overall business and ESG performance over the vesting period
		Vesting period	Three years
		Holding period	The latter of five years after the date of grant or two years post-employment
Minimum Shareholding Requirement	Provides long-term alignment with shareholders	In-post (% of pre-tax salary)	500%
		Post-exit shareholding requirement (% salary)	The lower of the shareholding at departure or 500% of salary for a period of two years





Directors' Remuneration Report continued

Malus & clawback
Awards subject to the applicable plan rules governing the annual bonus and RSP are subject to malus and clawback provisions that allow the Committee to reduce or clawback awards and may be applied in certain circumstances, such as material failures in the financial, operational, compliance, or HSEC and HR performance of the Company and a failure to identify and/or report such failure(s); and any other circumstances that are deemed to have a significant impact on the reputation or financial prospects of the Company. These provisions apply irrespective whether an award is made in cash or equity.

The Committee may, in its discretion, decide to delay vesting and therefore extend the period during which malus and clawback may be applied if facts come to light within the period warranting an investigation.

Discretion and vesting subject to the underpin
In addition to the specific discretions set out in the policy table on the preceding page, the Committee may exercise various discretions related to the operation of the policy. In particular, these include, but are not limited to, the following:

- the participants of the respective incentive plans;
- the timing of award grants, vesting and/or payment;
- the size of an award and/or payment (subject to the limits set out in the policy table);
- the determination of vesting;
- dealing with a change of control or corporate restructuring;
- the determination of a good/bad leaver for incentive plan purposes and the treatment of pro-rating and holding periods;
- adjustments required in certain circumstances (e.g. rights issues, corporate reorganisation and/or change to capital structure); and
- determining the appropriate performance conditions, underpins, weightings and targets for the annual bonus scheme and LTI.

The holistic, qualitative judgement, which is applied as an underpin test before final vesting of restricted stock is confirmed, is an important aspect to ensure that vesting is not simply driven by a formula or the passage of time that may give unexpected or unintended remuneration outcomes.

The exercise of any discretion will be fully disclosed in the applicable statement of implementation of the policy.

Directors' service contracts

Executive Director's Contract
The table below summarises the key features of the service contract for Mr Nagle.

A copy of the service contract of Mr Nagle is available for inspection at the Company's registered office as noted on page 258 or as otherwise indicated in the Notice of 2022 AGM.

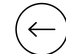
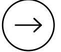
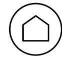
Provision	Service contract terms
Notice period	Twelve months' notice by either party
Contract date	01 July 2021
Expiry date	Rolling service contract

Termination Policy Summary
In practice, the facts surrounding any termination do not always fit neatly into defined categories for good or bad leavers. Therefore, it is appropriate for the Committee to consider the suitable treatment on a termination having regard to all of the relevant facts and circumstances available at that time. This Policy applies both to any negotiations linked to notice periods on a termination and any treatment which the Committee may choose to apply under the discretions available to it under the terms of the annual bonus and long-term incentive arrangements. The potential treatments on termination under these plans are summarised below.

Incentives	Good leaver	Bad leaver
Definition	If a leaver is deemed to be a 'good leaver'; i.e. leaving through serious ill health or death or otherwise at the discretion of the Committee	If a leaver is deemed to be a 'bad leaver'; typically, voluntary resignation or leaving for disciplinary reasons
Annual Bonus	Pro-rated bonus, typically with the normal proportion subject to deferral	No awards made and any unvested awards would lapse
Deferred element of bonuses earned previously	Typically retained for the balance of the deferral period (although the Committee may exceptionally approve early release)	May be retained or forfeited at Committee discretion
Restricted Share Plan	Will receive a pro-rated vesting (if applicable, subject to the application of the underpin at the normal measurement date) The Committee retains the discretion to disapply pro-rating however it does not expect to use this other than in exceptional circumstances	All unvested awards would normally lapse

In the event of a change of control or similar event, awards may become payable or vest early with treatment broadly in line with that for good leavers. Rules permit a roll-over of awards in appropriate circumstances.

The UK legislation does not require the inclusion of a cap or limit in relation to payments for loss of office. The Committee will take all relevant factors into account in deciding whether any discretion should be exercised in an individual's favour in these circumstances, and the Committee will aim to ensure that any payments made are, in its view, appropriate having

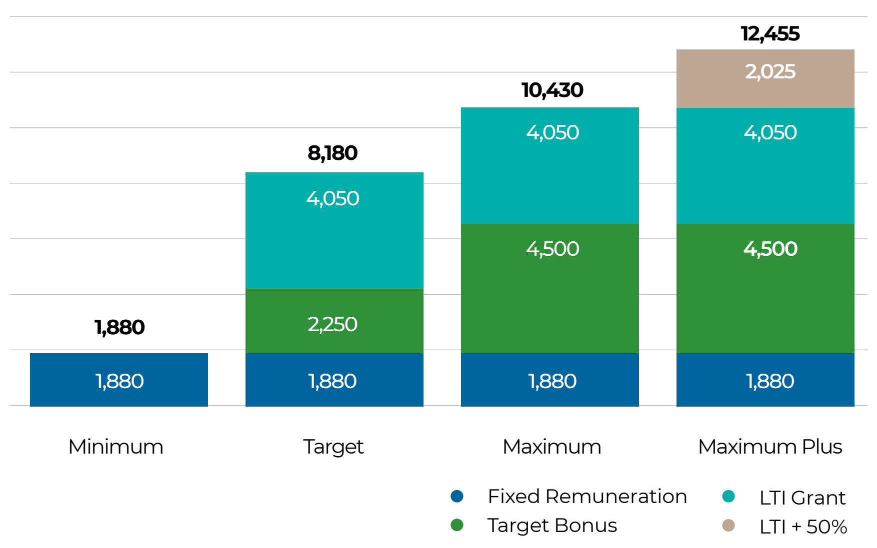
Directors' Remuneration Report continued

regard to prevailing best practice guidelines. The Committee may also, after taking appropriate legal advice, sanction the payment of additional sums in the settlement of potential legal claims and/or the provision of outplacement and similar services.

External appointments
None currently. The appropriateness of any future appointment will be considered as part of a wider review of Directors' interests/potential conflicts.

Potential rewards under various scenarios
The chart below is based on the following scenarios, in accordance with UK reporting regulations:

- Minimum: Mr Nagle's salary of $1.8m and 2021 benefits of $80k
- Target pay: as Minimum plus bonus at 50% of maximum plus the LTI grant
- Maximum pay: as Target pay except bonus payable at maximum
- Maximum plus 50%: as Maximum pay except the share price on the LTI is assumed to increase by 50%



Annual report on Remuneration

The Annual Report on Remuneration and the Annual Statement will be put to an advisory Shareholder vote at the AGM on 28 April 2022. Sections of the report are subject to audit and these have been flagged where applicable.

Implementation report – audited information

Executive Director remuneration
The emoluments of the Executive Directors for 2021 were as follows:

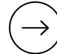
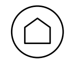
	Ivan Glasenberg[1]		Gary Nagle[2]
Single figure table (US$'000)	**2021**	2020	**2021**
Salary	723	1,447	900
Benefits[3]	4	4	14
Pension	29	57	24
Other[4]	0	–	165
Total fixed remuneration	**756**	**1,508**	**1,103**
Annual Bonus	–	–	2,105
Long-term incentives	–	–	–
Total variable remuneration	**–**	**–**	**2,105**
Total	**756**	**1,508**	**3,208**

1 Mr Glasenberg retired as Chief Executive Officer on 30 June 2021 and his salary was pro rated accordingly in 2021.
2 Mr Nagle was appointed Chief Executive Officer on 1 July 2021 and his 2021 remuneration was pro rated accordingly.
3 Lunch card and unemployment insurance covered by employer, in line with all other Swiss-based employees.
4 Comprises one-time relocation benefits consisting of household goods shipment, airfare, temporary accommodation and tax assistance.

The aggregate fees for all Non-Executive Directors for 2021 were $2,756,000 (2020: $2,884,000). The total emoluments of all Directors for 2021 (including pension contributions) were $6,720,000 (2020: $4,392,000). The variance between 2020 and 2021 is largely due to Mr Glasenberg never participating in the Company's bonus scheme and share plans, and he did not receive any shares as part of a compensation scheme during his tenure.

Incentive outcomes for 2021

Annual Bonus
The Company has designed a bonus scorecard for Mr Nagle with a mix of financial and non-financial measures which the Committee believes appropriately supports the achievement of Glencore's financial and strategic ambitions. For 2021, the annual bonus scorecard comprised 55% financial measures, 30% HSEC (safety and climate), and 15% individual targets.

Directors' Remuneration Report continued

The financial targets were set at the start of the financial year based on the comprehensive annual business planning process and in anticipation of Mr Nagle succeeding as Chief Executive Officer on 1 July 2021. These financial targets were set to reflect challenging levels of performance across a number of operating scenarios and price assumptions, including historical performance delivered and the expected impact of the Covid-19 pandemic. The non-financial targets were developed by the Board in consultation with Mr Nagle, following his appointment as Chief Executive Officer.

The financial measures selected include Funds from Operations (FFO), Net Debt, and Capital Expenditure (Capex). These financial measures are in line with the key metrics tracked by Glencore's four-year plan (2021 to 2024) developed as part of its longer-term viability assessment. FFO was selected to measure Glencore's ability to deliver margins and generate cash that may be returned to shareholders or further invested in the business for growth. Net Debt was selected to evaluate the actions taken to continuously strengthen Glencore's balance sheet and capital structure. Capex was selected to evaluate Glencore's capital allocation and progress towards pursuing business reinvestment opportunities that support the pathway to net zero emissions. Collectively, these financial measures reinforce the importance of advancing multiple strategies and objectives in parallel to support the Company's long-term viability.

The non-financial measures selected include HSEC (safety and progress towards CO_2 reduction targets), and individual objectives which, for 2021, considers individual contributions towards portfolio simplification; maintaining a culture of ethics and compliance throughout Glencore, and developing and nurturing Glencore's next generation of leadership, including through the development of a diverse and inclusive culture.

The Committee's assessment of year-end performance is further described below.

Bonus scorecard – Financial measures
The table below sets out the 2021 performance delivered against the financial targets under the annual bonus scorecard which comprise a total weighting of 55%.

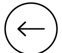
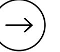
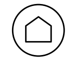
As detailed in the Strategic Report, 2021 was an extraordinary year for Glencore. Amid the ongoing challenges of Covid-19 and under the new leadership team, surging demand for metals and energy products combined with swift and decisive management action enabled Glencore to achieve record cash generation. FFO delivered in 2021 significantly exceeded the trailing three year average of $9.3 billion and a sharp focus on achieving the optimal capital structure for Glencore drove the reduction of net debt to $6.0 billion, from $15.8 billion in 2020, significantly deleveraging Glencore's balance sheet. The financial flexibility also enabled a continued focus on investing in sustaining and expansionary capital projects, as well as transition metals and value accretive Scope 1 and 2 reduction opportunities, in line with and supporting the Company's Paris-aligned total emissions reduction commitments. 2021 actual performance delivered against each of the financial metrics exceeds the maximum level of performance based on the performance ranges set at the beginning of the year.

Financial Measures	Weighting	Threshold	Target	Maximum	2021 Actual Performance	Percentage of maximum opportunity
Funds From Operations	30%	$11.1 bn	$12.3 bn	$13.5 bn	$17.1 bn	100%
Net debt	15%	$16.0 bn	$13.0 bn	$10.0 bn	$6.0 bn	100%
Capex	10%	$5.6 bn	$5.1 bn	$4.6 bn	$4.5 bn[1]	100%
Total Financial						**100%**

1 Segmental basis as shown in note 2 to the financial statements, adjusted for Marketing segment lease capex and proceeds from sales of Industrial PP&E

Bonus scorecard – Non-Financial Measures
Non-financial performance categories include safety, climate, and individual initiatives that reflect short-term operational and strategic priorities of the business that are critical to our continued success and are assessed based on performance in line with our business plan and the contributions of the CEO for the six-month period from the date of his appointment. These measures comprise a total weighting of 45%. The table below sets out the performance delivered against these non-financial performance categories.

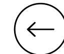
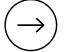
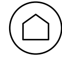
Reference	2021 achievements
Safety **Weighting** 15% **2021 Outturn** 90%	• Drove significant year-over-year improvements in all key health and safety indicators across the business • Positive multi-year trend with year-on-year improvement exceeding 10% for Lost Time Injury Frequency Rates (LTIFR) and Total Recordable Injury Frequency Rates (TRIFR) • Decrease in number of fatalities, in line with multi-year trend, and a year-on-year improvement exceeding 45% for the Fatality Frequency Rate (FFR) • Led the relaunch of the 'SafeWork' programme to identify and address underlying issues in safety performance and reinvigorate the safety culture across all operations. In 2021, all assets were assessed against the SafeWork framework. Identified gaps are captured in action plans, with regular status update reporting to the Board of Directors

Directors' Remuneration Report continued

Reference	2021 achievements
Progress towards 2035 CO_2 reduction targets **Weighting** 15% **2021 Outturn** 100%	• Continued to strengthen and demonstrate climate change including the establishment of a CEO-led taskforce and further embedding a climate change governance structure across the organisation • Strengthened medium-term total emissions (Scope 1, 2, 3) reduction target and introduced a new short-term target: 15% reduction by 2026 and 50% reduction by 2035 (both against 2019 baseline levels), in line with the goals of the Paris Agreement, identifying detailed pathways for achievement. • Progressed the identification of carbon abatement opportunities to support the achievement of Glencore's emissions reductions targets across the portfolio and significantly expanded our Marginal Abatement Cost Curve (MACC) • Assessment of the impact of carbon prices on industry cost curves for our key commodities illustrated that our portfolio is resilient to a range of carbon pricing scenarios given the favourable positions that the majority of our assets occupy on these curves

Reference	2021 achievements
Individual objectives, comprising: • **Portfolio simplification** • **Compliance** • **People** **Weighting** 15% **2021 Outturn** 100%	• Ongoing portfolio simplification through efficient and commercially attractive disposals of Ernest Henry, Chemoil US terminals, and the Enyo oil downstream business • Acquisition of Cerrejon and investments in energy transition, illustrated by the Britishvolt joint venture, are consistent with Glencore's climate change strategy and its stated emissions reduction targets • Rolled out a strengthened Code of Conduct through a comprehensive global campaign designed to embed our Values of safety, integrity, responsibility, openness, simplicity and entrepreneurialism throughout our business • Strengthened our Group policy framework, setting out the commitments through which we strive to be a responsible and ethical operator. In addition to our Values and Code, our Group policy framework comprises a suite of policies, standards, procedures and guidelines on various key matters and risks to Glencore • Led the development of a diversity and inclusion strategy to help Glencore attract, develop, and retain the best talent. Year-over-year improvement and progress in line with the Hampton-Alexander Review targets (see Our People section, page 34) • Defined a new executive leadership team to bolster leadership and management capability across the business • Collaborated effectively with leadership in operations and all functions across the Group to ensure seamless transition to CEO role and decisively navigate the impacts of Covid-19 • Continued to strengthen a culture of ethics and compliance across the business by driving top-down accountability, investing in personnel, systems, and external assurance
Total Non-Financial	**96.7%**

Directors' Remuneration Report continued

2021 annual bonus outcomes for the CEO

The Committee conducted a comprehensive assessment in respect of the progress achieved against the financial and non-financial measures. As discussed above, full payout was determined to be appropriate for the financial objectives as well as the individual and climate objectives. A 90% payout was determined to be appropriate for the safety objective. The combined formulaic result from the scorecard assessment was 98.5%.

The Committee also noted that despite the strong overall performance delivered and value created for shareholders in 2021, there were also four tragic fatalities. Whilst that is the lowest fatality rate recorded in our business since IPO, safety is of paramount importance and this is reflected in Glencore's ultimate ambition of zero fatalities. Therefore, any loss of life is unacceptable and an important reminder that there is still work to do to improve Glencore's safety across the business. Given the scale of Glencore's operations, maintaining the momentum with driving the global roll out of SafeWork 2.0 remains a key priority to thoroughly embed structures, systems, and standards to reinforce the requisite safety culture across the business. Additionally, it was noted that whilst 2021 was a hallmark year of earnings for Glencore, there is work to be done to deliver targeted production levels in respect of various projects underway. Reflecting on Glencore's safety commitment and accountability for sustainable value creation beyond superior financial returns, the Committee applied downward discretion to reduce the overall bonus outcome by 5%, resulting in a bonus outcome of 93.6% of maximum.

The following table sets out the outcome of the 2021 annual bonus for Mr Nagle. Note that the CEO was appointed on the 1 July 2021 and therefore the bonus award has been pro-rated for the period for which Mr Nagle has been in office, resulting in an award of 50% of the annual opportunity. Consistent with prior periods, no bonus awards have been made to Mr Glasenberg.

	Max opportunity (% of salary)	Performance measures	Weighting	Formulaic Outturn (% of max)
Gary Nagle	250%	Financial	55%	100%
		Non-financial	45%	96.7%
Total formulaic bonus outturn			100%	98.5%
Discretion applied				- 5%
2021 Annual Bonus Outturn (% of maximum opportunity)				93.6%
2021 Outturn[1]				$2.105 million

1 For 2021, the maximum opportunity was 250% applied to $900,000, being Mr Nagle's base salary for six months' service.

Bonus deferral

The Remuneration Policy states that 50% of any Annual Bonus plan outcome is deferred into shares for a period of up to three years unless otherwise determined by the Committee. The following table sets out the number of shares that were awarded as a result of the 50% deferral.

	Date of grant	Face value of award[1] (US$)	No. shares	Vesting date
Gary Nagle	14 March 2022	$1.053m	216,667	13 March 2025

1 Based on a share price of $4.86 which is the Volume Weighted Average Price (VWAP) of December 2021.

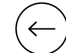
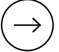
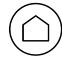
RSP Awards vesting in 2021

There were no RSP awards due to vest during the year.

To provide insight into the performance orientation embedded in our Restricted Share Plan and to ensure that the performance underpins remain appropriate in the context of market developments and the Company's strategy, the Committee conducted a review of the performance delivered to date versus the RSP underpins for outstanding awards.

The performance underpins are designed to mitigate the risk of payments for failure by enabling a reduction in vesting when: (1) shareholders do not receive the minimum distribution required under the Company's stated distribution policy; (2) absolute and relative shareholder performance over the vesting period is deemed unsatisfactory; or (3) progress against ESG initiatives, including the implementation of Company's Ethics and Compliance programme and the ambitious climate action transition plan is considered to be unsatisfactory. These performance underpins enable a more holistic consideration of performance to reward sustainable value creation and commercial effectiveness, rather than short-term share price volatility primarily driven by commodity price cycles that is characteristic of traditional total shareholder return-based measures commonly used in long-term incentive plans by other mining companies.

Overall, the Committee is pleased with the performance of the company against the underpins set at the grant of the awards which remain appropriate. A summary of the main considerations is provided on the next page.

Directors' Remuneration Report continued

Weighting	Performance considerations
Distributions to shareholders	During 2021, in line with our record cash generation, we completed c.$2.8 billion of shareholder returns, being c.$1.6 billion of base distribution (in respect of 2020 cash flows), a $500 million special distribution and $746 million of share repurchases. For 2022, based on 2021 cash flows, we are recommending to shareholders a $0.26 per share ($3.4 billion) base distribution, payable in two equal instalments. Additionally a new buyback programme of $550 million (c.$0.04 per share) has been announced.
Company performance over the year	2021 was a year marked by continuing Covid-19 challenges, surging demand for our metals and energy products, record cash flow generation for Glencore and the transition to a new leadership team. The Group achieved record results, with Adjusted EBITDA rising 84% to $21.3 billion. Net income before significant items increased 267% to $9.1 billion, while significant items reduced Net income attributable to equity holders to $5.0 billion. For Marketing, Adjusted EBIT grew 11% to a record $3.7 billion. For Industrial, Adjusted EBITDA of $17.1 billion was 118% higher compared to 2020, primarily reflecting strong margin growth from our copper, ferroalloys and coal assets. Our balance sheet health increased during the year demonstrated by current Net debt/Adjusted EBITDA and FFO/Net debt metrics of 0.28x and 282.3% respectively, as well as significant rating headroom at our BBB+/Baa1 credit ratings.
ESG performance	Our strong environmental performance has continued with no major or catastrophic events. Our safety performance has been strong, resulting in significant year-over-year improvements in all key health and safety indicators across the business. We have continued to demonstrate climate change leadership by strengthening the medium-term total emissions reduction targets and introduced a new short-term target. We have also made progress towards the carbon footprint reduction goals. From a governance perspective, we are committed to ensuring a culture of ethics and compliance across the Group. Reflecting this, we have dedicated substantial resources over the last few years to build and implement a best-in-class Ethics and Compliance programme and during 2021 we rolled out our strengthened Values and Code of Conduct through a comprehensive global campaign.

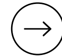
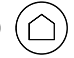
2021 Restricted share plan awards

During the year ended 31 December 2021, Mr Nagle received an award of restricted shares which may vest after a three-year period ending on 30 June 2024, subject to the achievement of three stretching performance underpins as discussed above. The award is set out in the table below. The value of the award has been pro-rated to reflect the period of the year that the new CEO has been in the role since the 1st of July 2021 (i.e. 6 months). This has resulted in an award with a value equal to half of the normal annual award.

No RSP awards were made to Mr Glasenberg.

	Grant (% of annual salary)	Face value of award[1] (US$'000)	No. shares[2]	Vesting date[3]	Holding Period[4]
Gary Nagle	225%	2,025	461,108	30 June 2024	5-years after grant or 2-years post-employment

1 Face value of award based on the 225% award opportunity multiplied by the pro-rated annual salary of $900k.
2 Based on a share price of $4.39 which was the VWAP of the month prior to award, June 2021.
3 Vesting subject to underpins described in the RSP Awards vesting in 2021 section.
4 Whichever occurs latest.

Directors' Remuneration Report continued

Statement of Directors' shareholdings and interests in shares
As at 31 December 2021 the Executive Director's shareholding in the Company is as follows:

	Outstanding scheme interests at 31 December 2021			Vested scheme interests		Total of all scheme interests as at 31 Dec 2021
	Unvested scheme interests subject to performance[1]	Unvested scheme interests not subject to performance[2]	Total outstanding scheme interests	As at 31 Dec 2020	As at 31 Dec 2021	
Gary Nagle	461,108	–	461,108	–	–	**461,108**

1 Includes awards under the Restricted Share Plan.
2 Exclude awards under the deferred bonus plan issued in the course of 2022.

Former Executive Director and CEO, Ivan Glasenberg, waived his rights under the Company's share plan and did not receive any shares as part of a compensation scheme during his tenure.

Non-Executive Directors do not participate in the Company's share plan and their interest in shares of the Company is included in the Directors' report, page 120.

Between 1 January 2022 and the date of this 2021 Annual Report, the Executive and Non-Executive Directors' beneficial interests in the table above remained unchanged, except for the portion of the Executive Director's 2021 bonus deferred into shares, which was granted in 2022 as disclosed above.

	Plan	Date of award[1]	Interests at 1 January 2021	Interests awarded during the year	Interests vested during the year	Interests lapsed during the year	Interests outstanding at 31 December 2021	Date at which award vests
Gary Nagle	21 LTIP	1 July 2021	–	461,108	–	–	461,108	30 June 2024

Share Ownership Guidelines

Glencore is founded on an ownership ethos and the Committee therefore promotes the critical importance of aligning the interests of the CEO with those of shareholders. The aim is to encourage the build-up of a meaningful shareholding in the Company over time by retaining shares received through the RSP, pursuant to which vested shares cannot be sold until the later of five years from the date award or two years post-departure, or from purchases in the market.

The in-post shareholding requirement for the CEO is 500% of salary. The CEO will be required to retain the lower of: (1) actual shareholding on stepping down from the Board and (2) such shares as then represents the policy level of 500% of salary for 2 years after stepping down (although the Board may relax this requirement in appropriate cases) with such policy enforceable through a requirement to lodge such shares at the Company's request.

Director	Beneficially owned shares as at 31 Dec 2021	Shareholding requirement (as % of salary)	Current shareholding (as % of salary)[1]	Shareholding requirement met?
Gary Nagle	2,000,000	500%	564%	Yes

1 The share price of £3.75 and the exchange rate of £1=US$1.35 as at 31 December 2021 has been used for the purpose of calculating the current shareholding as a percentage of salary. Unvested awards do not count towards the satisfaction of the shareholding guidelines.

Directors' Remuneration Report continued

CEO pay ratio

The table below shows the ratio of CEO single figure remuneration for 2021 to the comparable, indicative, full-time equivalent total remuneration for employees globally, whose pay is ranked at the 25th percentile, median and 75th percentile. As we are a global group, which is not headquartered in the UK and whose UK employees represent less than one percent of all our employees worldwide, we have decided to amend this comparison to all employees. Our methodology is fully compliant with the UK Remuneration Regulations except that we have substituted all of our employees for just the UK employees as specified in the Regulations on the basis that this is a more meaningful comparison. The increase between 2020 and 2021 is due to the change of CEO and the application of the renewed remuneration policy, as noted earlier in this report.

Year	Method (A)	25th percentile pay ratio	Median pay ratio	75th percentile pay ratio
2021	**A**	**$10,404** **381:1**	**$23,530** **169:1**	**$67,734** **59:1**
2020	A	$8,525 177:1	$21,212 71:1	$65,025 23:1

Additional UK remuneration disclosures

Under UK laws and remuneration regulations, UK companies are also required to disclose various data comparing the percentage change in Directors' year-on-year remuneration compared with employees of the listed company itself, i.e. not on a Group-wide basis. As Glencore plc has no direct employees, there would be no non-director data to disclose. The changes relative to the Executive Director solely relate to the change of CEO, to whom the new policy applied for the second half of the year, and all the relevant information is included in this report. Minor adjustments relating to Non-Executive Directors' Committee fees are listed below. On this basis, it was considered unnecessary to include such data.

Relative importance of remuneration spend

The table below illustrates the change in total remuneration, distributions paid and net profit from 2020 to 2021.

	2021 US$m	2020 US$m
Distributions and buy-backs attributable to equity holders	**2,861**	–
Net income/(loss) attributable to equity holders	**4,974**	(1,903)
Total remuneration	**6,012**	5,403

The figures presented have been calculated on the following bases:

- Distributions and buy-backs – distributions paid and shares bought back during the year
- Net income/(loss) attributable to equity holders – our reported net income/loss in respect of the financial year
- Total remuneration – represents total personnel costs as disclosed in note 24 to the financial statements which includes salaries, wages, social security, other personnel costs and share-based payments receivable by all employees of the Group

Loss of office payments

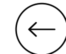
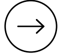
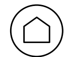
No additional payments for loss were made.

Payments to past Directors

No payments to past Directors.

Fees retained for external Non-Executive Directorships

Not applicable.

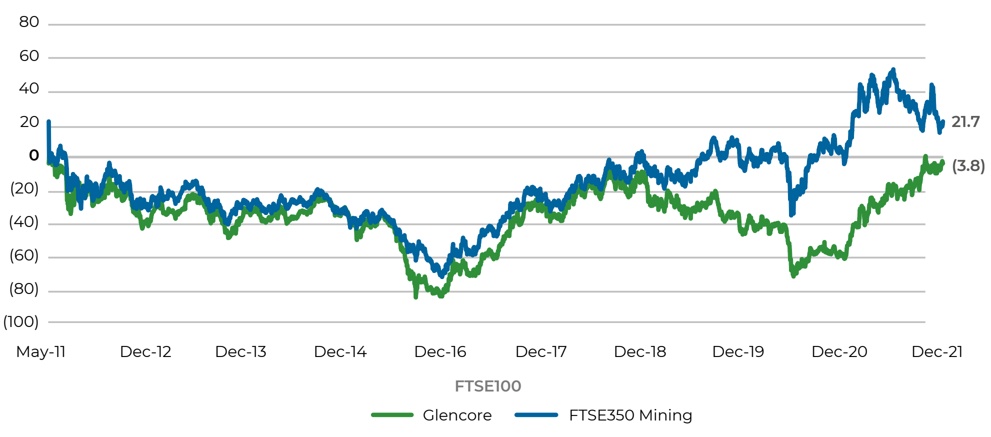
Directors' Remuneration Report continued

Alignment between pay and performance

Total shareholder return ("TSR") performance

This graph shows the value to 31 December 2021, on a total shareholder return (TSR) basis, of £100 invested in Glencore plc on 31 December 2011 compared with the value of £100 invested in the FTSE 350 Mining Index.

The Committee believes that the FTSE 350 Mining Index is an appropriate comparator as it includes companies listed in London in the same sector as Glencore.



The UK reporting regulations also require that a TSR performance graph is supported by a table summarising aspects of CEO remuneration, as shown below for the same period as the TSR performance graph:

History of CEO remuneration

		Single figure of total remuneration[1] (US$'000)	Annual variable element award rates against maximum opportunity	Long-term incentive vesting rates against maximum opportunity
2021	**Gary Nagle[2]**	**3,208**	**93.6%**	**n/a**
2021	**Ivan Glasenberg[3]**	**756**	**–**	**–**
2020	Ivan Glasenberg	1,508	–	–
2019	Ivan Glasenberg	1,503	–	–
2018	Ivan Glasenberg	1,503	–	–
2017	Ivan Glasenberg	1,513	–	–
2016	Ivan Glasenberg	1,509	–	–
2015	Ivan Glasenberg	1,510	–	–
2014	Ivan Glasenberg	1,513	–	–
2013	Ivan Glasenberg	1,509	–	–
2012	Ivan Glasenberg	1,533	–	–

1 The figures in this table are reported in US dollars and have been translated to US dollars where applicable at the exchange rates used for the preparation of the financial statements in each relevant financial year. The value of benefits and pension provision in the single figure vary as a result of the application of exchange rates.

2 Mr Nagle was appointed Chief Executive Officer on 1 July 2021 and his salary was prorated accordingly in 2021.

3 Mr Glasenberg retired as Chief Executive Officer on 30 June 2021 and his salary was prorated accordingly in 2021.

Directors' Remuneration Report continued

Non-Executive Director fees

The emoluments of the Non-Executive Directors for 2021 and 2020 were as follows:

Name	**2021 Base Fees US$'000**	2020 Base Fees US$'000	**2021 Committee Fees US$'000**	2020 Committee Fees US$'000	**Total 2021 US$'000**	Total 2020 US$'000
Non-Executive Chairman						
Kalidas Madhavpeddi[1]	**558**	122	**77**	66	**635**	188
Anthony Hayward[2]	**671**	1,150	**n/a**	n/a	**671**	1,150
Non-Executive Directors						
Cynthia Carroll[3]	**123**	n/a	**61**	n/a	**184**	n/a
Peter Coates	**135**	135	**186**	175	**321**	310
Martin Gilbert[4]	**200**	200	**101**	100	**301**	300
Patrice Merrin	**135**	135	**163**	165	**298**	300
Gill Marcus	**135**	135	**96**	87	**231**	222
David Wormsley[5]	**40**	n/a	**10**	n/a	**50**	n/a
John Mack[6]	**44**	135	**21**	65	**65**	200
Leonhard Fischer[7]	**n/a**	135	**n/a**	79	**n/a**	214

1 Mr Madhavpeddi was appointed as Non-Executive Chairman on 30 July 2021, from which date he was paid the Chairman's fee that encompasses all Committee memberships.
From 1 January to 30 July 2021, he was paid the same base fee as other Non-Executive Directors plus Committee fees. For this period he received $156k, corresponding to a prorated base fee of $79k plus prorated committee fees of $77k. From 31 July to 31 December 2021, he received a prorated Chairman fee of $479k.
2 Mr Hayward has stepped down as Non-Executive Chairman on 30 July 2021.
3 Ms Carroll was appointed as Non-Executive director on 2 February 2021.
4 Mr Gilbert is the Senior Independent Director.
5 Mr Wormsley was appointed as Non-Executive Director on 15 September 2021.
6 Mr Mack stepped down as a Non-Executive Director on 29 April 2021.
7 Mr Fischer stepped down as a Non-Executive Director on 31 December 2020.

Implementation report – unaudited information

Implementation of Remuneration Policy in FY2022

This section provides details of how the Remuneration Policy will be implemented for 2022.

Fixed remuneration

	Base salary	Effective date	Increase %	Reason
Gary Nagle	US$1,800k	1 January 2022	0%	The pay package for the CEO has only been in place for 6 months and therefore the Committee decided to not make any adjustments .

Glencore's annual pension provision for the CEO is fully aligned with the Swiss requirements and that of other employees based in Switzerland, where the CEO is located, which at present amounts to a maximum of c.$65,000 per annum.

Annual bonus

As the annual bonus scorecard has only been in place for 6 months, the structure of the annual bonus will remain largely unchanged for 2022; the CEO will continue to have a maximum opportunity of 250% of salary; 50% of any bonus earned will be deferred into shares for 3 years. A combination of financial, safety and climate measures, as well as individual initiatives that align with Glencore's strategy will continue to apply.

The Committee considers that the detailed performance targets for the 2022 bonus are commercially sensitive and that disclosing precise targets in advance would not be in the interest of shareholders. Actual targets, performance achieved, and outturns will be disclosed in the 2022 Annual Report so that shareholders can fully assess the basis for any payouts.

Financial	Funds From Operations	30%
	Net debt	15%
	Capex	10%
ESG	Safety	15%
	Progress towards 2035 CO_2 targets	15%
Individual initiatives		15%

Directors' Remuneration Report continued

Restricted share plan

For 2022, the LTIP will continue to operate on the same basis as in 2021. Awards will be granted in January 2022 to the CEO under the RSP. When considering grant levels each year, the Committee takes account of share price performance over the preceding year. Given the share price growth during 2021, the Committee has decided to make no adjustment to the size of the award which will be maintained at 225% of salary.

Shares will only be released (other than to meet tax obligations) on the later of five years from grant and two years post-employment.

In line with the approach taken in 2021, the Committee will retain discretion to approve the vesting of these awards, subject to the satisfaction of the performance underpins following the third anniversary of the grant, and will carefully evaluate the overall performance of the company to ensure there is no reward for failure. In reaching its decision, the Committee will look at both financial and non-financial performance noting that there may be short-term trade-offs between different factors. In particular, it will consider reducing the level of vesting if any of the following occur:

- Failure to pay the minimum distribution required under the Company's stated distribution policy;
- The overall performance and outcomes, both on absolute and relative basis, is considered by the Committee unsatisfactory to permit full vesting;
- ESG performance (including climate) is considered unsatisfactory to permit full vesting.

Given the complexity of the Group structure and its clear exposure to commodity price movements, the underpin deliberately does not apply a formula driven approach to determining vesting levels. Instead, broad discretion has been reserved to consider the position in the round and to reduce vesting levels if the overall company financial or ESG performance is not at an adequate level. The Remuneration Committee will make use of all relevant data points for its review, including the Company's Ethics and Compliance programme and climate action transition plan to assess the progress across the Group concerning material ESG matters. In reaching any decision, it will balance both the design principle that the default for restricted stock is to accept lower awards levels for greater certainty of vesting and, therefore, there should be a default to full vesting while ensuring that the Remuneration Committee considers the overall outcome and avoids payments for failure.

Non-Executive Director fees for 2022

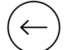
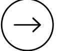
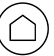
The annual fees are paid in accordance with a Non-Executive Director's role and responsibilities. The Chairman's fee is inclusive of all his committee responsibilities. The Committee reviewed Non-Executive Director fees in October 2021 and determined that adjustments were required for some Committee membership fees, mostly due to the increased workload required of Committee members. The Committee believes that the fees remain competitively positioned against the market. The notes to the table below shows the changes to the Committees' fees.

There was no change to the base fees.

As a result, the fees payable for 2022 are as follows:

	US$'000
Non-Executive Directors base fees	
Chairman	1,150
Senior Independent Director	200
Non-Executive Director	135
Committee[1] Fees:	
ECC	
Chair[2]	60
Member[3]	40
Remuneration	
Chair[4]	55
Member	25
Audit	
Chair[4]	70
Member	35
Nomination	
Chair	40
Member	20
HSEC	
Chair	125
Member	40
Investigations	
Member	40

1 Fees do not apply to the Chairman when he is a member of a Committee.
2 There were no fees previously assigned for the Chair of the ECC Committee as the role was previously fulfilled by the Chairman.
3 Fees for members of the ECC Committee were decreased by $10k, effective 1 October 2021.
4 Fees for the Chairs of the Remuneration Committee and Audit Committee increased by $10k each, effective 1 October 2021.

Directors’ Remuneration Report continued

Non-Executive Directors' letters of appointment and re-election

All Non-Executive Directors have letters of appointment with the Company for an initial period of three years from their date of appointment, subject to re-election at each AGM. The Company may terminate each appointment by immediate notice and there are no special arrangements or entitlements on termination except that the Chairman is entitled to three months’ notice. Copies of the letter of appointment for Non-Executive Directors are available for inspection at the Company’s registered office address as noted on page 258.

Approval

This report in its entirety has been approved by the Committee and the Board of Directors and signed on its behalf by:

Cynthia Carroll
Chair of the Remuneration Committee
15 March 2022

Directors' Report

John Burton, Company Secretary

Introduction

This Annual Report is presented by the Directors on the affairs of Glencore plc (the 'Company') and its subsidiaries (the 'Group' or 'Glencore'), together with the financial statements and auditor's report, for the year ended 31 December 2021. The Directors' Report includes details of the business, the development of the Group and likely future developments as set out in the Strategic Report, which together form the management report for the purposes of the UK Financial Conduct Authority's Disclosure and Transparency Rule (DTR) 4.1.8R. The notice concerning forward-looking statements is set out at the end of the Annual Report.

Corporate structure

Glencore plc is a public company limited by shares, incorporated in Jersey and domiciled in Baar, Switzerland. Its shares are listed on the London and Johannesburg Stock Exchanges.

Financial results and distributions

The Group's financial results are set out in the financial statements section of this Annual Report.

A total capital distribution of US$0.16 per share was paid in two instalments in 2021 in respect of the 2020 financial year. The Board is recommending to shareholders an aggregate capital distribution of US$0.26 per share in respect of the 2021 financial year as further detailed on page 52.

Review of business, future developments and post balance sheet events

A review of the business and the future developments of the Group is presented in the Strategic Report.

A description of acquisitions, disposals, and material changes to Group companies undertaken during the year is included in the Financial review and in note 26 to the financial statements.

Financial instruments

Descriptions of the use of financial instruments and financial risk management objectives and policies, including hedging activities and exposure to price risk, credit risk, liquidity risk and cash flow risk are included in notes 27 and 28 to the financial statements.

Corporate governance

A report on corporate governance and compliance with the UK Corporate Governance Code is set out in the Corporate Governance report and forms part of this report by reference.

Health, safety, environment & communities (HSEC)

An overview of health, safety and environmental performance and community participation is provided in the Sustainability section of the Strategic report. The work of the HSEC Board committee is contained in the Corporate Governance report.

Greenhouse gas emissions

A summary of the Group's greenhouse gas emissions is included on page 21.

Taxation policy

Our Tax Policy: **glencore.com/group-tax-policy** and our most recent Payments to Governments report: **glencore.com/payments-to-governments-report** set out the Company's approach to tax and transparency and disclose the payments to governments made by the Group on a country-by-country and project-by-project basis.

Exploration and research and development

The Group's business units carry out exploration and research and development activities that are necessary to support and expand their operations.

Employee policies and involvement

Glencore has diversity and recruitment policies that aim to treat individuals fairly and not to discriminate on the basis of gender, race, ethnicity, disability, religion or beliefs, or on any other basis. Applications for employment and promotion are fully considered on their merits, and employees are given appropriate training and equal opportunities for career development and promotion.

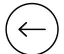
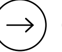
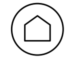
If disability occurs during employment, the Group seeks to accommodate that disability where reasonably possible, including with appropriate training.

The Group's Code of Conduct and other policies support and protect the interests of employees in a number of ways such as requiring open, fair and respectful communication, commitment to respect human rights, fair and equitable conditions of employment and, above all, a safe working environment.

Employee communication is mainly provided through the Group's intranet, corporate website and via emails. A range of information is made available to employees, including all policies and procedures applicable to them as well as information on the Group's financial performance and the main drivers of its business. Employee consultation depends upon the type and location of assets or office but includes Group-wide surveys – see the Our people section on page 34.

Directors' conflicts of interest

Under Jersey law and the Company's Articles of Association (which mirror section 175 of the UK Companies Act 2006), a Director must avoid a situation in which the Director has, or can have, a direct or indirect interest that conflicts, or possibly may conflict, with the interests of the Company. The duty is not infringed if the matter has been authorised by the Directors. Under the Articles, the Board has the power to authorise potential or actual conflict situations. The Board maintains effective procedures to enable the Directors to notify the Company of any actual or potential conflict situations and for those situations to be reviewed and, if appropriate, to be authorised by the Board. Directors' conflict situations are reviewed annually. A register of authorisations is maintained.

Directors' Report continued

Directors' liabilities and indemnities

The Company has granted third party indemnities to each of its Directors against any liability that attaches to them in defending proceedings brought against them, to the extent permitted by Jersey law. In addition, Directors and Officers of the Company and its subsidiaries are covered by directors & officers liability insurance.

Directors and officers

The names of the Company's Directors and Officers who were in office at the end of 2021, together with their biographical details and other information, are shown on pages 86-89.

Directors' interests

Details of interests in the ordinary shares of the Company of those Directors who held office as at 31 December 2021 are given below:

Name	Number of Glencore Shares	Percentage of Total Voting Rights
Executive Director		
Gary Nagle	2,000,000	0.01
Non-Executive Directors		
Cynthia Carroll	–	–
Peter Coates	1,665,150	0.01
Martin Gilbert	50,000	0.00
Kalidas Madhavpeddi	–	–
Gill Marcus	–	–
Patrice Merrin	60,000	0.00
David Wormsley	–	–

Share capital and shareholder rights

As at 28 February 2022, the issued ordinary share capital of the Company was $145,862,001 represented by 14,586,200,066 ordinary shares of $0.01 each, of which 1,401,241,158 shares are held in treasury and 33,541,915 shares are held by Group employee benefit trusts.

Major interests in shares

Taking into account the information available to Glencore as at 28 February 2022, the table below shows the Company's understanding of the interests in 3% or more of the Total Voting Rights attaching to its issued ordinary share capital:

Name	Number of Glencore Shares	Percentage of Total Voting Rights
Qatar Holding	1,221,497,099	9.26
Ivan Glasenberg	1,211,957,850	9.19
BlackRock, Inc.	1,070,599,712	8.12
Aristotelis Mistakidis	435,175,134	3.30

Share capital

The rights attaching to the Company's ordinary shares, being the only share class of the Company, are set out in the Company's Articles of Association (the 'Articles'), which can be found at **glencore.com/who-we-are/governance**. Subject to Jersey law, any share may be issued with or have attached to it such preferred, deferred or other special rights and restrictions as the Company may by special resolution decide or, if no such resolution is in effect, or so far as the resolution does not make specific provision, as the Board may decide.

No such resolution is currently in effect. Subject to the recommendation of the Board, holders of ordinary shares may receive a distribution. On liquidation, holders of ordinary shares may share in the assets of the Company.

Holders of ordinary shares are also entitled to receive the Company's Annual Report and Accounts (or a summarised version) and, subject to certain thresholds being met, may requisition the Board to convene a general meeting (GM) or submit resolutions for proposal at AGMs. None of the ordinary shares carry any special rights with regard to control of the Company.

Holders of ordinary shares are entitled to attend and speak at GMs of the Company and to appoint one or more proxies or, if the holder of shares is a corporation, a corporate representative. On a show of hands, each holder of ordinary shares who (being an individual) is present in person or (being a corporation) is present by a duly appointed corporate representative, not being himself a member, shall have one vote. On a poll, every holder of ordinary shares present in person or by proxy shall have one vote for every share of which he or she is the holder. Electronic and paper proxy appointments and voting instructions must be received not later than 48 hours before a GM. A holder of ordinary shares can lose the entitlement to vote at GMs where that holder has been served with a disclosure notice and has failed to provide the Company with information concerning interests held in those shares. Except as (1) set out above and (2) permitted under applicable statutes, there are no limitations on voting rights of holders of a given percentage, number of votes or deadlines for exercising voting rights.

The Directors may refuse to register a transfer of a certificated share which is not fully paid, provided that the refusal does not prevent dealings in shares in the Company from taking place on an open and proper basis or where the Company has a lien over that share. The Directors may also refuse to register a transfer of a certificated share unless the instrument of transfer is:

(i) lodged, duly stamped (if necessary), at the registered office of the Company or any other place as the Board may decide accompanied by the certificate for the share(s) to be transferred and/or such other evidence as the Directors may reasonably require as proof of title; or

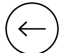
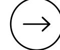
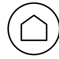
(ii) in respect of only one class of shares.

Transfers of uncertificated shares must be carried out using CREST and the Directors can refuse to register a transfer of an uncertificated share in accordance with the regulations governing the operation of CREST.

The Directors may decide to suspend the registration of transfers, for up to 30 days a year, by closing the register of shareholders. The Directors cannot suspend the registration of transfers of any uncertificated shares without obtaining consent from CREST.

There are no other restrictions on the transfer of ordinary shares in the Company except: (1) certain restrictions may from time to time be imposed by laws and regulations (for example insider trading laws); (2) pursuant to the Company's share dealing code whereby the Directors and certain employees of the Company require approval to deal in the Company's shares; and (3) where a shareholder with at least a 0.25% interest in the Company's issued share capital has been served with a disclosure notice and has failed to provide the Company with information concerning interests in those shares. There are no agreements between holders of ordinary shares that are known to the Company, which may result in restrictions on the transfer of securities or on voting rights.

The rules for appointment and replacement of the Directors are set out in the Articles. Directors can be appointed by the Company

Directors' Report continued

by ordinary resolution at a GM or by the Board upon the recommendation of the Nomination Committee. The Company can remove a Director from office, including by passing an ordinary resolution or by notice being given by all the other Directors. The Company may amend its Articles by special resolution approved at a GM.

The powers of the Directors are set out in the Articles and provide that the Board may exercise all the powers of the Company including to borrow money. The Company may by ordinary resolution authorise the Board to issue shares, and increase, consolidate, sub-divide and cancel shares in accordance with its Articles and Jersey law.

Purchase of own shares

In August 2021, the Company announced the commencement of a buyback programme of up to $650 million that terminated on 7 January 2022, and pursuant to which the Company purchased 135,120,406 of its own ordinary shares. The authority to purchase own shares was approved by the shareholders on 29 April 2021.

As announced on 15 February 2022, the Company launched a new buyback programme of $550 million, which started on 21 February 2022.

The Directors will seek a similar authority at the Company's AGM on 28 April 2022.

Going concern

The financial position of the Group, its cash flows, liquidity position and borrowing facilities are set out in the Strategic Report. Furthermore, notes 27 and 28 to the financial statements include the Group's objectives and policies for managing its capital, its financial risk management objectives, details of its financial instruments and hedging activities and its exposure to credit and liquidity risk. Significant financing activities that took place during the year are detailed in the Financial review section, which starts on page 48.

The results of the Group, principally pertaining to its industrial asset base, are exposed to fluctuations in both commodity prices and currency exchange rates whereas the performance of marketing activities is primarily physical volume driven with commodity price risk substantially hedged.

The Directors have a reasonable expectation, having made appropriate enquiries, that the Group has adequate resources to continue in its operational existence for the foreseeable future. For this reason they continue to adopt the going concern basis in preparing the 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 undrawn credit facilities, monitoring of debt maturities, and after review of the Guidance on Risk Management, Internal Control and Related Financial and Business Reporting 2014 as published by the UK Financial Reporting Council.

Longer-term viability

In accordance with provision 31 of the Code, the Directors have assessed the prospects of the Group's viability over a longer period than the 12 months required by the going concern assessment above. A summary of the assessment made is set out on page 71 in the Risk Management section.

Based on the results of the related analysis, the Directors have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the four-year period of this assessment. They also believe that the review period of four years is appropriate having regard to the Group's business model, strategy, principal risks and uncertainties, sources of funding and liquidity.

Auditor

Each of the persons who is a Director at the date of approval of this Annual Report confirms that:

a. so far as the Director is aware, there is no relevant audit information of which the Company's auditor is unaware; and

b. the Director has taken all the steps that he or she ought to have taken as a director in order to make himself or herself aware of any relevant audit information and to establish that the Company's auditor is aware of that information.

Deloitte LLP have expressed their willingness to continue in office as auditor and a resolution to reappoint them will be proposed at the forthcoming AGM.

Directors' Report continued

Statement of Directors' responsibilities

The Directors are responsible for preparing the Annual Report and financial statements in accordance with applicable law and regulations.

Company law requires the Directors to prepare financial statements for the Company for each financial year.

The financial statements are prepared in accordance with International Financial Reporting Standards (IFRS) adopted by the United Kingdom, and IFRS as issued by the International Accounting Standards Board. The financial statements are required by law to be properly prepared in accordance with the Companies (Jersey) Law 1991. International Accounting Standard 1 requires that financial statements present fairly for each financial year the Company's financial position, financial performance and cash flows. This requires the faithful representation of the effects of transactions, other events and conditions in accordance with the definitions and recognition criteria for assets, liabilities, income and expenses set out in the International Accounting Standards Board's Framework for the preparation and presentation of financial statements.

In virtually all circumstances, a fair presentation will be achieved by compliance with all applicable IFRSs.

The Directors confirm that the Annual Report and accounts taken, as a whole, is fair, balanced and understandable, and provides the information necessary for shareholders to assess the performance, strategy and business model of the Company.

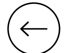
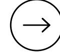
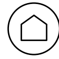
However, the Directors are also required to:

- Properly select and apply accounting policies
- Present information, including accounting policies, in a manner that provides relevant, reliable, comparable and understandable information
- Provide additional disclosures when compliance with the specific requirements in IFRSs are insufficient to enable users to understand the impact of particular transactions, other events and conditions on the entity's financial position and financial performance
- Make an assessment of the Company's ability to continue as a going concern

The Directors are responsible for keeping proper accounting records that disclose with reasonable accuracy at any time the financial position of the Company and enable them to ensure that the financial statements comply with the Companies (Jersey) Law 1991. They are also responsible for safeguarding the assets of the Company and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities. The Directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. The legislation governing the preparation and dissemination of the Company's financial statements may differ from legislation in other jurisdictions.

Signed on behalf of the Board

John Burton
Company Secretary
15 March 2022

Directors' Report continued

Information required by Listing Rule LR 9.8.4C

In compliance with UK Listing Rule 9.8.4C the Company discloses the following information:

Listing Rule	Information required	Relevant disclosure
9.8.4(1)	Interest capitalised by the Group	See note 9 to the financial statements
9.8.4(2)	Unaudited financial information as required (LR 9.2.18)	See Chief Executive Officer's review
9.8.4(5)	Director waivers of emoluments	See Directors' remuneration report
9.8.4(6)	Director waivers of future emoluments	See Directors' remuneration report
9.8.4(12)	Waivers of dividends	See note 19 to the financial statements
9.8.4(13)	Waivers of future dividends	See note 19 to the financial statements
9.8.4(14)	Agreement with a controlling shareholder (LR 9.2.2A)	Not applicable

There are no disclosures to be made in respect of the other numbered parts of LR 9.8.4.

Confirmation of Directors' Responsibilities

We confirm that to the best of our knowledge:

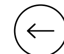
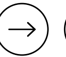
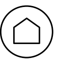
- The consolidated financial statements, prepared in accordance with International Financial Reporting Standards (IFRS) adopted by the United Kingdom, and IFRS as issued by the International Accounting Standards Board and the Companies (Jersey) Law 1991, give a true and fair view of the assets, liabilities, financial position and income of the Group and the undertakings included in the consolidation taken as a whole
- The management report, which is incorporated in the Strategic Report, includes a fair review of the development and performance of the business and the position of the Group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties they face
- The Annual Report and consolidated financial statements, taken as a whole, are fair and balanced and understandable and provide the information necessary for shareholders to assess the performance, position, strategy and business model of the Company

The consolidated financial statements of the Group for the year ended 31 December 2021 were approved on the date below by the Board of Directors.

Signed on behalf of the Board

Kalidas Madhavpeddi
Chairman

Gary Nagle
Chief Executive Officer
15 March 2022

Useful links

Latest Glencore financial reports

2021 production tables (Excel format)

2021 Resources and Reserves report

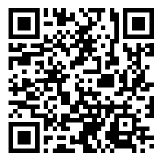
Climate Report 2020: Pathway to Net Zero

Pathway to Net Zero: 2021 Progress Report

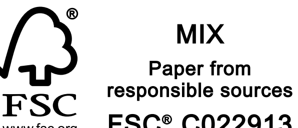
Sustainability Summary - 2020

Payments to Governments Report - 2020

Modern Slavery Statement - 2020


ESG A-Z

Water microsite



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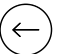
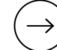
GLENCORE

Financial Statements **2021**

Independent Auditor's report to the members of Glencore plc

Report on the audit of the financial statements

1. Opinion

In our opinion the financial statements of Glencore plc and its subsidiaries (together "the Group"):

- give a true and fair view of the state of the Group's affairs as at 31 December 2021 and of the Group's profit for the year then ended;
- have been properly prepared in accordance with United Kingdom adopted international accounting standards; and International Financial Reporting Standards ("IFRSs") as issued by the International Accounting Standards Board ("IASB"), and
- have been properly prepared in accordance with Companies (Jersey) Law 1991.

We have audited the financial statements of the Group which comprise:

- the consolidated statement of income;
- the consolidated statement of comprehensive income;
- the consolidated statement of financial position;
- the consolidated statement of cash flows;
- the consolidated statement of changes of equity; and
- the related notes 1 to 36.

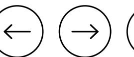
The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom adopted international accounting standards and IFRSs as issued by the IASB.

2. Basis for opinion

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

We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, including the Financial Reporting Council's (the "FRC's") Ethical Standard as applied to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements. The non-audit services provided to the Group for the year are disclosed in note 30 to the financial statements. We confirm that we have not provided any non-audit services prohibited by the FRC's Ethical Standard to the Group.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.



Independent Auditor's report to the members of Glencore plc continued

3. Summary of our audit approach

Key audit matters	The key audit matters that we identified in the current year were: • Government investigations; • Impairments of non-current assets; • Potential impact of climate change on non-current assets; • Classification of trading contracts and arrangements which contain a financing element; • Marketing revenue recognition and fair value measurements; and • Taxation: Uncertain tax positions and the recognition and recoverability of deferred taxes. Our assessment of the Group's key audit matters is consistent with those identified in 2020.
Materiality	The materiality that we used for the Group financial statements in the current year was $300 million (2020: $175 million). We have enhanced our approach to determining materiality by adding a balance sheet metric (net assets) in addition to our previous approach of using a 3-year average adjusted profit before tax metric.
Scoping	We focused our Group audit scope primarily on the audit work at 25 components, representing the Group's most material marketing operations and industrial assets. These 25 components account for 77% of the Group's net assets, 87% of the Group's revenue and 83% of the Group's adjusted EBITDA (refer to segment information in note 2 to the financial statements). We have enhanced the description of our climate-related considerations in the scoping section in this report providing additional background and context to our climate change risk assessment and scoping of our audit procedures.
Significant changes in our approach	Other than the above and the enhancement of our approach to determining materiality, there were no significant changes to our audit approach when compared to 2020.

4. Conclusions relating to going concern

In auditing the financial statements, we have concluded that the directors' use of the going concern basis of accounting in the preparation of the financial statements is appropriate.

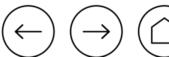
Our evaluation of the directors' assessment of the Group's ability to continue to adopt the going concern basis of accounting included:

- We considered the effect of key risks on the Group's business model as part of our risk assessment and analysed how these risks might affect the Group's liquidity position, including access to capital, and thus its ability to continue to operate as a going concern. The risks we considered to have the greatest impact are commodity prices over the forecast period, and the unutilised funding facilities available.
- We assessed the basis for the assumptions used in the forecast information including operational profitability, the Group's debt repayment obligations and capital expenditure requirements as well as undrawn facilities.
- We assessed the downside stress scenarios applied by the directors in their analysis, in particular whether the downside scenarios represented an appropriately robust sensitivity. We evaluated the effect of these scenarios on key metrics such as liquidity headroom, net debt and net debt to Adjusted EBITDA over the going concern period and performed additional sensitivities to further challenge the Group's forecast position.
- We assessed whether the investigations settlement and contingent liabilities could have a material effect on the Group's ability to continue as a going concern.

Based on the work we have performed, we have not identified any material uncertainties relating to events or conditions that, individually or collectively, may cast significant doubt on the Group's ability to continue as a going concern for a period of at least twelve months from when the financial statements are authorised for issue.

In relation to the reporting on how the Group has applied the UK Corporate Governance Code, we have nothing material to add or draw attention to in relation to the directors' statement in the financial statements about whether the directors considered it appropriate to adopt the going concern basis of accounting.

Our responsibilities and the responsibilities of the directors with respect to going concern are described in the relevant sections of this report.



5. Key audit matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) that we identified. These matters included those which had the greatest effect on: the overall audit strategy, the allocation of resources in the audit, and directing the efforts of the engagement team.

These matters were addressed in the context of our audit of the financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

5.1 Government investigations

Description of key audit matter

The Group remains the subject of certain investigations by regulatory and enforcement authorities as disclosed in notes 23 and 32 to the financial statements. The Board discussions on this matter are set out in the Corporate Governance Report on page 93 and the Group's discussion on the Laws and enforcement principal risk in the Strategic Report set out on pages 75-76.

The Investigations Committee of the Board is overseeing the Group's response to these investigations. The Group has engaged external legal counsel and forensic experts ("the advisors") to assist the Group in responding to the various investigations, to represent it in litigation and to perform additional investigations at the request of the Investigations Committee covering various aspects of the Group's business.

In accordance with the accounting criteria set out under *IAS 37 Provisions, Contingent Liabilities and Contingent Assets*, the judgement of the Investigations Committee (guided by the General Counsel and the Group's external legal counsel) is required in:

- determining whether the Group's provision estimate to resolve the U.S., UK and Brazilian investigations is complete and accurate, and that the related disclosures made by the Group on the nature, timing and associated uncertainties relating to the provision as required by IAS 37 are adequate; and
- evaluating whether a present obligation exists for the ongoing Swiss and Dutch investigations and potential additional follow-on investigations or claims, and whether the disclosure of these as contingent liabilities is adequate.

On 15 February 2022, the Group announced that it presently expects to resolve the U.S., UK and Brazilian investigations in 2022. Accordingly, and based on the Company's current information and understanding, the Group has recognised a provision as at 31 December 2021 in the amount of $1,500 million representing the Company's current best estimate of the costs to resolve these investigations – refer note 23.

At 31 December 2021, taking all available evidence into account, with respect to the Swiss and Dutch investigations and any potential additional investigations or claims, the Investigations Committee concluded that it is not probable that a present obligation existed at the end of the reporting period. The timing and amount, if any, of financial effects (such as fines, penalties or damages, which could be material) or other consequences, including external costs, from any of the various investigations or claims and any change in the investigations' scope is not possible to predict or estimate. Consequently, no liability has been recognised, nor has any estimate of the contingent liability been disclosed, in relation to these matters in the consolidated statement of financial position at 31 December 2021. The Group continues to cooperate with the Swiss and Dutch authorities – refer note 32.

We identified the following matters that led us to consider this to be a key audit matter:

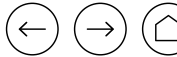
- the risk that the provision made by the Group is not complete and accurate, and the related disclosure made by the Group on the nature, timing and associated uncertainties relating to the provision as required by IAS 37 is inadequate; and
- the risk that the judgement on the probability that a present obligation did not exist for the Swiss and Dutch investigations and potential additional investigations or claims is inappropriate, and the disclosure of these as contingent liabilities may not be adequate.

How the scope of our audit responded to the key audit matter

In response to the investigations by regulatory and enforcement authorities we performed the following:

General procedures

- We gained an understanding of the Investigations Committee's and General Counsel's process and internal controls for reviewing the IAS 37 assessment and review of the disclosures in the Annual Report.
- We attended regular briefings from the General Counsel and the Group's external legal counsel during the year.
- We assessed the competence, capability and objectivity of all the key advisors used by the Group.
- We considered whether the advisors' scope and outcomes were sufficient to inform the Investigations Committee's assessment and representation of whether a present obligation exists and the adequacy of the provision made at 31 December 2021.
- We reviewed documents from the investigating authorities and the internal meeting minutes of the Investigations Committee.
- We obtained an understanding of the stage of each investigation and process being followed by each regulatory and enforcement authority in reaching resolution with Glencore from the Glencore General Counsel and gave direct challenge to and sought confirmation from external counsel on each matter.
- We performed a benchmark of Glencore's disclosure against announced resolutions of similar magnitude with similar regulatory and enforcement authorities.



Independent Auditor's report to the members of Glencore plc continued

Completeness and accuracy of provision made in respect of the U.S., UK and Brazilian investigations

- We agreed the provision amount to supporting documents from relevant authorities, where available. In the absence of these, we sought independent confirmation from relevant external legal counsel on the status of engagement with the authorities and a confirmation of the provision amounts under negotiation.
- In our challenge of the provision calculation prepared by management's experts, we utilised Deloitte forensic specialists and audit team members familiar with the relevant trading businesses to:
  - challenge the use of the methods selected, the significant assumptions applied, and the sources of data used by management and its advisors, including testing the reconciliation to documents from the enforcement authorities;
  - directly challenge the work performed by management's experts by performing walk through procedures on a sample of items included in the calculation and reperforming the provision calculation; and
  - challenge the assumptions adopted for those assumptions where a range of outcomes is possible and reperform the range of outcomes calculation.
- We enquired of the General Counsel and reviewed a memorandum prepared by the Group's independent external counsel to determine whether the conduct currently taken into account in the provision calculation is complete based on known information to date.
- We challenged the adequacy of the Group's disclosure in describing the nature, timing and associated uncertainties relating to the provision recognised.

Appropriateness of contingent liability assessment and relevant disclosures in relation to the ongoing Swiss and Dutch investigations, and potential additional follow-on investigations or claims

- We enquired of the Investigations Committee, the General Counsel and the Group's external legal counsel as to their awareness of known or likely non-compliance with laws and regularions from the Swiss and Dutch investigations to date which could indicate the existence of a present obligation at 31 December 2021, and whether any such non-compliance could result in a potential material outflow (penalty or fine).
- We obtained direct written confirmation from Swiss and Dutch legal counsel as to the current stage of the Swiss and Dutch investigations respectively, and their assessment of the probability of a present obligation existing at the reporting date.
- Having regard to potential additional follow-on investigations or claims, we enquired of the General Counsel and obtained written confirmation from external legal counsel on the potential for additional follow-on investigations or claims, and their assessment of the probability of a present obligation existing at the reporting date.
- Working with our Deloitte forensic specialists, we considered whether the Investigations Committee's conclusions were reasonable that a present obligation did not exist at the end of the reporting period and that the timing and amount, if any, of financial effects from any of these investigations and any change in their scope is not possible to predict or estimate.

Key observations

Based on the results of our procedures, we concluded that:

- the provision recognised in respect of the U.S., UK and Brazilian investigations is reasonable and in accordance with the requirements of IAS 37;
- the financial statement disclosures relating to the investigations by regulatory and enforcement authorities (note 23), including key judgement and estimation uncertainty sensitivities, are appropriate and in accordance with the requirements of IAS 37 and IAS 1; and
- the contingent liability disclosures made covering the ongoing Swiss and Dutch investigations, and potential future investigations and/or claims (note 32), are complete, appropriate and in accordance with the requirements of IAS 37 and IAS 1.

5.2 Impairments of non-current assets

Description of key audit matter

The carrying value of the Group's non-current assets within the scope of IAS 36 *Impairment of assets* includes intangible assets, property, plant and equipment ("PPE"), non-current advances and loans, and investments in associates and joint ventures, which amounted in total to $65,215 million at 31 December 2021. Refer to notes 7, 9, 10, 11 and 12.

In assessing the recoverability of non-current assets, management must make significant assumptions about factors such as:

- expected future prices of commodities key to the Group (particularly coal, oil, copper, cobalt, zinc, ferroalloys and nickel), foreign exchange rates, production levels, operating costs and discount rates;
- future mining and tax legislation, and political and other macro-economic developments;
- responses to climate change impacts by regulators and consumers, which could negatively impact demand for the Group's products, particularly coal (refer to 'Potential impact of climate change on non-current assets' key audit matter below); and
- geological and other operational challenges that could negatively affect an asset's performance over time.

For non-current advances and loans, the Group is also exposed to credit and performance risk arising from risks related to non-performance by the counterparty, particularly in markets demonstrating significant price volatility with limited liquidity and terminal markets, where suppliers may be incentivised to default on delivery and customers may be unwilling to take contracted deliveries or be unable to pay. Assessing counterparty performance, solvency and liquidity risks can be highly subjective.

When an impairment or impairment reversal indicator exists in the Group's significant assets and investments, management completes an impairment review.

As disclosed in note 7, pre-tax impairments totalling $1,452 million were recorded in PPE and intangible assets and $484 million of impairments were recognised in investments and non-current VAT receivables. In addition, $98 million of pre-tax impairment reversals were recognised in advances and loans.

The outcome of impairment or impairment reversal assessments can vary significantly if different assumptions are applied as further described in the sensitivity disclosures made by the Group within "Key sources of estimation uncertainty" in notes 1 and note 7, as well as the Audit Committee Report on page 99.

We have identified a potential risk of fraud through management bias due to the significant estimation uncertainty and subjectivity in certain judgements and key assumptions applied by management in its impairment and impairment reversal assessment.

How the scope of our audit responded to the key audit matter

General procedures

- We considered management's assessment of impairment risk and its assessment of the indicators of impairment or impairment reversal, and performed an independent assessment of impairment and impairment reversal indicators.
- We analysed management's determination of relevant cash-generating units ("CGUs") by reference to the requirements of the accounting standards and our understanding of the nature of the mining operations and the extent to which active markets are considered to exist for intermediary products.
- We obtained an understanding of the methodology applied by management in developing its impairment and impairment reversal assessments, which included understanding the inherent subjectivity and complexity of underlying key assumptions, as well as relevant controls in management's impairment and impairment reversal assessment process.
- For non-current advances and loans, we obtained an understanding of management's method of assessing these assets for impairment, which included obtaining an understanding of relevant controls in the Group's centralised and local credit and performance risk monitoring processes.

Challenge of key model assumptions and overall reasonableness of impairment or impairment reversal assessment

- We challenged the significant macroeconomic assumptions used and the data sources on which these assumptions were based.
- We considered the risk of management bias in macroeconomic forecast assumptions and estimates with the support of Deloitte valuations specialists by analysing management's inputs against third party forecast data, Deloitte's independent assessment of discount rates, and reconciliations to latest internal budget information.
- Where indicators of impairment or impairment reversal were identified, we performed detailed testing on management's impairment calculations and where appropriate based on our risk assessment, we utilised Deloitte valuation and mining specialists to assess the reasonableness of management's underlying model inputs and key assumptions, and the basis for technical mining, operational and financial inputs (e.g. price, discount rate, reserve and resource estimation, production parameters, grade and recovery rates, resource conversion rates, and operating and capital costs). Production and cost assumptions were analysed against historical performance as well as approved budgets and life of mine ("LOM") plans, where applicable, and minable tonnes assumptions were assessed against reserves and resources estimates.
- We assessed the competence, capability and objectivity of management's experts responsible for preparing the resources and reserves statements.

Independent Auditor's report to the members of Glencore plc continued

- We assessed the appropriateness of key mine-specific assumptions and the judgements taken in applying these assumptions within the LOM models, such as the incorporation of price-specific discounts or premiums, changes in tax legislation or other legal or regulatory assumptions (e.g. rehabilitation provisions).
- We performed a stand back assessment and evaluated management's impairment or impairment reversal assessment for any evidence of management bias in assumptions and judgements applied.
- We challenged management's assessment of recoverability of advances and loans by reviewing supporting agreements and obtaining evidence of current performance, historical patterns of trading and settlement, correspondence with the third party and any other information we are aware of that may influence the third party's ability to perform.
- We evaluated the adequacy of impairment related disclosures in the financial statements, including the key assumptions used and the completeness and accuracy of sensitivities disclosed.
- For climate related impairment matters, please refer to our key audit matter under 5.3 below.

Key observations

Based on the results of our assessment of management's methodology for impairment and impairment reversal testing and modelling, we concluded that the methodology applied complies with the accounting framework, and that management's assessment of impairment indicators was appropriate. We found that the level of management review and documentation retained relating to certain judgements and key assumptions in complex models requires improvement and considered this finding in our audit response.

We concluded that key assumptions to which impairment or impairment reversal outcomes were sensitive were reasonable in comparison to historical actuals achieved, third party evidence and/or our specialists' judgements.

Based on the results of our testing, we concluded that the recoverable amounts for the CGUs tested were within an acceptable range of outcomes, although certain assumptions applied are subject to high levels of estimation uncertainty. We considered management's disclosures on key assumptions and impairment or impairment reversal sensitivities and found them to be in compliance with IFRS requirements.

We concluded that the Group's impairment charge in relation to non-current loans and advances and non-current VAT receivables was appropriate.

5.3 Potential impact of climate change on non-current assets

Description of key audit matter

As described on pages 82-83 and 19-26 of the Annual Report, climate change is a material issue that can affect Glencore's business through currently enacted and prospective regulations to reduce carbon emissions and ultimately limit extreme climate events. This may impact the company through increased costs through carbon pricing mechanisms, access to capital and changes in energy prices amongst others.

In December 2020, the Group published its climate change strategy, *Pathway to Net Zero* which set out the pathway to delivering its climate-related targets and longer-term ambition of becoming a net-zero total emissions company by 2050. In December 2021, the Group published its Pathway to Net Zero: 2021 Progress Report detailing the steps taken during the year to identify and implement emission reduction opportunities and to make progress in the seven priority areas identified in the Group's climate strategy.

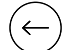
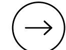
As outlined in Note 1, Glencore's exposure to assets that produce fossil fuels relates mainly to its coal mining operations in Australia, South Africa and Colombia and its Astron oil refining asset in South Africa. It also has goodwill in its coal marketing CGU. All of these assets are long-term in nature and, other than goodwill which is not required to be amortised, none are being depreciated or amortised over a period that extends beyond 2050. There are also rehabilitation liabilities linked to the coal and oil producing assets and the Astron refinery totalling $1,996 million ($3,843 million undiscounted). At 31 December 2021, the carrying values of fossil fuel producing assets and linked rehabilitation liabilities make up 26% of total non-current assets and 5% of total non-current liabilities respectively.

In note 1 to the financial statements, the Group identifies the accounting measurement and disclosure impacts of assets and liabilities that are most impacted by climate change and Glencore's climate commitments, including:

- estimation of the carrying value of certain assets exposed to climate change risk impacted by demand and supply for the Group's commodities, related commodity pricing and carbon pricing;
- estimation of the remaining useful economic life of assets for depreciation and amortisation purposes; and
- estimation of timing of rehabilitation and decommissioning closure activities.

To test the resilience of its portfolio to the impacts of climate change, the Group has developed a number of downside scenarios including:

- Current Pathway scenario, consistent with the IEA Stated Policies scenario (STEPS);
- Rapid Transition scenario, consistent with IEA Sustainable Development scenario (SDS); and
- Radical Transformation scenario, consistent with the IEA Net Zero Emissions by 2050 scenario (NZE2050).

In addition to the above, the Group has also run downside scenarios against the IEA's Announced Pledges Scenario (APS) and its own Complete Displacement Scenario (CDS).

In note 1, Glencore has presented illustrative climate related sensitivities based on IEA pricing assumptions for 2020, 2030 and 2050 which differ from management's best estimate of forecast pricing and has applied the 2020 IEA price as a starting point. Management's sensitivity therefore illustrates the combined effect of assuming weaker short term prices (than management has assumed in its base case), together with weaker long-term prices as a result of decarbonisation as illustrated in the respective IEA scenarios. We identified a key audit matter relating to the financial impacts of climate change on the Group and the impact on key judgements and estimates within the financial statements, and the consistency of reporting in the Strategic and Corporate Governance reports on pages 1-124 with the financial impacts in the financial statements. Our audit focused on the following areas in particular:

- Glencore's coal pricing assumptions used to asssess its coal producing assets for impairment or impairment reversals;
- the appropriateness of Glencore's useful life assessment of fossil fuel producing assets based on anticipated demand for coal and oil in the medium to long term;
- the appropriateness of Glencore's judgement that carbon costs will likely be passed on to the consumer (refer pages 22-23 and the climate change related considerations in note 1 for details);
- the valuation of goodwill relating to its coal marketing cash generating unit which is based on an earnings multiple approach of 12x (down from 15x in 2020) (refer note 10);
- the appropriateness of the timing of rehabilitation cash flows at operations that produce fossil fuels; and
- the consistency between Glencore's announced climate related targets and the above areas.

How the scope of our audit responded to the key audit matter

Coal pricing

- As the availability of long-term ("LT") coal pricing and demand and supply market data (particularly for coal produced outside of Australia) is extremely limited, we engaged valuation experts to analyse historical price correlations between the three primary coal benchmark prices: Newcastle (Australian coal benchmark) which has the largest number of brokers forecasting data, API 4 (South African coal benchmark) and API 2 (North West Europe coal benchmark for the sale of the Group's Colombian coal). This assessment was used to extrapolate a forward curve against which we challenged Glencore's forecast price assumptions.
- We compared Glencore's LT coal pricing to pricing assumptions provided by brokers and the IEA's STEPS scenario noting that some adjustments were required to the IEA's data to ensure comparability (e.g. appropriate freight adjustments, etc).
- We considered management's updated illustrative sensitivities in note 1, and challenged whether these presented contradictory evidence to management's conclusion that there were no further impairment indicators relating to the Group's thermal coal assets.

Asset useful lives

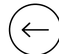
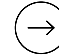
- We evaluated Glencore's coal production profile against the IEA scenarios and evaluated the consistency of management's internal modelling with its external climate reporting.
- With the support of South African refinery specialists, we challenged the useful life of the Astron's oil refinery by evaluating a third party expert report commissioned by management (that covered the period up to 2035), as well as data on oil demand expectations provided by the IEA up to 2050. We also considered factors such as the refinery's geographical and competitive landscape in our assessment.
- We challenged management's assessment of useful lives and the basis used to depreciate/amortise physical and intangible assets.
- We assessed whether any assets' useful lives exceeded management's modelled life of mine/asset of the operation.

Carbon costs

- We analysed the IEA's *World Energy Outlook 2021* report and evaluated management's position on carbon pricing against the IEA's assessment of carbon costs.
- We challenged the consistency of management's modelling of carbon costs with commodity price assumptions, evaluating whether forecast assumptions included or excluded these anticipated increases in costs.
- We reviewed management's position paper on global demand and supply balance and the impact that carbon costs would have on the highest cost producers and challenged management's position that carbon costs are likely to be passed on to the end consumer.
- We performed our own sensitivities analysis on carbon costs.

Marketing coal goodwill

- We determined an independent range of price to earnings multiples based on companies with coal trading, coal production or coal logistics exposure to evaluate the reasonableness of management's use of the earnings multiple approach.
- We obtained management's value in use calculation which is based on a bottom-up assessment of forecast trading volumes and margins. We challenged management's assumptions on coal volumes with reference to Glencore's declining volume production and scenarios provided by the IEA.

Independent Auditor's report to the members of Glencore plc continued

Rehabilitation provisions

- We updated our understanding of the current and any proposed legislative requirements and considered the impact on the timing of the rehabilitation provision.
- We challenged the timing of planned rehabilitation activities of Glencore's fossil fuel operations and whether modelled cash flows aligned with management's announced plans of winding down coal production by 2050.
- We re-performed the calculations behind management's sensitivity analysis to assess the impact of management's 3 and 5 year accelerations to forecast cash flows of all rehabilitation provisions impacting fossil fuel producing CGUs.

Consistency between Glencore's announced targets and accounting policies

- We have used Deloitte climate and sustainability specialists to challenge the Group's climate change narrative and related disclosures.
- We have read the other information included in the annual report and considered whether there was any material inconsistency between the other information and the financial statements, or whether there was any material inconsistency between the other information and our understanding of the business based on audit evidence obtained and conclusions reached in the audit.
- We considered whether management's sensitivity and estimation uncertainty disclosures were adequate in the context of climate change risks and uncertainties.

Key observations

With respect to Glencore's base case assessment of coal pricing assumptions we found Glencore's longer term Newcastle pricing assumptions to be above broker ranges, and the API 4 and API 2 prices were at the upper end of our acceptable range. When comparing Glencore's assumptions to the IEA's data points, we found their assumptions to be higher than the IEA's STEPS forecast. Aligning Glencore's base case commodity pricing assumption within our acceptable range did not result in impairment.

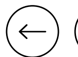
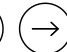
In light of the current pricing environment for thermal coal, we concur with management's disclosure in Note 1 that no reasonably possible change in key assumptions would result in a material impairment in the next financial year.

With respect to the illustrative climate related sensitivities provided in note 1, and whether these contradict management's impairment conclusions and our related audit conclusions, we observed that management's illustrative sensitivities reflect the combined effect of adopting the IEA's long term price assumptions based on the various IEA climate scenarios, together with the effect of adopting the 2020 IEA price as a starting point for short term price assumptions. The short term price assumptions in these sensitivities do not therefore reflect the benefit of the current pricing environment which has increased significantly over the 2020 price assumptions referenced in the IEA's report, and accordingly we are satisfied that these do not contradict management's assessment that an impairment is not reasonably possible within the next financial year. We further calculated that applying Glencore's contemporary short to medium price assumption up to 2025 instead of the IEA STEPS sensitivity price assumptions as described in Note 1, and then reverting to the IEA STEPS price assumptions from 2026 onwards, would not result in an impairment for thermal coal assets. We consider management's position on carbon pricing to be reasonable and concur with management that it is a key judgement (refer "Climate change related considerations" within note 1).

We concluded that the assumed timing of anticipated restoration, rehabilitation and decommissioning cash flows associated with Glencore's fossil fuel related assets was reasonable. We found management's sensitivity disclosures in note 1 to be appropriate.

We found no material inconsistencies between management's coal and oil impairment modelling, rehabilitation forecasts or asset useful lives as set out in note 1 and its stated response to climate change as described in the Strategic Report.

We concluded that reasonable consideration and weight had been given by management to the likely impacts of climate change in the valuation for impairment testing purposes of its coal assets, Coal marketing business CGU and oil refining assets at 31 December 2021.

5.4 Classification of trading contracts and arrangements which contain a financing element

Description of key audit matter

Glencore trades a diverse portfolio of commodities and utilises a wide variety of trading strategies in order to profit from volatility in market prices, differentials and spreads whilst maximising flexibility and optionality.

The classification of contracts relating to the Group's Marketing segment can be complex, particularly distinguishing the Group's regular marketing contracts, which are measured at fair value through profit or loss, from those sales contracts where the Group physically delivers its own production to a third party with no history or intention of net settlement ("own use"), which are exempt from fair value measurement (i.e. mark-to-market accounting).

During 2021 the Group entered into a number of long term liquified natural gas ("LT LNG") supply contracts. As these contracts are entered into for trading of LNG and there is an established practice of net settlement in LNG trades, these contracts have been classified as derivatives under IFRS 9 *Financial Instruments* and are required to be measured at fair value through profit or loss.

Transactions for the sale or purchase of commodities may contain a financing element, such as prepayments or extended payment terms, which may require judgement in determining the most appropriate accounting classification, presentation and disclosure.

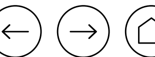
Refer to notes 1, 21, 22 and 25.

How the scope of our audit responded to the key audit matter

- We obtained an understanding of the trading strategies and associated product flows within the Group's marketing departments, including gaining an understanding of the relevant controls over market risk management using financial instrument specialists embedded within the audit team with experience in commodity trading.
- We analysed the trade books to understand unusual or complex derivatives open at year-end. We also analysed the trading results for portfolios designated as "own use" for evidence of any net settlements, which may indicate potential tainting of the IFRS 9 *Financial Instruments* "own use" criteria.
- We challenged management's judgement and conclusion associated with the classification and accounting for the new longer term LNG contracts by evaluating the key characteristics of Glencore's business model to confirm whether it is to trade LNG rather than act as a physical distributor/wholesaler and confirmed that there is a past practice of net settling certain contracts.
- We challenged management's judgement and conclusions associated with the classification and accounting for new significant arrangements and/or significant changes to existing arrangements containing a financing element. Our challenge included evaluation of the commercial substance of the arrangements in the context of applicable IFRS guidance and industry practice.
- We assessed the adequacy of related disclosures in the financial statements in accordance with the requirements of IFRS.

Key observations

Based on our procedures, we are satisfied that the significant judgements applied in the classification of contracts, and arrangements with a financing element, were appropriate, and the respective accounting treatment and disclosures are in accordance with the requirements of IFRS.



Independent Auditor's report to the members of Glencore plc continued

5.5 Marketing revenue recognition and fair value measurements

Description of key audit matter

Marketing revenue for the year (prior to inter-segment eliminations) was $181,764 million (2020: $124,137 million). Refer to note 1 for the revenue recognition accounting policies and note 2 for segment information. The increase in revenues year-on-year is principally due to the impact of higher commodity prices amid resurgent global demand and widespread supply challenges.

Glencore generates revenue as a fee-like income from physical asset handling and arbitrage, as well as blending and trade optimisation opportunities. Judgement is required to determine when control is transferred under certain contractual arrangements with third parties, and there is a particular risk in transactions that occur close to period end which contain complex terms and have a significant gross margin impact and/or may be reversed in a subsequent period.

Marketing related activities depend on the reliability of the trade capture systems and their IT infrastructure environment. As the majority of the Group's trades and marketing inventories are measured at fair value through profit or loss (through either revenue or cost of goods sold), a complete and accurate trade capture process that includes all specific and bespoke terms within the commodity contracts is critical for accurate financial reporting and monitoring of trade book exposures and performance.

Determination of fair values can be a complex and subjective area, requiring significant estimates, particularly where valuations utilise unobservable inputs and are classified as 'Level 3' as established by the hierarchy set out in IFRS 13 *Fair value measurements* (e.g. price differentials, medium and long term LNG pricing assumptions, credit risk assessments, market volatility and forecast operational estimates).

At 31 December 2021, total 'Level 3' financial assets and liabilities amounted to $996 million and $454 million respectively. We refer readers to "Critical accounting judgements" within note 1 and additionally notes 28 and 29.

Due to the abovementioned key judgement and estimation uncertainty areas, as well as the fact that substantially all output from industrial assets is sold by the Group's marketing divisions, we have identified revenue recognition and fair value measurements in the Marketing segment as a key audit matter.

How the scope of our audit responded to the key audit matter

- We reviewed Glencore's accounting policies on revenue recognition and fair value measurements to assess compliance with the requirements of IFRS.
- We tested relevant controls surrounding the completeness and accuracy of trade capture and the revenue and trade cycle.
- We tested general IT controls surrounding major technology applications and critical interfaces involving revenue recognition and the completeness and accuracy of trade capture.
- We utilised data analytics tools to enhance audit effectiveness over large transaction volumes tracing realised revenue to cash receipts.
- We traced, on a sample basis, recorded sales occurring on or around 31 December 2021 per the trade book system to relevant shipping documents to assess whether the IFRS revenue recognition criteria were met for recorded sales.
- We tested the accuracy and completeness of unrealised trades as of the reporting date by tracing and agreeing a sample of trades entered into around the year-end from source documents to the trade book system.
- We tested relevant internal controls over management's fair value measurement processes and performed detailed substantive testing of the related fair value measurements on a sample basis.
- We have embedded financial instrument specialists with experience in commodity trading within our team, and tested management significant unobservable inputs utilised in 'Level 3' measurements in the fair value hierarchy as set out in notes 28 and 29 to the financial statements. This work included assessing management's valuation assumptions against independent price quotes, recent transactions, and other relevant documentation. For the LT LNG contracts we assessed management's modelling techniques used in extrapolating the directly observable inputs.

Key observations

Based on the results of our testing, we are satisfied that the revenue recognition policies are in line with IFRS and were appropriately applied throughout the period. In addition, we are satisfied that the 'Level 3' fair value measurements are supported by reasonable assumptions in line with recent transactions and/or externally verifiable information. We found the financial statement disclosures on fair value measurements to be appropriate.

5.6 Taxation: Uncertain tax positions and the recognition and recoverability of deferred taxes

Description of key audit matter

The global tax environment is complex, particularly with respect to cross border transactions. Furthermore, the interpretation and application of tax legislation in certain jurisdictions in which the Group operates can be unclear and unpredictable. There continues to be an increase in enforcement activities, and increasingly stringent interpretations of existing legislation by local revenue authorities.

These developments give rise to complexity and uncertainty in respect of the calculation of income taxes and deferred tax assets and consideration of contingent liabilities associated with tax years open to audit and other exposures. The accounting interpretation IFRIC 23 *Uncertainty over Income Tax Treatments* is used by the Group together with IAS 12 *Income Taxes* to assess and measure the uncertainty over income tax treatments.

As disclosed in notes 1 and 8:

- Management has updated its assessment of uncertain tax positions and the recognition and recoverability of deferred taxes. In recognising a liability 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 2021, the Group has provided $880 million (2020: $1,189 million) for uncertain tax liabilities related to possible adverse outcomes of these matters.
- At 31 December 2021 the Group has recorded total deferred tax liabilities of $4,469 million (2020: $4,721 million) and total deferred tax assets of $1,779 million ($2,252 million).

The most significant estimation uncertainty relates to the DRC:

- During 2018, the DRC parliament adopted a new mining code (2018 Mining Code) which introduced wide-ranging reforms including the introduction of higher royalties, a new Super Profits Tax regime and further regulatory controls. The uncertainties of the 2018 Mining Code, specifically the application and interpretation of the Super Profits Tax, remain.
- During 2020 and 2021, tax authorities in the DRC have challenged the tax filings; some matters have subsequently been agreed while others are still outstanding. The Group is currently responding to the challenges raised.

Further estimation uncertainty arises from the challenges of forecasting future taxable profits in various jurisdictions given the inherent volatility of trading results.

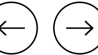
As a result, we have identified a risk of material misstatement of the liability for uncertain tax positions and the valuation of deferred tax assets due to the significant estimation uncertainty and subjectivity in certain judgements and key assumptions applied by management, whether arising from management bias or unintentional error. Refer Audit Committee reporting on page 99.

How the scope of our audit responded to the key audit matter

We engaged Deloitte tax specialists to assist in executing the following audit procedures:

- We challenged management's assessment of uncertain tax positions by reviewing correspondence with local tax authorities and reviewing third party expert tax opinions where appropriate, to assess the adequacy of associated liabilities and disclosures having consideration of the IFRIC 23 guidance.
- We considered the appropriateness of management's assumptions and estimates to support the recognition of deferred tax assets with reference to forecast taxable profits. We challenged the appropriateness of management's tax utilisation models by comparing these forecasts against the relevant entities' budgets or underlying asset LOM plans.
- We assessed the adequacy of disclosures in the financial statements in relation to deferred tax assets, and liabilities for uncertain tax positions, and the respective sensitivity disclosures provided.
- In respect of tax exposures in the DRC:
  - we challenged management's position by inspecting correspondence with local tax authorities, reviewing third party expert tax opinions where appropriate, and utilising Deloitte local DRC tax specialists to assess the probability and extent of outflows from the challenges or expected challenges from the various tax authorities;
  - we challenged the adequacy of associated liabilities and disclosures having consideration of IFRIC 23 guidance;
  - in respect of the recognition of a full deferred tax asset in Kamoto Copper Company ("KCC"), we challenged management's position regarding uncertainties arising from the application of the 2018 Mining Code and current challenges received from the DRC tax authorities on open tax years; and
  - we assessed the adequacy of disclosures in the financial statements in relation to the KCC deferred tax asset and the respective sensitivity disclosures provided.

Key observations
Based on our audit work, we concur that the recorded liabilities for uncertain tax positions and deferred tax assets and related disclosures are appropriate.



Independent Auditor's report to the members of Glencore plc continued

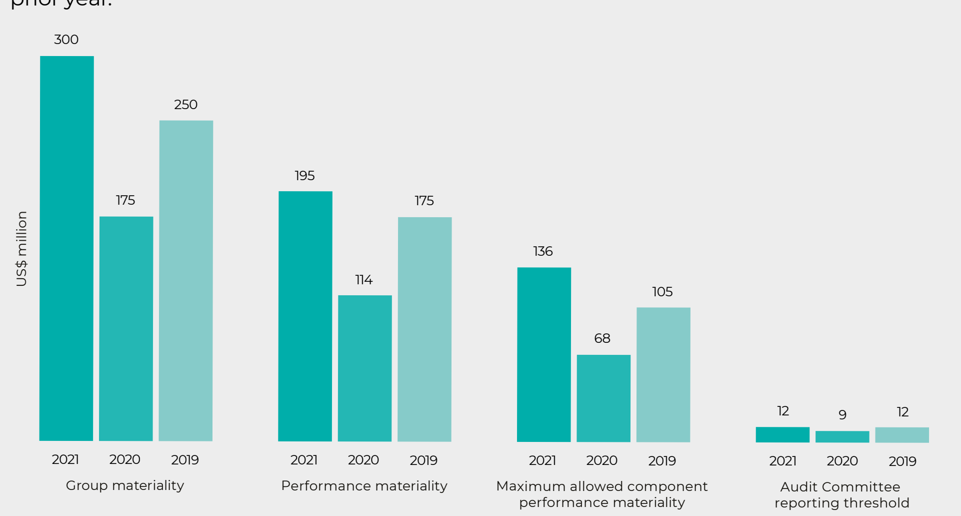
6. Our application of materiality

We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work.

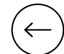
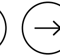
We set performance materiality at a level lower than materiality to reduce the probability that, in aggregate, uncorrected and undetected misstatements exceed the materiality for the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

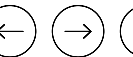
Group materiality and performance materiality	Group materiality: $300 million (2020: $175 million, 2019: $250 million) Group performance materiality: $195 million (2020: $114 million, 2019: $175 million) The increase in materiality is driven by significantly higher adjusted profit before tax compared to the prior year.



Basis for determining materiality and performance materiality	We have enhanced our approach to determining materiality by adding a balance sheet metric (net assets) to our previous approach of using a 3-year average adjusted profit before tax metric. Based on our professional judgement, we determined materiality to be $300 million which is: • 5.9% of three-year average adjusted profit before tax • 0.8% of net assets Performance materiality Group performance materiality for the 2021 audit has been set at $195 million being 65% of Group materiality (2020: $114 million being 65% of Group materiality). We maintained a factor of 65% to determine performance materiality based on our past experience and low number of uncorrected misstatements identified in the prior years as well as the ongoing risks associated with remote working on the company's internal control environment. Component audit procedures are scoped with reference to the component performance materiality (see ranges applied below). Component materiality Due to the diversified nature of the Group's operations, we have historically applied a maximum allowed component performance materiality such that our component level procedures are set at a level that is commensurate with the contributions of each component. The maximum permitted performance materiality for individual components which were of a significant size to the Group was $136 million (2020: $68 million). The actual performance materiality applied to individual components ranged from $13 million to $136 million.

Rationale for the benchmark applied	3-year average adjusted PBT (unchanged from prior years) Using a 3-year average continues to be an effective approach in the mining industry to normalise a profit orientated benchmark that is highly exposed to cyclical commodity price fluctuations. This benchmark is further normalised for items, which due to their nature and variable financial impact and / or expected infrequency of the underlying events, are not considered indicative of the continuing operations of the Group (such as impairment charges, losses disposals of businesses, and the government investigations provision). The absence of these normalisation steps results in a volatile materiality that may not represent the scale of the Group's operations. In evaluating the changes in Glencore's environment and the evolving stakeholder focus areas, net debt and the impact of climate change on asset valuations have become important metrics for stakeholders. As an emerging risk, we've observed that the impact of climate change is not necessarily captured in a mining company's 12 month performance but rather on the company's business model and long-term decision making, which includes access to capital. Incorporating a net assets metric into our approach improves the alignment of our materiality with the scale of the business and focus areas of investors. Net assets as an additional benchmark In evaluating the changes in Glencore's environment and the evolving stakeholder focus areas, net debt and the impact of climate change on asset valuations have become important metrics for stakeholders. As an emerging risk, the impact of climate change is not necessarily captured in a mining company's 12 month performance but rather on the company's business model and long-term decision making, which includes access to capital. Incorporating a net assets metric into our approach improves the alignment of our materiality with the scale of the business and focus areas of investors. Range approach to determining materiality We consider a range approach to be appropriate to capture the upper and lower bounds of a reasonable materiality level that takes into consideration both of the above benchmarks. We then selected a point within that range that, in our professional judgement, appropriately reflects the sensitivity of the users of the financial statements to Glencore's current year performance and financial position. The selected group materiality of $300 million amounts to 2.5% of current year adjusted pre-tax profit without the effect of averaging (2020: 11.4%).
Error reporting threshold	We agreed with the Audit Committee that we would report all individual audit differences in excess of $15 million (2020: $9 million), as well as differences below that threshold that, in our view, warranted reporting on qualitative grounds. We also report to the Audit Committee on disclosure matters that we identified when assessing the overall presentation of the financial statements.



Independent Auditor's report to the members of Glencore plc continued

7. An overview of the scope of our audit

7.1 Identification and scoping of components

Our Group audit was scoped by obtaining an understanding of the Group and its environment and assessing the risks of material misstatement at the Group level. Our scoping considered both quantitative and qualitative factors including a component's contribution to financial metrics (Revenue, Adjusted EBIT, Adjusted EBITDA, and non-current assets), production output and qualitative criteria, such as being a significant development project or exhibiting particular risk factors. Based on our assessment, we scoped in audit work at 25 components (2020: 38 components), representing the Group's most material marketing operations and industrial assets.

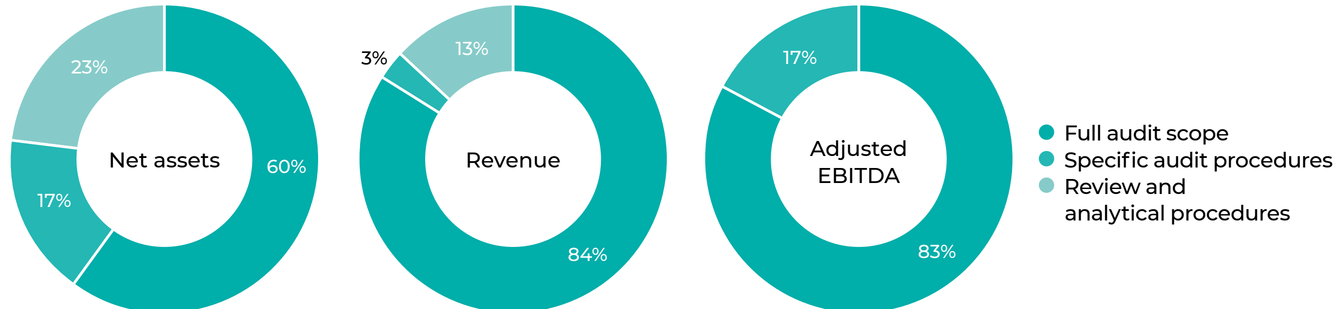
Our Group audit utilised the work of 14 component audit teams (2020: 22 component audit teams) in 12 countries (2020: 16 countries). The decrease in the number of components and component teams compared to the prior period is primarily due to the aggregation of 7 components into one single Copper Group component, following a change in the Group's reporting structure in 2021.

The following audit scoping was applied:

- 12 components (2020: 19 components) were subject to a full scope audit; and
- 13 components (2020: 19 components) were subject to specified audit procedures where the extent of our testing was based on our assessment of the risk of material misstatement of certain specific financial balances and / or processes and of the materiality of the Group's operations at those locations.

These 25 components account for 77% of the Group's net assets (2020: 80%), 87% of the Group's revenue (2020: 88%) and 83% of the Group's Adjusted EBITDA (2020: 91%).

At the parent entity level, we tested the consolidation process and carried out analytical procedures to confirm our conclusion that there was no reasonable possibility of a risk of material misstatement in the aggregated financial information of the remaining components not subject to audit or audit of specified account balances.



7.2 Working with other auditors

Detailed audit instructions were sent to the auditors of these in-scope components. These instructions identified the significant audit risks, other areas of audit focus, the account balances, classes of transactions and disclosures considered material and their relevant risks of material misstatement as assessed by the Group audit team. The instructions also set out the audit procedures to be performed and set out the information to be reported back to the Group audit team and other matters relevant to the audit.

Due to the global Covid-19 pandemic and the resulting travel restrictions, on-site meetings were limited to component teams in Switzerland. As a result, the Group audit team increased the frequency of phone and video calls with component auditors, and performed a virtual online programme of detailed reviews of the component audit teams' files.

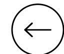
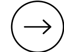
For all in-scope components, the Group audit team was involved in the audit work performed by the component auditors through a combination of provision of referral instructions, regular interaction with the component teams during the year, review and challenge of related component inter-office reporting and of findings from their work (which included the audit procedures performed to respond to risks of material misstatement), and attendance during component audit closing conference calls.

7.3 The impact of climate change on our audit

Climate change impacts Glencore's business in a number of ways as set out in the Strategic report on pages 19-26 of the Annual Report and Note 1 to the financial statements.

In planning our audit, the financial impacts on the Group of climate change and the transition to a low carbon economy were considered where these factors have the potential to directly or indirectly impact key judgements and estimates and related assumptions within the financial statements. We worked with Deloitte internal environmental specialists in considering potential climate change risk factors. Our risk assessment was based on:

- enquiries of senior management to understand the potential impact of climate change risk including physical risks to producing assets, the potential changes to the macro economic environment and the potential for the transition to a low carbon environment to occur quicker than anticipated;
- reading and considering Glencore's climate change report and position papers;

- consideration together with each of our component teams of immediate and possible longer-term impacts of climate change in their jurisdiction; and
- reading and considering external publications by recognised authorities on climate change such as the IEA's World Energy Outlook amongst others.

The principal audit risk that we have identified for our audit is that coal forecast assumptions (particularly coal price assumptions and the expected economic lives of these assets) used in management's impairment testing may not appropriately reflect anticipated changes in supply and demand due to climate change and the energy transition.

Our response to this principal audit risk and other climate risks that we considered relevant to the audit have been summarised in the Key Audit Matter, 'Potential impact of climate change on non-current assets' above.

7.4 Our consideration of the control environment

Glencore relies on the effectiveness of a number of IT systems and applications to ensure that financial transactions are recorded completely and accurately. The main financial accounting, reporting, trading and treasury systems were identified as key IT systems relevant to our audit. For the marketing business we planned to test and rely on key manual and automated controls over the revenue business process, as discussed in the "Marketing revenue recognition and fair value measurements" key audit matter above. Industrial activities are generally decentralised and thus the design of controls and testing approach varies between components, except for revenue where a controls reliance approach was adopted for third-party revenue across all components which was new in 2021.

The IT systems which are primarily managed from the centralised IT function in Switzerland were evaluated by IT specialists who were part of the Group audit team. Other IT systems were evaluated by component IT specialists to determine whether these IT systems could be relied upon. IT control deficiencies relating to the review of user access rights and the management of privileged access accounts were identified in a number of entities within the Group. As a result of these deficiencies, certain component teams were unable to adopt a controls-based audit approach in the current year. Accordingly, these teams extended the scope of audit procedures in response to the identified control deficiencies. Where centrally managed IT systems were similarly impacted, mitigating controls were identified and / or additional procedures were performed in order to adopt a control reliance approach.

At certain components of the Group, we observed insufficient segregation of duties around the posting of manual journal entries and a lack of evidence and precision of review and approval of manual journal entries. We modified our approach to auditing manual journal entries by assessing compensating controls and by enhancing our selection criteria in the testing of manual journal entries.

As described in the Impairment of non-current assets key audit matter above, we found that the level of review and documentation retained relating to certain judgements and key assumptions in complex models requires improvement.

The Audit Committee has discussed these internal control deficiencies, and management`s actions to remediate them on page 98. As deficiencies in the control environment increase the risk of fraud and error within the financial statements, we performed additional procedures to respond to the potential risks, including the risk of fraud as outlined below.

8. Other information

The other information comprises the information included in the annual report other than the financial statements and our auditor's report thereon. The directors are responsible for the other information contained within the annual report.

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

Our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the course of the audit, or otherwise appears to be materially misstated.

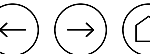
If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether this gives rise to a material misstatement in the financial statements themselves. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

9. Responsibilities of directors

As explained more fully in the statement of directors' responsibilities, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

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



Independent Auditor's report to the members of Glencore plc continued

10. Auditor's responsibilities for the audit of the financial statements

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

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: *www.frc.org.uk/auditorsresponsibilities*. This description forms part of our auditor's report..

11. Extent to which the audit was considered capable of detecting irregularities, including fraud

Irregularities, including fraud, are instances of non-compliance with laws and regulations. We design procedures in line with our responsibilities, outlined above, to detect material misstatements in respect of irregularities, including fraud. The extent to which our procedures are capable of detecting irregularities, including fraud, is detailed below.

11.1 Identifying and assessing potential risks related to irregularities

In identifying and assessing risks of material misstatement in respect of irregularities, including fraud and non-compliance with laws and regulations, we considered the following:

- the nature of the industry and sector, control environment and business performance including the design of the Group's remuneration policies, key drivers for remuneration, bonus levels and performance targets;
- the Group's own assessment of the risks that irregularities may occur either as a result of fraud or error;
- the results of our enquiries of senior management, internal audit, members of the legal, risk and compliance functions, and the Audit and Investigations Committees about their own identification and assessment of the risks of irregularities, including obtaining and reviewing the Group's documentation of its policies and procedures relating to:
  - identifying, evaluating and complying with laws and regulations and whether they were aware of any instances of non-compliance;
  - detecting and responding to the risks of fraud and whether they have knowledge of any actual, suspected or alleged fraud; and
  - reviewing internal controls established to mitigate risks of fraud or non-compliance with laws and regulations;
- the matters discussed among the engagement team, including significant component audit teams, and relevant internal specialists, including forensic, tax, mining, valuations and IT, regarding how and where fraud might occur in the financial statements and any potential indicators of fraud.

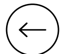
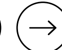
As a result of these procedures, we considered the opportunities and incentives that may exist within the organisation for fraud and identified the greatest potential for fraud in the following areas:

- the use of agents and intermediaries in certain higher-risk jurisdictions, and other higher-risk transaction types;
- key sources of estimation uncertainty within management's provisioning for ongoing regulatory investigations and the testing of impairment of non-current assets within the scope of IAS 36 *Impairment of Non-current Assets*;
- the use of supply chain finance arrangements and their classifications and disclosure within trade creditors;
- key sources of estimation uncertainty in management's recognition and measurement of deferred tax assets and uncertain tax positions;
- the judgement that LNG forward physical transactions meet the definition of a derivative and are accordingly accounted for at fair value through profit and loss; and
- valuation of unrealised forward physical positions.

In common with all audits under ISAs (UK), we are also required to perform specific procedures to respond to the risk of management override.

We also obtained an understanding of the legal and regulatory frameworks that the Group operates in, focusing on provisions of those laws and regulations that had a direct effect on the determination of material amounts and disclosures in the financial statements. The key laws and regulations we considered in this context included Companies (Jersey) Law 1991, Primary and Secondary Listing Rules, Disclosure Guidance and Transparency rules, the UK Corporate Governance code and related guidance and relevant tax laws.

In addition, we considered provisions of other laws and regulations that do not have a direct effect on the financial statements but compliance with which may be fundamental to the Group's ability to operate or to avoid a material penalty. These included the US Foreign Corrupt Practices Act, the US Anti-Money Laundering regulations, the UK Bribery Act 2010 and the Group's operating licences and environmental regulations in the jurisdictions in which it operates.

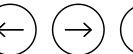
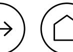
11.2 Audit response to risks identified

As a result of performing the above, we identified "Government investigations", "Impairments of non-current assets", "Classification of trading contracts and arrangements which contain a financing element", "Marketing revenue recognition and fair value measurements" and "Taxation: Uncertain tax positions and the recognition and recoverability of deferred taxes" as key audit matters related to the potential risk of fraud or non-compliance with laws and regulations. The key audit matters section of our report explains the matters in more detail and also describes the specific procedures we performed in response to those key audit matters.

In addition, our procedures to respond to risks identified included the following:

- enquiring of management, the Audit Committee, the Investigations Committee, General Counsel and the Group's external legal counsel concerning actual and potential litigation and claims;
- enquiring of management, the Audit Committee, the Investigations Committee, General Counsel and the Group's external legal counsel regarding whether the Group is in compliance with laws and regulations relating to fraud, money laundering, bribery and corruption;
- reading minutes of meetings of those charged with governance, reviewing internal audit reports and reviewing correspondence with relevant regulatory and taxation authorities, where applicable;
- obtaining an understanding of the Group's business relationships with agents and intermediaries in certain high risk jurisdictions and rationale for appointment;
- scrutinising higher risk expense accounts for evidence of improper payments in high risk jurisdictions;
- performing audit procedures to identify and investigate suspicious payments to government officials, agents and intermediaries by means of adding search parameters to our journal entry testing for key words relevant to potential fraudulent payments;
- working with our Deloitte forensic specialists to evaluate fraud risk factors and support the engagement team in performing certain audit procedures as required;
- challenging management's key judgements and assumptions for determining the recoverable amounts and credit adjustments for trade advances, and provisioning for uncertain tax positions;
- used analytical tools to identify unrealised forward physical positions of increased audit interest and challenged the method and inputs to those valuations;
- used analytical tools to confirm the completeness of management's identification of transactions that may indicate supply chain financing features, and challenged the nature of such supply chain financing arrangements and whether they qualify for separate disclosure or classification as debt;
- performing analytical procedures to identify any unusual or unexpected relationships that may indicate risks of material misstatement due to fraud;
- performing focused analytical procedures on key financial metrics of non-significant components to identify any unusual or material transactions that may indicate a risk of material misstatement and evaluating the business rationale of such transactions;
- reviewing the financial statement disclosures and testing to supporting documentation to assess compliance with provisions of relevant laws and regulations described as having a direct effect on the financial statements; and
- addressing the risk of fraud through management override of controls by testing the appropriateness of journal entries and other adjustments; assessing whether the judgements made by management in making accounting estimates indicate a potential bias and evaluating the business rationale of any significant transactions that are unusual or outside the normal course of business.

We also communicated relevant identified laws and regulations and potential fraud risks to all engagement team members, including internal specialists and all component audit teams, and remained alert to any indications of fraud or non-compliance with laws and regulations throughout the audit.

Independent Auditor's report to the members of Glencore plc continued

Report on other legal and regulatory requirements

12. Opinion on other matters prescribed by our engagement letter

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the provisions of the UK Companies Act 2006 as if that Act had applied to the company.

13. Corporate Governance Statement

The Listing Rules require us to review the directors' statement in relation to going concern, longer-term viability and that part of the Corporate Governance Statement relating to the group's compliance with the provisions of the UK Corporate Governance Code specified for our review.

Based on the work undertaken as part of our audit, we have concluded that each of the following elements of the Corporate Governance Statement is materially consistent with the financial statements and our knowledge obtained during the audit:

- the directors' statement with regards to the appropriateness of adopting the going concern basis of accounting and any material uncertainties identified (set out on page 121);
- the directors' explanation as to their assessment of the Group's prospects, the period this assessment covers and why the period is appropriate (set out on page 121);
- the directors' statement on fair, balanced and understandable (set out on page 122);
- the board's confirmation that it has carried out a robust assessment of the emerging and principal risks (set out on page 95);
- the section of the annual report that describes the review of effectiveness of risk management and internal control systems (set out on pages 68-84); and
- the section describing the work of the audit committee (set out on pages 98-99).

14. Matters on which we are required to report by exception

Adequacy of explanations received and accounting records

Under the Companies (Jersey) Law, 1991 we are required to report to you if, in our opinion:

- we have not received all the information and explanations we require for our audit; or
- proper accounting records have not been kept by the parent company, or proper returns adequate for our audit have not been received from branches not visited by us; or
- the financial statements are not in agreement with the accounting records and returns.

We have nothing to report in respect of these matters.

15. Other matters which we are required to address

15.1 Auditor tenure

Following the recommendation of the Audit Committee, we were initially appointed by the Board of Directors on 22 August 2011 to audit the financial statements of Glencore plc for the year ending 31 December 2011 and subsequent financial periods. Following a competitive tender process, we were reappointed as auditor of Glencore plc for the period ending 31 December 2023 and subsequent financial periods. The period of total uninterrupted engagement including previous renewals and reappointments of the firm as auditor of Glencore plc is 11 years, covering the years ending December 2011 to December 2021. The Engagement Partner has rotated twice during this period, with the most recent rotation being after the 2017 audit.

15.2 Consistency of the audit report with the additional report to the Audit Committee

Our audit opinion is consistent with the additional report to the audit committee we are required to provide in accordance with ISAs (UK).

16 Use of our report

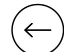
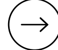
This report is made solely to the company's members, as a body, in accordance with Article 113A of the Companies (Jersey) Law, 1991. Our audit work has been undertaken so that we might state to the company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's members as a body, for our audit work, for this report, or for the opinions we have formed.

As required by the Financial Conduct Authority (FCA) Disclosure Guidance and Transparency Rule (DTR) 4.1.14R, these financial statements form part of the ESEF-prepared Annual Financial Report filed on the National Storage Mechanism of the UK FCA in accordance with the ESEF Regulatory Technical Standard (('ESEF RTS'). This auditor's report provides no assurance over whether the annual financial report has been prepared using the single electronic format specified in the ESEF RTS.

We have provided assurance on whether the annual financial report has been prepared using the single electronic format specified in the ESEF RTS and have reported separately to the members on this.

Geoffrey Pinnock, CA (SA)
for and on behalf of Deloitte LLP
Recognised Auditor
London, UK

15 March 2022

Consolidated statement of income
For the year ended 31 December 2021

US$ million	Notes	**2021**	2020
Revenue	3	203,751	142,338
Cost of goods sold		(191,370)	(138,640)
Selling and administrative expenses		(2,115)	(1,681)
Share of income from associates and joint ventures	11	2,618	444
Loss on disposals of non-current assets	4	(607)	(36)
Other income	5	186	438
Other expense	5	(2,133)	(611)
Impairments of non-current assets	7	(1,905)	(5,715)
Reversal of impairments/(impairments) of financial assets	7	67	(232)
Dividend income	11	23	32
Interest income	6	208	120
Interest expense	6	(1,348)	(1,573)
Income/(loss) before income taxes		**7,375**	**(5,116)**
Income tax (expense)/credit	8	(3,026)	1,170
Income/(loss) for the year		**4,349**	**(3,946)**
Attributable to:			
Non-controlling interests		(625)	(2,043)
Equity holders of the Parent		4,974	(1,903)
Earnings/(loss) per share:			
Basic (US$)	18	0.38	(0.14)
Diluted (US$)	18	0.37	(0.14)

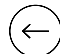
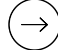
The accompanying notes are an integral part of the consolidated financial statements.

Consolidated statement of comprehensive income
For the year ended 31 December 2021

US$ million	Notes	2021	2020
Income/(loss) for the year		4,349	(3,946)
Other comprehensive income/(loss)			
Items not to be reclassified to the statement of income in subsequent periods:			
Defined benefit plan remeasurements	24	284	(20)
Tax (charge)/credit on defined benefit plan remeasurements		(61)	3
Loss on equity investments accounted for at fair value through other comprehensive income	11	(52)	(629)
Tax charge on equity investments accounted for at fair value through other comprehensive income		(4)	(1)
(Loss)/gain due to changes in credit risk on financial liabilities accounted for at fair value through profit and loss		(7)	19
Net items not to be reclassified to the statement of income in subsequent periods		**160**	**(628)**
Items that have been or may be reclassified to the statement of income in subsequent periods:			
Exchange loss on translation of foreign operations		(87)	(189)
(Loss)/gain on cash flow hedges[1]		(212)	200
Cash flow hedges reclassified to the statement of income[1]		241	(258)
Tax (charge)/credit on cash flow hedges reclassified to the statement of income		(2)	4
Share of other comprehensive loss from associates and joint ventures	11	(58)	(14)
Net items that have been or may be reclassified to the statement of income in subsequent periods		**(118)**	**(257)**
Other comprehensive income/(loss)		**42**	**(885)**
Total comprehensive income/(loss)		**4,391**	**(4,831)**
Attributable to:			
Non-controlling interests		(645)	(2,067)
Equity holders of the Parent		5,036	(2,764)

1 Certain prior year balances have been restated to conform with current year presentation to show gross movements in the cash flow hedge reserve.

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

Consolidated statement of financial position
As at 31 December 2021

US$ million	Notes	2021	2020
Assets			
Non-current assets			
Property, plant and equipment	9	43,159	47,110
Intangible assets	10	6,235	6,467
Investments in associates and joint ventures	11	12,294	12,400
Other investments	11	1,620	1,733
Advances and loans	12	3,527	3,042
Other financial assets	28	458	1,106
Inventories	13	662	678
Deferred tax assets	8	1,779	2,252
		69,734	**74,788**
Current assets			
Inventories	13	28,434	22,852
Accounts receivable	14	19,493	15,154
Other financial assets	28	4,636	1,998
Income tax receivable	8	364	444
Prepaid expenses		287	220
Cash and cash equivalents	15	3,241	1,498
		56,455	**42,166**
Assets held for sale	16	1,321	1,046
		57,776	**43,212**
Total assets		**127,510**	**118,000**
Equity and liabilities			
Capital and reserves – attributable to equity holders			
Share capital	17	146	146
Reserves and retained earnings	17	39,785	37,491
		39,931	**37,637**
Non-controlling interests	34	(3,014)	(3,235)
Total equity		**36,917**	**34,402**
Non-current liabilities			
Borrowings	21	26,811	29,227
Deferred income	22	2,088	2,590
Deferred tax liabilities	8	4,469	4,721
Other financial liabilities	28	710	688
Provisions[1]	23	6,117	5,770
Post-retirement and other employee benefits[1]	24	939	1,161
		41,134	**44,157**
Current liabilities			
Borrowings	21	7,830	8,252
Accounts payable	25	29,313	24,038
Deferred income	22	1,573	1,070
Provisions	23	2,093	693
Other financial liabilities	28	6,077	4,276
Income tax payable	8	1,785	927
		48,671	**39,256**
Liabilities held for sale	16	788	185
		49,459	**39,441**
Total equity and liabilities		**127,510**	**118,000**

1 In the current year, post-retirement and other employee benefits have been disaggregated from provisions. The prior year balances have been restated to conform with current year presentation.

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

Consolidated statement of cash flows
For the year ended 31 December 2021

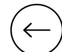
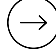
US$ million	Notes	2021	2020
Operating activities			
Income/(loss) before income taxes		7,375	(5,116)
Adjustments for:			
Depreciation and amortisation		6,335	6,671
Share of income from associates and joint ventures	11	(2,618)	(444)
Streaming revenue and other non-current provisions		(280)	(205)
Loss on disposals of non-current assets	4	607	36
Unrealised mark-to-market movements on other investments[2]	5	(64)	(438)
Impairments	7	1,838	5,947
Other non-cash items – net[1,2]		2,392	664
Interest expense – net	6	1,140	1,453
Cash generated by operating activities before working capital changes, interest and tax		**16,725**	**8,568**
Working capital changes			
Increase in accounts receivable[3]		(5,888)	(385)
Increase in inventories		(5,660)	(3,189)
Increase/(decrease) in accounts payable[4]		6,423	(436)
Total working capital changes		**(5,125)**	**(4,010)**
Income taxes paid		(1,837)	(820)
Interest received		100	100
Interest paid		(1,003)	(1,174)
Net cash generated by operating activities		**8,860**	**2,664**
Investing activities			
Net cash received from/(used in) disposal of subsidiaries	26	252	(222)
Purchase of investments		(86)	(122)
Proceeds from sale of investments		194	135
Purchase of property, plant and equipment		(3,618)	(3,569)
Proceeds from sale of property, plant and equipment		342	52
Dividends received from associates and joint ventures	11	2,375	1,015
Net cash used by investing activities		**(541)**	**(2,711)**

1 See reconciliation below.
2 Prior year balances relating to mark-to-market movements on other investments of $379 million previously included in 'other non-cash items' have been reclassified to unrealised mark-to-market movements on other investments.
3 Includes movements in other financial assets, prepaid expenses and long-term advances and loans.
4 Includes movements in other financial liabilities, provisions and deferred income.

Other non-cash items comprise the following:

US$ million	Notes	2021	2020
Net foreign exchange losses	5	187	192
Closed site rehabilitation costs	5	177	80
Closure and severance costs	5	–	183
Share based and deferred remuneration costs	20	476	207
Legal and regulatory proceedings	5/23	1,556	–
Other		(4)	2
Total		**2,392**	**664**

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

Consolidated statement of cash flows continued
For the year ended 31 December 2021

US$ million	Notes	2021	2020
Financing activities[1]			
Proceeds from issuance of capital market notes[2]		4,877	3,362
Repayment of capital market notes		(2,807)	(4,017)
Repurchase of capital market notes		(125)	(72)
Repayment of revolving credit facility		(2,244)	(870)
Proceeds from other non-current borrowings		231	392
Repayment of other non-current borrowings		(493)	(44)
Repayment of lease liabilities		(634)	(560)
Margin (payments)/receipts in respect of financing related hedging activities		(970)	1,040
(Repayment of)/proceeds from current borrowings		(2,016)	217
Proceeds from U.S. commercial papers		675	415
Proceeds received on acquisition of non-controlling interests in subsidiaries		55	–
Payments on acquisition of non-controlling interests in subsidiaries		(45)	(56)
Return of capital/distributions to non-controlling interests		(163)	(127)
Purchase of own shares	17	(746)	–
Distributions paid to equity holders of the Parent	19	(2,115)	–
Net cash used by financing activities		**(6,520)**	**(320)**
Increase/(decrease) in cash and cash equivalents		1,799	(367)
Effect of foreign exchange rate changes		11	(36)
Cash and cash equivalents, beginning of year		1,498	1,901
Cash and cash equivalents, end of year		**3,308**	**1,498**
Cash and cash equivalents reported in the statement of financial position		3,241	1,498
Cash and cash equivalents attributable to assets held for sale	16	67	–

1 Refer to note 21 for reconciliation of movement in borrowings.
2 Net of issuance costs relating to capital market notes of $48 million (2020: $20 million).

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

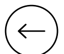
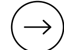
Consolidated statement of changes of equity
For the year ended 31 December 2021

	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 34)	Total equity
1 January 2020	**4,742**	**45,794**	**(4,971)**	**(5,437)**	**40,128**	**146**	**40,274**	**(1,038)**	**39,236**
Loss for the year	(1,903)	–	–	–	(1,903)	–	(1,903)	(2,043)	(3,946)
Other comprehensive (loss)/income	(32)	–	(829)	–	(861)	–	(861)	(24)	(885)
Total comprehensive loss	**(1,935)**	**–**	**(829)**	**–**	**(2,764)**	**–**	**(2,764)**	**(2,067)**	**(4,831)**
Own share disposal[1]	(32)	–	–	133	101	–	101	–	101
Equity-settled share-based expenses[2]	57	–	–	–	57	–	57	–	57
Change in ownership interest in subsidiaries[3]	–	–	(31)	–	(31)	–	(31)	(3)	(34)
Reclassifications	17	–	(17)	–	–	–	–	–	–
Distributions paid[5]	–	–	–	–	–	–	–	(127)	(127)
31 December 2020	**2,849**	**45,794**	**(5,848)**	**(5,304)**	**37,491**	**146**	**37,637**	**(3,235)**	**34,402**

	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 34)	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	164	–	(102)	–	62	–	62	(20)	42
Total comprehensive income	**5,138**	**–**	**(102)**	**–**	**5,036**	**–**	**5,036**	**(645)**	**4,391**
Own share disposal[1]	(78)	–	–	173	95	–	95	–	95
Own share purchases[1]	–	–	–	(746)	(746)	–	(746)	–	(746)
Equity-settled share-based expenses[2]	30	–	–	–	30	–	30	–	30
Change in ownership interest in subsidiaries[3]	–	–	(6)	–	(6)	–	(6)	14	8
Acquisition/disposal of business[4]	–	–	–	–	–	–	–	1,017	1,017
Reclassifications	(25)	–	25	–	–	–	–	(2)	(2)
Distributions paid[5]	–	(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**

1 See note 17.
2 See note 20.
3 See note 34.
4 See note 26.
5 See note 19.

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.

These consolidated financial statements were authorised for issue in accordance with the Directors' resolution on 15 March 2022.

Statement of compliance

The consolidated financial statements have been prepared in accordance with:

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

Climate change related considerations

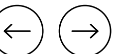
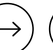
The Group has committed to total emissions (Scope 1, 2 and 3) reductions, relative to 2019, of 15% by 2026 and 50% by 2035 and has an ambition to achieve net zero total emissions by 2050. The accounting related measurement and disclosure items that are most impacted by our commitments, and climate change risk more generally, relate to those areas of the financial statements that are prepared under the historical cost convention and are subject to estimation uncertainties in the medium to long term. Climate change impacts can also introduce more volatility in assets and liabilities carried at fair value. Future changes to the Group's climate change strategy or realisation of global decarbonisation ambitions quicker than currently anticipated may impact some of the Group's significant judgements and key estimates and result in material changes to financial results and the carrying values of certain assets and liabilities in future reporting periods. The Group's current climate change strategy is reflected in the Group's significant judgements and key estimates, and therefore the Financial Statements, as follows:

(i) Property, plant and equipment and Intangible assets – estimation of the remaining useful economic life of assets for depreciation and amortisation purposes

Property, plant and equipment and intangible assets are depreciated / amortised to estimated residual values over the estimated useful lives of the specific assets concerned, or the estimated remaining life of the associated mine, field or lease, using a straight-line or a units of production over recoverable reserves method. The estimated useful lives of our specific assets and / or operations (and therefore the rate of depreciation / amortisation) aligns with our climate change commitments and ambition. Property, plant and equipment and intangible assets policies are further covered below and within impairment and impairment reversal estimation uncertainties, together with key estimates and sensitivities pertaining to a reasonably possible change in the realisation of global decarbonisation ambitions, which could also change the useful economic lives of the related assets.

(ii) Restoration, rehabilitation and decommissioning provisions – estimation of the timing of closure and rehabilitation activities

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. Many of these rehabilitation and decommissioning events are expected to take place when the underlying commercial reserves are extracted and the operations move into closure mode. Our current estimates of the timing of these closure activities align with the trajectory of our climate change emission reduction commitments and ambition. Sensitivities pertaining to a reasonably possible change in the realisation of global decarbonisation ambitions (i.e. the timing of the restoration, rehabilitation and decommissioning costs) of our fossil fuel related obligations are outlined below in the key estimation uncertainty - restoration, rehabilitation and decommissioning costs.

Notes to the financial statements continued

1. Accounting policies continued

(iii) Property, plant and equipment and Intangible assets (including the carrying value of goodwill in our coal marketing CGU) – estimation of the valuation of assets and potential impairment charges or reversals

The Group acknowledges that there is a wide range of possible energy transition scenarios, including those aligned with the Paris Agreement goals, that would indicate different outcomes for individual commodities. The decarbonisation transition could result in increasing or decreasing demand for the Group's various commodities, due to policy, regulatory (including carbon pricing mechanisms), legal, technological, market or societal responses to climate change, which, on the negative side, may result in some or all of a cash-generating unit's reserves becoming uneconomic to extract and / or our coal marketing CGU no-longer being able to generate returns and realise the benefits of its associated goodwill balance. While not currently the Group's central planning case, the resilience of the Group's portfolio to 1.5°C aligned and net zero ambition scenarios have been considered.

We use carbon price scenarios to assess the potential impacts on commodity specific operating cost curves and related supply / demand outcomes, arising from existing and future potential carbon pricing regulation. A key component of this analysis is to understand the potential development of a range of underlying cost curve structures over time and to consider, identify and make reasonable judgments, on the extent to which costs are likely to be passed onto the end-consumer. Our analysis shows that in our Radical Transformation scenario, marginal supply costs would increase by 10% to over 60%, for the range of our most relevant and material commodities. Against a backdrop of generally healthy expected increasing metals demand to support decarbonisation, we anticipate that cost (via carbon) and demand forces (lower supply in the case of coal) will drive those commodity prices higher, such increases being passed through to consumers, resulting in no expected overall materially negative impacts on our business. In fact, first and second quartile (below average) emission intensity producers, where we see the weighted average of our portfolio residing, are likely to see margin expansion. Sensitivities pertaining to a reasonably possible change in the recoverable value of our assets are outlined below in the key estimation uncertainty – impairments and impairment reversals.

Notwithstanding the above, for coal and other fossil fuels, should global decarbonisation ambitions materialise along a Paris-aligned scenario or other more ambitious net zero scenarios, essentially an accelerated displacement of coal and other fossil fuels as an energy source, the potential impact on the current carrying value of these cash generating units is outlined below in the key estimation uncertainty – impairments and impairment reversals (Sensitivity to demand for fossil fuels). It should be noted, that in these scenarios, we would expect to see positive valuation developments within our industrial production portfolio exposed to the metals currently required to deliver such rapid decarbonisation scenarios, including copper, nickel and cobalt.

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

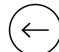
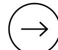
Judgement is required to determine when Glencore has control of subsidiaries or joint control of joint or other unincorporated arrangements. This requires an assessment of the relevant activities (those relating to the operating and capital decisions of the arrangement, such as: the approval of the capital 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 2021 and 2020 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.

Notes to the financial statements continued

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 2021, trade payables include $8,565 million (2020: $7,178 million) of such liabilities arising from supplier financing arrangements, the weighted average of which extended settlement of the original payable to 77 days (2020: 91 days) after physical supply and are due for settlement 33 days (2020: 46 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.

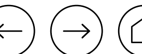
(iii) Classification of physical liquefied natural gas (LNG) purchase and sale contracts at amortised cost or fair value through profit and loss (notes 28 and 29)

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 derivative 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 2021, the net fair value of physical LNG contracts on the statement of financial position is $912 million ($1,786 million forward physical asset and $874 million forward physical liability).

(iv) Investigations by regulatory and enforcement authorities – Critical judgement in relation to whether a present obligation exists (note 32) and key estimation uncertainty in relation to the measurement of the provision recognised for such investigations (note 23).

(v) Impact of carbon pricing – refer to climate change related considerations above



Notes to the financial statements continued

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) with the impact recorded in the statement of income.

As noted 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 an improvement 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 2021, 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.

Notes to the financial statements continued

1. Accounting policies continued

Sensitivity to project execution and ramp-up (reasonably possible within the next financial year)

Mutanda

Mutanda's non-current capital employed is carried at approximately $2,200 million 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 resource potential. The valuation is sensitive to price and eventual commercialisation of the sulphide resources, and deteriorations or improvements in these key assumptions may result in additional impairments or reversals.

The short to long-term copper and cobalt price assumptions were $8,500-$7,000/t and $24-$25/lb respectively. A 10% reduction in the copper and cobalt price assumptions is not expected to result in a further impairment. Should the copper and cobalt assumptions rise by 10% (across the curve), the previously recognised impairment could be reversed in its entirety. Any such adjustment would also be considered in light of the remaining development risks relating to sulphide resources. Similarly, at such time as the sulphides resources may be commercialised, the balance of the historical impairment could be reversed.

Volcan

Volcan's non-current capital employed is carried at approximately $1,300 million net of an accumulated impairment of $1,903 million. Impairments principally related to value attributable to the future potential of various projects / resources. The valuation is sensitive to price and eventual commercialisation of the projects / resources, and deteriorations or improvements in these key assumptions may result in additional impairments or reversals.

The short to long-term zinc and silver price assumptions were $2,750-$2,400/t and $24-$20/oz respectively. Should the zinc and silver assumptions reduce by 10% (across the curve) or production reduce by 10%, an additional impairment of $470 million or $530 million, respectively, could be recognised. Should the zinc and silver assumptions rise by 10% (across the curve) an impairment reversal of $570 million could be recognised.

Climate change (additional illustrative disclosures)

Based on the current pricing environment, we do not consider there to be a reasonably possible change in key assumptions that would result in a material change in carrying values of any of our coal CGUs in the next financial year. With respect to our oil CGUs, 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.

All other sensitivities below are therefore illustrative of changes in assumptions beyond the next financial year.

Energy fossil fuels industrial operations

Our base case assessment takes into account the short-, medium- and longer-term seaborne coal demand outlook. While we have aligned our operational objectives and resulting emissions with a net zero by 2050 pathway, any such projected global pathway relies on additional efforts by governments, corporations and individuals to shift from a "business as usual" trajectory to a lower emissions trajectory. In particular, economic incentivisation of such shift, whether through carbon pricing and / or incentives to drive accelerated uptake of lower carbon and decarbonisation technologies, could result in different financial results on the same tonnage profile.

Our assessment applies a value in use methodology and assumes that, beyond the next 3 years when shorter term pricing assumptions have been used, through the remaining life of mine, there will continue to be a market for thermal coal at a real Newcastle FOB export price of $83/tonne (6,000 NAR), South African FOB export price of $83/tonne and Colombian CIF price (destination: Rotterdam) of $67/tonne, which represents our best estimate of long term pricing based on our view of projected likely supply and demand fundamentals and the industry cost structure.

Notwithstanding these assumptions, we present illustrative impairments arising under alternate price scenarios which are consistent with our IEA aligned climate scenarios. The IEA scenarios are described below:

- IEA's Stated Policies scenario (STEPS) – the impact of existing policy frameworks and announced policy intentions, subject to the IEA's assessment of the likelihood of such ambitions being implemented (consistent with our "Current Pathway" scenario);
- IEA's Announced Pledges scenario (APS) – the impact of all major national announcements of 2030 targets and longer term net zero and other pledges, regardless of whether these have been anchored in legislation or nationally determined contributions;
- IEA's Sustainable Development scenario (SDS) – the impact should additional policy mechanisms be implemented sufficient for full alignment with the Paris Goals of less than 2 degrees (consistent with our "Rapid Transition" scenario);
- IEA's Net zero emissions by 2050 scenario (NZE) – a pathway for the global energy sector to achieve net zero emissions by 2050 (consistent with our "Radical Transformation" scenario) and price assumptions for this scenario; and

In addition, for illustrative purposes, we have shown a Complete Displacement Scenario (CDS) – reflecting the impact of fossil fuels being immediately displaced as an energy source and the resulting immediate fall in commodity prices to zero.

Notes to the financial statements continued

1. Accounting policies continued

Our life of mine planning reflects operating cash flows from Cerrejon and the E&P oil portfolio until 2032, and some South African and Australian mines until 2043 and around 2050, respectively. Overall portfolio production is heavily weighted towards the earlier part of these mine lives and is broadly aligned with the IEA's SDS outlook for reducing coal demand. We have illustrated this by showing the year in which 50% and 80% of saleable coal would be extracted under the current plan, by 2029 and 2037 respectively.

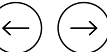
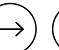
The sensitivities are presented on price alone and assume no mitigating actions, therefore the impairments in each scenario are likely higher than would transpire. In practice, in a sustained lower price environment, management would alter mine plans to cut operating and capital costs, potentially at the expense of future volumes, in order to reduce the overall NPV impact.

The STEPS, APS, SDS and NZE sensitivity prices adopted are those included in the documentation to the IEA's *World Energy Model 2021,* except that IEA thermal coal prices are on a delivered basis. These have been adjusted to FOB pricing on the basis of forward freight costs. Furthermore, in determining the Colombian CIF price, we have used a weighting of the IEA Japan and IEA European prices to take into account that Colombian coal sold from Cerrejon is likely to be delivered to a combination of different markets in the future as coal demand in Europe declines.

The IEA assumes, in each scenario, additional decarbonisation measures leading to declining fossil fuel prices by the years 2030 and 2050, anchored in each case in a 2020 baseline. For the purpose of our climate change sensitivities below, we have assumed linear progression of prices between these points. Our base case thus reflects significantly higher short-term prices informed by more recent market prices than were available in the *World Energy Model 2021*, and higher longer-term prices than in each of the IEA's climate scenarios reflecting our assessment of the supply and demand outlook and the industry cost structure.

	Cash-generating unit				
US$ million	**Thermal Australia**	**Thermal South Africa**	**Cerrejon**	**Total thermal coal**	**Oil E&P**
Base case assumptions in life of mine plan:					
– LOM saleable tonnes (Glencore consolidated) (million tonnes)/ (million bbls)	1,100	340	74		44
– projected year when 50% LOM tonnage / reserves depleted	2029	2029	2026	2029	2024
– projected year when 80% LOM tonnage / reserves depleted	2038	2034	2029	2037	2027
– long-term price (Newcastle FOB / API4 FOB / API2 CIF) ($/t) / (Brent oil price) ($/bbl) (real terms)	83	83	67		60
– discount rate applied (ranges represent opencut / underground)	6.8-7.4%	9.3-9.8%	8.6%		11.5%
Benchmark prices over LOM in selected scenarios ($/t, $/bbl):	2020 - '30 - '50	2020 - '30 - '50	2020 - '30 - '50		2022 - '30
– IEA STEPS	64 - 72 - 63	72 - 72 - 65	61 - 76 - 70		85 - 80
– IEA APS	64 - 68 -55	72 - 66 - 55	61 - 75 - 63		85 - 70
– IEA SDS	64 - 61 - 55	72 -61 -55	61 - 67 - 63		85 - 58
– IEA NZE	64 - 52 - 42	72 - 49 - 42	61 - 60 - 50		85 - 38
– CDS	n.a.	n.a.	n.a.		n.a.
Carrying value of non-current capital employed as at 31 December 2021	7,742	2,286	567	10,595	419
Illustrative impairment arising:					
– IEA STEPS	3,400	1,200	62	4,700	–
– IEA APS	4,400	1,600	81	6,100	–
– IEA SDS	6,000	1,900	230	8,100	–
– IEA NZE	7,000	2,286	340	9,600	–
– CDS	7,742	2,286	567	10,595	419

$151 million of the Oil E&P non-current capital employed relates to Chad upstream oil operations in the "held for sale" classification, shown in note 16.

Notes to the financial statements continued

1. Accounting policies continued

No impairment is projected for Oil E&P in any of the IEA's scenarios. Glencore's central price case for Oil E&P is $60/bbl, hence no adverse impact in the STEPS and APS scenarios which assume higher prices throughout. For the more aggressive price reductions envisaged in the SDS and NZE scenarios ($58/bbl and $38/bbl, respectively, by 2030, such prices having been adjusted to real terms 2021), we assumed $85/bbl in 2022, reducing by $10/bbl each year until the noted long-term price in each scenario was reached. Since 80% of extraction is expected by 2027, the impact of the lower prices on the balance is not projected to result in an impairment.

Other fossil fuel related capital employed NPV sensitivities

	Cash-generating unit		
US$ million	**Coking coal**	**Astron Energy**	**Coal marketing goodwill**
Base case assumptions in life of asset plan:			
– LOA saleable tonnes (millions) / Refinery steady-state capacity ('000 bbls)	140	100k bopd	n.a.
– projected year when 50% LOA reserves depleted	2028	n.a.	n.a.
– projected year when 80% LOA reserves depleted	2034	n.a.	n.a.
– long-term price (hard coking coal) ($/t) (real terms)	163	n.a.	n.a.
– discount rate applied (ranges represent opencut / underground)	6.8-7.4%	10.6%	n.a.
– price to earnings multiple			12x
Percentage decrease to long-term pricing/PE multiples:			
– 25% price / $1/bbl refining margin[1] / 2x PE (17%) decrease	122	n.a.	10x
– 30% price / $2/bbl refining margin / 4x PE (33%) decrease	114	n.a.	8x
Carrying value of non-current capital employed as at 31 December 2021	1,768	781	1,674
Illustrative impairment arising:			
– 25% price decrease across the curve / $1/bbl refining margin[1] / 2x PE (17%) decrease	130	240	–
– 30% price decrease across the curve / $2/bbl refining margin / 4x PE (33%) decrease	360	500	100

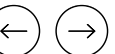
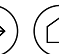
1 The change in refining margin by $1/bbl is considered to be a reasonably possible change in our assumptions for Astron Energy within the next financial year.

(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.

Climate change sensitivities
As noted above, while it is not a reasonably possible change we expect over the next financial year, global ambitions seeking to drive quicker decarbonisation, could result in the timing of restoration, rehabilitation and decommissioning costs related to our coal and oil closure obligations being accelerated. The undiscounted and current carrying value of our closure and monitoring provisions related to these operations is $3,843 million and $1,996 million, respectively. The weighted average maturity of the relevant closure provisions is 17 years. To illustrate the effect of accelerating these cash flows, we have presented a three-year and five-year weighted average acceleration in forecast cash flows of these provisions, which in isolation, would result in an increase to the provision of $217 million and $350 million, respectively.

Notes to the financial statements continued

1. Accounting policies continued

Adoption of new and revised standards

In the current year, Glencore has adopted all new and revised IFRS standards that became effective as of 1 January 2021, the changes being:

(i) Interest Rate Benchmark Reform - Phase 2 (Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16)

The amendments introduce a practical expedient for modifications required by the reform, provide an exception that hedge accounting is not discontinued solely because of the IBOR reform, and introduces disclosures that allow users to understand the nature and extent of risks arising from the IBOR reform to which the entity is exposed to and how the entity manages those risks as well as the entity's progress in transitioning from IBOR's to alternative benchmark rates, and how the entity is managing this transition.

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

Revised standards not yet effective

At the date of the authorisation of these consolidated financial statements, the following revised IFRS standards, which are applicable to Glencore, were issued but not yet effective:

(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 will apply the amendments to contracts for which the Group has not yet fulfilled all its obligations at the beginning of the annual reporting period in which the entity first applies the amendments. Comparatives will not be restated.

(ii) 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.

(iii) 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.

(iv) 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.

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

Basis of preparation

The financial statements are 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 these financial statements, 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 2021 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 are detailed in note 27.

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

Notes to the financial statements continued

1. Accounting policies continued

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.

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.

Notes to the financial statements continued

1. Accounting policies continued

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.

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.

Notes to the financial statements continued

1. Accounting policies continued

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.

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. As at 31 December 2021, the outstanding repurchase commitments under such agreements were $Nil (2020: approximately $300 million). 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.

Notes to the financial statements continued

1. Accounting policies continued

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 disposal of the operation to which they relate.

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.

Notes to the financial statements continued

1. Accounting policies continued

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.

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.

Notes to the financial statements continued

1. Accounting policies continued

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 – 30 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.

(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 netted against development expenditure. 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:

Notes to the financial statements continued

1. Accounting policies continued

(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.

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.

Notes to the financial statements continued

1. Accounting policies continued

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

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, 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.

Notes to the financial statements continued

1. Accounting policies continued

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.

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 instruments (see below). When settlement is satisfied primarily through physical delivery or receipt of an underlying product they are classified as non-financial instruments. 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.

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.

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.

Notes to the financial statements continued

1. Accounting policies continued

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 it is presumed to be an indicator of a significant increase in credit risk.

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.

Notes to the financial statements continued

1. Accounting policies continued

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.

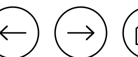
A change in the fair value of derivatives designated as a Cash Flow Hedge is initially recognised in the consolidated statement of comprehensive income and accumulated in the cash flow hedge reserve in shareholders' equity. The deferred amount is then released to the consolidated statement of income 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.

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.



Notes to the financial statements continued

2. Segment information

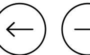
Glencore is organised and operates on a worldwide basis in two core business segments – Marketing activities and Industrial activities, reflecting the reporting lines and structure used by Glencore's Management to allocate resources and assess the performance of Glencore.

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 1 with the exception of relevant material associates, the Collahuasi joint venture and Volcan. Under IAS 28 and IFRS 11, Glencore's investments in the Antamina copper/zinc mine (34% owned) and the Cerrejón coal mine (33% owned) are considered to be associates as they are 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.



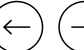
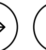
Notes to the financial statements continued

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.

2021 US$ million	Marketing activities	Industrial activities	Inter-segment eliminations	**Total**
Revenue				
Metals and minerals	74,727	41,535	(29,915)	86,347
Energy products	107,037	19,269	(4,727)	121,579
Corporate and other	–	6	–	6
Revenue - segmental	**181,764**	**60,810**	**(34,642)**	**207,932**
Proportionate adjustment – revenue[1]	–	(4,181)	–	(4,181)
Revenue – reported measure	**181,764**	**56,629**	**(34,642)**	**203,751**
Metals and minerals				
Adjusted EBITDA	2,588	12,017	–	14,605
Depreciation and amortisation	(94)	(3,485)	–	(3,579)
Proportionate adjustment – depreciation[1]	–	(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[1]	–	(89)	–	(89)
Adjusted EBIT	**1,395**	**3,252**	**–**	**4,647**
Corporate and other				
Adjusted EBITDA[2]	(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[1,3]				(11)
Movement in unrealised inter-segment profit elimination adjustments[4]				(549)
Loss on disposals of non-current assets				(607)
Other income/(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[1]				(1,028)
Income for the year				**4,349**

1 Refer to APMs section for definition.
2 Marketing activities include $473 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.

Notes to the financial statements continued

2. Segment information continued

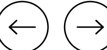
2020 US$ million	Marketing activities	Industrial activities	Inter-segment eliminations	**Total**
Revenue				
Metals and minerals	54,847	30,303	(18,859)	66,291
Energy products	69,290	11,145	(1,944)	78,491
Corporate and other	–	5	–	5
Revenue - segmental	**124,137**	**41,453**	**(20,803)**	**144,787**
Proportionate adjustment – revenue[1]	–	(2,449)	–	(2,449)
Revenue – reported measure	**124,137**	**39,004**	**(20,803)**	**142,338**
Metals and minerals				
Adjusted EBITDA	1,768	7,285	–	9,053
Depreciation and amortisation	(101)	(3,868)	–	(3,969)
Proportionate adjustment – depreciation[1]	–	(363)	–	(363)
Adjusted EBIT	**1,667**	**3,054**	**–**	**4,721**
Energy products				
Adjusted EBITDA	2,053	1,039	–	3,092
Depreciation and amortisation	(292)	(2,294)	–	(2,586)
Proportionate adjustment – depreciation[1]	–	(110)	–	(110)
Adjusted EBIT	**1,761**	**(1,365)**	**–**	**396**
Corporate and other				
Adjusted EBITDA[2]	(89)	(496)	–	(585)
Depreciation and amortisation	–	(116)	–	(116)
Adjusted EBIT	**(89)**	**(612)**	**–**	**(701)**
Total Adjusted EBITDA	**3,732**	**7,828**	**–**	**11,560**
Total depreciation and amortisation	(393)	(6,278)	–	(6,671)
Total depreciation proportionate adjustment	–	(473)	–	(473)
Total Adjusted EBIT	**3,339**	**1,077**	**–**	**4,416**
Share of associates' significant items[1,3]				(92)
Movement in unrealised inter-segment profit elimination adjustments[4]				(760)
Loss on disposals of non-current assets				(36)
Other income/(expense) – net				(173)
Impairments				(5,947)
Interest expense – net				(1,453)
Income tax expense				1,170
Proportionate adjustment – net finance, impairment and income tax expense[1]				(1,071)
Loss for the year				**(3,946)**

1 Refer to APMs section for definition.

2 Marketing activities include $211 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, notably Trevali ($36 million) and HG Storage ($20 million).

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.



Notes to the financial statements continued

2. Segment information continued

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**

2020 US$ million	Marketing activities	Industrial activities	Corporate and other	**Total**
Current assets	27,273	13,395	–	40,668
Current liabilities	(23,906)	(7,098)	–	(31,004)
Allocatable current capital employed	**3,367**	**6,297**	**–**	**9,664**
Property, plant and equipment	978	46,132	–	47,110
Intangible assets	5,188	1,279	–	6,467
Investments in associates and other investments	5,708	8,425	–	14,133
Non-current advances and loans	1,733	1,309	–	3,042
Inventories	–	678	–	678
Allocatable non-current capital employed	**13,607**	**57,823**	**–**	**71,430**
Other assets[1]			5,902	5,902
Other liabilities[2]			(52,594)	(52,594)
Total net assets	**16,974**	**64,120**	**(46,692)**	**34,402**
Capital expenditure				
Metals and minerals	68	3,023	–	3,091
Energy products	420	1,031	–	1,451
Corporate and other	–	28	–	28
Capital expenditure - segmental	**488**	**4,082**	**–**	**4,570**
Proportionate adjustment – capital expenditure[3]	–	(426)	–	(426)
Capital expenditure – reported measure[4]	**488**	**3,656**	**–**	**4,144**

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 $1,006 million (2020: $575 million), comprising $648 million (2020: $415 million) in Marketing activities and $358 million (2020: $160 million) in Industrial activities, of 'right-of-use assets' capitalised in accordance with IFRS 16 – Leases.

Notes to the financial statements continued

2. Segment information continued

Geographical information

US$ million	2021	2020
Revenue from third parties[1]		
The Americas	37,930	25,762
Europe	64,284	42,682
Asia	86,576	60,360
Africa	9,991	6,701
Oceania	4,970	6,833
	203,751	**142,338**
Non-current assets[2]		
The Americas	16,963	17,347
Europe	11,152	11,051
Asia	4,683	4,802
Africa	12,389	13,798
Oceania	17,163	19,657
	62,350	**66,655**

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 $16,714 million (2020: $18,047 million), in Peru of $7,243 million (2020: $7,271 million) and the DRC of $6,555 million (2020: $6,849 million).

3. Revenue

US$ million	2021	2020
Sale of commodities	201,113	139,486
Freight, storage and other services	2,638	2,852
Total	**203,751**	**142,338**

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 $710 million (2020: $1,217 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. Loss on disposals of non-current assets

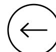
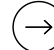
US$ million	Notes	2021	2020
Derecognition of non-controlling interest on disposal of Mopani	26	(1,022)	–
Gain on sale of Chemoil Terminals	26	110	–
Net gain on sale of other investments/operations		98	9
Gain/(loss) on disposal of property, plant and equipment		207	(45)
Total		**(607)**	**(36)**

Disposal of Mopani

On 31 March 2021, Glencore completed the disposal of its 90% 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

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, resulting in a gain of $110 million (see note 26).

Notes to the financial statements continued

5. Other income/(expense) – net

US$ million	Notes	**2021**	2020
Net changes in mark-to-market valuations on investments		64	438
Release of unfavourable contract provision	22	122	–
Total other income		**186**	**438**
Net foreign exchange losses		(187)	(192)
Legal and regulatory proceedings		(1,640)	(113)
Closed site rehabilitation costs		(177)	(80)
Closure and severance costs		–	(214)
Other expenses – net		(129)	(12)
Total other expenses		**(2,133)**	**(611)**
Total other (expense)/income - net		**(1,947)**	**(173)**

Together with foreign exchange movements and mark-to-market movements on investments, 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.

Net changes in mark-to-market valuations on investments

Primarily relates to movements on interests in investments (see note 11), 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.

Legal and regulatory proceedings

Comprises various investigations (legal, expert and compliance) related costs and a provision for the on-going investigations of $1,584 million (2020: $95 million)(see notes 23 and 32).

In 2020, a dispute with the Strategic Fuel Fund Association of South Africa was settled, resulting in an expense of $18 million.

Closed site rehabilitation costs

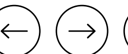
Comprises movements in restoration, rehabilitation and decommissioning estimates related to sites that are no longer operational (see note 23).

Closure and severance related costs

In 2020, closure and severance related costs were primarily incurred in respect of the suspension of operations at Prodeco coal in Colombia ($147 million), the Aguilar zinc mine in Argentina ($43 million) and the Lydenburg chrome smelter in South Africa ($24 million).

6. Interest income/(expense) – net

US$ million	Notes	**2021**	2020
Bank deposits and other financial assets		110	101
Accretion on certain advances repayable with product	12	90	–
Loans to associates		8	19
Interest income		**208**	**120**
Capital market notes		(733)	(889)
Revolving credit facilities		(55)	(102)
Post-retirement employee benefits	24	(23)	(26)
Deferred income	22	(115)	(127)
Lease liabilities	9	(98)	(96)
Restoration and rehabilitation	23	(153)	(144)
Other provisions	23	(33)	(45)
Bank loans		(93)	(98)
Less: capitalised interest	9	33	33
Other interest		(78)	(79)
Interest expense		**(1,348)**	**(1,573)**
Total interest income/(expense) - net		**(1,140)**	**(1,453)**



Notes to the financial statements continued

7. Impairments

US$ million	Notes	**2021**	2020
Property, plant and equipment and intangible assets	9/10	(1,452)	(5,508)
Investments	11	(333)	(96)
Advances and loans - current and non-current	12/14	98	(343)
VAT receivable - non-current		(151)	–
Total impairments[1]		**(1,838)**	**(5,947)**

1 Impairments recognised during the year are allocated to Glencore's operating segments as follows: Marketing activities $270 million (2020: $228 million) and Industrial activities $1,568 million (2020: $5,719 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), or in certain cases value in use (VIU). In particular, market pressures relating to investments in Coal mining operations has impacted the availability of an active market for acquiring such operations, and thus the recoverable amounts of our Coal CGUs have been measured using a VIU approach. The FVLCD or VIU 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 6.7% – 15.5% (2020: 6.1% – 13.5%). 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:

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. A 10% reduction in either the long-term realised nickel price or life of mine production could result in the remaining carrying value being fully impaired. A 10% increase in variable operating costs could result in an additional impairment of $170 million. Conversely, a 10% increase in the long-term realised nickel price could result 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

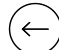
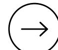
Primarily comprises an impairment charge of $331 million in respect of our 49% investment in HG Storage (Marketing activities segment), to an estimated recoverable value of $189 million following a review of the carrying value against valuation benchmarks. The valuation of this investment is not considered 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. 2020 primarily comprised an impairment charge in respect of our investment in Century Aluminum ($73 million).

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.

Notes to the financial statements continued

7. Impairments continued

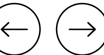
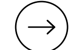
2020

Property, plant and equipment and intangible assets

- Volcan is a listed zinc / silver mining entity in Peru, in which the Group acquired a 63% controlling (23% economic) interest at the end of 2017 (Industrial activities segment). The operations primarily comprise two cash-generating units (Yauli and Chungar) and at the time of the acquisition, approximately one third of the value was ascribed to realising the future potential of various projects / resources. Due to the impact Covid-19 had on the long-term outlook of the global economy a review of the life of mine plan and related expansion projects was carried out in Q2 2020.

  It was determined that the related risk / confidence levels in deploying capital to longer-term greenfield projects and the probability of approving development and realisation of these projects had reduced. This, along with the shift in long-term zinc pricing, led to an impairment of $2,347 million (and related deferred tax obligations of $716 million were released) to its estimated recoverable value of $1,503 million. The valuation assumed a long-term zinc and silver price of $2,400/t and $20.00/lb, respectively and an operation specific discount rate of 9.2%. As at 31 December 2020, had the zinc and silver price assumptions fallen by 10% (across the curve), a further impairment of $450 million would have been recognised. A 10% reduction in estimated annual production over the life of mine would have resulted in an additional impairment of $540 million.
- As a result of persistent operational challenges, further technical analysis resulting in a reduced life of mine forecast, delays in key development projects and cost increases owing to inflation, tax and other regulatory pressures, a decision was made, in Q2 2020, to place the Mopani copper operations in Zambia (Industrial activities segment) on care and maintenance subject to government approval. As a consequence of the operational, technical and cost factors, the Mopani operations were impaired by $1,041 million, to their estimated recoverable value of $861 million, including tax receivables. In January 2021, an agreement was reached to sell Mopani to ZCCM (see note 16).
- During H1 2020, pressure on the API 2 European coal market (primary price reference market for our Colombian coal operations) increased as European economies continue to shift to a decarbonised environment, exacerbated by the significant drop in oil and gas prices (supply and demand factors). A review of Prodeco's operations determined that, in addition to a deteriorating market environment, there were increasing challenges with respect to obtaining several key approvals from government agencies and other key stakeholders. In Q2 2020, an application was therefore made to place Prodeco operations on extended care and maintenance until these conditions improve. In Q4, the application was rejected and it was subsequently decided to relinquish the mining licenses.

  Consequently, the full carrying value of the mining operations related to such licenses ($835 million) (Industrial activities segment) were fully impaired (property, plant and equipment - $789 million and non-current advances and loans - $46 million).
- As noted above, oil prices were significantly impacted by demand destruction from Covid-19 and the lack of timely effective supply response from OPEC+ and the longer term outlook for oil prices also deteriorated due to updated expectations surrounding decarbonisation. In addition, Covid-19 disrupted and restricted international mobility, which had a particularly significant impact on our workforce arrangements in Chad, resulting in these fields being placed on care and maintenance in March. As a result, in Q2 2020, the Chad oil operations (Industrial activities segment) were impaired by $673 million to their estimated recoverable amount of $145 million. The valuation remained sensitive to Covid-19 related disruptions on international mobility and a timely restart of the operations in a safe and economic manner. Should such restart have been prolonged for an extended period of time, an additional future impairment could have resulted.
- In June 2020, it was determined to keep the Lydenburg chrome smelter (Industrial activities segment) on care and maintenance. This decision reflected the challenging operating and market environment across the South African ferrochrome industry, including unsustainably increasing electricity tariffs / supply interruption and other sources of real cost inflation. These macro factors outweigh the significant efforts made over the past years to make the operation more competitive, rendering its estimated fair value as negative. As a result, the entire carrying value of the Lydenburg smelter ($116 million) was impaired.
- The global macro-economic impact of Covid-19 on refined petroleum product demand and resulting global refinery overcapacity had a negative effect on refining margins. As a result, Astron (Industrial activities segment) lowered its long term through-the-cycle outlook on refining margins by approximately 30% and the Astron oil refinery was impaired by $480 million to its estimated recoverable amount of $1,015 million, including its related downstream supply business. The operation specific discount rate used in the valuation was a pre-tax nominal discount rate of 12.3%. The valuation remained most sensitive to refining margins and a deterioration in these assumptions could have resulted in additional impairments. As at 31 December 2020, had the margin assumptions fallen by $1/bbl (across the curve), a further $243 million of impairment would have been recognised. Had the discount rate increased by 1%, a further $88 million of impairment would have been recognised.
- 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 $62 million recognised in our Industrial activities segment.

Notes to the financial statements continued

7. Impairments continued

Advances and loans – current and non-current

In 2020, loans of $103 million were impaired in full due to financial difficulties faced by one of the Group's associates (Marketing activities segment). The balance of the impairment charges on advances and loans classified as non-financial instruments (none of which were individually material) were recognised in our Marketing activities segment ($125 million) and our Industrial activities segment ($115 million), following the restructuring of certain loans and physical advances due to various non-performance factors.

8. Income taxes

Income taxes consist of the following:

US$ million	**2021**	2020
Current income tax expense	(2,923)	(931)
Adjustments in respect of prior year current income tax	158	88
Deferred income tax (expense)/credit	(92)	2,005
Adjustments in respect of prior year deferred income tax	(169)	8
Total tax (expense)/credit reported in the statement of income	**(3,026)**	**1,170**
Deferred income tax (expense)/credit recognised directly in other comprehensive income	(67)	6
Total tax (expense)/credit recognised directly in other comprehensive income	**(67)**	**6**

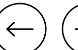
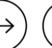
The effective Group tax rate is different from the statutory Swiss income tax rate applicable to the Company for the following reasons:

US$ million	**2021**	2020
Income/(loss) before income taxes	7,375	(5,116)
Less: Share of income from associates and joint ventures	(2,618)	(444)
Parent Company's and subsidiaries' income/(loss) before income tax and attribution	**4,757**	**(5,560)**
Income tax (expense)/credit calculated at the Swiss income tax rate of 12% (2020: 12%)	(571)	667
Tax effects of:		
Different tax rates from the standard Swiss income tax rate	(1,486)	1,572
Tax-exempt income ($207 million (2020: $206 million) from recurring items and $25 million (2020: $4 million) from non-recurring items)	232	210
Items not tax deductible ($987 million (2020: $589 million) from recurring items and $378 million (2020: $280 million) from non-recurring items)	(1,365)	(869)
Foreign exchange fluctuations	52	(76)
Changes in tax rates	15	(9)
Utilisation and changes in recognition of tax losses and temporary differences	101	(249)
Tax losses not recognised	15	(169)
Adjustments in respect of prior years	(11)	96
Other	(8)	(3)
Income tax (expense)/credit	**(3,026)**	**1,170**

The non-tax deductible items of $1,365 million (2020: $869 million) primarily relate to financing costs, impairments and various other expenses.

The impact of tax-exempt income of $232 million (2020: $210 million) primarily relates to non-taxable intra-group 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.

Notes to the financial statements continued

8. Income taxes continued

Deferred taxes

Deferred taxes as at 31 December 2021 and 2020 are attributable to the items in the table below:

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)**

US$ million	2020	Recognised in the statement of income	Recognised in other comprehensive income	Business combination and disposal of subsidiaries	Foreign currency exchange movements	Other	2019
Deferred tax assets[1]							
Tax losses carried forward	1,951	741	–	–	(2)	–	1,212
Other	301	33	3	–	(13)	13	265
Total	**2,252**	**774**	**3**	**–**	**(15)**	**13**	**1,477**
Deferred tax liabilities[1]							
Depreciation and amortisation	(4,123)	1,550	–	–	75	(68)	(5,680)
Mark-to-market valuations	(128)	(56)	–	–	(1)	–	(71)
Other	(470)	(255)	3	–	3	122	(343)
Total	**(4,721)**	**1,239**	**3**	**–**	**77**	**54**	**(6,094)**
Total Deferred tax - net	**(2,469)**	**2,013**	**6**	**–**	**62**	**67**	**(4,617)**

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 $287 million (2020: $579 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 2021, $2,016 million (2020: $2,998 million) of deferred tax assets related to available loss carry forwards have been brought to account, of which $1,418 million (2020: $1,951 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:

- $629 million (2020: $843 million) in entities domiciled in the DRC;
- $482 million (2020: $658 million) in entities domiciled in Switzerland; and
- $238 million (2020: $365 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.

Notes to the financial statements continued

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. Following KCC's successful ramp-up of its operations to near name plate capacity, deferred taxation assets have been recognised for the full estimated available tax losses at 31 December 2021 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	**2021**	2020
Income tax receivable	364	444
Income tax payable	(1,785)	(927)
Net income tax payable	**(1,421)**	**(483)**

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 2021, the Group has recognised $880 million (2020: $1,189 million) of uncertain tax liabilities related to possible adverse outcomes of these open matters, of which, $287 million (2020: $579 million) has been recognised net of deferred tax assets, with the balance of $593 million (2020: $610 million) recognised as an income tax payable. The change in the total uncertain tax position during the year reflects 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 $837 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 over the following 12 months.

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 2021, there are various ongoing technical discussions, 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.

Notes to the financial statements continued

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	**2021**	2020
1 year	1,024	1,155
2 years	425	496
3 years	41	530
Thereafter	11,095	11,099
Unlimited	10,335	8,366
Total	**22,920**	**21,646**

As at 31 December 2021, unremitted earnings of $50,116 million (2020: $56,677 million) have been retained by subsidiaries for reinvestment. No provision is made for income taxes.

9. Property, plant and equipment

2021

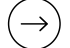
US$ million	Notes	Freehold land and buildings	Plant and equipment	Right-of-use assets	Mineral and petroleum rights	Exploration and evaluation	Deferred mining costs	**Total**
Gross carrying amount:								
1 January 2021		6,576	44,514	2,576	30,495	1,974	17,462	103,597
Disposal of subsidiaries	26	(100)	(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.

Plant and equipment includes expenditure for construction in progress of $3,387 million (2020: $3,247 million). Mineral and petroleum rights include biological assets of $24 million (2020: $19 million). Depreciation expenses included in cost of goods sold are $6,128 million (2020: $6,385 million) and in selling and administrative expenses, $52 million (2020: $74 million).

During 2021, $33 million (2020: $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% (2020: 3%).

As at 31 December 2021, with the exception of leases, no property, plant or equipment was pledged as security for borrowings (2020: $Nil).



Notes to the financial statements continued

9. Property, plant and equipment continued

2020

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 2020		6,211	46,065	2,313	30,763	2,248	17,629	105,229
Disposal of subsidiaries	26	(35)	(321)	(16)	(24)	–	(233)	(629)
Additions		32	2,746	575	58	–	721	4,132
Disposals		(28)	(1,260)	(265)	(42)	(274)	(90)	(1,959)
Effect of foreign currency exchange movements		(13)	(121)	(2)	(114)	–	(1)	(251)
Reclassification to held for sale	16	(111)	(1,833)	–	(692)	–	(1,002)	(3,638)
Reclassification from held for sale	16	176	36	1	16	1	8	238
Other movements[1]		344	(798)	(30)	530	(1)	430	475
31 December 2020		**6,576**	**44,514**	**2,576**	**30,495**	**1,974**	**17,462**	**103,597**
Accumulated depreciation and impairment:								
1 January 2020		2,017	24,646	633	11,060	2,158	9,358	49,872
Disposal of subsidiaries	26	(35)	(321)	(3)	(24)	–	(234)	(617)
Disposals		(22)	(1,173)	(135)	(29)	(274)	(88)	(1,721)
Depreciation		375	2,680	519	1,363	–	1,522	6,459
Impairment	7	278	1,120	–	2,860	–	992	5,250
Effect of foreign currency exchange movements		–	(14)	1	(9)	–	6	(16)
Reclassification to held for sale	16	(89)	(1,405)	–	(461)	–	(938)	(2,893)
Reclassification from held for sale	16	27	–	–	14	1	–	42
Other movements[1]		75	(95)	(11)	64	(1)	79	111
31 December 2020		**2,626**	**25,438**	**1,004**	**14,838**	**1,884**	**10,697**	**56,487**
Net book value 31 December 2020		**3,950**	**19,076**	**1,572**	**15,657**	**90**	**6,765**	**47,110**

1 Primarily consists of increases in rehabilitation costs of $399 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 2021, the net book value of recognised right-of use assets relating to land and buildings was $450 million (2020: $519 million) and plant and equipment $1,255 million (2020: $1,053 million). The depreciation charge for the period relating to those assets was $89 million (2020: $101 million) and $550 million (2020: $418 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	**2021**	**2020**
Depreciation on right-of-use assets	(639)	(519)
Interest expense on lease liabilities	(98)	(96)
Expense relating to short-term leases	(493)	(863)
Expense relating to low-value leases	(3)	(4)
Expense relating to variable lease payments not included in the measurement of the lease liability	(5)	(3)
Income from subleasing right-of-use assets	304	349
Total	**(934)**	**(1,136)**

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

Notes to the financial statements continued

10. Intangible assets

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		–	–	(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.

2020

US$ million	Notes	Goodwill	Port allocation rights	Licences, trademarks and software	Customer relationships and other	**Total**
Cost:						
1 January 2020		13,293	1,374	596	720	15,983
Additions		–	–	5	7	12
Disposals		–	–	(16)	(9)	(25)
Effect of foreign currency exchange movements		–	(62)	(18)	(41)	(121)
Other movements		–	–	18	16	34
31 December 2020		**13,293**	**1,312**	**585**	**693**	**15,883**
Accumulated amortisation and impairment:						
1 January 2020		8,293	198	315	171	8,977
Disposals		–	–	(16)	(9)	(25)
Amortisation expense[1]		–	52	44	116	212
Impairment	7	–	–	5	253	258
Effect of foreign currency exchange movements		–	(3)	(1)	(7)	(11)
Other movements		–	–	(5)	10	5
31 December 2020		**8,293**	**247**	**342**	**534**	**9,416**
Net book value 31 December 2020		**5,000**	**1,065**	**243**	**159**	**6,467**

1 Recognised in cost of goods sold.

Notes to the financial statements continued

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	**2021**	2020
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 productions 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 2022 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 (2020: 15 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.

Notes to the financial statements continued

11. Investments in associates, joint ventures and other investments

Investments in associates and joint ventures

US$ million	Notes	**2021**	**2020**
1 January		12,400	12,984
Additions		53	102
Disposals		(2)	(14)
Share of income from associates and joint ventures		2,618	444
Share of other comprehensive loss from associates and joint ventures		(58)	(14)
Impairments	7	(333)	(96)
Dividends received		(2,375)	(1,015)
Reclassification to held for sale	16	(11)	–
Other movements		2	9
31 December		**12,294**	**12,400**
Of which:			
Investments in associates		5,567	6,038
Investments in joint ventures		6,727	6,362

As at 31 December 2021, the carrying value of our listed associates is $406 million (2020: $508 million), mainly comprising Century Aluminum and PT CITA, which have carrying values of $165 million (2020: $261 million) and $177 million (2020: $170 million), respectively. The fair value of our listed associates, using published price quotations (a Level 1 fair value measurement) is $967 million (2020: $737 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 (2020: $100 million)(see note 21).

Notes to the financial statements continued

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)/income	–	–	**–**	(13)	(94)	**(107)**	**(107)**
Total comprehensive 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 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 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.

Notes to the financial statements continued

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

2020 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	2,302	4,755	**7,057**	5,141	5,846	**10,987**	**18,044**
Current assets	455	1,584	**2,039**	1,407	10,529	**11,936**	**13,975**
Non-current liabilities	(707)	(1,538)	**(2,245)**	(1,380)	(3,057)	**(4,437)**	**(6,682)**
Current liabilities	(102)	(698)	**(800)**	(845)	(9,041)	**(9,886)**	**(10,686)**
The above assets and liabilities include the following:							
Cash and cash equivalents	99	91	**190**	99	327	**426**	**616**
Current financial liabilities[1]	(20)	(53)	**(73)**	(288)	(4,351)	**(4,639)**	**(4,712)**
Non-current financial liabilities[1]	(15)	(476)	**(491)**	(100)	(2,547)	**(2,647)**	**(3,138)**
Net assets 31 December 2020	**1,948**	**4,103**	**6,051**	**4,323**	**4,277**	**8,600**	**14,651**
Glencore's ownership interest	33.3%	33.8%		44.0%	49.9%		
Acquisition fair value and other adjustments	(54)	1,813	**1,759**	1,089	1,237	**2,326**	**4,085**
Carrying value	595	3,200	**3,795**	2,991	3,371	**6,362**	**10,157**

1 Financial liabilities exclude trade, other payables and provisions.

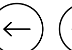
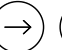
Summarised profit and loss in respect of Glencore's associates and joint ventures, reflecting 100% of the underlying associates' and joint ventures' relevant figures for the year ended 31 December 2020, including group adjustments relating to alignment of accounting policies or fair value adjustments, is set out below.

US$ million	Cerrejón	Antamina	**Total material associates**	Collahuasi	Viterra	**Total material joint ventures**	**Total material associates and joint ventures**
Revenue	626	3,126	**3,752**	3,936	28,342	**32,278**	**36,030**
(Loss)/income for the year	(1,613)	794	**(819)**	1,414	414	**1,828**	**1,009**
Other comprehensive loss	–	–	**–**	(19)	4	**(15)**	**(15)**
Total comprehensive (loss)/income	(1,613)	794	**(819)**	1,395	418	**1,813**	**994**
Glencore's share of dividends paid	11	363	**374**	598	–	**598**	**972**
The above (loss)/income for the year includes the following:							
Depreciation and amortisation	(329)	(843)	**(1,172)**	(659)	(548)	**(1,207)**	**(2,379)**
Interest income[1]	–	–	**–**	2	13	**15**	**15**
Interest expense[2]	(21)	(51)	**(72)**	(71)	(176)	**(247)**	**(319)**
Impairment, net of tax[3]	(1,969)	–	**(1,969)**	–	–	**–**	**(1,969)**
Income tax credit/(expense)	692	(553)	**139**	(815)	(143)	**(958)**	**(819)**

1 Includes foreign exchange gains and other income of $4 million.

2 Includes foreign exchange losses of $87 million.

3 Glencore's attributable share of impairment relating to Cerrejón amounts to $445 million, net of taxes of $211 million.

Notes to the financial statements continued

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

Aggregate information of associates that are not individually material:

US$ million	**2021**	2020
The Group's share of income/(loss)	38	(120)
The Group's share of other comprehensive loss	(5)	(8)
The Group's share of total comprehensive income/(loss)	33	(128)
Aggregate carrying value of the Group's interests	1,876	2,243

The amount of corporate guarantees in favour of associates and joint ventures as at 31 December 2021 was $611 million (2020: $560 million). No amounts have been claimed or provided as at 31 December 2021. Glencore's share of joint ventures' capital commitments amounts to $213 million (2020: $105 million).

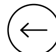
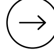
Refer to note 36 for further details of the Group's principal associates and joint ventures.

Other investments

US$ million	**2021**	2020
Fair value through other comprehensive income[1]		
EN+ GROUP PLC	789	701
PAO NK Russneft[2]	50	309
Yancoal	160	164
OSJC Rosneft	485	357
Other	136	116
	1,620	1,647
Fair value through profit and loss		
Century Aluminum Company cash-settled equity swaps[3]	–	49
Champion Iron Ore Limited share warrants[3]	–	37
	–	86
Total	**1,620**	**1,733**

1 Fair value through other comprehensive income includes net acquisitions of $25 million (2020: $12 million net disposals) for the period.
2 In December 2021, Glencore agreed to the sale of its interest in PAO NK Russneft. Completion of the sale is conditional on receipt of certain regulatory approvals and is expected to occur in H1 2022. Glencore's investment in PAO NK Russneft is pledged under a loan facility issued to OAO NK Russneft.
3 During the year, the swaps settled and the warrants were exercised.

During the year, dividend income from equity investments designated as at fair value through other comprehensive income amounted to $23 million (2020: $32 million).

Notes to the financial statements continued

12. Advances and loans

US$ million	Notes	2021	2020
Financial assets at amortised cost			
Loans to associates		128	246
Other non-current receivables and loans		519	600
Rehabilitation trust fund		148	148
Financial assets at fair value through profit and loss			
Other non-current receivables and loans	28	28	102
Deferred consideration	28	135	302
Non-financial instruments			
Pension surpluses	24	125	40
Advances repayable with product[1]		1,673	1,334
Land rights prepayment		150	150
Other tax and related non-current receivables[2]		621	120
Total		**3,527**	**3,042**

1 Net of $1,074 million (2020: $1,534 million) provided by various banks, the repayment terms of which are contingent upon and connected to the future delivery of contractual production.

2 As a result of continued challenge and non-performance by certain government authorities in settling long outstanding VAT claims, certain VAT receivable balances amounting to $646 million were reclassified to non-current during the period (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	2021	2020
Secured financing arrangements	511	585
Other	8	15
Total	**519**	**600**

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 and other non-current receivables and loans (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 loss allowance for financial assets classified at amortised cost is detailed below:

Notes to the financial statements continued

12. Advances and loans continued

US$ million	Loans to associates	Other non-current receivables and loans	**2021**	Loans to associates	Other non-current receivables and loans	**2020**
Gross carrying value 31 December	190	773	963	308	940	1,248
Of which:						
12-month expected credit losses	31	529	560	156	626	782
Lifetime expected credit losses (credit impaired)	159	244	403	152	314	466
Loss allowances						
1 January	62	340	402	31	355	386
Released during the period[1]	–	(28)	(28)	–	–	–
Charged during the period[1]	–	15	15	31	33	64
Utilised during the period	–	(48)	(48)	–	(48)	(48)
Reclassifications	–	(25)	(25)	–	–	–
31 December	62	254	316	62	340	402
Of which:						
12-month expected credit losses	–	14	14	–	37	37
Lifetime expected credit losses (credit impaired)	62	240	302	62	303	365
Net carrying value 31 December	**128**	**519**	**647**	**246**	**600**	**846**

1 $22 million (2020: $45 million impairment) recognised as a reversal of impairment (see note 7) and the balancing charge of $9 million (2020: $19 million) recognised in cost of goods sold.

Financial assets at fair value through profit and loss

Other non-current receivables and loans

During 2021, fair value movements of positive $35 million were recognised (2020: negative $18 million)(see note 7). Fair value was determined using a Level 3 discounted cash flow model technique, with the key unobservable inputs being a discount rate specific to the operation of 12% and a repayment profile dependent upon the underlying business plans and forecasts over the next 6 years. The valuation is sensitive to the timing of the underlying cash flows and could result in a $5 million reduction of fair value if the repayment schedule is extended by an additional 4 years.

Deferred consideration

In 2021, fair value movements of net positive $39 million (2020: $379 million) were recognised (see note 5).

Non-financial instruments

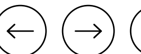
Advances repayable with product

US$ million	**2021**	2020
Counterparty		
Mopani transaction debt	881	–
Société Nationale d'Electricité (SNEL) power advances	304	312
Chad State National Oil Company	293	347
Société Nationale des Pétroles du Congo	129	156
Other[1]	66	519
Total	**1,673**	**1,334**

1 Comprises no individually material items.

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). As at 31 December 2021, $904 million of debt is outstanding, of which $881 million is due after 12 months and is presented above and $23 million is due within 12 months and is included in Accounts receivable.



Notes to the financial statements continued

12. Advances and loans continued

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 Q4 2021. The loans are being repaid via discounts on electricity purchases.

Chad State National Oil Company
Glencore has provided a net $321 million (2020: $359 million) to the Chad State National Oil Company (SHT) to be repaid through future oil deliveries over ten years. As at 31 December 2021, the advance is net of $604 million (2020: $714 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, $293 million (2020: $347 million) is receivable after 12 months and is presented within Other non-current receivables and loans and $31 million (2020: $12 million) is due within 12 months and included within Accounts receivable.

Société Nationale des Pétroles du Congo (SNPC)
Glencore has provided a net $156 million (2020: $156 million) to SNPC repayable through future oil deliveries over five years. As at 31 December 2021, the advance is net of $498 million (2020: $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, $129 million (2020: $156 million) is due after 12 months and is presented within Other long-term receivables and loans and $27 million (2020: $Nil) 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.

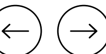
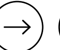
13. Inventories

Current inventory
Inventories of $28,434 million (2020: $22,852 million) comprise $16,073 million (2020: $12,260 million) of inventories carried at fair value less costs of disposal and $12,361 million (2020: $10,592 million) valued at the lower of cost or net realisable value. The amount of inventories and related ancillary costs recognised as an expense during the period was $177,704 million (2020: $124,037 million).

Fair value of inventories is 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 2021, the total amount of inventory pledged under such facilities was $17 million (2020: $804 million). The proceeds received and recognised as current borrowings were $2 million (2020: $679 million) and $80 million (2020: $80 million) as non-current borrowings.

Non-current inventory
$662 million (2020: $678 million) of 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.

Notes to the financial statements continued

14. Accounts receivable

US$ million	Notes	2021	2020
Financial assets at amortised cost			
Trade receivables		4,943	3,360
Margin calls paid		5,914	3,692
Receivables from associates		413	288
Other receivables[1]		402	356
Financial assets at fair value through profit and loss			
Trade receivables containing provisional pricing features	28	5,267	4,459
Finance lease receivable	28	2	9
Other receivables	28	79	–
Deferred consideration	28	175	130
Non-financial instruments			
Advances repayable with product[2]		876	922
Other tax and related receivables		1,422	1,938
Total		**19,493**	**15,154**

1 Includes current portion of non-current loans receivable of $296 million (2020: $241 million).

2 Includes advances, net of $409 million (2020: $298 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.

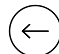
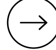
The average credit period on sales of goods is 16 days (2020: 24 days). The carrying value of trade receivables approximates fair value.

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, $11 million (2020: credit of $3 million) of such losses were recognised. 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 2021	**Not past due**	**<30**	**31 – 60**	**61 – 90**	**>90**	**Total**
Gross carrying amount	4,034	287	157	152	337	4,967
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**

US$ million	Trade receivables – days past due					
As at 31 December 2020	**Not past due**	**<30**	**31 – 60**	**61 – 90**	**>90**	**Total**
Gross carrying amount	2,941	224	44	21	143	3,373
Expected credit loss rate	0.27%	0.54%	0.82%	1.09%	2.31%	
Lifetime expected credit loss	(8)	(1)	(1)	–	(3)	(13)
Total	**2,933**	**223**	**43**	**21**	**140**	**3,360**

The Group determines the expected credit loss of receivables from associates 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:

Notes to the financial statements continued

14. Accounts receivable continued

US$ million	Receivables from associates	Other receivables	**2021**	Receivables from associates	Other receivables	**2020**
Gross carrying value 31 December	529	531	1,060	410	488	898
Of which:						
12-Month expected credit losses	391	387	778	271	357	628
Lifetime expected credit losses (credit impaired)	138	144	282	139	131	270
Allowance for credit loss						
1 January	122	132	254	10	79	89
Released during the period[1]	–	(10)	(10)	(1)	(3)	(4)
Charged during the period[1]	3	30	33	103	62	165
Utilised during the period	–	(48)	(48)	–	(6)	(6)
Effect of foreign currency exchange movements	(9)	–	(9)	10	–	10
Reclassifications	–	25	25	–	–	–
31 December	116	129	245	122	132	254
Of which:						
12-Month expected credit losses	–	23	23	–	51	51
Lifetime expected credit losses (credit impaired)	116	106	222	122	81	203
Net carrying value 31 December	**413**	**402**	**815**	**288**	**356**	**644**

1 $7 million (2020: $123 million impairment) recognised as a reversal of impairment (see note 7) and the balancing $30 million (2020: $38 million) net charge recognised in cost of goods sold

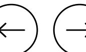
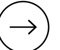
Glencore has a number of dedicated financing facilities, which finance a portion of its receivables. The receivables have not been derecognised, as the Group retains the principal risks and rewards of ownership. The proceeds received are recognised as current borrowings (see note 21). As at 31 December 2021, the total amount of trade receivables pledged was $Nil (2020: $693 million) and proceeds received and classified as current borrowings amounted to $Nil (2020: $567 million).

15. Cash and cash equivalents

US$ million	**2021**	2020
Bank and cash on hand	2,403	1,387
Deposits and treasury bills	838	111
Total	**3,241**	**1,498**

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 2021, $547 million (2020: $82 million) was restricted, including $477 million (2020: $Nil) held in on-shore accounts in our DRC operations, currently available to effect payment to on-shore counterparts only.

Notes to the financial statements continued

16. Assets and liabilities held for sale

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

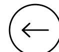
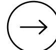
					2021	2020
US$ million	Ernest Henry	Bolivia	Access World	E&P Chad	**Total**	Total Mopani
Non-current assets						
Property, plant and equipment	311	161	171	240	883	745
Intangible assets	–	2	2	–	4	–
Investments	–	–	11	–	11	–
Advances and loans	–	–	10	–	10	5
Deferred tax assets	30	10	4	–	44	–
	341	**173**	**198**	**240**	**952**	**750**
Current assets						
Inventories	16	36	–	22	74	187
Accounts receivable	26	82	93	14	215	106
Income tax receivable	–	–	1	–	1	–
Prepaid expenses	2	–	10	–	12	3
Cash and cash equivalents	1	21	45	–	67	–
	45	**139**	**149**	**36**	**369**	**296**
Total assets held for sale	**386**	**312**	**347**	**276**	**1,321**	**1,046**
Non-current liabilities						
Borrowings	–	(3)	(111)	–	(114)	–
Deferred income	(138)	–	–	–	(138)	–
Deferred tax liabilities	–	(4)	(1)	(4)	(9)	–
Provisions	(74)	(29)	(1)	(85)	(189)	(54)
Post-retirement and other employee benefits	(1)	(17)	(1)	–	(19)	(10)
	(213)	**(53)**	**(114)**	**(89)**	**(469)**	**(64)**
Current liabilities						
Borrowings	–	(7)	(17)	–	(24)	(26)
Accounts payable	(32)	(55)	(95)	(6)	(188)	(58)
Deferred income	(53)	–	–	–	(53)	–
Provisions	(1)	(35)	(3)	–	(39)	(24)
Income tax payable	–	(14)	(1)	–	(15)	(13)
	(86)	**(111)**	**(116)**	**(6)**	**(319)**	**(121)**
Total liabilities held for sale	**(299)**	**(164)**	**(230)**	**(95)**	**(788)**	**(185)**
Non-controlling interest	**–**	**–**	**(2)**	**–**	**(2)**	**–**
Total net assets held for sale	**87**	**148**	**115**	**181**	**531**	**861**

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 and a gain on disposal of some $630 million is expected.

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 is due on completion with the balance (c.$90 million) due over the following 4 years. The transaction is expected to close in H1 2022.

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 metals and softs commodities storage and logistics group, for $180 million. The share purchase agreement was subsequently signed on 31 January 2022, completion of the sale is conditional on receipt of certain regulatory approvals, which is expected to occur in 2022.

E&P Chad
In August 2021, Glencore agreed to dispose 100% of its Chad upstream oil operations to Perenco S.A.. Completion of the sale is conditional on receipt of certain regulatory approvals, which is expected to occur in H1 2022.

Notes to the financial statements continued

16. Assets and liabilities held for sale continued

Mopani

In March 2021, Glencore completed the sale of its controlling interest in Mopani to the minority shareholder, ZCCM Investments Holding plc (ZCCM) for $1, leaving $1.5 billion of Glencore loans outstanding, where the pace and size of repayment instalments is linked to Mopani's future production and copper prices (see notes 12 and 26).

17. Share capital and reserves

	Number of ordinary shares (thousand)	Share capital (US$ million)	Share premium (US$ million)
Authorised:			
31 December 2021 and 2020 Ordinary shares with a par value of $0.01 each	50,000,000		
Issued and fully paid up:			
1 January 2020 and 31 December 2020	**14,586,200**	**146**	**45,794**
Distributions paid (see note 19)	–	–	(2,115)
31 December 2021	**14,586,200**	**146**	**43,679**

	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 2020	1,261,887	(4,801)	129,992	(636)	**1,391,879**	**(5,437)**
Own shares disposed during the year	–	–	(26,991)	133	**(26,991)**	**133**
31 December 2020	**1,261,887**	**(4,801)**	**103,001**	**(503)**	**1,364,888**	**(5,304)**
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)**

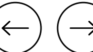
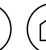
Own shares

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 August 2021, Glencore announced a $650 million share buy-back programme to be completed by February 2022, effected in accordance with the terms of the authority granted by shareholders at the 2021 Annual General Meeting. As at 31 December 2021, $616 million of shares have been purchased.

As at 31 December 2021: 1,489,601,292 shares (2020: 1,364,888,033 shares), including 1,390,388,731 Treasury Shares, equivalent to 10.21% (2020: 9.36%) of the issued share capital were held at a cost of $5,877 million (2020: $5,304 million) and market value of $7,559 million (2020: $4,341 million).

Notes to the financial statements continued

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 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 34)	–	–	–	(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)**
1 January 2020	(2,665)	(97)	364	(2,573)	(4,971)
Exchange gain on translation of foreign operations	(167)	–	–	–	(167)
Loss on cash flow hedges, net of tax	–	(50)	–	–	(50)
Loss on equity investments accounted for at fair value through other comprehensive income, net of tax	–	–	(631)	–	(631)
Change in ownership interest in subsidiaries (see note 34)	–	–	–	(31)	(31)
Gain due to changes in credit risk on financial liabilities accounted for at fair value through profit and loss	–	–	19	–	19
Reclassifications	–	–	(18)	1	(17)
31 December 2020	**(2,832)**	**(147)**	**(266)**	**(2,603)**	**(5,848)**

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.

Notes to the financial statements continued

18. Earnings per share

US$ million	**2021**	2020
Income/(loss) attributable to equity holders of the Parent for basic earnings per share	4,974	(1,903)
Weighted average number of shares for the purposes of basic earnings per share (thousand)	13,204,101	13,216,886
Effect of dilution:		
Equity-settled share-based payments (thousand)[1]	132,503	139,989
Weighted average number of shares for the purposes of diluted earnings per share (thousand)	13,336,604	13,216,886
Basic earnings/(loss) per share (US$)	**0.38**	**(0.14)**
Diluted earnings/(loss) per share (US$)	**0.37**	**(0.14)**

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	**2021**	2020
Income/(loss) attributable to equity holders of the Parent for basic earnings per share	4,974	(1,903)
Net loss on disposals[2]	652	36
Net credit/(expense) on disposals – tax	75	(11)
Impairments[3]	1,906	6,693
Impairments – non-controlling interest	(689)	(1,596)
Impairments – tax	(34)	(1,214)
Headline and diluted earnings for the year	**6,884**	**2,005**
Headline earnings per share (US$)	**0.52**	**0.15**
Diluted headline earnings per share (US$)	**0.52**	**0.15**

1 These equity-settled share-based payments could potentially dilute basic earnings per share in the future, but did not impact diluted loss per share in 2020 because they were anti-dilutive.

2 See note 4.

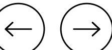
3 Comprises impairments of property, plant and equipment, investments, advances and loans, VAT receivable (see note 7) and Glencore's share of impairments booked directly by associates (see note 2).

19. Distributions

US$ million	**2021**	2020
Paid during the year:		
First tranche distribution - $0.06 per ordinary share (2020: $Nil)	794	–
Second tranche and additional distribution - $0.10 per ordinary share (2020: $Nil)	1,321	–
Total	**2,115**	**–**

The proposed distribution in respect of the year ended 31 December 2021 of $0.26 per ordinary share amounting to some $3.4 billion is subject to approval by shareholders at the Annual General Meeting and has not been included as a liability in these financial statements. These distributions declared are expected to be paid equally ($0.13 each) in May 2022 and September 2022.

In 2020, it was determined that no distribution would be made.



Notes to the financial statements continued

20. Share-based payments

US$ million	Number of awards granted (thousands)	Fair value at grant date (US$ million)	**Number of awards outstanding 2021 (thousands)**	Number of awards outstanding 2020 (thousands)	**Expense recognised 2021 (US$ million)**	Expense recognised 2020 (US$ million)
Deferred awards						
2018 Series	12,891	65	3,535	4,316	–	–
2019 Series	10,791	37	667	7,914	–	–
2020 Series	45,798	85	31,538	45,798	(2)	85
2021 Series	20,565	91	20,565	–	90	–
	90,045		**56,305**	**58,028**	**88**	**85**
Performance share awards						
2015 Series	79,787	109	–	9,509	2	–
2016 Series	23,984	84	–	–	–	3
2017 Series	19,750	95	400	5,965	1	10
2018 Series	28,499	104	9,823	18,396	12	29
2019 Series	29,705	90	18,504	28,330	23	55
2020 Series	33,583	104	31,466	19,761	55	–
2021 Series	16,005	76	16,005	–	8	–
	231,313		**76,198**	**81,961**	**101**	**97**
Total	**321,358**		**132,503**	**139,989**	**189**	**182**

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 annual 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 and three tranches on 31 January or 30 June of the years following the year of grant, as may be the case. The fair value of the awards is determined by reference to the monthly volume-weighted average share price (VWAP) of Glencore plc prior to the respective award date. 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 with respect to the monthly volume-weighted average share price (VWAP) of Glencore plc prior to the respective award date.

Share-based awards assumed in previous business combinations

	Total options outstanding (thousands)	**Weighted average exercise price (GBP)**
1 January 2021	71,667	4.25
Lapsed	(27,130)	4.80
Exercised	–	–
31 December 2021	**44,537**	**3.91**
1 January 2020	102,623	3.98
Lapsed	(30,956)	3.38
Exercised	–	–
31 December 2020	**71,667**	**4.25**

Notes to the financial statements continued

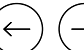
20. Share-based payments continued

As at 31 December 2021, a total of 44,536,755 options (2020: 71,667,011 options) were outstanding and exercisable, having an exercise price of GBP3.91 (2020: GBP3.91 to GBP4.80) and a weighted average exercise price of GBP3.91 (2020: GBP4.25). 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	**2021**	2020
Non-current borrowings			
Capital market notes		22,376	22,353
Committed syndicated revolving credit facilities		2,543	4,766
Lease liabilities		1,093	1,008
Other bank loans		799	1,100
Total non-current borrowings		**26,811**	**29,227**
Current borrowings			
Secured inventory/receivables/other facilities	11/13/14	122	1,346
U.S. commercial paper		1,764	1,090
Capital market notes		2,884	2,018
Lease liabilities		525	513
Other bank loans[1]		2,535	3,285
Total current borrowings		**7,830**	**8,252**
Total borrowings		**34,641**	**37,479**

1 Comprises various uncommitted bilateral bank credit facilities and other financings and is net of $Nil million (2020: $135 million) of funds advanced by the Group under a netting arrangement with a bank and a subsidiary.



Notes to the financial statements continued

21. Borrowings continued

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.

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 in respect of 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.

Notes to the financial statements continued

21. Borrowings continued

2020

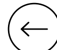
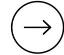
US$ million	Borrowings excluding lease liabilities	Lease liabilities	**Total borrowings**	Cross currency and interest rate swaps and net margins[1]	**Total liabilities arising from financing activities**
1 January 2020	35,401	1,642	37,043	199	37,242
Cash related movements[2]					
Proceeds from issuance of capital market notes	3,362	–	3,362	–	3,362
Repayment of capital market notes	(4,017)	–	(4,017)	–	(4,017)
Repurchase of capital market notes	(72)	–	(72)	–	(72)
Repayment of revolving credit facilities	(870)	–	(870)	–	(870)
Proceeds from other non-current borrowings	392	–	392	–	392
Repayment of other non-current borrowings	(44)	–	(44)	–	(44)
Repayment of lease liabilities	–	(560)	(560)	–	(560)
Margin receipts in respect of financing related hedging activities	–	–	–	1,040	1,040
Proceeds from U.S. commercial papers	415	–	415	–	415
Proceeds from current borrowings	217	–	217	–	217
	(617)	**(560)**	**(1,177)**	**1,040**	**(137)**
Non-cash related movements					
Borrowings (disposed of)/acquired in business combinations[3]	–	(13)	(13)	–	(13)
Borrowings reclassified to held for sale[4]	(26)	–	(26)	–	(26)
Fair value adjustment to fair value hedged borrowings	344	–	344	–	344
Fair value movement of hedging derivatives	–	–	–	(1,148)	(1,148)
Foreign exchange movements	792	20	812	–	812
Change in lease liabilities	–	435	435	–	435
Interest on convertible bonds	20	–	20	–	20
Other movements	44	(3)	41	–	41
	1,174	**439**	**1,613**	**(1,148)**	**465**
31 December 2020	**35,958**	**1,521**	**37,479**	**91**	**37,570**

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.

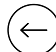
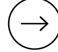



Notes to the financial statements continued

21. Borrowings continued

Capital Market Notes

US$ million	Maturity	**2021**	2020
Euro 700 million 1.625% coupon bonds	Jan 2022	–	865
Euro 1,000 million 1.875% coupon bonds	Sep 2023	1,136	1,219
Euro 400 million 3.70% coupon bonds	Oct 2023	467	520
Euro 600 million 0.625% coupon bonds	Sep 2024	682	732
Euro 750 million 1.75% coupon bonds	Mar 2025	862	951
Euro 500 million 3.75% coupon bonds	Apr 2026	598	680
Euro 500 million 1.50% coupon bonds	Oct 2026	566	632
Euro 950 million 1.125% coupon bonds	Mar 2028	1,079	1,159
Euro 600 million 0.75% coupon bonds	Mar 2029	653	–
Euro 500 million 0.75% coupon bonds	Mar 2033	526	–
Eurobonds		**6,569**	**6,758**
JPY 10 billion 1.075% coupon bonds	May 2022	–	97
GBP 500 million 6.00% coupon bonds	Apr 2022	–	685
GBP 500 million 3.125% coupon bonds	Mar 2026	677	724
Sterling bonds		**677**	**1,409**
CHF 175 million 1.25% coupon bonds	Oct 2024	194	202
CHF 250 million 0.35% coupon bonds	Sep 2025	274	283
CHF 225 million 1.00% coupon bonds	Mar 2027	248	256
CHF 150 million 0.50% coupon bonds	Sep 2028	160	–
Swiss Franc bonds		**876**	**741**
US$ 600 million 5.375% coupon bonds	Feb 2022	–	535
US$ 250 million LIBOR plus 1.65% coupon bonds	May 2022	–	250
US$ 1,000 million 4.25% coupon bonds	Oct 2022	–	1,002
US$ 500 million 3.00% coupon bonds	Oct 2022	–	461
US$ 1,500 million 4.125% coupon bonds	May 2023	1,538	1,580
US$ 1,000 million 4.125% coupon bonds	Mar 2024	970	969
US$ 1,000 million 4.625% coupon bonds	Apr 2024	1,029	1,069
US$ 625 million non-dilutive convertible bonds	Mar 2025	552	532
US$ 500 million 4.00% coupon bonds	Apr 2025	510	531
US$ 1,000 million 1.625% coupon bonds	Sep 2025	994	992
US$ 475 million 4.375% coupon bonds	Feb 2026	469	–
US$ 600 million 1.625% coupon bonds	Apr 2026	587	–
US$ 1,000 million 4.00% coupon bonds	Mar 2027	1,043	1,103
US$ 50 million 4.00% coupon bonds	Mar 2027	50	50
US$ 500 million 3.875% coupon bonds	Oct 2027	522	553
US$ 750 million 4.875% coupon bonds	Mar 2029	811	864
US$ 1,000 million 2.50% coupon bonds	Sep 2030	992	991
US$ 600 million 2.85% coupon bonds	Apr 2031	598	–
US$ 600 million 2.65% coupon bonds	Sep 2031	745	–
US$ 250 million 6.20% coupon bonds	Jun 2035	269	270
US$ 500 million 6.90% coupon bonds	Nov 2037	582	586
US$ 500 million 6.00% coupon bonds	Nov 2041	536	537
US$ 500 million 5.55% coupon bonds	Oct 2042	473	473
US$ 500 million 3.875% coupon bonds	Apr 2051	496	–
US$ 500 million 3.375% coupon bonds	Sep 2051	488	–
US$ bonds		**14,254**	**13,348**
Total non-current bonds		**22,376**	**22,353**

Notes to the financial statements continued

21. Borrowings continued

US$ million	Maturity	2021	2020
GBP 500 million 6.00% coupon bonds	Apr 2022	677	–
JPY 10 billion 1.075% coupon bonds	May 2022	87	–
Euro 600 million 2.75% coupon bonds	Apr 2021	–	724
CHF 250 million 2.25% coupon bonds	May 2021	–	284
US$ 1,000 million 4.95% coupon bonds	Nov 2021	–	1,010
US$ 600 million 5.375% coupon bonds	Feb 2022	410	–
US$ 250 million LIBOR plus 1.65% coupon bonds	May 2022	250	–
US$ 1,000 million 4.25% coupon bonds	Oct 2022	999	–
US$ 500 million 3.00% coupon bonds	Oct 2022	461	–
Total current bonds		**2,884**	**2,018**

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

2020 Bond activities

- In September 2020, issued:
  - 7.5 year EUR 850 million, 1.125% coupon bond
  - 5.5 year CHF 225 million, 1.00% coupon bond
  - 5 year $1,000 million, 1.625% coupon bond
  - 10 year $1,000 million, 2.50% coupon bond
- In December 2020, issued 7.5 year EUR 100 million, 1.125% coupon bond

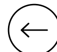
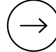
Committed syndicated revolving credit facilities

In March 2021, Glencore extended its revolving credit facilities. The margins on these facilities remained unchanged, namely US$ LIBOR plus 40bps flat for the one-year, and US$ LIBOR plus 27.5bps, subject to a ratings grid, for the medium term. During the period, certain amounts were voluntarily cancelled, determined as being in excess of the Group's liquidity headroom requirements.

As at 31 December 2021, the facilities comprise:

- a $6,572 million one year revolving credit facility with a one-year borrower's term-out option (to May 2023);
- 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.

Notes to the financial statements continued

21. Borrowings continued

Secured facilities

US$ million	Maturity[1]	Interest	**2021**	2020
Syndicated committed metals inventory/receivables facilities[2]	Nov 2024	3.2%	82	81
Syndicated uncommitted metals and oil inventory/receivables facilities			–	1,245
Other secured facilities	Apr 2022	US$ LIBOR + 72 bps	120	100
Total			**202**	**1,426**
Current			122	1,346
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.

Notes to the financial statements continued

22. Deferred income

US$ million	Notes	Unfavourable contracts	Prepayments	**Total**
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
1 January 2020		609	2,619	3,228
Additions		–	1,047	1,047
Accretion in the year		–	127	127
Revenue recognised in the year		(66)	(663)	(729)
Effect of foreign currency exchange difference		(14)	1	(13)
31 December 2020		**529**	**3,131**	**3,660**
Current		79	991	1,070
Non-current		450	2,140	2,590

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.

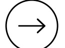
These amounts are released to revenue as the underlying commodities are delivered to the buyers over the life of the contracts at rates consistent with the extrapolated forward price curves at the time of the acquisitions.

During the year, 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 predominantly 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, for product delivered from the Antamina and Antapaccay operations, 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 2021, post Ernest Henry being reclassified to 'held for sale', $1,068 million (2020: $1,391 million) of product delivery obligations remain, of which $35 million (2020: $118 million) are due within 12 months.
- Silver supply arrangement – Various silver prepayment arrangements for the future delivery of an average of 14 million ounces of silver per annum, over a remaining 4 year period. As at 31 December 2021, $784 million (2020: $841 million) of product delivery obligations remain, of which $408 million (2020: $292 million) are due within 12 months.
- Palladium supply arrangement – Various palladium prepayment arrangements for the future delivery of an average of 37 thousand ounces of palladium per annum, over a remaining 4 year period. As at 31 December 2021, $141 million (2020: $200 million) of product delivery obligations remain, of which $58 million (2020: $63 million) are due within 12 months.
- Gold supply arrangement – Various gold supply arrangements for the future delivery of 518 thousand ounces (2020: 228 thousand ounces) of gold over a 1-year period. As at 31 December 2021, $765 million (2020: $360 million) of product delivery obligations remain, which are due within 12 months.



Notes to the financial statements continued

22. Deferred income continued

- Cobalt supply arrangement – In March 2019, Glencore signed a six year cobal 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 2021, $94 million (2020: $100 million) of product delivery obligations remain, of which $26 million (2020: $5 million) are due within 12 months.
- Iron ore supply arrangement – In November 2021, Glencore signed a 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 2021, $200 million (2020: $Nil) of product delivery obligations remain of which, $117 million (2020: $Nil) are due within 12 months.

23. Provisions

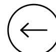
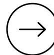
US$ million	Notes	Rehabilitation costs	Onerous contracts	Legal investigations	Other provisions	**Total**
1 January 2021		5,182	535	–	746	6,463
Utilised		(190)	(122)	–	(276)	(588)
Released		(14)	(103)	–	(31)	(148)
Accretion		153	31	–	2	186
Disposal of subsidiaries	26	(67)	–	–	(10)	(77)
Additions		918	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
1 January 2020		4,847	595	–	633	6,075
Utilised		(189)	(124)	–	(37)	(350)
Released		–	(174)	–	(42)	(216)
Accretion		144	40	–	4	188
Disposal of subsidiaries	26	(208)	–	–	(15)	(223)
Additions		614	200	–	247	1,061
Reclassification to held for sale	16	(54)	–	–	(24)	(78)
Reclassification from held for sale	16	45	–	–	7	52
Effect of foreign currency exchange movements		(17)	(2)	–	(27)	(46)
31 December 2020		**5,182**	**535**	**–**	**746**	**6,463**
Current		297	143	–	253	693
Non-current		4,885	392	–	493	5,770

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 23 years (2020: 23 years).

As at 31 December 2021, 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 1.5% (2020: 1.6%), South African rand 3.75% (2020: 3.6%), Australian dollar 2.0% (2020: 2.3%), Canadian dollar 1.5% (2020: 1.7%), and Chilean peso 2.5% (2020: 2.6%).

The sensitivity of the rehabilitation costs provision to changes in the discount rate assumptions as at 31 December 2021, assuming that all other assumptions are held constant, is set out below:

Notes to the financial statements continued

23. Provisions continued

US$ million	Discount rate Increase 0.5%	Discount rate Decrease 0.5%
Decrease/(increase) in overall rehabilitation provision	416	(484)
(Decrease)/increase in property, plant and equipment	(352)	409
Net increase/(decrease) in statement of income	64	(75)
Effect in the following year		
Decrease/(increase) in depreciation expense	15	(18)
(Increase)/decrease in interest expense	(6)	8
Net increase/(decrease) in statement of income	9	(10)

Onerous contracts
Onerous contracts represent liabilities related to contractual take or pay commitments for securing coal logistics capacity and LNG re-gasification 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 Group is subject to a number of investigations by regulatory and enforcement authorities including:

- The United States Department of Justice is investigating the Group with respect to compliance with various criminal statutes, including the Foreign Corrupt Practices Act, United States money laundering statutes and fraud statutes related to the Group's business in certain overseas jurisdictions.
- The United States Commodity Futures Trading Commission ("CFTC") is investigating whether the Group may have violated certain provisions of the Commodity Exchange Act and/or CFTC Regulations including through corrupt practices in connection with commodities trading.
- The United Kingdom Serious Fraud Office is investigating the Group in respect of suspicions of bribery in the conduct of business of the Group.
- The Brazilian authorities are investigating the Group in relation to "Operation Car Wash", which relates to bribery allegations concerning Petrobras.
- 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.

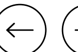
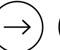
The Board has appointed a committee, the Investigations Committee ("the Committee"), to oversee the response to the investigations on behalf of the Board. The Committee has engaged external legal counsel and forensic experts to assist in responding to the various investigations and to perform additional investigations at the request of the Committee covering various aspects of the Group's business. The Group continues to cooperate fully with the above authorities.

The Group has also been notified by the Dutch authorities of a criminal investigation into Glencore International AG related to potential corruption pertaining to the DRC and is in contact with the Dutch authorities in respect of this investigation. The scope of the investigation is similar to that of the OAG investigation. The Dutch authorities are coordinating their investigation with the OAG and we would expect any possible resolution to avoid duplicative penalties for the same conduct.

While the Committee cannot forecast with certainty the cost, extent, timing or terms of the outcomes of the investigations, the Committee presently expects to resolve the U.S., UK and Brazilian investigations in 2022. Accordingly, and based on the Company's current information and understanding, the Group has raised a provision as at 31 December 2021 in the amount of $1,500 million representing the Committee's current best estimate of the costs to resolve these investigations (included in other expenses, see note 5). As the investigations are still ongoing and their ultimate outcome remains uncertain, there remains a significant risk that the final outcome could materially impact the recognised balance within the next financial year. It is impractical to provide further sensitivity estimates of potential downside variances.

The timing and outcome of the OAG and Dutch investigations remains uncertain – see note 32.

Other
Other comprises provisions for possible demurrage, mine concession and construction related claims. This balance comprises no individually material provisions.

Notes to the financial statements continued

24. Personnel costs and employee benefits

US$ million	Notes	Post-retirement employee benefits	Other employee entitlements	**Total**
1 January 2021		980	181	1,161
Utilised		(84)	(9)	(93)
Released		(1)	(7)	(8)
Accretion		23	–	23
Additions		151	14	165
Actuarial (gain)/loss		(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**
1 January 2020		958	228	1,186
Utilised		(106)	(71)	(177)
Accretion		26	–	26
Disposal of subsidiaries	26	–	(9)	(9)
Additions		74	38	112
Actuarial loss/(gain)		20	–	20
Reclassification to held for sale	16	–	(10)	(10)
Effect of foreign currency exchange movements		8	5	13
31 December 2020		**980**	**181**	**1,161**

The provision for post-retirement employee benefits includes pension plan liabilities of $352 million (2020: $504 million) and post-retirement medical plan liabilities of $430 million (2020: $476 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 2021 and 2020, were $6,012 million and $5,403 million, respectively. Personnel costs related to consolidated industrial subsidiaries of $4,188 million (2020: $3,944 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 $173 million in 2021 (2020: $122 million).

Post-retirement medical plans
The Company participates in a number of post-retirement medical plans, principally in Canada, 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.

Notes to the financial statements continued

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 64% 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.

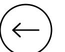
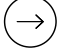
The majority of benefit payments are from trustee-administered funds; however, there are also a number of unfunded plans where Glencore meets the benefit payments as they fall due. Plan assets held in trusts are governed by local regulations and practices in each country. Responsibility for governance 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 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)
Gain from change in financial assumptions		(37)	(188)	–	(188)
(Gain)/loss from actuarial experience		(4)	3	–	3
Actuarial (gains)/losses 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 actual return on plan assets in respect of defined benefit pension plans amounted to a gain of $107 million (2020: $273 million), comprising interest income and the re-measurement of plan assets.

During the next financial year, the Group expects to make a contribution of $84 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 $117 million. Future funding requirements and contributions are reviewed and adjusted on an annual basis.

Notes to the financial statements continued

24. Personnel costs and employee benefits continued

			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 2020		**512**	2,951	(2,547)	**404**
Current service cost		8	59	–	59
Past service cost - plan amendments		–	2	–	2
Settlement of pension plan disposal		–	(41)	48	7
Interest expense/(income)		19	75	(68)	7
Total expense/(income) recognised in consolidated statement of income		**27**	95	(20)	**75**
Gain on plan assets, excluding amounts included in interest expense - net		–	–	(150)	(150)
Gain from change in demographic assumptions		(75)	(3)	–	(3)
Loss from change in financial assumptions		28	211	–	211
Loss from actuarial experience		4	5	–	5
Actuarial losses/(gains) recognised in consolidated statement of comprehensive income		**(43)**	213	(150)	**63**
Employer contributions		–	–	(83)	(83)
Employee contributions		–	1	(1)	–
Benefits paid directly by the Company		(23)	(8)	8	–
Benefits paid from plan assets		–	(174)	174	–
Net cash (outflow)/inflow		**(23)**	(181)	98	**(83)**
Exchange differences		3	60	(55)	5
31 December 2020		**476**	3,138	(2,674)	**464**
Of which:					
Pension surpluses	12	–			(40)
Pension deficits		476			504

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 2021 and 2020. The net liability of any of the Group's defined benefit plans outside of Canada as at 31 December 2021 does not exceed $70 million (2020: $92 million).

Notes to the financial statements continued

24. Personnel costs and employee benefits continued

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 liability(asset) 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**

2020

US$ million	Canada	Other	**Total**
Post-retirement medical plans			
Present value of defined benefit obligation	415	61	**476**
of which: amounts owing to active members	142	11	153
of which: amounts owing to pensioners	273	50	323
Defined benefit pension plans			
Present value of defined benefit obligation	2,041	1,097	**3,138**
of which: amounts owing to active members	501	533	1,034
of which: amounts owing to non-active members	37	192	229
of which: amounts owing to pensioners	1,503	372	1,875
Fair value of plan assets	(1,917)	(757)	**(2,674)**
Net defined benefit liability at 31 December 2020	**124**	**340**	**464**
Of which:			
Pension surpluses	(38)	(2)	(40)
Pension deficits	162	342	504
Weighted average duration of defined benefit obligation - years	13	16	**14**

Estimated future benefit payments of the Canadian plans, which reflect expected future services but exclude plan expenses, up until 2031 are as follows:

US$ million	Post-retirement medical plans	Defined benefit pension plans	**Total**
2022	19	99	118
2023	19	98	117
2024	19	98	117
2025	19	135	154
2026	19	95	114
2027-2031	92	470	562
Total	**187**	**995**	**1,182**

Notes to the financial statements continued

24. Personnel costs and employee benefits continued

The plan assets consist of the following:

	2021		2020	
	Active market	Non-active market	Active market	Non-active market
Cash and short-term investments	40	–	24	21
Fixed income	823	195	844	213
Equities	851	–	979	–
Other	416	208	393	200
Total	**2,130**	**403**	**2,240**	**434**

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	
	2021	2020	**2021**	2020
Discount rate	4.1%	3.6%	2.7%	2.2%
Future salary increases	–	–	2.6%	2.6%
Future pension increases	–	–	0.5%	0.4%
Ultimate medical cost trend rate	4.6%	4.6%	–	–

Mortality assumptions are based on the latest available standard mortality tables for the individual countries concerned. As at 31 December 2021, these tables imply expected future life expectancy, for employees aged 65, 16 to 23 years for males (2020: 16 to 23) and 20 to 25 years for females (2020: 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.

Notes to the financial statements continued

24. Personnel costs and employee benefits continued

The sensitivity of the defined benefit obligation to changes in principal assumptions as at 31 December 2021 is set out below, assuming that all other assumptions are held constant and the effect of interrelationships is excluded.

	Increase/(decrease) in pension obligation		
US$ million	Post-retirement medical plans	Defined benefit pension plans	**Total**
Discount rate			
Increase by 50 basis points	(28)	(170)	**(198)**
Decrease by 50 basis points	32	186	**218**
Rate of future salary increase			
Increase by 100 basis points	–	34	**34**
Decrease by 100 basis points	–	(33)	**(33)**
Rate of future pension benefit increase			
Increase by 100 basis points	–	56	**56**
Decrease by 100 basis points	–	(46)	**(46)**
Medical cost trend rate			
Increase by 100 basis points	51	–	**51**
Decrease by 100 basis points	(41)	–	**(41)**
Life expectancy			
Increase in longevity by one year	12	69	**81**

25. Accounts payable

US$ million	Notes	**2021**	2020
Financial liabilities at amortised cost			
Trade payables		10,397	8,021
Margin calls received		729	1,033
Associated companies		1,124	1,209
Other payables and accrued liabilities		889	850
Financial liabilities at fair value through profit and loss			
Trade payables containing provisional pricing features	28	13,806	11,264
Non-financial instruments			
Advances settled in product		459	289
Other payables and accrued liabilities		1,460	994
Other tax and related payables		449	378
Total		**29,313**	**24,038**

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. As at 31 December 2021, Nil (2020: 10%) of total trade payables of $24,203 million (2020: $19,285 million) include liabilities under supplier financing arrangements with maturities beyond 91 days (refer to note 1 for critical judgements associated with classification of liabilities which contain a financing element). The carrying value of trade payables approximates fair value.

Notes to the financial statements continued

26. Acquisition and disposal of subsidiaries and other entities

2021 & 2020 Acquisitions
In 2021 and 2020, there were no material acquisitions.

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:

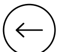
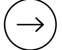
US$ million	Mopani[1]	Chemoil Terminals	Others	**Total**
Non-current assets				
Property, plant and equipment	748	158	20	926
Advances and loans	5	–	–	5
	753	158	20	**931**
Current assets				
Inventories	168	–	–	168
Accounts receivable	99	3	14	116
Prepaid expenses	3	–	–	3
Cash and cash equivalents	–	10	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/(used) in disposal	**–**	**238**	**14**	**252**

1 As at 31 December 2020, total assets and liabilities were presented as current assets and liabilities "held for sale" (see note 16).

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.

Notes to the financial statements continued

26. Acquisition and disposal of subsidiaries and other entities continued

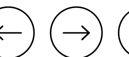
2020 Disposals

In 2020, Glencore disposed of its controlling interest in Minera Alumbrera Limited. The carrying value of the assets and liabilities over which control was lost and the net cash used in the disposal are detailed below:

US$ million	**Alumbrera**
Non-current assets	
Property, plant and equipment	12
	12
Current assets	
Inventories	2
Accounts receivable	14
Cash and cash equivalents	222
	238
Non-controlling interest	**2**
Non-current liabilities	
Provisions	(182)
	(182)
Current liabilities	
Borrowings	(13)
Accounts payable	(9)
Provisions	(50)
	(72)
Carrying value of net assets disposed	**(2)**
Net gain on disposal	**(2)**
Cash and cash equivalents received	–
Less: cash and cash equivalents disposed	(222)
Net cash used in disposal	**(222)**

Minera Alumbrera Limited

In December 2020, Glencore disposed of its 50% interest in Minera Alumbrera Limited, a copper-gold operation in Argentina, in return for a 24.99% interest in Minera Agua Rica Alumbrera Limited. Glencore is no longer able to unilaterally direct the key strategic, operating and capital decisions of Minera Alumbrera Limited and was deemed to have disposed of its controlling interest at fair value. The difference to the net carrying value was recognised through the statement of income, with Glencore subsequently accounting for its share in Minera Agua Rica Alumbrera Limited using the equity method in accordance with IAS 28.



Notes to the financial statements continued

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 (stable) from Moody's and BBB+ (stable) 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 proceding 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 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 has set a consolidated VaR limit (one day 95% confidence level) of $150 million (2020: $100 million) representing less than 0.4% of total equity, which the Board reviews annually. Given 2021's elevated implied market volatilities, together with statistically higher commodity correlations and the nature / extent (e.g. increased size and tenor of LNG business) of transaction volumes, the Board approved an increase in the VaR limit in H2 2021, initially to $130 million on a temporary basis and then to $150 million going forward, with effect from 1 January 2022.

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.

Notes to the financial statements continued

27. Financial and capital risk management continued

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

US$ million	**2021**	2020
Year-end position	72	33
Average during the year	54	39
High during the year	126	102
Low during the year	27	14

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), coal, iron ore and oil/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, freight 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 primarily based on US$ LIBOR 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 50 basis points higher/lower and all other variables held constant, Glencore's income for the year ended 31 December 2021 would decrease/increase by $98 million (2020: $112 million).

Interest rate benchmark reform

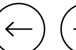
Whereas initially the UK FCA announced that they would not compel the 20 panel banks to submit into the LIBOR interest rate setting mechanism by the end of 2021, in November 2020 they issued a revised timetable, with the consequence that overnight, 1, 3 and 6 month USD LIBOR's will continue to be quoted until 30 June 2023.

To cater for the envisaged transition of interest rate hedging arrangements, which have an accelerated timetable, the Group has already agreed to align with the ISDA fall-back protocol. Therefore, all existing and new derivative arrangements referencing LIBORs, will be amended in line with the timelines and announcements made by regulators in the respective currency jurisdiction.

The Group has additionally established a multidisciplinary working group, to prepare and implement a LIBOR transition plan. This working group is assessing on an ongoing basis the potential impact of LIBOR reform. This transition plan includes updating policies, systems and processes, in order to anticipate the appropriate changes as and when deemed necessary.

During the year, the Group already also transitioned some of its non-derivative contractual exposures from LIBOR based to alternative fixed rates. However the Group's remaining non-derivative LIBOR linked contracts do not yet include adequate and robust fall-back provisions for cessation of the referenced benchmark interest rate.

The Group continues to monitor the market and the output from various industry groups managing the transition to new benchmark interest rates, and will look to implement a new benchmark, which is expected to be based broadly around the US Secured Overnight Financing Ratee (SOFR), or at the very least, implement robust fall-back language for different instruments and LIBORs, when appropriate.



Notes to the financial statements continued

27. Financial and capital risk management continued

The following table sets out the hedging relationships as at 31 December 2021, which include IBOR benchmarks and are yet to be transitioned to risk-free rate benchmarks.

		Carrying amount				
US$ million	Notional	Assets	Liabilities	Interest rate benchmark	Hedged item	Hedge relationship
Hedging instruments						
Interest rate swaps	4,950	224	(11)	LIBOR	US$ bonds	Fair value hedge
Cross-currency interest rate swaps	4,792	110	(284)	LIBOR	EMTN	Fair value hedge
Basis swaps	9,142	3	–	LIBOR	US$ bonds/EMTN	Fair value hedge
Non-derivative financial liabilites	–	–	–			
Committed syndicated revolving credit facilities[1]	–	–	(2,543)	LIBOR		
Secured facilities[1]	–	–	(120)	LIBOR		

1 See note 21.

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	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020	
Cross currency swap agreements									
Cash flow hedges - currency risk									
Eurobonds	2,907	2,907	1.14	1.14	3	164	42	–	2025
Sterling bonds	798	798	1.60	1.60	–	–	129	126	2022
Swiss franc bonds	504	504	1.06	1.06	12	16	–	–	2026
Fair value hedges - currency and interest rate risk									
Eurobonds	3,947	4,323	1.22	1.27	67	232	285	120	2027
Yen bonds	81	81	0.01	0.01	5	16	–	–	2022
Sterling bonds	663	663	1.33	1.33	33	81	–	–	2026
Swiss franc bonds	347	440	1.07	1.04	11	48	5	–	2026
	9,247	9,716			131	557	461	246	
Interest rate swap agreements									
Fair value hedges - interest rate risk									
US$ bonds	6,450	5,250	–	–	272	525	12	4	2026
	15,697	**14,966**			**403**	**1,082**	**473**	**250**	

1 Refer to note 21 for details.

Notes to the financial statements continued

27. Financial and capital risk management continued

The gross liquidity risk relating to the above 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.

US$ million	After 5 years	Due 3 - 5 years	Due 2 - 3 years	Due 1 - 2 years	Due 0 - 1 year	**Total**
2021	3,088	3,242	1,034	1,895	1,109	**10,368**
2020	3,381	2,123	1,823	1,970	1,305	**10,602**

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

	Carrying amount of the hedged item (Note 21)		Of which, accumulated amount of fair value hedge adjustments	
US$ million	**2021**	2020	**2021**	2020
Foreign exchange and interest rate risk				
Eurobonds	3,672	4,372	(255)	56
Yen bonds	87	97	5	16
Swiss franc bonds	354	486	38	45
Sterling bonds	677	724	22	64
US$ bonds	6,638	5,702	226	489
	11,428	**11,381**	**36**	**670**

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 4.7% (2020: 5.1%) of its trade receivables (on a gross basis taking into account credit enhancements) or accounting for more than 3.6% of its revenues over the year ended 31 December 2021 (2020: 3.1%)(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. Total balance for those assets as at 31 December 2021 is $10,765 million (2020: $6,828 million) (see notes 12, 14 and 15).

Notes to the financial statements continued

27. Financial and capital risk management continued

in %	**2021**	2020
AAA to AA-	8	10
A+ to A-	59	47
BBB+ to BBB-	11	23
BB+ to BB-	3	2
B+ to B-	8	8
CCC+ and below	11	10

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.

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 (2020: $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 2021, Glencore had available committed undrawn credit facilities and cash amounting to $10,296 million (2020: $10,259 million), refer to Other reconciliations section. The maturity profile of Glencore's financial liabilities based on the contractual terms is as follows:

2021

US$ million	After 5 years	Due 3 - 5 years	Due 2 - 3 years	Due 1 - 2 years	Due 0 - 1 year	**Total**
Borrowings excluding lease liabilities, fair value hedge adjustments and other non-hedged 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
Other financial liabilities	195	131	21	32	5,850	6,229
Total	**14,454**	**7,614**	**3,791**	**7,199**	**41,717**	**74,775**
Current assets					57,776	57,776

2020

US$ million	After 5 years	Due 3 - 5 years	Due 2 - 3 years	Due 1 - 2 years	Due 0 - 1 year	**Total**
Borrowings excluding lease liabilities, fair value hedge adjustments and other non-hedged items	8,473	6,306	3,536	9,215	7,814	35,344
Expected future interest payments	2,415	782	550	690	846	5,283
Lease liabilities - undiscounted	592	209	209	378	593	1,981
Accounts payable	–	–	–	–	22,377	22,377
Other financial liabilities	381	52	31	53	4,200	4,717
Total	**11,861**	**7,349**	**4,326**	**10,336**	**35,830**	**69,702**
Current assets					43,212	43,212

Notes to the financial statements continued

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.

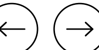
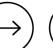
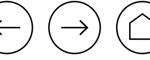
The financial assets and liabilities are presented by class in the tables below at their carrying values, which generally approximate the fair values with the exception of $33,023 million (2020: $35,958 million) of borrowings, the fair value of which at 31 December 2021 was $34,169 million (2020: $37,150 million) based on observable market prices applied only to the listed portion of the borrowing portfolio (a Level 2 fair value measurement).

2021 US$ million	Amortised cost	FVTPL[1]	FVTOCI[2]	**Total**
Assets				
Other investments (see note 29)	–	–	1,620	1,620
Non-current other financial assets (see note 29)	–	458	–	458
Advances and loans (see note 12)	795	163	–	958
Accounts receivable (see note 14)	11,672	5,523	–	17,195
Other financial assets (see note 29)	–	4,636	–	4,636
Cash and cash equivalents (see note 15)	3,241	–	–	3,241
Total financial assets	**15,708**	**10,780**	**1,620**	**28,108**
Liabilities				
Borrowings (see note 21)	34,641	–	–	34,641
Non-current other financial liabilities (see note 29)	87	623	–	710
Accounts payable (see note 25)	13,139	13,806	–	26,945
Other financial liabilities (see note 29)	–	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.

2020 US$ million	Amortised cost	FVTPL[1]	FVTOCI[2]	Total
Assets				
Other investments (see note 29)	–	86	1,647	1,733
Non-current other financial assets (see note 29)	–	1,106	–	1,106
Advances and loans (see note 12)	994	404	–	1,398
Accounts receivable (see note 14)	7,696	4,598	–	12,294
Other financial assets (see note 29)	–	1,998	–	1,998
Cash and cash equivalents (see note 15)	1,498	–	–	1,498
Total financial assets	**10,188**	**8,192**	**1,647**	**20,027**
Liabilities				
Borrowings (see note 21)	37,479	–	–	37,479
Non-current other financial liabilities (see note 29)	100	588	–	688
Accounts payable (see note 25)	11,113	11,264	–	22,377
Other financial liabilities (see note 29)	–	4,276	–	4,276
Total financial liabilities	**48,692**	**16,128**	**–**	**64,820**

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

Notes to the financial statements continued

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 2021 and 2020 were as follows:

2021 US$ million	Amounts eligible for set off under netting agreements Gross amount	 Amounts offset	 **Net amount**	Related amounts not set off under netting agreements 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.

2020 US$ million	Amounts eligible for set off under netting agreements Gross amount	 Amounts offset	 **Net amount**	Related amounts not set off under netting agreements 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]	11,575	(9,678)	**1,897**	(246)	(925)	726	**1,207**	**3,104**
Derivative liabilities[1]	(12,941)	9,678	**(3,263)**	246	2,389	(628)	**(1,701)**	**(4,964)**

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.

Notes to the financial statements continued

29. Fair value measurements continued

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.

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 2021 and 2020. 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

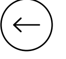
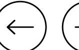
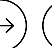
2021

US$ million	Level 1	Level 2	Level 3	**Total**
Financial assets				
Accounts receivable (see note 14)	–	5,269	175	**5,444**
Deferred consideration (see note 12)	–	–	135	**135**
Other investments (see note 11)	1,536	84	–	**1,620**
Financial assets	**1,536**	**5,353**	**310**	**7,199**
Other financial assets				
Commodity related contracts				
Futures	180	118	–	**298**
Options	133	31	–	**164**
Swaps	256	254	40	**550**
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 (see note 28)	**569**	**3,381**	**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 (see note 28)	**–**	**458**	**–**	**458**
Total	**2,105**	**9,192**	**996**	**12,293**

2020

US$ million	Level 1	Level 2	Level 3	**Total**
Financial assets				
Accounts receivable (see note 14)	–	4,468	130	**4,598**
Deferred consideration (see note 12)	–	–	302	**302**
Other investments (see note 11)	1,691	42	–	**1,733**
Financial assets	**1,691**	**4,510**	**432**	**6,633**
Other financial assets				
Commodity related contracts				
Futures	107	75	–	**182**
Options	19	13	–	**32**
Swaps	142	249	–	**391**
Physical forwards	–	916	258	**1,174**
Financial contracts				
Cross currency swaps	–	219	–	**219**
Current other financial assets (see note 28)	**268**	**1,472**	**258**	**1,998**
Non-current other financial assets				
Cross currency swaps	–	529	–	**529**
Foreign currency and interest rate contracts	–	569	–	**569**
Purchased call options over Glencore shares[1]	–	8	–	**8**
Non-current other financial assets (see note 28)	**–**	**1,106**	**–**	**1,106**
Total	**1,959**	**7,088**	**690**	**9,737**

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

Notes to the financial statements continued

29. Fair value measurements continued

Financial liabilities

2021

US$ million	Level 1	Level 2	Level 3	**Total**
Financial liabilities				
Accounts payable (see note 25)	–	13,806	–	**13,806**
Current financial liabilities	**–**	**13,806**	**–**	**13,806**
Other financial liabilities				
Commodity related contracts				
Futures	1,993	344	–	**2,337**
Options	52	92	–	**144**
Swaps	999	175	–	**1,174**
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 (see note 28)	**3,044**	**2,798**	**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**
Deferred consideration	–	–	49	**49**
Embedded call options over Glencore shares[2]	–	61	–	**61**
Non-current other financial liabilities (see note 28)	**–**	**404**	**219**	**623**
Total	**3,044**	**17,008**	**454**	**20,506**

2020

US$ million	Level 1	Level 2	Level 3	**Total**
Financial liabilities				
Accounts payable (see note 25)	–	11,264	–	**11,264**
Current financial liabilities	**–**	**11,264**	**–**	**11,264**
Other financial liabilities				
Commodity related contracts				
Futures	2,652	264	–	**2,916**
Options	29	14	–	**43**
Swaps	228	224	–	**452**
Physical forwards	–	537	252	**789**
Financial contracts				
Cross currency swaps	–	76	–	**76**
Current other financial liabilities (see note 28)	**2,909**	**1,115**	**252**	**4,276**
Non-current other financial liabilities				
Cross currency swaps	–	171	–	**171**
Foreign currency and interest rate contracts	–	181	–	**181**
Non-discretionary dividend obligation[1]	–	–	150	**150**
Option over non-controlling interest in Ale	–	–	22	**22**
Deferred consideration	–	–	56	**56**
Embedded call options over Glencore shares[2]	–	8	–	**8**
Non-current other financial liabilities (see note 28)	**–**	**360**	**228**	**588**
Total	**2,909**	**12,739**	**480**	**16,128**

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 (modelled mine life of 11 years as at 31 December 2021) and has no fixed repayment date and is not cancellable within 12 months.

2 Embedded call option bifurcated from the 2025 convertible bond.

Notes to the financial statements continued

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	Accounts Receivable	Physical forwards	Swaps	Other	**Total Level 3**
1 January 2021	130	6	–	74	**210**
Total gain recognised in revenue	–	117	337	–	**454**
Total gain/(loss) recognised in cost of goods sold	–	389	(297)	–	**92**
Non-discretionary dividend obligation	–	–	–	2	**2**
Fair value movement of deferred consideration	186	–	–	(160)	**26**
Realised	(141)	(101)	–	–	**(242)**
31 December 2021	**175**	**411**	**40**	**(84)**	**542**
1 January 2020	37	109	–	(211)	**(65)**
Total gain recognised in revenue	–	1	–	–	**1**
Total loss recognised in cost of goods sold	–	(63)	–	–	**(63)**
Non-discretionary dividend obligation	–	–	–	11	**11**
Option over non-controlling interest	–	–	–	14	**14**
Fair value movement of deferred consideration	133	–	–	260	**393**
Realised	(40)	(41)	–	–	**(81)**
31 December 2020	**130**	**6**	**–**	**74**	**210**

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

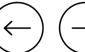
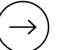
Some of the Group's financial assets and financial liabilities are measured at fair value at the end of each reporting period.

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.

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.

Notes to the financial statements continued

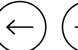
29. Fair value measurements continued

US$ million			**2021**	2020
Swaps – Level 3		Assets	**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 $4 million adjustment to the current carrying value.			
Physical Forwards – Level 3		Assets	**646**	**258**
		Liabilities	**(235)**	**(252)**
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.			
Deferred consideration (Mototolo) – Level 3		Assets	**282**	**391**
		Liabilities	**–**	–
Valuation techniques and key inputs:	Discounted cash flow model			
Significant and other unobservable inputs:	– Long-term forecast commodity prices; – 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 $27 million adjustment to the current carrying value.			
Deferred consideration (Orion) – Level 3		Assets	**28**	**41**
		Liabilities	**–**	–
Valuation techniques and key inputs:	Discounted cash flow model			
Significant and other unobservable inputs:	– Estimated production plan; – Long-term forecast commodity prices; – 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 gold price would result in no adjustment to the current carrying value of the asset, while a 10% decrease in gold price would result in a $9 million negative adjustment			

Notes to the financial statements continued

29. Fair value measurements continued

US$ million			**2021**	2020
Non-discretionary dividend obligation – Level 3		Assets	**–**	–
		Liabilities	**(148)**	(150)
Valuation techniques:	Discounted cash flow model			
Significant and other unobservable inputs:	– 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 $94 million adjustment to the current carrying value.			
Option over non-controlling interest in Ale – Level 3		Assets	**–**	–
		Liabilities	**(22)**	(22)
Valuation techniques and key inputs:	Discounted cash flow model			
Significant unobservable inputs:	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.			



Notes to the financial statements continued

30. Auditor's remuneration

US$ million	**2021**	2020
Remuneration in respect of the audit of Glencore's consolidated financial statements	3	3
Other audit fees, primarily in respect of audits of accounts of subsidiaries	19	19
Audit-related assurance services[1]	3	2
Total audit and related assurance fees	**25**	**24**
Transaction services	–	1
Taxation compliance services	–	1
Other taxation advisory services	–	1
Other assurance services[2]	1	1
Total non-audit fees	**1**	**4**
Total professional fees	**26**	**28**

1 Audit-related assurance services primarily related to interim reviews of the Group's half-year accounts as well as bond issuances and comfort letters.

2 Other assurance services primarily comprises assurance in respect of certain aspects of the Group's sustainability reporting.

31. 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 2021, $1,111 million (2020: $859 million), of which 86% (2020: 87%) 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 2021, $118 million (2020: $128 million) of such development expenditures are to be incurred, of which 27% (2020: 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 2021, $8,965 million (2020: $6,334 million) of procurement and $4,353 million (2020: $4,138 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 ($410 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.

Cerrejon acquisition commitments

In June 2021, Glencore entered into agreements to acquire the remaining 66.67% interest in the Cerrejón joint venture that it does not own. The transaction closed in January 2022, refer to note 35. The purchase price consideration of $588 million was based on an economic effective date of 31 December 2020 then being subject to purchase price adjustments calculated at closing. After taking into account the dividends generated during 2021, together with certain other adjustments, the completion cash payment by Glencore amounted to $101 million.

Notes to the financial statements continued

32. Contingent liabilities

There were no corporate guarantees in favour of third parties as at 31 December 2021 (2020: 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 2021 and 2020, 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 is subject to various legal and regulatory proceedings and as at December 2021 a provision for certain of these matters of $1,500 million has been recognised.

At 31 December 2021, taking account of all available evidence, the Committee concluded that, with respect only to the OAG and Dutch 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.

In addition to any pending investigations as described, other authorities may commence investigations or bring proceedings against the Group in connection with the matters under investigation and the Group may be the subject of legal claims brought by other parties in connection with these matters, including class action suits. Taking into account all available evidence, the Committee does not consider it probable that a present obligation existed in relation to these potential additional investigations or 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.

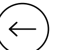
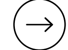
Environmental contingencies

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.

33. 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 2021, sales and purchases with associates and joint ventures amounted to $3,828 million (2020: $2,710 million) and $6,469 million (2020: $5,033 million) respectively.

Notes to the financial statements continued

33. Related party transactions continued

Remuneration of key management personnel

Glencore's key management personnel are the members of the Board of Directors, CEO, CFO, General Counsel and Head of the Industrial activities segment. The remuneration of Directors and other members of key management personnel recognised in the consolidated statement of income including salaries and other current employee benefits amounted to $27 million (2020: $19 million). Amounts expensed relating to long-term benefits or share-based payments to key management personnel amounted to $1 million (2020: $Nil). Further details on remuneration of Directors are set out in the Directors' remuneration report on page 101.

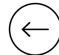
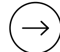
34. Principal subsidiaries with material non-controlling interests

Non-controlling interest is comprised of the following:

US$ million	**2021**	2020
Volcan	(106)	(136)
Kazzinc	1,368	1,362
Koniambo	(5,180)	(4,098)
Kamoto Copper Company (KCC)	474	232
Mopani[1]	–	(1,009)
Other[2]	430	414
Total	**(3,014)**	**(3,235)**

1 See note 26.

2 Other comprises various subsidiaries in which no individual balance attributable to non-controlling interests is material.

Notes to the financial statements continued

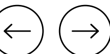
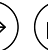
34. Principal subsidiaries with material non-controlling interests continued

Summarised financial information in respect of Glencore's subsidiaries that have material non-controlling interest as at 31 December 2021 and 2020, reflecting 100% of the underlying subsidiary's relevant figures, is set out below.

US$ million	Mopani[1]	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 %	0.0%	30.3%	51.0%	25.0%	76.7%
2021					
Revenue	125	3,502	242	3,899	981
Expenses	(1,155)	(2,940)	(2,364)	(2,820)	(941)
Net (loss)/profit for the year	**(1,030)**	**562**	**(2,122)**	**1,079**	**40**
(Loss)/profit attributable to owners of the Company	(1,027)	392	(1,040)	837	9
(Loss)/profit attributable to non-controlling interests	(3)	170	(1,082)	242	31
Total comprehensive (loss)/income for the year	**(1,030)**	**562**	**(2,122)**	**1,079**	**40**
Dividends paid to non-controlling interests	–	(150)	–	–	–
Net cash inflow/(outflow) from operating activities	56	837	(165)	1,708	318
Net cash outflow from investing activities	(4)	(318)	(13)	(301)	(174)
Net cash (outflow)/inflow from financing activities	(26)	(394)	193	(1,294)	(28)
Total net cash inflow	**26**	**125**	**15**	**113**	**116**

1 See note 26.

US$ million	Mopani	Kazzinc	Koniambo	KCC	Volcan
31 December 2020					
Non-current assets	–	4,407	1,594	5,194	1,793
Current assets	1,083	1,167	307	1,668	293
Total assets	**1,083**	**5,574**	**1,901**	**6,862**	**2,086**
Non-current liabilities	4,601	737	12,719	9,983	1,350
Current liabilities	197	333	91	1,566	348
Total liabilities	**4,798**	**1,070**	**12,810**	**11,549**	**1,698**
Net assets	**(3,715)**	**4,504**	**(10,909)**	**(4,687)**	**388**
Equity attributable to owners of the Company	(2,706)	3,142	(6,811)	(4,919)	524
Non-controlling interest	(1,009)	1,362	(4,098)	232	(136)
Non-controlling interest %	26.9%	30.3%	51.0%	25.0%	76.7%
2020					
Revenue	731	3,032	239	2,431	547
Expenses	(1,649)	(2,418)	(1,201)	(2,080)	(2,307)
Net (loss)/profit for the year	**(918)**	**614**	**(962)**	**351**	**(1,760)**
(Loss)/profit attributable to owners of the Company	(616)	428	(471)	256	(413)
(Loss)/profit attributable to non-controlling interests	(302)	186	(491)	95	(1,347)
Total comprehensive (loss)/income for the year	**(918)**	**614**	**(962)**	**351**	**(1,760)**
Dividends paid to non-controlling interests	–	(120)	–	–	–
Net cash (outflow)/inflow from operating activities	(19)	1,010	(194)	144	129
Net cash outflow from investing activities	(84)	(388)	(36)	(472)	(117)
Net cash inflow/(outflow) from financing activities	103	(597)	233	146	67
Total net cash inflow/(outflow)	**–**	**25**	**3**	**(182)**	**79**

Notes to the financial statements continued

35. Subsequent events

- On 11 January 2022, the Group completed the acquisition of the remaining 66.67% interest in Cerrejon 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 $101 million.

  The acquisition increases Glencore's total ownership to 100% providing it with the ability to exercise control. As a result, effective the acquisition date, Glencore will fully consolidate Cerrejon which as at 31 December 2021 reported assets and liabilities of:

US$ million	**Cerrejón**
Non-current assets	2,033
Current assets	1,030
Non-current liabilities	(690)
Current liabilities	(509)
The above assets and liabilities include the following:	
Cash and cash equivalents	511
Current financial liabilities[1]	(27)
Non-current financial liabilities[1]	(14)
Net assets 31 December 2021	**1,864**

1 Financial liabilities exclude trade, other payables and provisions.

  Due to the timing of the transaction, management is in the preliminary stages of determining fair values of the assets and liabilities acquired and the associated accounting for the acquisition. Certain disclosures in terms of IFRS 3 relating to the business combination such as the estimated fair value of net assets acquired have not been presented. Notwithstanding these circumstances, should the above book value of net assets approximate fair value and, adjusting for the consideration paid and the 31 December 2021 carrying value of our 33.33% interest (see note 11), a gain on acquisition of some $1.2 billion could result.

- 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. Glencore complies with all sanctions applicable to our business activities. As noted in our announcement on 1 March 2022, we have no operational footprint in Russia and our trading exposure is not material. We are reviewing all our business activities in the country including our equity stakes in En+ and Rosneft – refer note 11. As at close of trading on 28 February 2022, the fair value of these equity investments was $645 million and $183 million respectively. On 3 March 2022, both companies were suspended from trading on the London Stock Exchange.

Notes to the financial statements continued

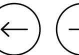
36. Principal operating, finance and industrial subsidiaries and investments

	Country of incorporation	**% interest 2021**	% interest 2020	Main activity
Principal subsidiaries				
Industrial activities				
Cobar Management Pty Limited	Australia	100.0	100.0	Copper production
Compania Minera Lomas Bayas	Chile	100.0	100.0	Copper production
Complejo Metalurgico Altonorte S.A.	Chile	100.0	100.0	Copper production
Compania Minera Antapaccay S.A.	Peru	100.0	100.0	Copper production
Pasar Group	Philippines	78.2	78.2	Copper production
Glencore Recycling Inc	USA	100.0	100.0	Copper production
Mopani Copper Mines plc	Zambia	–	73.1	Copper production
Polymet Mining Corp.	Canada	71.4	71.6	Copper production
Kamoto Copper Company SA[1]	DRC	75.0	75.0	Copper/Cobalt production
Mutanda Group	DRC	100.0	100.0	Copper/Cobalt production
Mount Isa Mines Limited	Australia	100.0	100.0	Copper/Zinc/Lead production
Kazzinc Ltd	Kazakhstan	69.7	69.7	Copper/Zinc/Lead production
Zhairemsky GOK JSC	Kazakhstan	69.7	69.7	Copper/Zinc/Lead production
Altyntau Kokshetau JSC	Kazakhstan	69.7	69.7	Gold production
African Carbon Producers (Pty) Ltd	South Africa	100.0	100.0	Char production
African Fine Carbon (Pty) Ltd	South Africa	100.0	100.0	Char production
Char Technology (Pty) Ltd	South Africa	100.0	100.0	Char production
Sphere Minerals Limited	Australia	100.0	100.0	Iron Ore exploration
Britannia Refined Metals Limited	UK	100.0	100.0	Lead production
Access World Group	Switzerland	100.0	100.0	Logistics services
Murrin Murrin Operations Pty Limited	Australia	100.0	100.0	Nickel production
Koniambo Nickel S.A.S.[2]	New Caledonia	49.0	49.0	Nickel production
Glencore Nikkelverk AS	Norway	100.0	100.0	Nickel production
McArthur River Mining Pty Ltd	Australia	100.0	100.0	Zinc production
Nordenhamer Zinkhütte GmbH	Germany	100.0	100.0	Zinc production
Asturiana de Zinc S.A.U	Spain	100.0	100.0	Zinc production
Volcan Companja Minera S.A.A.[3]	Peru	23.3	23.3	Zinc production
AR Zinc Group	Argentina	–	100.0	Zinc/Lead production
Portovesme S.r.L.	Italy	100.0	100.0	Zinc/Lead production
Empresa Minera Los Quenuales S.A.	Peru	97.6	97.6	Zinc/Lead production
Sinchi Wayra Group	Bolivia	100.0	100.0	Zinc/Tin production

1 Refer to note 34.

2 The Group has control of Koniambo Nickel S.A.S. as a result of the ability to direct the key activities of the operation and to appoint key management personnel provided by the terms of the financing arrangements underlying the Koniambo project.

3 The Group has control of Volcan Compania Minera S.A.A. as a result of the ability to control the entity through the voting of its 63.0% of the voting shares (Class A); the economic interest is diluted by the outstanding non-voting shares (Class B).



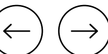
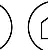
Notes to the financial statements continued

36. Principal operating, finance and industrial subsidiaries and investments continued

	Country of incorporation	**% interest 2021**	% interest 2020	Main activity
Industrial activities				
Oakbridge Pty Limited	Australia	98.2	83.0	Coal production
Rolleston Coal Holdings Pty Limited	Australia	100.0	100.0	Coal production
Mangoola Coal Operations Pty Limited	Australia	100.0	100.0	Coal production
Mt Owen Pty Limited	Australia	100.0	100.0	Coal production
NC Coal Company Pty Limited	Australia	100.0	100.0	Coal production
Ravensworth Operations Pty Ltd	Australia	100.0	100.0	Coal production
Ulan Coal Mines Ltd	Australia	100.0	100.0	Coal production
Prodeco group	Colombia	100.0	100.0	Coal production
Izimbiwa Coal (Pty) Ltd[4]	South Africa	50.0	49.9	Coal production
Umcebo Mining (Pty) Ltd[5]	South Africa	48.7	48.7	Coal production
Tavistock Collieries (Pty) Ltd	South Africa	100.0	100.0	Coal production
Glencore Exploration Cameroon Ltd	Bermuda	100.0	100.0	Oil production
Glencore Exploration (EG) Ltd	Bermuda	100.0	100.0	Oil production
Petrochad (Mangara) Limited	Bermuda	100.0	100.0	Oil exploration/production
Astron Energy (Pty) Ltd	South Africa	72.0	75.0	Oil refining / distribution
Astron Energy Botswana (Pty) Ltd	Botswana	100.0	100.0	Oil distribution
Marketing activities and other operating and finance				
Xstrata Limited	UK	100.0	100.0	Holding
Glencore Australia Investment Holdings Pty Ltd	Australia	100.0	100.0	Holding
Glencore Operations Australia Pty Limited	Australia	100.0	100.0	Holding
Glencore Queensland Limited	Australia	100.0	100.0	Holding
Glencore Investment Pty Ltd	Australia	100.0	100.0	Holding
Glencore Australia Holdings Pty Ltd	Australia	100.0	100.0	Finance
Glencore Finance (Bermuda) Ltd	Bermuda	100.0	100.0	Finance
Alesat Combustiveis S.A.	Brazil	88.0	88.0	Oil distribution
Topley Corporation	B.V.I.	100.0	100.0	Ship owner
Glencore Finance (Europe) Limited	Jersey	100.0	100.0	Finance
Glencore Capital Finance DAC	Ireland	100.0	100.0	Finance
Finges Investment B.V.	Netherlands	100.0	100.0	Finance
Glencore (Schweiz) AG	Switzerland	100.0	100.0	Finance
Glencore Group Funding Limited	UAE	100.0	100.0	Finance
Glencore Funding LLC	USA	100.0	100.0	Finance
Glencore Australia Oil Pty Limited	Australia	100.0	100.0	Operating
Glencore Canada Corporation	Canada	100.0	100.0	Operating
Glencore Singapore Pte Ltd	Singapore	100.0	100.0	Operating
ST Shipping & Transport Pte Ltd	Singapore	100.0	100.0	Operating
Glencore AG	Switzerland	100.0	100.0	Operating
Glencore International AG	Switzerland	100.0	100.0	Operating
Glencore Commodities Ltd	UK	100.0	100.0	Operating
Glencore Energy UK Ltd	UK	100.0	100.0	Operating
Glencore UK Ltd	UK	100.0	100.0	Operating

4 Glencore has the ability to exercise control over Izimbiwa through the ability to direct the key activities of the operations and to appoint key management personnel provided by the terms of the shareholder's agreement.

5 Although Glencore holds less than 50% of the voting rights, it has the ability to exercise control over Umcebo as a result of shareholder agreements which provide Glencore the ability to control the Board of Directors.

Notes to the financial statements continued

36. Principal operating, finance and industrial subsidiaries and investments continued

	Country of incorporation	**% interest 2021**	% interest 2020	Main activity
Principal joint ventures[6]				
Viterra Group	Jersey	49.9	49.9	Agriculture business
Clermont Coal Joint Venture	Australia	37.1	37.1	Coal production
BaseCore Metals LP	Canada	50.0	50.0	Copper production
Compania Minera Dona Ines de Collahuasi	Chile	44.0	44.0	Copper production
El Aouj Joint Venture	Mauritania	50.0	50.0	Iron Ore production
Principal joint operation and other unincorporated arrangement[7]				
Bulga Joint Venture	Australia	85.9	72.6	Coal production
Cumnock Joint Venture	Australia	90.0	90.0	Coal production
Hail Creek Joint Venture	Australia	84.7	84.7	Coal production
Hunter Valley Operations Joint Venture	Australia	49.0	49.0	Coal production
Liddell Joint Venture	Australia	67.5	67.5	Coal production
Oaky Creek Coal Joint Venture	Australia	55.0	55.0	Coal production
United Wambo Joint Venture	Australia	47.5	47.5	Coal production
ARM Coal (Pty) Ltd	South Africa	49.0	49.0	Coal production
Goedgevonden Joint Venture	South Africa	74.0	74.0	Coal production
Ernest Henry Mining Pty Ltd	Australia	70.0	70.0	Copper production
Glencore Merafe Pooling and Sharing Joint Venture	South Africa	79.5	79.5	Ferroalloys production
Rhovan Pooling and Sharing Joint Venture	South Africa	74.0	74.0	Vanadium production

6 The principal joint arrangements are accounted for as joint ventures as the shareholder agreements do not provide the Group the ability to solely control the entities.

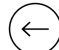
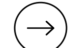
7 Classified as joint operations under IFRS 11, as these joint arrangements convey a direct right to a share of the underlying operations' assets, liabilities, revenues and expenses. The Hail Creek interest is an 'other unincorporated arrangement' accounted for similar to a joint operation.

	Country of incorporation	**% interest 2021**	% interest 2020	Main activity
Principal associates				
Carbones del Cerrejon LLC	Colombia	33.3	33.3	Coal production
Port Kembla Coal Terminal Limited	Australia	16.4	13.9	Coal terminal
Newcastle Coal Shippers Pty Ltd	Australia	50.2	35.7	Coal terminal
Wiggins Island Coal Export Terminal	Australia	25.0	25.0	Coal terminal
Richards Bay Coal Terminal Company Limited	South Africa	19.3	19.3	Coal terminal
Century Aluminum Company[8]	USA	46.4	47.0	Aluminium production
PT CITA Mineral Investindo Tbk	Indonesia	31.7	30.2	Alumina production
HG Storage International Limited	Jersey	49.0	49.0	Oil storage
Noranda Income Fund	Canada	25.0	25.0	Zinc production
Trevali Mining Corporation	Canada	26.3	26.3	Zinc production
Compania Minera Antamina S.A.	Peru	33.8	33.8	Zinc/Copper production
Recylex S.A.	France	29.8	29.8	Zinc/Lead production
Minera Agua Rica Alumbrera Limited	Argentina	25.0	25.0	Copper production

8 Represents the Group's economic interest in Century, comprising 42.9% (2020: 42.9%) voting interest and 3.4% non-voting interest (2020: 4%). Century is publicly traded on NASDAQ under the symbol CENX.

	Country of incorporation	**% interest 2021**	% interest 2020	Main activity
Other investments				
EN+ GROUP IPJSC	Russia	10.6	10.6	Aluminium production
PAO NK RussNeft[9]	Russia	25.0	25.0	Oil production

9 In December 2021, Glencore agreed to the sale of its interest in PAO NK Russneft. Completion of the sale is conditional on receipt of certain regulatory approvals and is expected to occur in H1 2022.

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.

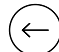
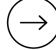
Proportionate adjustment

For internal reporting and analysis, management evaluates the performance of Antamina copper/zinc mine (34% owned), Cerrejón coal mine (33% 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.

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.

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.

Alternative performance measures continued

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	**2021**	2020
Revenue – Marketing activities	181,764	124,137
Revenue – Industrial activities	60,810	41,453
Intersegment eliminations	(34,642)	(20,803)
Revenue - segmental	**207,932**	**144,787**
Proportionate adjustment material associates and joint ventures – revenue	(5,162)	(2,996)
Proportionate adjustment Volcan – revenue	981	547
Revenue – reported measure	**203,751**	**142,338**

Share of income from material associates and joint ventures

US$ million	**2021**	2020
Associates' and joint ventures' Adjusted EBITDA	4,001	2,061
Depreciation and amortisation	(687)	(683)
Associates' and joint ventures' Adjusted EBIT	3,314	1,378
Impairment, net of tax[1]	–	(445)
Net finance costs	4	(56)
Income tax expense	(1,211)	(524)
	(1,207)	(1,025)
Share of income from relevant material associates and joint ventures	**2,107**	**353**
Share of income from other associates and joint ventures	511	91
Share of income from associates and joint ventures[2]	**2,618**	**444**

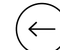
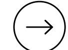
1 In 2020, Industrial activities segment comprised an impairment of $445 million, net of taxes of $211 million, relating to Cerrejón, resulting from lower API2 coal price assumptions and reduced production estimates, including updated mine-life approval expectations.

2 Comprises share in earnings of $492 million (2020: $197 million) from Marketing activities and share in earnings of $2,126 million (2020: $247 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.

Alternative performance measures continued

Adjusted EBITDA consists of Adjusted EBIT plus depreciation and amortisation, including the related Proportionate adjustments. See reconciliation table below.

US$ million	**2021**	2020
Reported measures		
Revenue	203,751	142,338
Cost of goods sold	(191,370)	(138,640)
Selling and administrative expenses	(2,115)	(1,681)
Share of income from associates and joint ventures	2,618	444
Dividend income	23	32
	12,907	**2,493**
Adjustments to reported measures		
Share of associates' significant items	11	92
Movement in unrealised inter-segment profit elimination	549	760
Proportionate adjustment material associates and joint ventures – net finance, impairment and income tax expense	1,207	1,025
Proportionate adjustment Volcan – net finance, income tax expense and non-controlling interests	(179)	46
Adjusted EBIT	**14,495**	**4,416**
Depreciation and amortisation	6,335	6,671
Proportionate adjustment material associates and joint ventures – depreciation	687	683
Proportionate adjustment Volcan - depreciation	(194)	(210)
Adjusted EBITDA	**21,323**	**11,560**

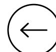
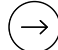
Significant items

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 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 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)
	(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.

Alternative performance measures continued

Reconciliation of net significant items 2020

US$ million	Gross significant charges	Non-controlling interests' share	Significant items tax	**Equity holders' share**
Share of Associates' significant items[1]	(92)	–	–	(92)
Movement in unrealised inter-segment profit elimination[1]	(760)	–	80	(680)
Loss on disposals of non-current assets[2]	(36)	–	–	(36)
Other expense – net[3]	(173)	(12)	(69)	(254)
Tax significant items in their own right[4]	–	–	479	479
	(1,061)	(12)	490	(583)
Impairments attributable to equity holders				
Impairments[5]	(3,600)	350	270	(2,980)
Impairment Volcan[5]	(2,347)	1,251	716	(380)
Impairments - net, related to material associates and joint ventures[6]	(445)	–	–	(445)
	(6,392)	1,601	986	(3,805)
Total significant items	**(7,453)**	**1,589**	**1,476**	**(4,388)**

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 Tax expenses related to certain recognition of tax adjustments ($724 million), offset by tax expenses related to foreign exchange fluctuations ($76 million) and tax losses not recognised ($169 million), see note 8 of the financial statements.
5 See note 7 of the financial statements.
6 See Proportionate adjustment reconciliation above.

Net income attributable to equity shareholder pre-significant items

Net income attributable to equity shareholders 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	**2021**	2020
Income/(loss) attributable to equity holders of the Parent	4,974	(1,903)
Significant items	4,151	4,388
Income attributable to equity holders of the Parent pre-significant items	**9,125**	**2,485**

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 2021, $24,795 million (2020: $19,584 million) of inventories were considered readily marketable. This comprises $16,073 million (2020: $12,260 million) of inventories carried at fair value less costs of disposal and $8,722 million (2020: $7,324 million) carried at the lower of cost or net realisable value. Total readily marketable inventories includes $125 million (2020: $128 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.

Alternative performance measures continued

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	**31,400**	**125**	**(688)**	**30,837**
Less: Readily marketable inventories	(24,670)	(125)	–	(24,795)
Net debt	**6,730**	**–**	**(688)**	**6,042**
Adjusted EBITDA				**21,323**
Net debt to Adjusted EBITDA				**0.28**

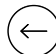
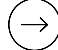
Net funding/net debt at 31 December 2020

US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	Adjusted measure
Non-current borrowings	29,227	210	(889)	28,548
Current borrowings	8,252	151	(33)	8,370
Total borrowings	**37,479**	**361**	**(922)**	**36,918**
Less: cash and cash equivalents	(1,498)	(107)	115	(1,490)
Net funding	**35,981**	**254**	**(807)**	**35,428**
Less: Readily marketable inventories	(19,456)	(128)	–	(19,584)
Net debt	**16,525**	**126**	**(807)**	**15,844**
Adjusted EBITDA				**11,560**
Net debt to Adjusted EBITDA				**1.37**

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	**2021**	2020
Capital expenditure – Marketing activities	801	488
Capital expenditure – Industrial activities	4,423	4,082
Capital expenditure - segmental	**5,224**	**4,570**
Proportionate adjustment material associates and joint ventures – capital expenditure	(713)	(543)
Proportionate adjustment Volcan – capital expenditure	197	117
Capital expenditure – reported measure	**4,708**	**4,144**

Alternative performance measures continued

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.

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)**

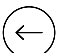
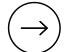
2020 US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Purchase of property, plant and equipment	(3,569)	(513)	105	(3,977)
Proceeds from sale of property, plant and equipment	52	4	–	56
Net purchase and sale of property, plant and equipment	**(3,517)**	**(509)**	**105**	**(3,921)**

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.

-

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%**

Alternative performance measures continued

2020 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	8,568	–	–	8,568
Addback EBITDA of relevant material associates and joint ventures	–	2,061	(131)	1,930
Non-cash adjustments included within EBITDA	–	15	–	15
Adjusted cash generated by operating activities before working capital changes, interest and tax	8,568	2,076	(131)	10,513
Income taxes paid	(820)	(383)	14	(1,189)
Interest received	100	1	(1)	100
Interest paid	(1,174)	(12)	44	(1,142)
Dividends received from associates and joint ventures	1,015	(972)	–	43
Funds from operations (FFO)	**7,689**	**710**	**(74)**	**8,325**
Net debt				**15,844**
FFO to net debt				**52.5%**

Other reconciliations

Available committed liquidity[1]

US$ million	**2021**	2020
Cash and cash equivalents – reported	3,241	1,498
Proportionate adjustment – cash and cash equivalents	140	(8)
Headline committed syndicated revolving credit facilities	11,222	14,625
Amount drawn under syndicated revolving credit facilities	(2,543)	(4,766)
Amounts drawn under U.S. commercial paper programme	(1,764)	(1,090)
Total	**10,296**	**10,259**

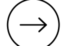
1 Presented on an adjusted measured basis.

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
Working capital changes	(5,125)	(179)	15	(5,289)
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 received 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**

Cash flow related adjustments 2020

US$ million	Reported measure	Proportionate adjustment material associates and joint ventures	Proportionate adjustment Volcan	**Adjusted measure**
Funds from operations (FFO)	7,689	710	(74)	8,325
Working capital changes	(4,010)	(314)	6	(4,318)
Net cash received from disposal of subsidiaries	(222)	–	–	(222)
Purchase of investments	(122)	–	–	(122)
Proceeds from sale of investments	135	–	–	135
Purchase of property, plant and equipment	(3,569)	(513)	105	(3,977)
Proceeds from sale of property, plant and equipment	52	4	–	56
Margin receipt in respect of financing related hedging activities	1,040	–	–	1,040
Proceeds paid on acquisition of non-controlling interests in subsidiaries	(56)	–	–	(56)
Return of capital/distributions to non-controlling interests	(127)	–	–	(127)
Cash movement in net funding	**810**	**(113)**	**37**	**734**



Other reconciliations continued

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 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 expense 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/(income) 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/(income) on the basis of the income statement	**3,163**	**(137)**	**3,026**

1 See table above.

Reconciliation of tax expense 2020

US$ million	**Total**
Adjusted EBIT, pre-significant items	4,416
Net finance costs	(1,453)
Adjustments for:	
Net finance costs from material associates and joint ventures	(56)
Proportional adjustment and net finance costs - Volcan	84
Share of income from other associates pre-significant items	(183)
Profit on a proportionate consolidation basis before tax and pre-significant items	**2,808**
Income tax expense, pre-significant items	(306)
Adjustments for:	
Tax expense from material associates and joint ventures	(524)
Tax credit from Volcan	(3)
Tax expense on a proportionate consolidation basis	**(833)**
Applicable tax rate	**29.7%**

US$ million	Pre-significant tax expense	Significant items tax[1]	**Total tax expense**
Tax expense/(credit) on a proportionate consolidation basis	833	(971)	(138)
Adjustment in respect of material associates and joint ventures – tax	(524)	211	(313)
Adjustment in respect of Volcan – tax	(3)	(716)	(719)
Tax expense/(credit) on the basis of the income statement	**306**	**(1,476)**	**(1,170)**

1 See table above.

Production by quarter – Q4 2020 to Q4 2021

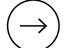
Metals and minerals

Production from own sources – Total[1]

		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change YTD 21 vs YTD 20 %	Change Q4 21 vs Q4 20 %
Copper	kt	323.4	301.2	296.8	297.5	300.2	1,195.7	1,258.1	(5)	(7)
Cobalt	kt	5.8	6.8	8.0	8.6	7.9	31.3	27.4	14	36
Zinc	kt	310.3	282.6	299.2	274.0	262.0	1,117.8	1,170.4	(4)	(16)
Lead	kt	65.1	55.3	61.7	56.4	48.9	222.3	259.4	(14)	(25)
Nickel	kt	28.4	25.2	22.5	23.4	31.2	102.3	110.2	(7)	10
Gold	koz	261	224	199	170	216	809	916	(12)	(17)
Silver	koz	9,546	7,761	8,223	7,810	7,725	31,519	32,766	(4)	(19)
Ferrochrome	kt	378	399	374	298	397	1,468	1,029	43	5
Coal	mt	22.7	24.5	24.2	27.6	27.0	103.3	106.2	(3)	19
Oil (entitlement interest basis)	kbbl	584	1,071	1,486	1,588	1,129	5,274	3,944	34	93

Production from own sources – Copper assets[1]

			Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
African Copper (Katanga, Mutanda, Mopani)											
Katanga	Copper metal	kt	68.8	64.3	67.3	71.8	61.0	264.4	270.7	(2)	(11)
	Cobalt[2]	kt	5.0	5.8	6.1	6.9	5.0	23.8	23.9	–	–
Mutanda	Copper metal	kt	–	–	–	–	6.3	6.3	–	–	n.m.
	Cobalt[2]	kt	–	–	1.1	1.0	1.8	3.9	–	–	n.m.
Mopani	Copper metal	kt	10.3	6.5	–	–	–	6.5	30.3	(79)	(100)
	Total Copper metal	**kt**	**79.1**	**70.8**	**67.3**	**71.8**	**67.3**	**277.2**	**301.0**	**(8)**	**(15)**
	Total Cobalt[2]	**kt**	**5.0**	**5.8**	**7.2**	**7.9**	**6.8**	**27.7**	**23.9**	**16**	**36**
Collahuasi[3]	**Copper in concentrates**	**kt**	**59.2**	**71.7**	**74.2**	**65.3**	**66.0**	**277.2**	**276.8**	**–**	**11**
	Silver in concentrates	**koz**	**893**	**1,081**	**1,170**	**978**	**990**	**4,219**	**3,961**	**7**	**11**
	Gold in concentrates	**koz**	**9**	**10**	**12**	**11**	**12**	**45**	**53**	**(15)**	**33**
Antamina[4]	**Copper in concentrates**	**kt**	**40.7**	**35.8**	**37.4**	**38.1**	**38.7**	**150.0**	**127.7**	**17**	**(5)**
	Zinc in concentrates	**kt**	**44.9**	**38.0**	**42.2**	**38.9**	**34.6**	**153.7**	**142.4**	**8**	**(23)**
	Silver in concentrates	**koz**	**2,017**	**1,577**	**1,558**	**1,548**	**1,452**	**6,135**	**5,535**	**11**	**(28)**
Other South America (Antapaccay, Lomas Bayas)											
Antapaccay	Copper in concentrates	kt	51.5	43.5	40.5	41.3	45.5	170.8	185.6	(8)	(12)
	Gold in concentrates	koz	32	28	24	16	22	90	90	–	(31)
	Silver in concentrates	koz	355	327	303	336	416	1,382	1,298	6	17
Lomas Bayas	Copper metal	kt	18.0	15.8	16.4	15.6	16.5	64.3	74.1	(13)	(8)
	Total Copper metal	**kt**	**18.0**	**15.8**	**16.4**	**15.6**	**16.5**	**64.3**	**74.1**	**(13)**	**(8)**
	Total Copper in concentrates	**kt**	**51.5**	**43.5**	**40.5**	**41.3**	**45.5**	**170.8**	**185.6**	**(8)**	**(12)**
	Total Gold in concentrates and in doré	**koz**	**32**	**28**	**24**	**16**	**22**	**90**	**90**	**–**	**(31)**
	Total Silver in concentrates and in doré	**koz**	**355**	**327**	**303**	**336**	**416**	**1,382**	**1,298**	**6**	**17**

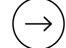


Production by quarter – Q4 2020 to Q4 2021 continued

Metals and minerals

Production from own sources – Copper assets[1] continued

			Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Australia (Ernest Henry, Cobar)[5]											
Ernest Henry											
	Copper metal	kt	12.0	11.0	10.9	12.2	10.7	44.8	49.2	(9)	(11)
	Gold	koz	25	18	21	10	15	64	93	(31)	(40)
	Silver	koz	48	53	46	51	45	195	198	(2)	(6)
Cobar	Copper in concentrates	kt	12.7	8.9	10.3	9.5	11.8	40.5	46.2	(12)	(7)
	Silver in concentrates	koz	144	95	111	117	136	459	516	(11)	(6)
	Total Copper metal	**kt**	**12.0**	**11.0**	**10.9**	**12.2**	**10.7**	**44.8**	**49.2**	**(9)**	**(11)**
	Total Copper in concentrates	**kt**	**12.7**	**8.9**	**10.3**	**9.5**	**11.8**	**40.5**	**46.2**	**(12)**	**(7)**
	Total Gold	**koz**	**25**	**18**	**21**	**10**	**15**	**64**	**93**	**(31)**	**(40)**
	Total Silver	**koz**	**192**	**148**	**157**	**168**	**181**	**654**	**714**	**(8)**	**(6)**
Total Copper department											
	Copper	**kt**	**273.2**	**257.5**	**257.0**	**253.8**	**256.5**	**1,024.8**	**1,060.6**	**(3)**	**(6)**
	Cobalt	**kt**	**5.0**	**5.8**	**7.2**	**7.9**	**6.8**	**27.7**	**23.9**	**16**	**36**
	Zinc	**kt**	**44.9**	**38.0**	**42.2**	**38.9**	**34.6**	**153.7**	**142.4**	**8**	**(23)**
	Gold	**koz**	**66**	**56**	**57**	**37**	**49**	**199**	**236**	**(16)**	**(26)**
	Silver	**koz**	**3,457**	**3,133**	**3,188**	**3,030**	**3,039**	**12,390**	**11,508**	**8**	**(12)**

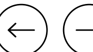


Production by quarter – Q4 2020 to Q4 2021 continued

Metals and minerals

Production from own sources – Zinc assets[1]

			Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Kazzinc											
	Zinc metal	**kt**	**38.7**	**37.8**	**33.2**	**34.2**	**42.7**	**147.9**	**167.5**	**(12)**	**10**
	Lead metal	**kt**	**7.6**	**4.3**	**4.9**	**5.7**	**4.9**	**19.8**	**25.6**	**(23)**	**(36)**
	Copper metal[6]	**kt**	**8.9**	**8.7**	**4.9**	**4.7**	**7.3**	**25.6**	**37.0**	**(31)**	**(18)**
	Gold	**koz**	**190**	**164**	**139**	**129**	**163**	**595**	**659**	**(10)**	**(14)**
	Silver	**koz**	**1,714**	**816**	**485**	**640**	**980**	**2,921**	**4,712**	**(38)**	**(43)**
Kazzinc – total production including third party feed											
	Zinc metal	*kt*	*75.2*	*76.2*	*70.6*	*68.2*	*76.4*	*291.4*	*298.2*	*(2)*	*2*
	Lead metal	*kt*	*30.1*	*28.7*	*26.4*	*27.1*	*28.9*	*111.1*	*125.0*	*(11)*	*(4)*
	Copper metal	*kt*	*14.7*	*15.2*	*11.0*	*10.1*	*15.9*	*52.2*	*60.7*	*(14)*	*8*
	Gold	*koz*	*294*	*233*	*211*	*212*	*269*	*925*	*965*	*(4)*	*(9)*
	Silver	*koz*	*6,399*	*5,759*	*5,132*	*5,185*	*6,378*	*22,454*	*22,140*	*1*	*–*
Australia (Mount Isa, McArthur River)[5]											
Mount Isa	Zinc in concentrates	kt	88.2	85.0	86.4	82.8	75.6	329.8	354.2	(7)	(14)
	Copper metal	kt	21.9	19.9	20.7	25.9	25.0	91.5	89.6	2	14
	Lead in concentrates	kt	38.9	36.2	39.4	32.8	24.5	132.9	161.9	(18)	(37)
	Silver	koz	178	116	115	159	235	625	557	12	32
	Silver in concentrates	koz	1,295	1,176	1,427	1,246	869	4,718	5,790	(19)	(33)
Mount Isa, Townsville – total production including third party feed											
	Copper metal	*kt*	*54.5*	*54.2*	*55.5*	*65.2*	*51.9*	*226.8*	*217.2*	*4*	*(5)*
	Gold	*koz*	*41*	*41*	*43*	*35*	*42*	*161*	*158*	*2*	*2*
	Silver	*koz*	*372*	*323*	*366*	*440*	*700*	*1,829*	*1,417*	*29*	*88*
McArthur River	Zinc in concentrates	kt	76.4	63.5	74.2	69.9	72.0	279.6	279.3	–	(6)
	Lead in concentrates	kt	15.0	10.9	14.2	14.4	15.7	55.2	54.9	1	5
	Silver in concentrates	koz	487	270	471	460	602	1,803	1,614	12	24
	Total Zinc in concentrates	**kt**	**164.6**	**148.5**	**160.6**	**152.7**	**147.6**	**609.4**	**633.5**	**(4)**	**(10)**
	Total Copper	**kt**	**21.9**	**19.9**	**20.7**	**25.9**	**25.0**	**91.5**	**89.6**	**2**	**14**
	Total Lead in concentrates	**kt**	**53.9**	**47.1**	**53.6**	**47.2**	**40.2**	**188.1**	**216.8**	**(13)**	**(25)**
	Total Silver	**koz**	**178.0**	**116**	**115**	**159**	**235**	**625**	**557**	**12**	**32**
	Total Silver in concentrates	**koz**	**1,782**	**1,446**	**1,898**	**1,706**	**1,471**	**6,521**	**7,404**	**(12)**	**(17)**
North America (Matagami, Kidd)											
Matagami	Zinc in concentrates	kt	13.5	14.1	11.0	12.3	10.0	47.4	52.2	(9)	(26)
	Copper in concentrates	kt	1.9	1.6	1.6	2.2	1.7	7.1	6.7	6	(11)
Kidd	Zinc in concentrates	kt	12.7	12.3	15.8	9.9	10.7	48.7	62.5	(22)	(16)
	Copper in concentrates	kt	9.5	7.6	6.8	5.7	3.1	23.2	34.0	(32)	(67)
	Silver in concentrates	koz	517	362	405	309	307	1,383	2,125	(35)	(41)
	Total Zinc in concentrates	**kt**	**26.2**	**26.4**	**26.8**	**22.2**	**20.7**	**96.1**	**114.7**	**(16)**	**(21)**
	Total Copper in concentrates	**kt**	**11.4**	**9.2**	**8.4**	**7.9**	**4.8**	**30.3**	**40.7**	**(26)**	**(58)**
	Total Silver in concentrates	**koz**	**517**	**362**	**405**	**309**	**307**	**1,383**	**2,125**	**(35)**	**(41)**



Production by quarter – Q4 2020 to Q4 2021 continued

Metals and minerals

Production from own sources – Zinc assets[1] continued

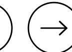
		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Other Zinc: South America (Argentina, Bolivia, Peru)[7]										
Zinc in concentrates	**kt**	**35.9**	**31.9**	**36.4**	**26.0**	**16.4**	**110.7**	**112.3**	**(1)**	**(54)**
Lead in concentrates	**kt**	**3.6**	**3.9**	**3.2**	**3.5**	**3.8**	**14.4**	**17.0**	**(15)**	**6**
Copper in concentrates	**kt**	**0.5**	**0.5**	**0.4**	**0.3**	**0.5**	**1.7**	**1.6**	**6**	**–**
Silver in concentrates	**koz**	**1,832**	**1,809**	**2,051**	**1,889**	**1,634**	**7,383**	**6,121**	**21**	**(11)**
Total Zinc department										
Zinc	**kt**	**265.4**	**244.6**	**257.0**	**235.1**	**227.4**	**964.1**	**1,028.0**	**(6)**	**(14)**
Lead	**kt**	**65.1**	**55.3**	**61.7**	**56.4**	**48.9**	**222.3**	**259.4**	**(14)**	**(25)**
Copper	**kt**	**42.7**	**38.3**	**34.4**	**38.8**	**37.6**	**149.1**	**168.9**	**(12)**	**(12)**
Gold	**koz**	**190**	**164**	**139**	**129**	**163**	**595**	**659**	**(10)**	**(14)**
Silver	**koz**	**6,023**	**4,549**	**4,954**	**4,703**	**4,627**	**18,833**	**20,919**	**(10)**	**(23)**

Production by quarter – Q4 2020 to Q4 2021 continued

Metals and minerals

Production from own sources – Nickel assets[1]

			Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Integrated Nickel Operations (Sudbury, Raglan, Nikkelverk)											
	Nickel metal	**kt**	**15.1**	**14.2**	**13.7**	**12.8**	**14.3**	**55.0**	**56.5**	**(3)**	**(5)**
	Nickel in concentrates	**kt**	**0.2**	**0.1**	**–**	**0.1**	**–**	**0.2**	**0.4**	**(50)**	**(100)**
	Copper metal	**kt**	**3.8**	**3.4**	**3.2**	**3.2**	**3.7**	**13.5**	**13.5**	**–**	**(3)**
	Copper in concentrates	**kt**	**3.7**	**2.0**	**2.2**	**1.7**	**2.4**	**8.3**	**15.1**	**(45)**	**(35)**
	Cobalt metal	**kt**	**0.2**	**0.4**	**0.2**	**0.2**	**0.3**	**1.1**	**0.6**	**83**	**50**
	Gold	**koz**	**5**	**4**	**3**	**4**	**4**	**15**	**21**	**(29)**	**(20)**
	Silver	**koz**	**66**	**79**	**81**	**77**	**59**	**296**	**339**	**(13)**	**(11)**
	Platinum	**koz**	**10**	**10**	**6**	**8**	**9**	**33**	**40**	**(18)**	**(10)**
	Palladium	**koz**	**23**	**21**	**18**	**21**	**23**	**83**	**101**	**(18)**	**–**
	Rhodium	**koz**	**1**	**1**	**1**	**1**	**1**	**4**	**4**	**–**	**–**
	Nickel metal	*kt*	*23.5*	*22.6*	*22.8*	*24.0*	*21.8*	*91.2*	*92.1*	*(1)*	*(7)*
	Nickel in concentrates	*kt*	*0.1*	*0.1*	*0.1*	*–*	*0.1*	*0.3*	*0.4*	*(25)*	*–*
	Copper metal	*kt*	*5.5*	*4.9*	*4.9*	*5.1*	*5.2*	*20.1*	*20.5*	*(2)*	*(5)*
	Copper in concentrates	*kt*	*2.9*	*2.8*	*3.2*	*1.8*	*2.5*	*10.3*	*17.6*	*(41)*	*(14)*
	Cobalt metal	*kt*	*1.2*	*1.0*	*1.0*	*1.0*	*1.0*	*4.0*	*4.4*	*(9)*	*(17)*
	Gold	*koz*	*8*	*7*	*8*	*6*	*8*	*29*	*36*	*(19)*	*–*
	Silver	*koz*	*89*	*132*	*137*	*121*	*121*	*511*	*545*	*(6)*	*36*
	Platinum	*koz*	*16*	*22*	*14*	*17*	*20*	*73*	*72*	*1*	*25*
	Palladium	*koz*	*48*	*58*	*47*	*57*	*58*	*220*	*238*	*(8)*	*21*
	Rhodium	*koz*	*1*	*1*	*1*	*1*	*1*	*4*	*5*	*(20)*	*–*
Murrin Murrin											
	Total Nickel metal	**kt**	**9.1**	**7.5**	**5.6**	**7.4**	**9.6**	**30.1**	**36.4**	**(17)**	**5**
	Total Cobalt metal	**kt**	**0.6**	**0.6**	**0.6**	**0.5**	**0.8**	**2.5**	**2.9**	**(14)**	**33**
Murrin Murrin – total production including third party feed											
	Total Nickel metal	*kt*	*9.8*	*8.2*	*6.1*	*8.4*	*11.0*	*33.7*	*40.8*	*(17)*	*12*
	Total Cobalt metal	*kt*	*0.7*	*0.7*	*0.6*	*0.6*	*0.9*	*2.8*	*3.3*	*(15)*	*29*
Koniambo	**Nickel in ferronickel**	**kt**	**4.0**	**3.4**	**3.2**	**3.1**	**7.3**	**17.0**	**16.9**	**1**	**83**
Total Nickel department											
	Nickel	**kt**	**28.4**	**25.2**	**22.5**	**23.4**	**31.2**	**102.3**	**110.2**	**(7)**	**10**
	Copper	**kt**	**7.5**	**5.4**	**5.4**	**4.9**	**6.1**	**21.8**	**28.6**	**(24)**	**(19)**
	Cobalt	**kt**	**0.8**	**1.0**	**0.8**	**0.7**	**1.1**	**3.6**	**3.5**	**3**	**38**
	Gold	**koz**	**5**	**4**	**3**	**4**	**4**	**15**	**21**	**(29)**	**(20)**
	Silver	**koz**	**66**	**79**	**81**	**77**	**59**	**296**	**339**	**(13)**	**(11)**
	Platinum	**koz**	**10**	**10**	**6**	**8**	**9**	**33**	**40**	**(18)**	**(10)**
	Palladium	**koz**	**23**	**21**	**18**	**21**	**23**	**83**	**101**	**(18)**	**–**
	Rhodium	**koz**	**1**	**1**	**1**	**1**	**1**	**4**	**4**	**–**	**–**



Production by quarter – Q4 2020 to Q4 2021 continued

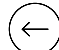
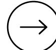
Metals and minerals

Production from own sources – Ferroalloys assets[1]

		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Ferrochrome[8]	kt	378	399	374	298	397	1,468	1,029	43	5
Vanadium pentoxide	mlb	5.9	5.5	5.5	4.2	5.3	20.5	19.5	5	(10)

Total production – Custom metallurgical assets[1]

		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Copper (Altonorte, Pasar, Horne, CCR)										
Copper metal	kt	116.0	127.2	127.6	121.5	114.3	490.6	482.6	2	(1)
Copper anode	kt	134.4	126.7	109.5	94.4	123.4	454.0	490.1	(7)	(8)
Zinc (Portovesme, San Juan de Nieva, Nordenham, Northfleet)										
Zinc metal	kt	203.6	202.6	195.8	206.7	195.5	800.6	787.2	2	(4)
Lead metal	kt	45.8	49.9	52.3	62.3	80.4	244.9	198.0	24	76

Production by quarter – Q4 2020 to Q4 2021 continued

Energy products

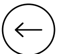
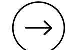
Production from own sources – Coal assets[1]

		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Australian coking coal	mt	2.0	2.4	1.7	2.5	2.5	9.1	7.6	20	25
Australian semi-soft coal	mt	1.0	1.2	1.4	0.9	1.0	4.5	4.6	(2)	–
Australian thermal coal (export)	mt	12.8	12.0	13.0	15.5	15.4	55.9	55.7	–	20
Australian thermal coal (domestic)	mt	1.5	1.4	1.2	1.6	1.8	6.0	6.4	(6)	20
South African thermal coal (export)	mt	3.3	4.0	3.7	3.9	3.1	14.7	14.8	(1)	(6)
South African thermal coal (domestic)	mt	1.8	1.7	1.4	1.2	1.0	5.3	9.2	(42)	(44)
Cerrejón[9]	mt	0.3	1.8	1.8	2.0	2.2	7.8	4.1	90	633
Prodeco	mt	–	–	–	–	–	–	3.8	(100)	n.m.
Total Coal department	**mt**	**22.7**	**24.5**	**24.2**	**27.6**	**27.0**	**103.3**	**106.2**	**(3)**	**19**

Oil assets

		Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	**2021**	2020	Change 2021 vs 2020 %	Change Q4 21 vs Q4 20 %
Glencore entitlement interest basis										
Equatorial Guinea	kboe	345	784	1,245	1,294	818	4,141	1,960	111	137
Chad	kbbl	–	–	–	–	–	–	1,112	(100)	n.m.
Cameroon	kbbl	239	287	241	294	311	1,133	872	30	30
Total Oil department	**kboe**	**584**	**1,071**	**1,486**	**1,588**	**1,129**	**5,274**	**3,944**	**34**	**93**
Gross basis										
Equatorial Guinea	kboe	1,871	3,777	6,041	6,233	4,086	20,137	10,435	93	118
Chad	kbbl	–	–	–	–	–	–	1,521	(100)	n.m.
Cameroon	kbbl	693	708	699	729	730	2,866	2,528	13	5
Total Oil department	**kboe**	**2,564**	**4,485**	**6,740**	**6,962**	**4,816**	**23,003**	**14,484**	**59**	**88**

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 Mount Isa copper operations (including Townsville) previously recorded under copper department moved to zinc department.
6 Copper metal includes copper contained in copper concentrates and blister.
7 South American production excludes Volcan Compania Minera.
8 The Group's attributable 79.5% share of the Glencore-Merafe Chrome Venture.
9 The Group's pro-rata share of Cerrejón production (33.3%).

Resources and reserves

The resource and reserve data in the following tables comprise summary extracts of the Glencore Resources and Reserves report as at 31 December 2021, as published on the Glencore website on 2 February 2022. The Glencore Resources and Reserves report was publicly reported, as appropriate for individual components, in accordance with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code), the 2016 edition of the South African Code for Reporting of Mineral Resources and Mineral Reserves (SAMREC), the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Reserves (2014 edition) and the Petroleum Resources Management System (PRMS) for reporting of oil and natural gas reserves and resources.

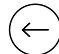
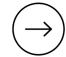
Data is reported as at 31 December 2021, unless otherwise noted. For comparison purposes, data for 2020 has been included. Metric units are used throughout, and all data is presented on a 100% asset basis with the exception of Oil assets which are shown on a working interest basis. All tonnage information has been rounded to reflect the relative uncertainty in the estimates; there may therefore be small differences in the totals.

Metals and minerals: Copper

Copper mineral resources

		Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources	
Name of operation	Commodity	**2021**	2020	**2021**	2020	**2021**	2020	**2021**	2020
African copper									
Katanga	(Mt)	–	–	269	290	269	290	76	99
	Copper (%)	–	–	4.71	4.73	4.71	4.73	1.70	1.56
	Cobalt (%)	–	–	0.56	0.55	0.56	0.55	0.50	0.47
Mutanda	(Mt)	371	368	97	96	468	464	17	17
	Copper (%)	1.39	1.39	0.96	0.97	1.31	1.31	0.72	0.72
	Cobalt (%)	0.55	0.55	0.44	0.44	0.53	0.53	0.53	0.54
Collahuasi	(Mt)	883	876	4,713	4,729	5,695	5,605	4,811	4,898
	Copper (%)	0.79	0.79	0.79	0.8	0.79	0.80	0.73	0.73
	Molybdenum (%)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Antamina	(Mt)	306	329	619	642	925	971	1,260	1,272
	Copper (%)	0.83	0.82	0.88	0.89	0.87	0.86	1.00	1.01
	Zinc (%)	0.61	0.64	0.73	0.72	0.69	0.69	0.57	0.58
	Silver (g/t)	10	9	11	12	11	11	11	11
	Molybdenum (%)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01
Other South America	(Mt)	556	509	2,231	2,131	2,787	2,639	1,072	654
	Copper (%)	0.42	0.44	0.38	0.39	0.39	0.41	0.27	0.29
	Gold (g/t)	0.04	0.04	0.04	0.04	0.04	0.04	0.01	0.01
	Silver (g/t)	0.8	0.8	0.8	0.8	0.8	0.8	0.1	0.1
Cobar	(Mt)	3.9	4.5	3.5	3.4	7.4	7.9	4.0	3.8
	Copper (%)	5.74	5.77	4.92	5.14	5.36	5.50	5.41	5.66
	Silver (g/t)	24	25	20	21	22.0	23.0	20	22
Other projects[1]	(Mt)	852	853	2,309	2,319	3,161	3,171	3,180	3,023
(El Pachon, West Wall, Polymet)	Copper (%)	0.51	0.51	0.45	0.45	0.47	0.47	0.39	0.39

1 The above listed Copper projects also include other metallic content, as noted in the Resources and Reserves report published on 2 February 2022.

Resources and reserves continued

Copper ore reserves

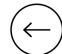
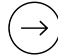
		Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves	
Name of operation	Commodity	**2021**	2020	**2021**	2020	**2021**	2020
African copper							
Katanga	(Mt)	–	–	128	143	128	143
	Copper (%)	–	–	3.86	3.66	3.86	3.66
	Cobalt (%)	–	–	0.51	0.49	0.51	0.49
Mutanda	(Mt)	52	48	81	82	134	130
	Copper (%)	1.43	1.36	1.64	1.59	1.52	1.15
	Cobalt (%)	0.64	0.62	0.78	0.75	0.70	0.70
Collahuasi	(Mt)	476	491	3,691	3,685	4,167	4,176
	Copper (%)	1.00	1.01	0.77	0.78	0.80	0.80
	Molybdenum (%)	0.02	0.02	0.02	0.02	0.02	0.02
Antamina	(Mt)	186	206	150	176	336	382
	Copper (%)	0.92	0.90	0.98	0.92	0.94	0.91
	Zinc (%)	0.66	0.77	1.01	1.06	0.81	0.91
	Silver (g/t)	9	9	11	10	10	9
	Molybdenum (%)	0.03	0.03	0.02	0.02	0.03	0.02
Other South America	(Mt)	352	328	454	510	806	838
	Copper (%)	0.50	0.41	0.35	0.34	0.37	0.37
	Gold (g/t)	0.04	0.05	0.05	0.04	0.05	0.04
	Silver (g/t)	0.6	0.7	0.7	0.6	0.7	0.6
Australia (Cobar)	(Mt)	4.2	4.9	2.6	2.8	6.8	7.7
	Copper (%)	4.00	3.95	3.60	3.65	3.80	3.84
	Silver (g/t)	16.4	16.3	14.1	15.0	15.6	15.8
Other projects[1]	(Mt)	157	157	106	106	264	264
(El Pachon, West Wall, Polymet)	Copper (%)	0.29	0.29	0.29	0.29	0.29	0.29

1 The above listed Copper projects also include other metallic content, as noted in the Resources and Reserves report published on 2 February 2022.

Resources and reserves continued

Zinc mineral resources

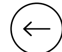
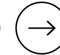
Name of operation	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources	
		2021	2020	**2021**	2020	**2021**	2020	**2021**	2020
Kazzinc									
Kazzinc Polymetallic	(Mt)	94	111	113	123	208	234	166	172
	Zinc (%)	2.7	2.8	1.3	1.4	2.0	2.0	2.0	2.2
	Lead (%)	0.9	0.9	0.4	0.4	0.6	0.6	1.2	1.2
	Copper (%)	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3
	Silver (g/t)	18	18	13	13	15	15	21	21
	Gold (g/t)	1.2	1.1	1.0	1.0	1.1	1.0	0.8	0.8
Kazzinc Gold (Vasilkovskoye)	(Mt)	64	73	53	53	117	126	2.0	2.0
	Gold (g/t)	1.9	1.9	2.1	2.1	2.0	2.0	1.7	1.8
Australia									
Mount Isa – Zinc bearing	(Mt)	83	85	310	310	393	395	286	290
	Zinc (%)	9.1	9.2	6.3	6.3	6.9	6.9	5	5
	Lead (%)	4.0	4.1	3.4	3.4	3.5	3.6	2	3
	Silver (g/t)	77	78	67	67	69	69	48	48
Mount Isa – Copper bearing	(Mt)	58	57	110	111	166	169	12	12
	Copper (%)	2.1	2.1	1.6	1.6	1.8	1.8	1.5	1.5
McArthur River	(Mt)	103	106	49	57	152	162	–	–
	Zinc (%)	9.7	9.5	10.5	10.2	9.9	9.7	–	–
	Lead (%)	4.2	4.1	5.0	4.8	4.5	4.4	–	–
	Silver (g/t)	42	40	53	52	46	45	–	–
Mount Margaret	(Mt)	5	5	8	8	13	13	0.5	0.5
	Copper (%)	0.6	0.6	0.8	0.8	0.7	0.7	0.9	0.9
	Gold (g/t)	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3
North America									
Zinc North America	(Mt)	21	21	41	33	62	54	73	77
	Zinc (%)	4.0	4.3	4.4	4.6	4.2	4.4	3.5	4.1
	Lead (%)	0.5	0.5	0.5	0.6	0.5	0.6	0.4	0.8
	Copper (%)	1.4	1.4	0.8	0.6	1.0	0.9	0.6	0.7
	Silver (g/t)	46	46	100	114	81	88	102	124
	Gold (g/t)	0.4	0.4	0.3	0.3	0.3	0.4	0.2	0.2
Copper North America	(Mt)	75	75	255	255	330	330	120	120
	Copper (%)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
	Gold (g/t)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Volcan									
Lead/zinc/silver deposits	(Mt)	25	26	75	115	99	141	146	215
	Zinc (%)	5.9	5.3	4.4	3.6	4.8	3.9	4.5	4.4
	Lead (%)	1.5	1.5	1.2	1.1	1.3	1.1	1.4	1.5
	Silver (g/t)	87	84	87	82	87	82	85	83
Copper deposits	(Mt)	18.4	18.4	34.3	34.3	53	53	148	148
	Gold (g/t)	–	–	–	–	–	–	0.2	0.2
	Copper (%)	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
Other Zinc	(Mt)	12.0	13.0	19	21	30	35	74	75
	Zinc (%)	5.6	5.5	4.2	4.1	4.7	4.3	6.6	6.3
	Lead (%)	1.1	1.6	1.1	1.6	1.1	1.5	1.2	1.2
	Copper (%)	0.3	0.3	0.3	0.3	0.3	0.3	0.1	0.1
	Silver (g/t)	132	129	134	125	133	124	84	83

Resources and reserves continued

Zinc ore reserves

Name of operation	Commodity	Proved Ore Reserves 2021	Proved Ore Reserves 2020	Probable Ore Reserves 2021	Probable Ore Reserves 2020	Total Ore Reserves 2021	Total Ore Reserves 2020
Kazzinc							
Kazzinc Polymetallic	(Mt)	70	68	15.1	23.8	85	92
	Zinc (%)	3.4	3.5	3.1	3.5	3.3	3.5
	Lead (%)	1.0	1.0	0.3	0.6	0.9	0.9
	Copper (%)	0.1	0.2	0.4	0.3	0.2	0.2
	Silver (g/t)	17	18	14	15	16	17
	Gold (g/t)	0.7	0.6	1.3	0.8	0.8	0.7
Kazzinc Gold (Vasilkovskoye)	(Mt)	35	43	36	36	71	79
	Gold (g/t)	2.0	2.0	1.8	1.8	1.9	1.9
Australia							
Mount Isa – Zinc bearing	(Mt)	22	26	47	46	68	72
	Zinc (%)	8.0	7.8	7.1	6.9	7.5	7.3
	Lead (%)	3.6	3.9	3.5	3.5	3.6	3.7
	Silver (g/t)	66	72	62	64	63	67
Mount Isa – Copper bearing	(Mt)	5.9	9.5	17	17	23	27
	Copper (%)	2.3	2.3	2.0	1.9	2.0	2.1
McArthur River	(Mt)	71	74	20.0	12.7	91	87
	Zinc (%)	9.1	9.4	7.8	7.8	8.8	9.2
	Lead (%)	4.1	4.3	4.0	3.8	4.1	4.2
	Silver (g/t)	41	43	42	39	41	42
North America	(Mt)	2.3	4.5	1.5	1.7	4	6
	Zinc (%)	3.13	4.04	4.5	4.0	3.6	4.0
	Copper (%)	1.74	1.67	1.7	1.6	1.7	1.6
	Silver (g/t)	41	41	43	38	42	40
	Gold (g/t)	0.09	0.20	–	–	0.1	0.1
Volcan	(Mt)	6	7	17	21	24	28
	Zinc (%)	6.0	4.3	4.1	4.6	4.6	4.6
	Lead (%)	1.1	1.1	0.9	1.1	1.0	1.1
	Silver (g/t)	82	80	81	91	81	88
Other Zinc	(Mt)	3.4	3.6	9.5	9.0	12.8	13.0
	Zinc (%)	6.0	5.6	2.9	2.8	3.6	3.5
	Lead (%)	1.0	1.4	0.7	1.0	0.8	1.1
	Copper (%)	0.1	0.2	0.2	0.2	0.2	0.2
	Silver (g/t)	136	151	104	113	110	122

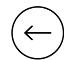
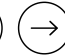
Resources and reserves continued

Nickel mineral resources

Name of operation	Commodity	Measured Mineral Resources 2021	Measured Mineral Resources 2020	Indicated Mineral Resources 2021	Indicated Mineral Resources 2020	Measured and Indicated Resources 2021	Measured and Indicated Resources 2020	Inferred Mineral Resources 2021	Inferred Mineral Resources 2020
INO	(Mt)	9.1	9.6	42.8	36.7	51.9	46.2	47	49
	Nickel (%)	2.43	2.59	2.50	2.55	2.49	2.55	1.4	1.6
	Copper (%)	0.81	0.85	1.79	1.95	1.61	1.72	1.9	1.8
	Cobalt (%)	0.05	0.06	0.05	0.06	0.05	0.06	0.03	0.03
	Platinum (g/t)	0.73	0.73	0.93	0.92	0.89	0.88	0.8	0.8
	Palladium (g/t)	1.46	1.47	1.61	1.59	1.58	1.57	1.3	1.4
Murrin Murrin	(Mt)	139.7	144.1	52.2	74.6	192.0	218.8	9	17
	Nickel (%)	1.02	1.00	0.98	1.00	1.01	1.00	1.0	0.9
	Cobalt (%)	0.088	0.074	0.070	0.084	0.083	0.077	0.06	0.07
Koniambo	(Mt)	11.0	11.5	43.8	44.0	54.8	55.5	84	84
	Nickel (%)	2.47	2.47	2.41	2.41	2.42	2.42	2.5	2.5

Nickel ore reserves

Name of operation	Commodity	Proved Ore Reserves 2021	Proved Ore Reserves 2020	Probable Ore Reserves 2021	Probable Ore Reserves 2020	Total Ore Reserves 2021	Total Ore Reserves 2020
INO	(Mt)	7.60	8.30	21.20	19.90	28.8	28.2
	Nickel (%)	2.01	1.93	2.07	2.33	2.06	2.21
	Copper (%)	0.68	0.67	0.90	0.95	0.84	0.87
	Cobalt (%)	0.05	0.04	0.04	0.06	0.05	0.05
	Platinum (g/t)	0.62	0.57	0.48	0.53	0.52	0.54
	Palladium (g/t)	1.22	1.05	0.78	0.95	0.90	0.99
Murrin Murrin	(Mt)	59.5	103.0	9.0	33.9	68.5	136.8
	Nickel (%)	1.09	1.02	1.07	1.04	1.09	1.03
	Cobalt (%)	0.113	0.081	0.091	0.109	0.110	0.088
Koniambo	(Mt)	11.0	11.0	26.0	26.0	37.0	37.2
	Nickel (%)	2.23	2.23	2.19	2.17	2.20	2.20

Resources and reserves continued

Ferroalloys mineral resources

Name of operation	Commodity	Measured Mineral Resources 2021	Measured Mineral Resources 2020	Indicated Mineral Resources 2021	Indicated Mineral Resources 2020	Measured and Indicated Resources 2021	Measured and Indicated Resources 2020	Inferred Mineral Resources 2021	Inferred Mineral Resources 2020
Western Chrome Mines									
Western Chrome Mines	(Mt)	60.000	58.347	64.42	58.55	124.42	116.89	93.3	101.4
	Cr_2O_3 (%)	42.05	42.05	41.5	41.4	41.8	41.7	42	42
Tailings	(Mt)	–	–	–	–	–	–	3.1	2.9
	Cr_2O_3 (%)	–	–	–	–	–	–	18	17
Eastern Chrome Mines									
Eastern Chrome Mines	(Mt)	68.813	72.017	43.98	44.73	112.80	116.76	181.3	180.7
	Cr_2O_3 (%)	39.99	41.36	40.1	40.2	40.0	40.9	39	39
Tailings	(Mt)	–	–	–	–	–	–	4.9	4.9
	Cr_2O_3 (%)	–	–	–	–	–	–	20	20
Vanadium	(Mt)	51.662	49.754	33.49	35.56	85.15	85.31	91	93
	V_2O_5 (%)	0.47	0.47	0.5	0.5	0.5	0.5	0.5	0.5
Manganese	(Mt)	26.229	27.186	19.55	19.55	45.78	46.74	3	3
	Mn (%)	37.56	37.24	36.4	36.5	37.1	36.9	36	36

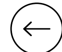
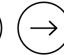
Ferroalloys ore reserves

Name of operation	Commodity	Proved Ore Reserves 2021	Proved Ore Reserves 2020	Probable Ore Reserves 2021	Probable Ore Reserves 2020	Total Ore Reserves 2021	Total Ore Reserves 2020
Western Chrome Mines	(Mt)	10.249	10.418	1.97	3.13	12.22	13.56
	Cr_2O_3 (%)	30.41	30.23	28.3	29.0	30.1	29.9
Eastern Chrome Mines	(Mt)	23.147	27.701	5.08	4.43	28.22	32.13
	Cr_2O_3 (%)	34.39	33.55	32.7	33.8	34.1	33.6
Vanadium	(Mt)	19.993	22.223	8.18	9.45	28.17	31.67
	V_2O_5 (%)	0.46	0.47	0.43	0.43	0.5	0.5
Manganese	(Mt)	20.490	21.650	5.66	4.10	26.15	25.75
	Mn (%)	36.27	36.34	35.9	35.9	36.2	36.3

Metals and minerals: Aluminium/Alumina

Alumina mineral resources

Name of operation	Commodity	Measured Mineral Resources 2021	Measured Mineral Resources 2020	Indicated Mineral Resources 2021	Indicated Mineral Resources 2020	Measured and Indicated Resources 2021	Measured and Indicated Resources 2020	Inferred Mineral Resources 2021	Inferred Mineral Resources 2020
Aurukun	(Mt)	96	96	331	352	427	448	3	4
	Al_2O_3 (%)	53.5	53.3	49.9	49.7	50.7	50.5	49.4	48.8

Resources and reserves continued

Iron ore mineral resources

Name of operation	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources	
		2021	2020	**2021**	2020	**2021**	2020	**2021**	2020
El Aouj Mining Company S.A.	(Mt)	470	470	1,435	1,435	1,905	1,905	2,520	2,520
	Iron (%)	36	36	36	36	36	36	35	35
Sphere Mauritania S.A.	(Mt)	215	215	190	190	405	405	251	251
(Askaf)	Iron (%)	36	36	35	35	36	36	35	35
Sphere Lebtheinia S.A.	(Mt)	–	–	2,180	2,180	2,180	2,180	560	560
	Iron (%)	–	–	32	32	32	32	32	32
Jumelles Limited	(Mt)	2,300	2,300	2,500	2,500	4,800	4,800	2,100	2,100
(Zanaga)	Iron (%)	34	34	30	30	32	32	31	31

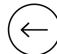
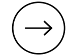
Iron ore reserves

Name of operation	Commodity	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves	
		2021	2020	**2021**	2020	**2021**	2020
El Aouj Mining Company S.A.	(Mt)	380	380	551	551	931	931
	Iron (%)	35	35	35	35	35	35
Jumelles Limited	(Mt)	770	770	1,290	1,290	2,070	2,070
(Zanaga)	Iron (%)	37	37	32	32	34	34

Energy products: Coal

Coal resources

Name of operation	Commodity	Measured Coal Resources		Indicated Coal Resources		Inferred Coal Resources	
		2021	2020	**2021**	2020	**2021**	2020
Australia							
New South Wales	Coking/Thermal Coal (Mt)	3,570	3,671	3,653	3,644	7,491	7,591
Queensland	Coking/Thermal Coal (Mt)	3,986	3,852	5,247	5,203	9,220	9,000
South Africa	Thermal Coal (Mt)	2,256	2,314	837	839	344	344
Prodeco	Thermal Coal (Mt)	–	190	–	155	–	60
Cerrejón	Thermal Coal (Mt)	3,250	3,300	1,250	1,250	600	600
Canada projects							
(Suska, Sukunka)	Coking/Thermal Coal (Mt)	45	45	113	113	130	130

Resources and reserves continued

Coal reserves

Name of operation	Commodity	Coal Reserves Proved 2021	Coal Reserves Probable 2021	Marketable Coal Reserves Proved 2021	Marketable Coal Reserves Probable 2021	Total Marketable Coal Reserves 2021	Total Marketable Coal Reserves 2020
Australia							
New South Wales	Coking/Thermal Coal (Mt)	1,079	579	784	414	1,214	1,266
Queensland	Coking/Thermal Coal (Mt)	326	184	298	151	452	528
South Africa	Thermal Coal (Mt)	522	236	334	129	463	508
Prodeco	Thermal Coal (Mt)	–	–	–	–	–	–
Cerrejón	Thermal Coal (Mt)	200	130	190	120	320	350

Energy products: Oil

Net reserves (Proven and Probable)[1]

Working Interest Basis

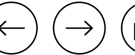
	Equatorial Guinea		Chad		Cameroon		**Total**		
	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Combined mmboe
31 December 2020	11	152	97	–	4	–	**112**	**152**	**138**
Revisions	1	32	–	–	–	–	**1**	**32**	**7**
Production	(2)	(20)	–	–	(1)	–	**(3)**	**(20)**	**(6)**
31 December 2021	10	164	97	–	3	–	**110**	**164**	**139**

Net contingent resources (2C)[1]

Working Interest Basis

	Equatorial Guinea		Chad		Cameroon		**Total**		
	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Oil mmbbl	Gas bcf	Combined mmboe
31 December 2020	26	434	61	–	2	–	**89**	**434**	**164**
31 December 2021	27	310	–	–	–	–	**27**	**310**	**80**

1 "Net" reserves or resources are equivalent to Glencore's working interest in the asset/property.



Shareholder Information

Glencore plc is registered in Jersey, is headquartered in Switzerland and has operations around the world.

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The Company has a primary listing on the London Stock Exchange (LSE) and a secondary listing on the Johannesburg Stock Exchange (JSE). Our website contains further information on our business and for shareholders including as to share transfer and distributions: **glencore.com/investors/shareholder-centre**

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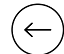
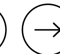

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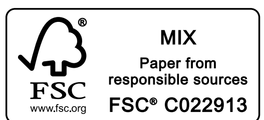

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