GLENCORE

ANNUAL REPORT 2016

Contents

Strategic report

04 Chief Executive Officer's review
06 Positioned for the future
08 Who we are
10 Our presence
12 Our business model
16 Our strategy
20 Sustainable development
30 Delivering on our commitments to climate change
34 Key performance indicators
36 Principal risks and uncertainties
45 Financial review
52 Business review
– Metals and minerals
– Energy products
– Agricultural products

Governance

80 Chairman's introduction, Directors and Officers
84 Corporate governance report
99 Directors' remuneration report
109 Directors' report

Financial statements

116 Independent Auditor's Report
126 Consolidated statement of income/(loss)
127 Consolidated statement of comprehensive income/(loss)
128 Consolidated statement of financial position
129 Consolidated statement of cash flows
131 Consolidated statement of changes of equity
132 Notes to the financial statements

Additional information

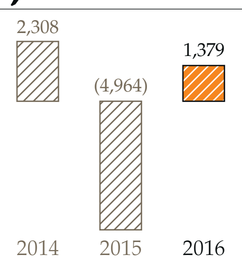
201 Glossary
206 Production by quarter – Q4 2015 to Q4 2016
213 Resources and reserves
222 Shareholder information
IBC Forward looking statements

Further details on our sustainability approach and performance can be found in our annual sustainability report and on our website **www.glencore.com/sustainability**

Highlights 2016

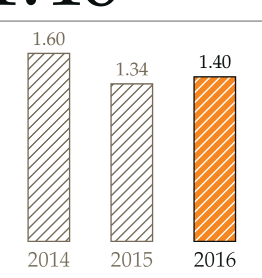
Net income attributable to equity holders
US$ million

1,379



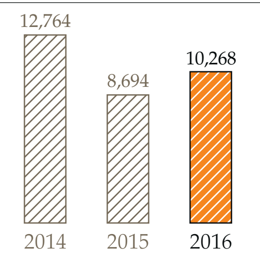
Lost time injury frequency rate
per million hours worked

1.40



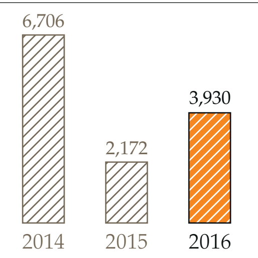
Adjusted EBITDA
US$ million

10,268



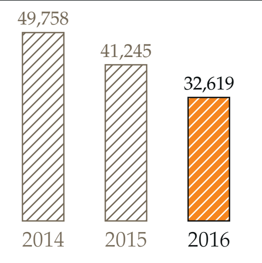
Adjusted EBIT
US$ million

3,930



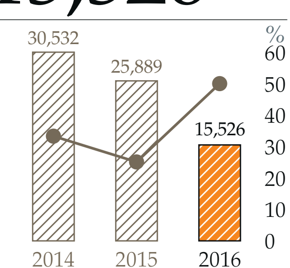
Net funding
US$ million

32,619



Net debt/FFO to net debt
US$ million

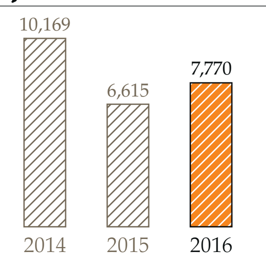
15,526



FFO to net debt

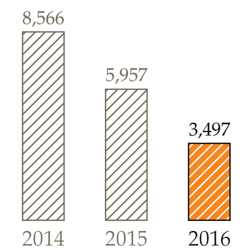
Funds from operations
US$ million

7,770



Capital expenditure
US$ million

3,497



One of the world's largest diversified natural resource companies
+ 90
commodities

50
countries
155,000
people

Strategic report

"Our financial performance during 2016 reflects the quality of our industrial assets and the resilience of our marketing business."

IVAN GLASENBERG
Chief Executive Officer *(see page 04)*

04 Chief Executive Officer's review
06 Positioned for the future
08 Who we are
10 Our presence
12 Our business model
16 Our strategy
20 Sustainable development
30 Delivering on our commitments on climate change
34 Key performance indicators
36 Principal risks and uncertainties
45 Financial review
52 Business review
– Metals and minerals
– Energy products
– Agricultural products

269
CATERPILLAR
CAT
269

Chief Executive Officer's review

Ivan Glasenberg, Chief Executive Officer

Creating long-term, sustainable returns for shareholders

- Debt reduction programme completed: net funding at $32.6 billion and net debt $15.5 billion by year end
- Strong free cash flow generation, underpinned by the resilience of the marketing business and quality of the industrial assets
- Capital allocation maximises value creation for shareholders: a fixed $1 billion distribution that reflects the resilience, predictability and stability of cash flows from the marketing business
- The right commodity mix to meet the changing needs of key maturing economies: leading, low-cost supply positions in mid- and late-cycle commodities and significant operational leverage to improving fundamentals in key commodities, as well as substantial volumes of low-cost latent capacity

Improving market conditions

Despite an uncertain start to 2016, commodities finally started reversing five years of underperformance compared to other asset classes. In this environment, the mining sector has been a significant outperformer, with the SXPP basic resources index up around 70% over the year, compared to a 17% increase for the FTSE 100 Index.

China's willingness and ability to reflate caught markets somewhat by surprise, given widespread scepticism over the sustainability of Chinese demand for commodities. This was then compounded by increasingly supportive economic conditions in other regions.

Looking ahead, political events across the globe have coincided with the expectation of higher inflation and with it, higher interest rates, a backdrop, which is generally influenced by and/or supportive of higher commodity prices.

The increasing likelihood of various regionally signalled fiscal economic stimulus programmes should also promote improved physical demand for and positive sentiment towards commodities.

Robust financial performance

Our robust financial performance during 2016 (Adjusted EBITDA of $10.3 billion, up 18% on 2015) reflects the quality of our industrial asset portfolio and the resilience of our large scale diversified marketing business.

Marketing Adjusted EBIT was $2.8 billion in 2016, 14% higher than 2015 and above the $2.7 billion top-end of our Q4 2016 narrowed guidance range, reflecting strong second half contributions from all three business segments. These activities continue to generate a consistent, high cash return on equity, underpinned by competitive funding rates, a stable cost base and low capex requirements.

Following the sale of a 50% interest in Glencore Agriculture in late 2016, our 2017 Marketing Adjusted EBIT guidance range is $2.2 to $2.5 billion

(up from $2.1 to $2.4 billion in our December 2016 update), while also reflecting such sale, our longer-term guidance range has been lowered to $2.2 to $3.2 billion.

Our various industrial teams responded to the challenges of low prices, delivering robust cost structures and margins within our key commodities. The industrial assets' Adjusted EBITDA of $7.3 billion in 2016 was almost 22% higher than 2015, reflecting improving commodity prices in the latter part of the year, but mostly the delivery of material cost reductions and operational improvements. Since 2009, over $38 billion has been spent on our industrial assets, which are now extremely well positioned, with largely Tier 1 costs, scale, diversification and optionality.

Debt reduction programme delivered

The plan of action we initiated in September 2015 to sensibly bring down our financial leverage and strengthen our balance sheet is now complete; at the end of 2016, net funding and net debt of $32.6 billion and $15.5 billion respectively, were around or better than target levels, with debt coverage ratios already comfortably below our recently reduced target levels.

This debt reduction was partly achieved through a highly successful divestment programme that raised $6.2 billion since September 2015, including the following 2016 transactions:

- Antapaccay silver streaming transaction, raising $500 million
- Sale of 50% of our agriculture business for $3.1 billion
- Disposal of a 30% economic interest plus gold stream in Ernest Henry, delivering $670 million and
- Sale of our Hunter Valley coal rail haulage business (GRail), for $840 million.

The disposal programme underpinned a $14.7 billion reduction in net funding in just 18 months.

The success of our deleveraging programme and capital structure/credit repositioning is now well understood and recognised by credit markets with public funding spreads and default swaps returning to 'normalised' levels. As previously communicated, we are now targeting maximum through the cycle leverage of 2x Net debt/EBITDA (previously <3x). This lower gearing target is aimed at sustainably reducing risk and providing greater flexibility and stability in the future. We believe our commitment to secure and thereafter maintain a strong Baa/BBB credit rating is well on track.

Capital allocation to maximise value creation for shareholders

In December 2016, we announced the reinstatement of shareholder distributions, following a one-year suspension period. Initially we will return $1 billion to shareholders in 2017, to be paid in equal tranches, following the full-year and interim financial results, subject to shareholders' approval at the Annual General Meeting.

As announced in December 2016, starting from 2018, our new distribution policy, in respect of 2017 actual cash flow generation, will comprise a fixed $1 billion component and a variable element representing a minimum pay-out of 25% of free cash flow from our industrial assets. The components will reflect prevailing conditions and outlook at the time and will be confirmed annually alongside release of our full-year results.

The right commodity mix to meet the needs of the future

We believe that not all commodities are equal and, in general, we have the right ones. Glencore's diverse asset portfolio, comprising low-cost positions in mid- and late-cycle commodities, such as copper, cobalt, nickel, zinc and thermal coal, positively matches the changing needs of current and future commodity demand.

We take a highly disciplined approach towards supply, evidenced by curtailing production at a number of coal, copper, oil and zinc assets in 2015/2016 to preserve value for the longer term and assist in market rebalancing. We have significant operational leverage to improving fundamentals in our key commodities with substantial volumes of low-cost latent capacity that can be restarted as and when appropriate.

We believe that our presence throughout the commodity value chain affords Glencore the unique position to generate superior shareholder value over the longer term.

Integrated approach to sustainability

It is with great sadness to report that 16 people died at our assets, from eight incidents, during 2016. This loss of life is unacceptable. We expend great efforts and continuously strive towards our goals of eliminating occupational fatalities, injuries and occupational diseases across the organisation. We are committed to achieving strong health and safety performances at all of our assets through resolving local challenges and transforming behaviour at all levels.

We recognise that we have stewardship obligations across our business and a duty to the local communities we work with. During 2016, our sustainability team rolled out revised water management and health strategies and published a paper setting out the potential impact of climate change on our business.

Going forward

The last 18 months have been challenging for Glencore. On a positive note, we have demonstrated that Glencore is a strongly cash generative business, even at low points in the cycle, and is capable and willing to react decisively and quickly as circumstances require. Important lessons have been learned and the actions taken ensure that Glencore remains extremely well positioned to create value for all stakeholders.

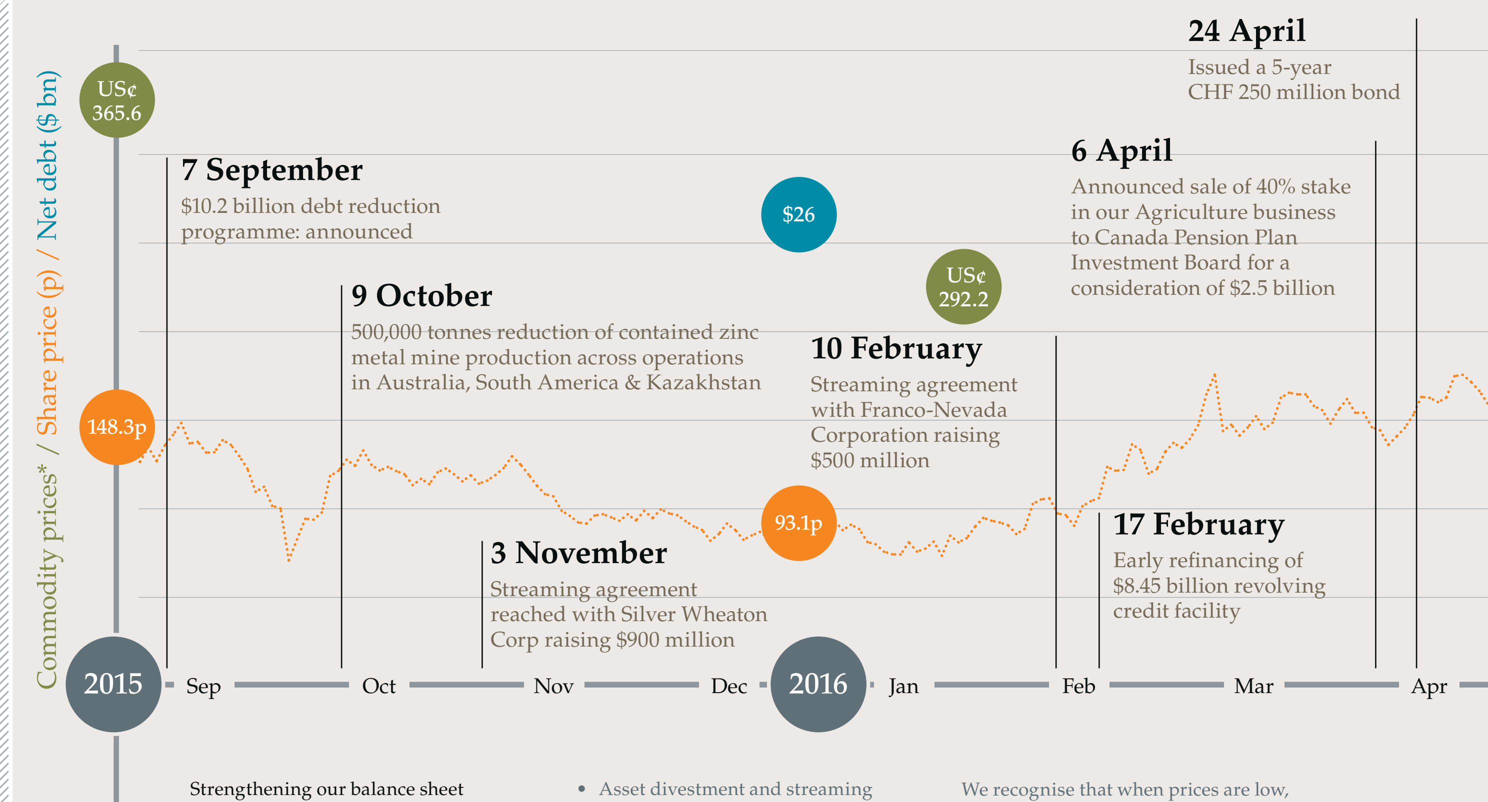
Ivan Glasenberg
Chief Executive Officer

Positioned for the future

In response to some market concerns over our leverage, we have positively repositioned our capital structure and optimised our asset portfolio to maximise cash flows while targeting a strong BBB/Baa investment grade balance sheet.

Our robust programme of actions, announced in September 2015, to reduce debt and address market concerns has delivered a $14.0 billion reduction in Net debt and $14.7 billion reduction in Net funding over the past 18 months.

The progressive delivery of our various debt reduction measures as well as higher commodity prices over the period have supported an increase of over 200% in the Glencore share price over 2016.



Strengthening our balance sheet

During the second half of 2015, it became apparent that financial markets were concerned about Glencore's debt levels and our ability to sustain an investment grade credit rating. Following dramatic movements in our share price during September, we rapidly put in place a comprehensive programme of actions to reduce our debt, restructure underperforming assets and preserve the value of our resources.

This programme culminated in a series of actions which included:

- $2.5 billion share placement
- The suspension of 2015 final dividend and 2016 interim dividend ($2.4 billion)
- Renewed focus on working capital efficiency
- Asset divestment and streaming proceeds of $6.3 billion
- Curtailment of the Katanga and Mopani copper assets pending long-term transformation via operational upgrades
- Temporary suspension of around 500,000 tonnes of zinc mine capacity to preserve the value of our resources in the ground.

Preserving operational value

With our unique position at every stage of the commodities value chain, from extraction through to marketing and logistics, our wide-reaching market knowledge means we are well placed to see physical commodity movements and to understand their impacts on supply/demand fundamentals. As such, we take a highly disciplined approach to supply.

We recognise that when prices are low, greater value can be generated by curtailing production and preserving reserves until conditions improve.

In September 2015, we announced the suspension of production at our Katanga and Mopani assets in Africa to implement transformational upgrade projects that will significantly lower the cost of production.

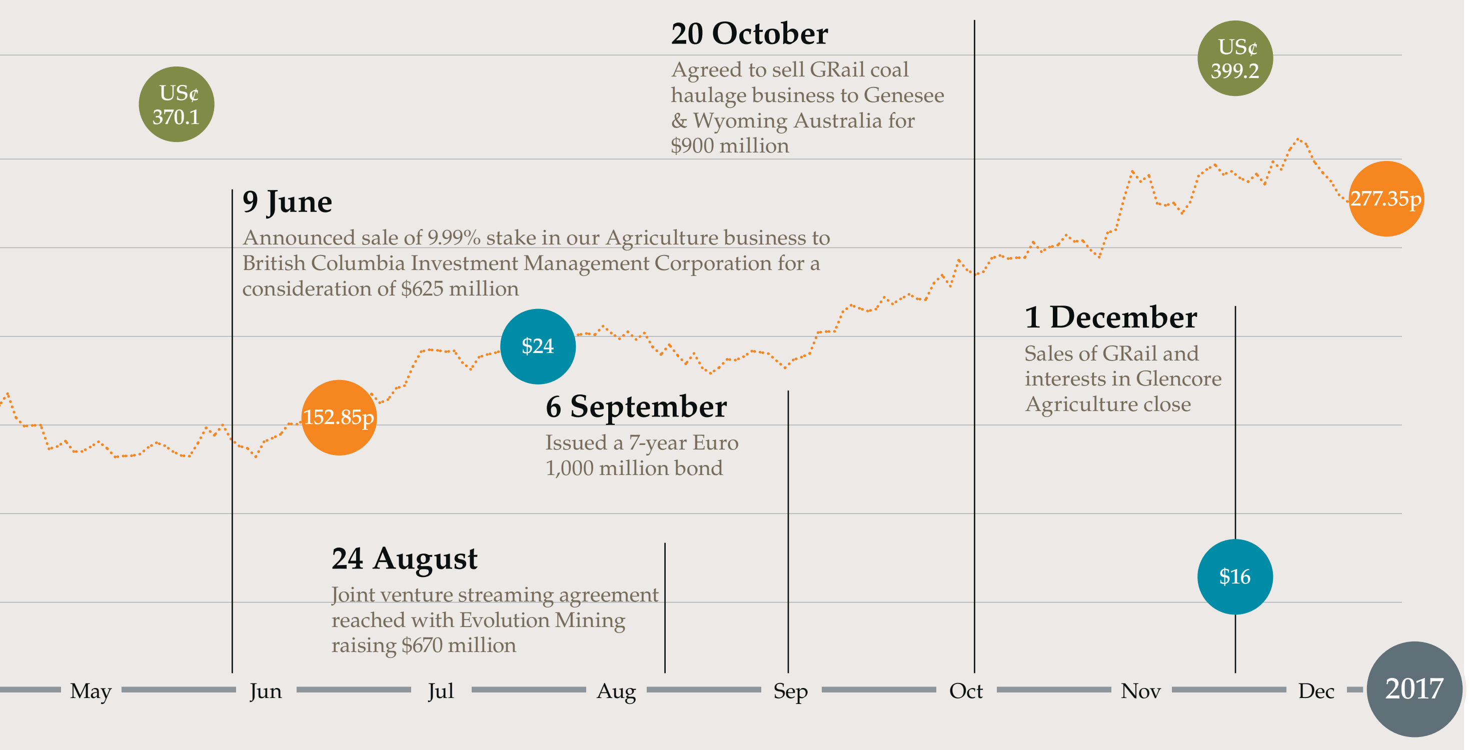
A month later, we reduced zinc volumes by around 500,000 tonnes of contained zinc across our operations in Australia, South America & Kazakhstan, preserving the value of our reserves in the ground, at a time of low zinc and lead prices, which did not correctly value the scarce nature of these resources. These latent tonnes will be restarted when commodity price conditions support value creation.

*Based on data from S&P GSCI Spot Index

Dividend policy and reinvestment

In December 2016, we announced the reinstatement of distributions to shareholders. Initially, Glencore will return $1 billion to shareholders in two equal tranches in 2017. This will be paid in May and September 2017.

In 2018, a new distribution policy will apply with respect to 2017 actual cash flows, subject to Board and shareholder approval. This will compromise of a fixed $1 billion component reflecting the resilience, predictability and stability of marketing cash flows and a variable element, representing a minimum payment of 25% of free cash flows from our industrial assets.



Unlocking value through asset sales
A significant part of our debt reduction programme was achieved through asset divestments. This included the sale of non-core gold and silver by-products at a number of our copper mines as well as the introduction of strategic partners into our agriculture business through the sale of a c.50% stake to Canada Pension Plan Investment Board and British Columbia Investment Management Corporation.

Cash flows from these assets were monetised at a blended unlevered real after tax IRR of around 5%.

Creating long-run sustainable returns
Our proactive actions over the past 18 months have repositioned our capital structure and demonstrated our commitment to a strong BBB/Baa investment grade rating. We now target maximum through the cycle Net debt/Adjusted EBITDA leverage of 2x – a structure that engenders less risk for the business, additional balance sheet flexibility and overall greater stability of distributions to shareholders.

Our business is well-capitalised, requiring modest capital expenditure going forwards. Over $38 billion has been spent on the combined Glencore/Xstrata asset base since 2009 and the heavy capital expenditure programme is now largely complete. A total capital expenditure of around $4 billion per annum (including around $3 billion of sustaining capital expenditure) is now being guided to over the next three to five years.

We have strong supply positions in mid- to late-cycle commodities, including copper, cobalt, nickel, zinc and thermal coal, as well as significant operational leverage to improving fundamentals in our key commodities with substantial volumes of low-cost latent capacity that can restart when we believe conditions are right.

The right combination of commodities to feed the changing needs of maturing economies, combined with our highly resilient marking business underpins our ability to generate healthy, long-run sustainable returns for shareholders.

Who we are

Highly diversified

+90
commodities

3
business segments

Global footprint

90
offices

155,000
people

Active at every stage of the commodity chain to maximise value

High-quality, low-cost assets

Strong entrepreneurial culture: employees empowered to make decisions

We are one of the world's largest diversified, vertically integrated producers, processors and marketers of natural commodities. We market and deliver physical commodities sourced from our own production and third party producers to our highly diversified customer base that includes consumers from the automotive, steel, power generation, oil and food processing industries.

We are a global diversified natural resource company, producing and marketing more than 90 commodities. We are uniquely diversified in terms of commodity, geography and activity. Together with our consumers and suppliers, we benefit from having scale and diversity at every stage of the commodity chain, from extraction to delivery. As both a producer and marketer of commodities, we can benefit from the full range of arbitrage opportunities and value-added margin present throughout our commodity supply chains.

Our portfolio of industrial assets comprises around 150 facilities: mining and metallurgical, oil production

Unique market insight

4,000
employees in marketing

40+
years' experience

Breadth of scale

50
countries

150
sites

Long-term relationships with broad base of suppliers and customers

Marketing business less correlated to commodity prices

Maximum flexibility and economies of scale

and agricultural. These mainly high-quality, low-cost assets generate cash even during periods of weakness for particular commodities, industries, customers or regions. Our industrial asset base enhances the quality and scale of our marketing activities, offering our customers greater choice.

We have over 40 years of experience in marketing commodities. This has allowed us to develop and build expertise in the commodities we deal with, and to cultivate long-term relationships with our broad, international supplier and customer base. Our marketing business tends to be less correlated to commodity prices than our industrial business, which generally makes our earnings less volatile than commodity businesses based solely on production.

Our marketing business focuses on maximising returns across our entire supply chain, in addition to minimising costs and maximising operational efficiency.

We create value from: our economies of scale; our extensive global third party supply base; our logistics, risk management and working capital financing capabilities.

Our global presence underpins our extensive market insight, business optionality, large customer base, and strong market position and penetration for the commodities we handle.

Our strong entrepreneurial culture has been central to our success. This is underpinned by the fact that management and employees own around one-third of our shares, aligning our workforce's interests with those of external shareholders to a level that is unique among major resource companies.

Our presence

We are a global, diversified natural resources company. Our three distinct business segments are aligned with management's oversight and ensure value is extracted at every point of the operating chain:

Metals & minerals

Copper, zinc & lead, nickel, ferroalloys, alumina & aluminium and iron ore production and marketing. We have interests in industrial assets that include mining, smelting, refining and warehousing operations.

Copper

	Country	Assets
1	Argentina	Alumbrera Mine
2	Australia	Cobar, Ernest Henry, Mount Isa, Townsville
3	Canada	CCR, Horne
4	Chile	Altonorte, Collahuasi Mine, Lomas Bayas Mine, Punitaqui
5	DRC	Katanga, Mutanda
6	Peru	Antamina, Antapaccay
7	Philippines	Pasar
8	Zambia	Mopani, Sable

For more information, see page 52

Zinc

	Country	Assets
9	Argentina	Aguilar
10	Australia	Mount Isa, McArthur River
11	Bolivia	Sinchi Wayra
12	Burkina Faso	Perkoa
13	Canada	Brunswick Lead Smelter General Smelting Matagami, Kidd
14	Europe	Portovesme, San Juan de Nieva, Nordenham, Northfleet
15	Kazakhstan	Kazzinc
16	Namibia	Rosh Pinah
17	Peru	Los Quenuales

Nickel

	Country	Assets
18	Australia	Murrin Murrin
19	Canada	Raglan Mine Sudbury INO
20	Europe	Nikkelverk
21	New Caledonia	Koniambo

Ferroalloys

	Country	Assets
22	Europe	Glencore Manganese Group
23	South Africa	Chrome and Vanadium

Adjusted EBITDA 2016 (%)

Revenue[1] by region & segment 2016 (%)

Non-current assets[2] by region & segment 2016 (%)

Metals & minerals
Energy products
Agricultural products
Americas
Asia
Europe
Africa
Oceania

1 *Revenue by geographic 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 the product.*

2 *Non-current assets are non-current assets excluding other investments, advances and loans and deferred tax assets.*

The percentage contributions are derived from the information included in note 2 of the financial statements.

Diversity by geography:

Our operations around the world span a global network of more than 90 offices located in over 50 countries, and employ around 155,000 people, including contractors.

Diversity by product and activity:

We produce and market over 90 commodities; including those from around 150 mining and metallurgical sites, oil production assets and agricultural facilities.

Energy products

Coal and oil industrial and marketing. Our Energy products businesses include coal mining and oil production operations and investments in strategic handling, storage and freight equipment and facilities.

Coal

24 Australia	Bulga, Clermont, Collinsville, Integra, Liddell, Mangoola, Mount Owen, Oaky Creek, Newlands, Ravensworth, Rolleston, Tahmoor, Ulan
25 Colombia	Cerrejón, Prodeco
26 South Africa	Goedgevonden, iMpunzi, Izimbiwa Coal, Tweefontein

Oil

27 Chad	Badila, Mangara
28 Equatorial Guinea	Block O and Block I

For more information, see page 66

Agriculture

Focused on grains, oils/oilseeds, cotton and sugar. Glencore Agriculture is supported by both controlled and non-controlled storage, handling and processing facilities in strategic locations.

29 Argentina	Storage facilities, rice milling operations, crushing plants, biodiesel plants
30 Australia	Storage facilities, farming operations, port operations (Viterra)
31 Brazil	Wheat milling operations, crushing plant, sugarcane facility, storage facilities, port operations
32 Canada	Storage facilities/elevators, crushing plants, port operations (Viterra)
33 Europe	Crushing plants, biodiesel plants, storage facilities, farming operations, port operations
34 Kazakhstan	Storage facilities
35 New Zealand	Storage facilities
36 Paraguay	Storage facilities
37 Uruguay	Milling operations, storage facilities
38 USA	Crushing plant, storage facilities

For more information, see page 74

Corporate office

Marketing office/other

Our business model

Strategic imperatives:

Integrating sustainability throughout our business

Maintaining a robust and flexible balance sheet

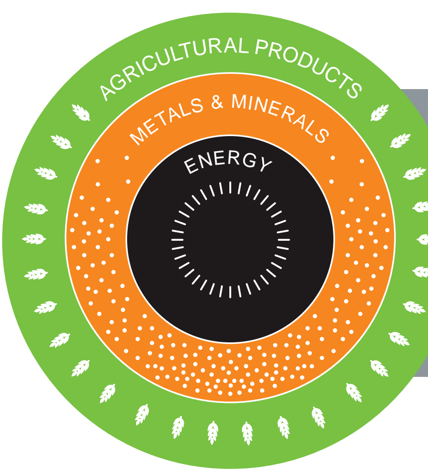
Inputs:

Assets and natural resources:

- We wholly-own or have a significant ownership in our assets, in which we make long-term investments
- We prioritise being a competitive, low-cost producer
- Our resources and reserves are overall long-life and of high quality, enhancing the scale and value of our marketing business (see page 213)
- We are a disciplined producer, aligning supply to demand

Our people and partners:

- We have worked to cultivate and establish long-term relationships with a broad range of suppliers and customers across diverse industries and geographies
- Our highly skilled and professional workforce of around 155,000 employees and contractors is located across six continents
- We interact with a large number and range of stakeholders around the world. We are committed to building transparent and constructive relationships with our partners to deliver sustainable, long-term benefits to all our stakeholders



What we do:

EXPLORATION, ACQUISITION & DEVELOPMENT

EXTRACTION & PRODUCTION

1

Our focus on brownfield sites and exploration close to existing assets lowers our risk profile and lets us use existing infrastructure, realise synergies and control costs.

We evaluate each industrial investment opportunity on a standalone basis and on its potential to strengthen our marketing activities or existing industrial assets.

This approach allows us to build on our economies of scale, our familiarity with individual political and cultural landscapes, and our understanding of commodity dynamics.

We mine and beneficiate minerals across a range of commodities, mining techniques and countries, for processing or refining at our own facilities, or for sale.

Resource extraction and production involves long-term commitments and exposure to risks relating to commodity prices, project development, changes in sovereign legislation and community acceptance.

Earning and maintaining our licence to operate from our host governments and local communities is integral to developing and maintaining our assets.

Outputs:

Sustainable business

See our Sustainable development section on page 20

Our people: *Safety*

Our people: *Health*

Environment

Community & human rights

Our people: *Workforce*

Principal risks and uncertainties:

KPIs:

Total recordable injury frequency rate (TRIFR) | Water withdrawn | Greenhouse gas (GHG) emissions
Community investment spend

Focusing on cost control and operating efficiencies

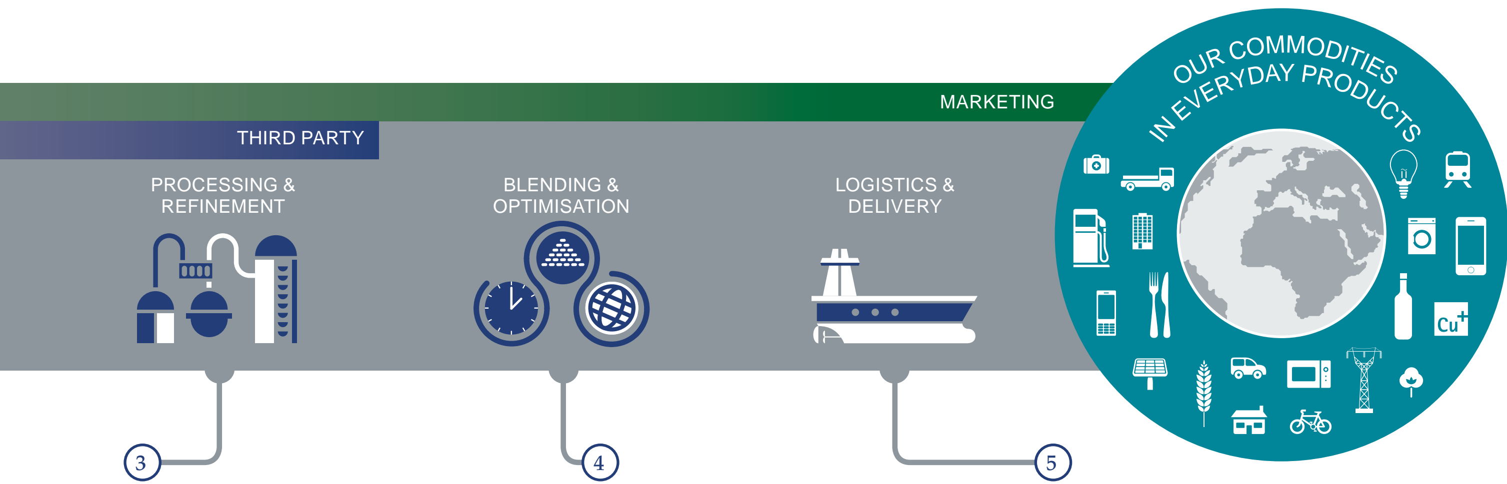
See page 16 for more information on our strategy

Financial discipline:

- We deploy capital in a disciplined manner that creates value for all our stakeholders. We have a long track record of value creation across economic cycles
- Our hedging strategies protect us against price risks and ensure that our marketing profitability is primarily determined by volume-driven activities and value-added services rather than absolute price

Unique market knowledge:

- Our scale and global reach give us valuable insight into market flows and access to real-time information
- Our long experience has allowed us to build extensive market knowledge and insight, as well as full logistics capabilities
- As an integrated commodity producer and marketer, we are uniquely positioned to generate value at every stage of the commodity chain



3

Our expertise and technological advancement in processing and refining mean we can optimise our end products to suit a wider customer base.

Our smelting and refining facilities provide volumes that are handled by our marketing teams.

Our ownership of processing and refining assets increases our flexibility and optionality and provides security of supply as well as valuable market knowledge.

We purchase and process additional products from smaller operators that do not benefit from our economies of scale.

4

Our presence at every stage of the commodity chain allows us to offer a wide range of product specifications, resulting in a superior service.

Our ability to blend and optimise both our own and third party products helps us to meet our customers' specific requirements.

Working with third party suppliers gives us better oversight of the total supply status for specific commodities; we have valuable market and local knowledge to better understand the supply-demand balance.

5

Our logistics assets allow us to handle large volumes of commodities, both to fulfil our obligations and to take advantage of demand and supply imbalances.

We have a worldwide network of storage and logistics assets in key strategic locations, including metal warehouses accredited by the LME and numerous oil and grain storage facilities.

Our many value-added services make us a preferred counterparty for customers without such capabilities, as well as strengthening long-term relationships.

Financial performance

See our Financial review on page 45

Returns for shareholders	*Value for our stakeholders*

See page 36 for more information on risks and uncertainties

Adjusted EBIT/EBITDA | Funds from operations (FFO) | Net funding | Net debt/FFO to Net debt | Net income attributable to equity holders

Our marketing business

We are an established physical marketer of commodities. Over the past 40 years, we have built a strong reputation as a reliable, timely supplier of quality products. Our presence on the ground gives us unique, extensive market knowledge and insight, as well as trusted relationships with our partners and customers. In addition, we have developed the logistics capabilities to generate value-added margins and are well positioned to seek arbitrage opportunities throughout our supply chain.

Our marketing activities involve the physical movement of commodities, both those extracted by our industrial business and those purchased from third party suppliers. We supply these to where they are in most demand. We generate earnings as a fee-like income from physical asset handling and arbitrage, as well as blending and optimisation opportunities.

Our market insight, extensive logistics network and storage facilities differentiate us from businesses based solely on commodity production. As a result, in addition to minimising costs and maximising operational efficiency, we can also focus on maximising the fee-like returns we make from the entire marketing process.

Our integrated marketing and industrial businesses work side by side to give us a presence across the entire supply chain, delivering a unique knowledge of market dynamics and helping us to fully understand the needs of our customers.

Less vulnerability to commodity prices and volatility

Our marketing business is countercyclical from a cash flow perspective, as its funding requirements are highly linked to commodity prices. The business requires less working capital during periods of falling prices, which helps mitigate the generally negative effects of lower prices on our industrial assets.

Virtually all our marketed volumes are hedged or pre-sold to minimise price exposure. Our use of hedging instruments results in profitability being overwhelmingly determined by volume activity and associated value-added supply chain margins, and other marketing conditions, rather than by the absolute flat price itself.

Risk management

We have developed a comprehensive risk management system over our 40 years of business, supported by robust procedures, to monitor our marketing activities.

Unique market knowledge: global office network and logistics/ storage infrastructure

Fee-like income from handling of physical commodities and arbitrage opportunities

Established third party supply and global customer base

Price exposure minimised: marketed volumes hedged or pre-sold

The arbitrage strategies we implement to generate additional returns vary from commodity to commodity.

The main opportunities are:

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.

We mitigate the credit risks associated with our marketing activities, including those within supplier and customer agreements, through the extensive application of measures including credit insurance, letters of credit, security arrangements and bank or corporate guarantees.

Our teams manage Glencore's market exposure by reducing price risks arising from timing differences between the purchase and sale of commodities to acceptably low levels.

Our extensive internal compliance policies and procedures, as well as third party screening, seek to ensure that we comply with all applicable sanctions, laws and regulations.

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. Arbitrage activity generates additional value through sourcing, transporting, blending, storing or otherwise processing commodities.

Our strategy

Our main strategic objective is to sustainably grow total shareholder returns while maintaining a strong investment grade rating and acting as a responsible operator. To achieve this ambition, we are focusing on three strategic imperatives: to fully integrate sustainability throughout our business; to maintain a robust and flexible balance sheet; and to focus on cost controls and operational efficiencies throughout our entire business.

These three strategic imperatives are supported by our highly entrepreneurial culture that underpins Glencore's opportunistic approach to doing business within clearly defined financial criteria. From an operational level through to our senior management team, our employees are empowered to evaluate opportunities and make decisions while taking responsibility for their actions. This approach allows our managers to be flexible and rapid in their response to changing situations while risk is mitigated by a comprehensive framework of controls. Our entrepreneurial culture is underpinned by a high level of ownership by management and employees, which is unique amongst the major resource companies.

Strategic priority
Integration of sustainability throughout our business

Strategic priority
Maintain a robust and flexible balance sheet

Strategic priority
Focus on cost control and operational efficiencies

Strategic priority

Integration of sustainability throughout our business

Strategic objectives:

We believe that by being a better operator with a reputation for doing things the right way, we will be seen by our stakeholders as a partner of choice. We are achieving this through taking an approach of continuous improvement. This approach is delivered through our health and safety programmes, advancing our environmental performance, respecting human rights and by developing, maintaining and strengthening our relationships with all of our stakeholders.

Key performance indicators: see page 35

- Safe and healthy workplace – TRIFR
- Environmental performance – water withdrawn, greenhouse gas (GHG) emissions, meeting our commitments on climate change
- Long-term value for communities – community investment spend

Principal risks and uncertainties:

- Health, safety and environment, including potential catastrophes
- Emissions and climate change
- Community relations
- Skills availability and retention

Key highlights in 2016

- Continued to progress our SafeWork programme, an initiative that focuses on eliminating fatalities and serious injuries. Sadly, we failed to meet our target of zero fatalities in 2016; 16 people died at our operations during the year
- Improved our total recordable injury rate by 7%. Our lost time injury frequency rate increased by 4%
- Completed the revision of our health strategy and distributed its supporting materials. Developed and implemented leading and lagging KPIs
- Rolled out throughout the Group our strategic water management framework
- Published *Climate change considerations for our business*; identified a range of climate change scenarios and assessed their implications on our portfolio; responded to the requirements of the Aiming for A resolution
- Implemented a strategic framework to enhance our contribution to socio-economic benefits at all assets

Priorities going forward

We will continue to implement activities that further integrate sustainability throughout our business to support our commitment to continuously improve our standards of health, safety, environmental and community performance. We are committed to operating transparently, responsibly and meeting or exceeding applicable laws or external requirements.

Our strategy

Strategic priority

Maintain a robust and flexible balance sheet

Strategic objectives:

We recognise that a robust and sufficiently flexible balance sheet contributes to the delivery of sustainable, long-term shareholder returns and ensures that Glencore is well placed to withstand the cyclical nature of the natural resource industry. We aim to increase returns on capital and cash flows while targeting a maximum two times Net debt to Adjusted EBITDA ratio throughout the cycle. We aim to only deploy capital when strict and clearly defined financial criteria, relating to returns and payback, can be met.

Key performance indicators:
see page 34

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

Principal risks and uncertainties:

- Reductions in commodity prices
- Fluctuations in supply or demand for commodities
- Fluctuations in currency exchange rates
- Liquidity risk
- Counterparty credit and performance

Key highlights in 2016

- Completed the debt reduction programme: at year-end, net funding and net debt were $32.6 billion and $15.5 billion respectively
- Disposed $6.2 billion of assets
- Issued $1.3 billion of bonds and repurchased $2.6 billion of bonds with maturities mainly in 2018 to 2020, thus capping post-2017 maturities at c.$3 billion in any one year (down from c.$4–5 billion)
- Meaningfully and proactively repositioned Glencore's capital structure and credit profile through delivery of the debt reduction programme
- Credit rating reaffirmed as Baa3 (stable) by Moody's and BBB- (positive outlook) by Standard & Poor's
- Undertook an early refinancing of the short-term tranche of the revolving credit facility, securing greater than 24 months' liquidity from such time

Priorities going forward

We are committed to maintaining our balance sheet strength to ensure it is capable of supporting growth and shareholder returns regardless of the commodity price environment. We will preserve a robust capital structure and business portfolio that reflects our commitment to targeting, receiving and maintaining a strong BBB/Baa investment grade rating. In this regard, we will manage the business to a net debt to EBITDA ratio of no greater than two times throughout the cycle.

Strategic priority

Focus on cost control and operational efficiencies

Strategic objectives:

Our major industrial assets are mainly long-life and low-cost, reflecting our substantial investment into existing assets as well as our appetite, capabilities and belief in some commodities and geographies where our peers are not materially present. Our industrial assets provide a consistent source of volumes for our marketing operations, which are supplemented by third party production. Our marketing activities use their scale and capabilities to extract additional margin throughout our business model and provide a superior service to our customers and a reliable supply of quality product.

We seek to increase the value of our business by improving the competitiveness of our assets through an ongoing focus on cost management and logistical capabilities, including operating safety and efficiently. We take a disciplined approach towards all of our assets and will divest when another operator places greater value on them, or curtail production in response to oversupply when it makes sense to do so.

Key performance indicators:
see page 34

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

Principal risks and uncertainties:

- Geopolitical risk
- Laws, enforcement, permits and licences to operate
- Sourcing, freight, storage, infrastructure and logistics
- Development and operating risks and hazards
- Cost control

Key highlights in 2016

- Achieved $2.8 billion Adjusted EBIT across our marketing business, underlining its resilience to the commodity cycle
- Achieved significant reductions to operating costs at our key industrial assets through efficiencies and savings as well as favourable foreign exchange movements and by-product credits
- Continued our disciplined approach to supply, maintaining production curtailments; volumes will be restarted at the right time and price

Priorities going forward

Our industrial activities will continue to focus on controlling costs and generating sustainable operating and capital efficiencies. Our marketing business supports the creation of incremental value through critical mass, blending, storage and geographical arbitrage.

Our marketing activities' priorities are to maximise the returns and cash flows from the pool of allocated capital, which, in turn, supports the strengthening of our balance sheet. Our presence at every stage of the value chain means that Glencore is uniquely positioned to leverage our scale and diversity.

Sustainable development

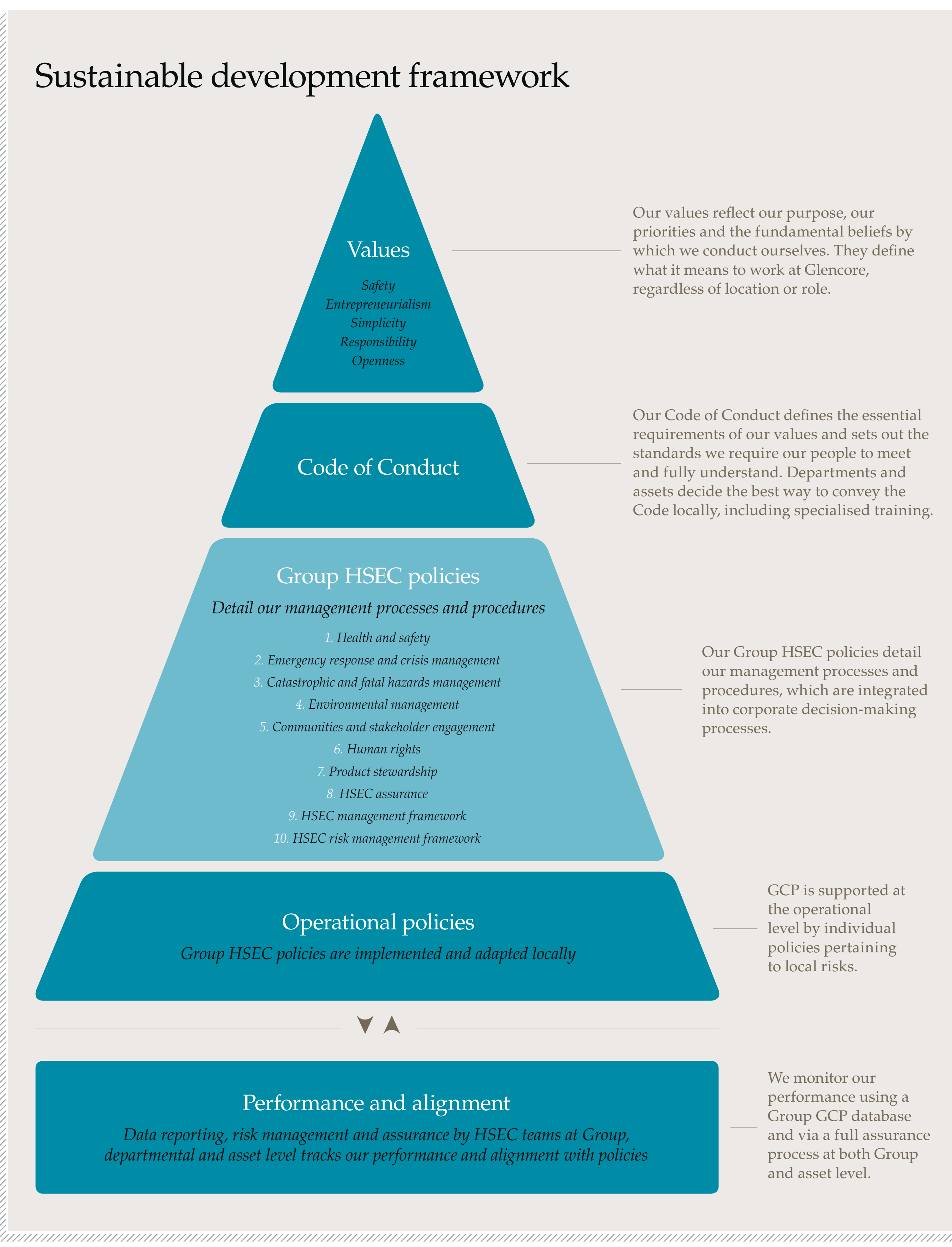
Our activities and our presence deliver lasting benefits to our stakeholders and to society, creating value both locally and globally. The commodities that we produce and market have an essential role in everyday life and support the development of emerging economies. Working with the communities living around our operations, we support socio-economic development through our investment in infrastructure, procurement, health and education projects.

Our approach to sustainability is embodied by Glencore Corporate Practice (GCP). This consists of three tiers, our values, our Code of Conduct and our Group HSEC policies. GCP is supported at asset level by operational policies, developed for the specific needs of individual assets, with compliance determined by performance monitoring and assurance.

GCP provides a framework for the integration of our sustainability principles, guidance and policies throughout our business. GCP gives clear guidance on the standards we expect all our operations to achieve. Through the reporting function within GCP, our Board receives regular updates and has detailed oversight of how our business is performing across all our internally defined sustainability-related key areas.

We publish an annual sustainability report, in accordance with the core requirements of Global Reporting Initiative (GRI). This report covers in considerable detail our approach, our performance and basis of preparation across all key sustainability topics. Our sustainability reports are available on our website: **www.glencore.com/sustainability**.

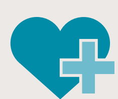
Sustainable development framework



Sustainable development

Our sustainability strategy sets out our ambitions against four core pillars: health; safety; environment; and community and human rights. In addition, we have identified "our people: workforce" as a focus area.

Safety:
Become a leader in workplace safety, eliminating fatalities and injuries



Health:
Become a leader in the protection and improvement of our people's and communities' wellbeing

Environment:
Minimise any negative environmental impact from our operations and apply the precautionary principle in decision-making

Topic	2016 priorities	Progress
Safety	*Continue to implement SafeWork, build a strong culture of safety and eliminate fatalities across the Group*	*16 fatalities took place at Glencore assets during 2016. All loss of life is unacceptable and we are determined to eliminate fatalities across our Group* *SafeWork implemented Group-wide; ongoing efforts to bring about a universally robust safety culture at all our assets*
	Progress our targeted 50% reduction of lost time injury frequency rate (LTIFR) and total recordable injury frequency rate (TRIFR) by 2020, based on our 2015 and 2014 baselines respectively	*Our TRIFR improved by 7%, our LTIFR increased by 4%*
Health	*Roll out the revised health strategy and supporting materials to assets during 2016*	*Revised health strategy and supporting materials rolled out Group-wide; underpinning the development and implementation of leading health and safety practices at all of our assets*
Environment	*Undertake a feasibility study to develop a meaningful target for carbon, continue to develop our position in the debate on climate change and the role of fossil fuels in the future global energy mix*	*Climate change considerations incorporated into the annual budget process to improve understanding of our expected footprint, supporting the development of realistic reduction goals to further decrease our Group GHG footprint*
	Implement the water management framework across the Group and assess operations that have been identified as being high-risk sites related to water	*Strategic water management framework rolled out and an approach for identifying potential high water-related risk sites established*
Community and human rights	*Continue to strengthen relationships with our communities and other stakeholders to maintain our licence to operate*	*Community Leadership Programme toolkit developed: a toolkit of training materials for our community relations teams and management at assets, drawn from internal and external expertise*
	Develop a strategic framework to enhance our contribution to socio-economic development and roll out associated metrics to all operations	*Utilising our socio-economic contribution scorecard to examine the key value flows that our assets create for four principal stakeholder groups: employees; suppliers and contractors; local communities; and government*
Our people	*Continue to support and foster development of talented people regardless of age, gender or race through local employment, internships, scholarships or training*	*Ensuring appropriate succession planning and retention strategies are in place that reflect both the local working environment skill requirements and longer-term development and retention of talent for Glencore globally*

Non-financial indicators includes the information and data from our industrial activities, including only assets where we have operational control, and excluding investment, marketing and holding companies. The community investments spend and headcount information also includes our marketing activities

Community and human rights:
Foster sustainable growth and respect human rights wherever we operate

Our people:
Employ workforces that reflect the demographics of the communities in which we operate

Within our strategy we have clearly defined imperatives, objectives, priority areas and targets. Our Departments and assets align their annual HSEC plans to the corporate sustainability strategy.

The sustainability strategy is reviewed each year, which includes consultation with our Department SD Leads to ensure it continues to fulfil the needs of our business.

Key Performance indicator	2016	2015[1]	2014[1]	Our priorities going forward
Fatalities at managed operations	16	10	16	We are committed to eliminating fatalities throughout our assets
Lost time injury frequency rate (per million hours worked)	1.40	1.34	1.60	50% reduction of Group LTIFR by the end of 2020, against 2015 figure of 1.34
Total recordable injury frequency rate (per million hours worked)[2]	4.05	4.35	5.02	50% reduction in TRIFR by 2020 using 2014 figures as baseline
New occupational disease cases	89	127	259	A year-on-year reduction in the number of new cases of occupational disease
CO_2e Scope 1 (million tonnes)	22.9	23.0	21.8	Continue to enhance our reporting on our progress in fulfilling our climate change commitments Report on progress in developing carbon targets across coal & ferroalloys
CO_2 Scope 2 – location-based (million tonnes)[3]	12.7	14.8	14.7	
Water withdrawn (million m^3)	970	954	996	Assets identified with "high-risk water issues" to implement five-year water targets 2017–2021 Maintain internal and external audits associated with our high risk tailings dams
Total energy use (petajoules)	222	236	236	
Community investment spend ($ million)	84	94	114	Distribute the Community Leadership Programme toolkit to all assets, for customisation to local circumstances
				Implement our Social Value Creation strategy Group-wide No serious human rights incidents (Category 3 or above)
Number of employees and contractors	154,832	156,468	181,349	Continue to support and foster development of talented people regardless of age, gender or race through local employment, internships, scholarships or training
Share of female employees (%)	17	16	16	

1 *For some indicators, data from previous years has been restated to reflect improvements in our data collection, analysis and validation systems.*
2 *TRIFR baseline set in 2014, definitions aligned post-merger.*
3 *Scope 2 indicators have been restated to reflect updated IEA grid emission factors and a shift to the location-based approach of the Greenhouse Gas Protocol*

Sustainable development

Materiality

Glencore's HSEC Management Framework Policy requires regular materiality assessments to determine the Group's strategic priorities. Our 2016 materiality assessment process considered Group, department and asset priorities, along with external stakeholder concerns and was approved by the Board HSEC Committee. The assessment included information drawn from three areas:

- Our understanding of the issues that affect our business and the natural resources sector
- What is required of us by law and how this affects our activities
- Feedback: topics raised during engagement with our people and external stakeholders

In line with the Global Reporting Initiative (GRI) guidance on materiality, we undertook a Group-wide review of material topics at global and local levels. This identified topics raised during structured engagement activities, by a broad range of internal and external stakeholders. It considered the topics that affect our peers and the entire sector, assessing media coverage and feedback from local communities. It included input from each department's HSEC and Corporate Affairs teams on relevant issues and reporting indicators, including interviews and analysis.

We report on topics with global interest or impact, or that affect more than one region. A topic is considered material if senior management determines that it may significantly affect our business operations or have a significant impact on any of our stakeholders.

We organised all the material issues raised into a material matters register, with input from each department's sustainability lead. The final output of the assessment was a material matters matrix and corresponding reporting indicators.

The ten issues we have identified to focus on in 2017 were:

- Health and safety
- Catastrophic hazard management
- Process safety management
- Climate change and emissions
- Water and effluents
- Waste and spills
- Local community engagement and social commitment compliance
- Human rights and grievance mechanisms
- Product stewardship
- Emerging regulations

The Board HSEC Committee has reviewed and approved the results of this materiality assessment.

Risk management

The identification, assessment and mitigation of risks determines our approach to sustainability management. Risk management is fully integrated into our business planning and decision-making processes at every level of the Group, with clearly defined roles, responsibilities and key competencies.

All of our assets apply our risk management framework and its supporting guidelines. The framework is aligned with international standards and provides a standardised approach to managing our health, safety, environment, community, human rights and reputational risks, as well as those linked to the management of financial and legal issues.

Our assets use the framework to identify hazards, particularly those with potentially major or catastrophic consequences, and to develop plans to address and eliminate, or mitigate, the related risks. Management tools such as protocols, training packages, software and reporting processes are available.

We require different levels of risk management for different activities. From routine pre-task risk assessments using simple tools to formal risk assessments where there are changes to a business, to operations or to processes; the introduction of new equipment; or new projects.

We maintain a register of risks and management plans and continually monitor and review performance against these plans, communicating risks and responsibilities to the relevant stakeholders. We also undertake regular internal reviews of our risk management effectiveness as part of our continuous improvement process.

HSEC assurance

Our internal HSEC assurance programme has a primary focus on the systematic management of catastrophic hazards that have been identified by each of our commodity departments, and their relevant controls and critical controls. We put a high priority on accountability. Our assessment criteria and methodologies are transparent; the emphasis is on finding constructive solutions for continual improvement.

In 2016 we finalised our HSEC auditing system, which is a key part of our internal assurance programme. The systems now in place ensure that all auditing of the way we address catastrophic hazards is undertaken by experienced subject matter experts and its findings are actively followed-up and verified. The programme is contributing to improving standards and performance Group-wide. All findings and follow-up actions are presented to the Board HSEC Committee.

The safety of our people

The health and safety of our people is our top priority. We are committed to achieving strong health and safety performances at all of our assets through resolving local challenges and transforming behaviour at all levels of our organisation.

Strategy and approach

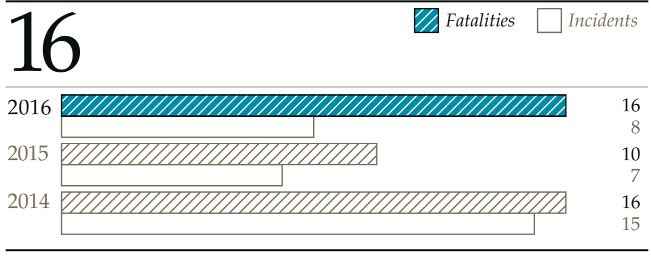
We take a proactive, preventative approach towards health and safety and our aim is to establish a positive safety culture in which all of our employees and contractors are empowered to have the authority to stop work if they consider a workplace or situation unsafe. We believe that all occupational fatalities, diseases and injuries are preventable. We are working towards achieving this ambition through SafeWork, a Group-wide initiative. A key element of SafeWork is its focus on eliminating fatalities and serious injuries through encouraging life-saving behaviours and developing a better understanding of the consequences of unsafe actions.

An important tool in improving safety at our operations has been the recording of high potential risk incidents (HPRIs). Reporting on HPRIs trends and making corrective actions directly is helping to prevent the systemic cause of fatalities.

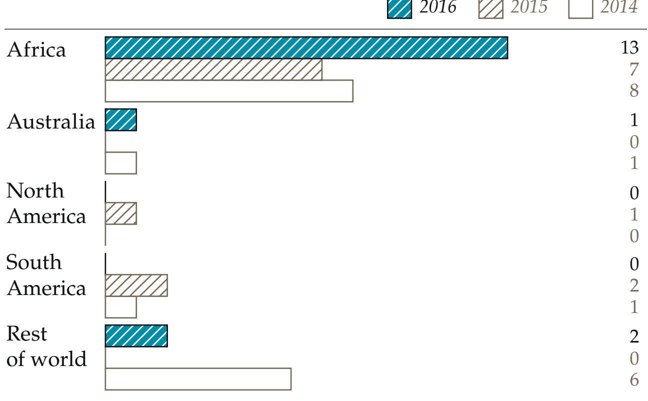
Performance

It is with deep regret that we have not met our goal of zero fatalities. 16 people lost their lives at our operations, compared to 10 during 2015. All loss of life is unacceptable and we are determined to eliminate fatalities across our Group.

Fatalities at managed operations
Number



Fatalities per region (2014–2016)
Number



All our assets are implementing our SafeWork programme. Each asset has completed a gap analysis against our fatal hazard protocols requirements. This included identifying and implementing controls, and producing detailed action plans to close out any identified gaps. SafeWork also requires training in hazard awareness, risk assessment, life-saving behaviours and safety leadership.

In 2014, we identified a small number of our operations as 'focus assets'. These assets are located in challenging geographies and have legacy issues that have historically resulted in them having a lower safety performance than the rest of the business.

During 2016, 13 fatalities from five incidents took place at our focus assets. We are determined to bring about permanent structural change in our safety and risk management, through the implementation of our SafeWork and Catastrophic Hazard Management programmes. We recognise that more work needs to be done to strengthen each asset's capabilities around sustaining the prevention of fatalities.

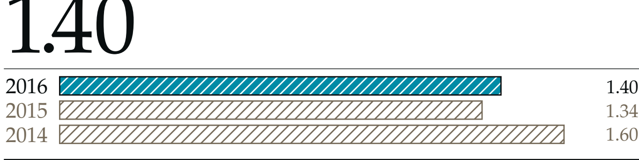
Reducing injury frequency rates

Our long-term goal of reducing employee and contractor injuries targets the delivery of year-on-year reductions in our lost time injury frequency rate (LTIFR). Our LTIFR are recorded when an employee or contractor is unable to work following an incident; days recorded begin on the first rostered shift that the worker is absent after the day of the injury. It reflects the total number of LTIs per million hours worked and does not include restricted work injuries or fatalities.

In 2016, our LTIFR was 1.40 per million hours worked (2015: 1.34). For the first year since 2010, we have not delivered a year-on-year improvement in LTIFR. The absolute number of lost time injuries continues to reduce.

Sustainable development

Lost time injury frequency rate (LTIFR)
per million hours worked

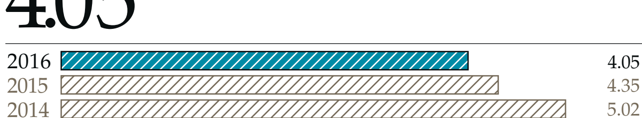


The total recordable injury frequency rate (TRIFR) is the sum of fatalities, lost time injuries, restricted work injuries and medical treatment injuries per million hours worked. The metric represents all injuries that require medical treatment beyond first aid.

During 2015, we set a long-term goal of achieving a 50% reduction in TRIFR by the end of 2020, using our 2014 TRIFR of 5.02 as the baseline (restated as a result of enhanced definitions and improved data accuracy and recording of reporting indicators). Following the merger with Xstrata in 2013, 2014 was the first year all our assets had harmonised their TRIFR reporting definitions. Our 2016 TRIFR of 4.05 is a 19% improvement against the 2014 baseline. Our current TRIFR is on track to meet the progressive improvement required to meet our long-term goal.

Total recordable injury frequency rate (TRIFR)
per million hours worked

4.05



405 High Potential Risk Incidents (HPRIs) were reported in 2016, compared to 338 for all of 2015. The reporting of HPRIs represents a positive part of our strategy to reduce fatalities and, as such, we do not target a reduction in this metric. We are encouraging our workforce to recognise the need to record and report HPRIs through the promotion of a risk-based safety culture.

Health

Promotion of health and wellbeing in our workforce

We believe that all occupational diseases can be prevented. We are working to address risks to the health of our workforce, both from exposure to hazards in the workplace, and from broader lifestyle challenges. The most common health hazards in our workplaces continue to be the manual handling of heavy loads, noise, silica, lead, diesel exhaust particles, acid mist and particulate matter (dust) containing heavy metals.

Outside of our operations, the regions in which we operate have a diverse range of health problems, including HIV/AIDS and malaria in Africa, malnutrition in South America, and diabetes and obesity in Canada and Australia.

The challenges relating to eliminating occupational diseases vary with each site's operational processes and procedures. We have developed three key objectives to meet our strategic intent in occupational disease management:

- Healthy workplaces where exposures to hazards are controlled at the source
- Fit for work ensures the capabilities of employees is appropriate for the tasks being undertaken
- Fit for life delivers wellbeing initiatives that reflect the health needs of individuals in the workplace and those of the local community

Underpinning the three core pillars and reflecting our identified material issues, emerging issues including regulations in relation to health and wellbeing are being monitored and assessed.

The framework and key objectives for our Health Strategy have been finalised. We have consolidated our leading practices, developed tools to support the implementation of the Health Strategy and established indicators to measure performance. These resources are being shared throughout Glencore.

Performance

In 2016, 93% of our sites reported no new cases of occupational disease, compared to 94% of sites in 2015. 89 new cases of occupational disease have been recorded in 2016 (2015: 127).

Environment

Environment

Our operations have direct and indirect impact on the environment in regions where we operate. We work to minimise and mitigate any negative impact from our activities and are always looking for ways to improve our performance. We are committed to reducing our environmental impact, including the efficient use of resources, such as energy and water, wherever possible.

Our water footprint

Water is an essential component of our business activities. More than half of our operations are located in water-scarce areas. We are committed to managing our impact on water resources responsibly. We are implementing new technologies to help minimise or eliminate water discharge.

We prioritise efficient water use, water reuse/recycling, responsible waste water disposal and maintaining any equipment that may pose a hazard to water quality. We engage with local water users to avoid material adverse impacts on the quality and quantity of local water sources or compromising their access to water.

We follow a risk-based approach for the implementation of water management plans. Each asset is required to develop a water management plan that reflects its lifecycle, the identification of the steps needed to eliminate or mitigate water impacts and risks, and the identification of opportunities to improve operational water performance, including the setting of water-related targets where needed. Asset-based targets include water efficiency targets, reducing the withdrawal of fresh water, and increasing the quality of discharged water.

During 2016, we reviewed and revised our approach to measuring our water-related performance, aligning our reporting indicators with the commonly-accepted Water Accounting Framework (WAF) of the Minerals Council of Australia. This will enable us to create comprehensive water balances for all our assets, which supports improved measuring and reporting on water.

Our revised reporting process has resulted in a number of amendments to the indicators and their definitions. As a result, our 2016 water data cannot be fully aligned with reporting from previous years. However, our improved water performance reporting will greatly improve data accuracy going forward.

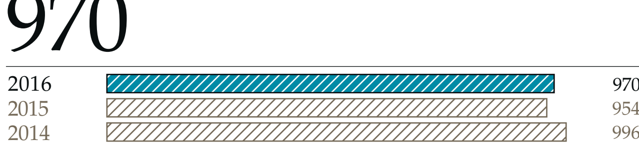
During 2017, we will further evaluate our assets using our new approach on high water-related risk sites. We will assess current water management practices at "high risk" assets to identify potential areas for improvement.

We will run a pilot study using ICMM's catchment-based water management approach. This approach provides a comprehensive and systematic approach for identifying, evaluating and responding to catchment-based water-related risks throughout the assets lifecycle as well as their impact on other users.

Water withdrawn*

million m^3

970



*2016 data is not directly comparable to prior periods due to disclosed changes in data reporting methodology.

We report to the CDP Water Disclosure programme.

Treatment of waste

Most of our waste is mineral; this includes tailings, slag and rock. Our operations have rigorous waste management systems to dispose of waste while preventing environmental contamination. We reuse as much waste as possible, for example we use waste rock to backfill our mines and fill roads with non-hazardous tailings.

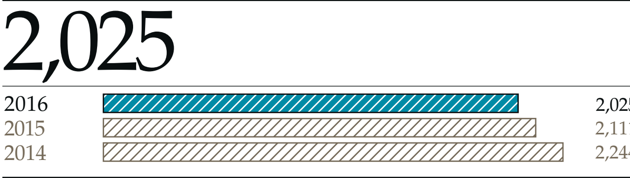
Our metal and coal assets generate tailings, which are stored in purpose-built tailing storage facilities. The tailings are placed in specially designed ponds filled with tailings and water; over time, the water evaporates while the tailings settle, eventually filling the dam. At this point, the dam is capped, sealed and rehabilitated.

Tailings facilities are heavily regulated and undergo regular inspections. Our facilities are monitored continuously to ensure integrity and structural stability. In addition to ongoing local assurance, our corporate HSEC assurance team audits our tailings facilities against a defined protocol that is aligned with international best practice.

Sustainable development

During 2016, our hazardous and non-hazardous mineral waste totalled 2,025 million tonnes (2015: 2,111 million tonnes).

Hazardous and non-hazardous mineral waste
million tonnes



Air emissions

Wherever we operate, we comply with relevant regulatory limits and international standards for air emissions. Our open cut operations emit dust from excavation and movement of material. We monitor dust levels at affected communities and minimise dust in a number of ways.

In 2016, our SO_2 emissions totalled 402,000 tonnes (2015: 366,000) as a result of increased production volumes at one site and changes in the feed composition at another site.

Managing the closure of operations

Throughout the life of each operation, it must have a closure plan that is continuously maintained, including appropriate financial provisions. As some of our operations enter suspensions or closure, we are aware of the importance of managing our environmental impacts throughout this process. We also work closely with the host communities to manage the transition and identify opportunities for delivering positive, lasting change.

Community and human rights

Respecting fundamental human rights

Our operations have many contacts with the communities in which we work. It is vital that we uphold the human rights of our people and our local communities, including vulnerable people such as women, indigenous people and victims of conflict. This is particularly relevant in regions where our assets require additional security.

Our approach to respecting fundamental human rights is aligned with the UN Guiding Principles on Business and Human Rights Protect, Respect and Remedy Framework, as well as the ILO Core Conventions. Each of our operations is required to identify human rights risks as part of their risk assessment processes that are undertaken at key phases of their lifecycle.

All our operations are required to have in place grievance mechanisms that are accessible, accountable and fair, and that enable our stakeholders to raise concerns without fear of recrimination.

Performance

Following our successful application to join the Voluntary Principles Initiative in 2015, we are working with the member governments, companies and NGOs to further develop our approach towards human rights.

In 2016, we reviewed our approach to the management of grievances throughout our operations, and developed further guidance to ensure alignment with the UN Guiding Principles on Business and Human Rights.

Working in partnership with local communities

The communities surrounding our operations are our neighbours, employees, business partners and future workforce. Through our commitment to two-way dialogue with our local communities we aim to secure a broad base of support for our activities.

We aim to foster sustainable growth where we operate. We contribute to society throughout our value chain, via employment, procurement, enterprise development, infrastructure and social investment programmes.

Local employment

Our most significant impact on the regions where we are present is through employment, both directly and via contractors. Local employment is particularly significant in developing countries, where our local employees can support as many as nine people each. Improving the prosperity of our workforce also funds a general uplift in local economies, resulting in further job creation.

Local procurement

We use local suppliers wherever possible, as this is cost-effective and helps communities to reduce their reliance on our operations for employment. It is also an important building block for the development of local economies; in some countries, national development objectives determine procurement requirements for each region.

Local infrastructure

Our operations are often in remote and underdeveloped areas, where we can share infrastructure such as roads, water and electricity with our host communities. This infrastructure will last long after our activities end, not only boosting current economic growth but contributing to a sustainable future.

Performance

We are committed to maintaining open and constructive relationships with our host communities, and contributing to their long-term resilience. We seek to maintain engagement strategies that are aligned with the business objectives, and are based on a thorough understanding of community needs and concerns. Where relevant, we develop targeted engagement strategies to work with vulnerable groups.

During the year, we continued to target contributions to initiatives that benefit our host communities. In 2016, this contribution totalled $84 million.

Our community development projects are in three focus areas: capacity building, including education, enterprise development and economic diversification; health and environment. Wherever possible, we seek to work closely with host governments, and to strengthen governmental capacity through training and other support.

Developing and supporting our workforce

Our people are fundamental to our success, underpinning our ability to succeed and grow. We aim to provide clear, attractive career paths and safe, healthy workplaces that are free from discrimination and harassment.

Our success relies strongly on our ability to attract, develop and retain the best talent at every level. We choose the best people for each position and reward our people competitively, in line with market conditions and their contribution to our overall business success. We provide our people with the opportunity to develop and grow their skills, expertise and experience and the confidence to enhance their careers.

Diversity

We believe that a diverse workforce is essential for a successful business and seek to ensure that our workforce reflects the diversity of the communities in which we operate. We value diversity and treat employees and contractors fairly, providing equal opportunities throughout the organisation. In 2016, our workforce was made up of 15,857 (17%) female employees, compared to 16,382 (16%) during 2015.

Protecting labour rights

We are committed to upholding the International Labour Organization's (ILO) Declaration of Fundamental Principles and Rights at Work and their Core Labour Standards. We prohibit any form of child, forced or bonded labour at any of our operations and do not tolerate discrimination or harassment. We endeavour to have a positive and constructive relationship with the unions in the locations where we operate.

Industrial relations

Around 70% of our employees are represented by an independent trade union or covered by a collective bargaining agreement. We uphold our employees' right to freedom of association, right to unionise and collective representation, regardless of their location or function. We are committed to working honestly and transparently with labour unions and undertake negotiations in good faith.

Delivering on our commitments to climate change

We recognise the science of global climate change as laid out by the Intergovernmental Panel on Climate Change (IPCC). We believe this, along with COP21 and public sentiment, will continue to drive a greater number of decisions, policy developments and programmes to restrict greenhouse gas emissions (GHG).

For a number of years, we have engaged with stakeholders specifically interested in climate change, on its potential impact on our business and the contributions that Glencore can make towards a lower carbon economy. At our 2016 Annual General Meeting, a special resolution proposed by the Aiming for A coalition of shareholders, was passed. We welcome the opportunity to provide an update on the reporting requirements associated with this resolution.

During 2016, we established a cross-functional working group to support the delivery of our climate change commitments, as well as supporting our ongoing identification, mitigation and management of related risks and exploiting of business opportunities. The working group is led by our Chairman and includes heads of departments and senior representatives of key functions. It is currently developing a comprehensive risk assessment process and proactively seeking opportunities to reduce our GHG emissions footprint. Progress on the steps the working group is taking is regularly reported to the Board.

Emissions management

We take energy and carbon costs, regulations and emission volumes into consideration as part of our business planning and investment decision processes. Our business proactively works to understand and manage our footprint, and continues to invest in solutions to use energy more efficiently and reduce emissions from the production and end use of our products. Our assets incorporate energy savings and emission reduction opportunities into their ongoing business planning processes as part of our overall efforts to reduce Glencore's GHG footprint.

We are determining how a meaningful internal carbon target might be applied across our business. This target will take into account the diversity of our production processes and geographical locations. We are using internal operational-level energy and emission forecasts, produced by all of our assets, to establish a 2020 GHG profile that will underpin strategic programmes to support an improved management of our GHG footprint and to identify emission reduction opportunities Group-wide.

Across Glencore we use renewable energy sources whenever feasible. Around 19% of the energy used by our assets comes from renewable sources. This includes electricity generated by Glencore facilities and renewable energy procured from local or regional grid suppliers.

Portfolio resilience IEA scenarios

We continually test the resilience of our asset portfolio against carbon scenarios, as well as the financial exposures each scenario could potentially place on our business. Our carbon assumptions are based on the current International Energy Agency World Energy Outlook scenarios and supplemented by local carbon prices and regulatory developments.

Low carbon R&D and investment strategies

We are working to mitigate the physical impacts of climate change where we can and take resource efficiency into account when making operational decisions. Wherever we operate, we seek to optimise our energy and carbon footprint. Throughout our business we are sharing knowledge on how to identify and implement projects to reduce emissions.

Our broad range of products will be required as the global economy continues to grow, as countries develop and for the transition to a lower emissions economy. Copper, aluminium and steel are required for renewables-based power stations as well as energy-efficient infrastructure and the electrification of the transport sector. Nickel and cobalt are required for energy storage and likely to play an important role in the growth of electro-mobility.

Fossil fuels remain a key input for industrial sectors and a critical source of safe, reliable and secure energy, when coupled with carbon capture and storage technologies, fossil fuels can continue to play a significant role in the global energy mix.

KPIs and executive incentives

Key performance indicators relating to climate change are being developed for operational management, who are best placed to implement changes to our energy-use and emissions profiles.

Public policy positions

We believe that the corporate sector has an important role to play in the process of developing climate change policy, and can make a valuable contribution towards the development of effective, efficient and equitable climate change policy. We actively engage in public policy discussions with a range of stakeholders on issues related to energy, carbon and climate change. We also have a range of technical experts who are able to assist policymakers in the development of complex regulations through governmental technical working groups.

Commodities of today and tomorrow: coal

Future global energy demand growth will require all fuel sources

Our coal business has attracted particular interest in the context of climate change. We are progressively integrating climate change challenges and opportunities into business planning and risk management frameworks. We expect our coal business to remain viable and do not believe our coal assets will become stranded.

Under the key energy outlooks, global energy demand will require coal, oil and gas to contribute around 70% of required energy in 2030, even with a $100 price on carbon. The International Energy Agency's modelling of the commitments made as part the 2015 Paris agreements shows that absolute demand for coal will continue to grow.

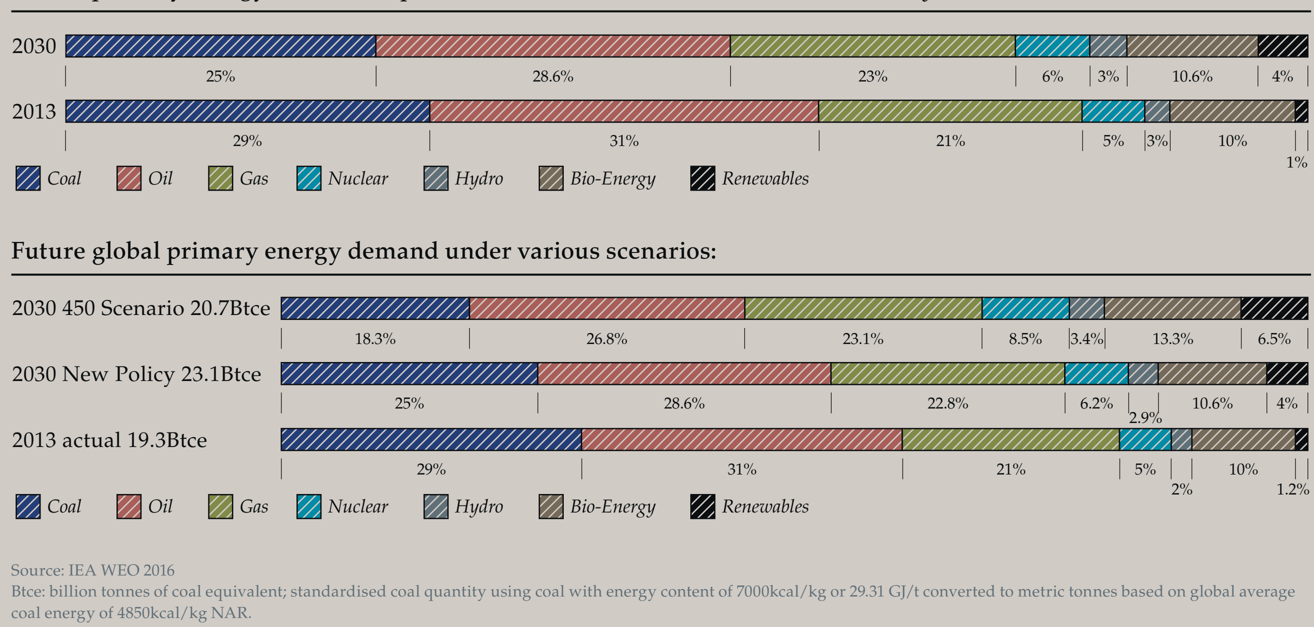
Under every policy scenario, demand for coal will be sustained by the building of low-cost, coal-fired electricity generation in developing economies, underpinning the consumption of 120 to 140 billion tonnes of coal between 2013 and 2030.

Low emission technologies can ensure that fossil fuels can play a significant role in reducing global emissions while continuing to play a vital role in delivering secure and reliable energy for industry and households.

Investment in high efficiency low-emission (HELE) technologies, including carbon capture and storage (CCS) will be critical for reducing the cost of achieving the 2°C climate change goal given its broad applicability to electricity generation, synthetic fuel production, industrial processes, and bioenergy.

Our coal business has established a wholly owned, 'non-profit' subsidiary called Carbon Transport and Storage Company (CTSCo) which is leading a CCS Project in Australia. The Project has been established to demonstrate the technical viability, integration and safe operation of CCS in the Surat Basin in Australia.

Some of our customers use our coal to feed highly efficient power plants (ultra-super critical units) that can produce emissions that are up to 40% lower than average coal plants.



Source: IEA WEO 2016
Btce: billion tonnes of coal equivalent; standardised coal quantity using coal with energy content of 7000kcal/kg or 29.31 GJ/t converted to metric tonnes based on global average coal energy of 4850kcal/kg NAR.

In addition to reporting on our progress in our Annual Report, we have produced the publication *Climate change considerations for our business*, which provides a detailed overview of the activities we are undertaking to better understand the impact of climate change on our business. This publication will be updated during 2017 to report on the progress we have made.

Measuring our performance

We have a standardised approach to capturing data and reporting on emissions and we openly and transparently disclose our carbon and energy footprint. Our emissions profile varies across our different business units, reflecting the diversity of our business. We are working on determining how an internal carbon target might be effectively applied across our business.

Delivering on our commitments to climate change

Commodities of today and tomorrow: nickel and cobalt

Demand for nickel and cobalt driven by electric vehicles

The electric vehicle revolution is driving increasing battery demand and, in turn, additional demand for nickel and cobalt, two of Glencore's core commodities.

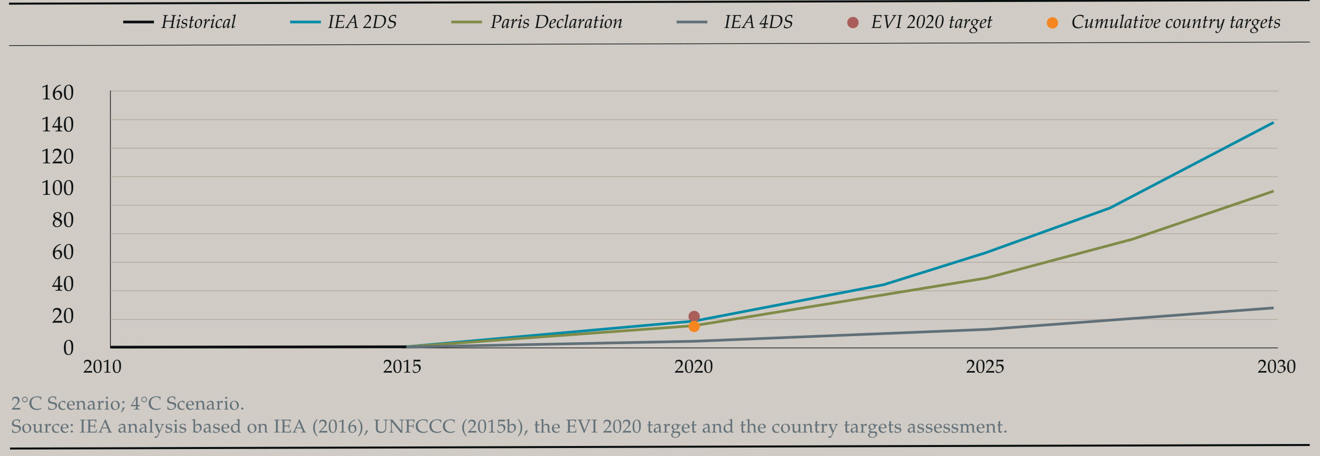
Glencore is a leading producer and marketer of nickel and cobalt, key commodities in climate change solutions. We produce some of the world's purest nickel and cobalt and are one of the largest recyclers and processors of nickel and cobalt-bearing materials including batteries.

Car makers are investing in technology that is required to electrify vehicles in order to achieve regulatory emissions targets. A number of large car manufacturers have recently announced new electric car models, reflecting the anticipated demand from the general public, supported by government subsidies and investment in charging infrastructure.

The transition to electric vehicles has been underpinned by developments in battery storage. Battery use has expanded from small-scale, suitable for consumer products, to larger, more powerful batteries that can be used as energy storage systems. Battery chemistry that relies on nickel and cobalt compounds is emerging as the technology of choice.

Increasing public acceptance is fuelling the demand for both electric vehicles and the batteries used to power them. The International Energy Agency recognises that reaching 2020 deployment targets for electric vehicles requires a sizeable growth of the electric car stock globally and meeting the 2030 decarbonisation and sustainability goals across all scenarios requires a major deployment of electric cars in the 2020s.

Deployment scenarios for the stock of electric cars to 2030
Electric cars in the vehicle stock (millions)



2°C Scenario; 4°C Scenario.
Source: IEA analysis based on IEA (2016), UNFCCC (2015b), the EVI 2020 target and the country targets assessment.

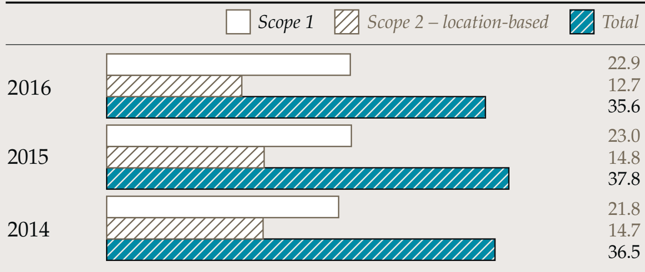
In line with the Greenhouse Gas Protocol, we divide carbon emissions reporting into three different scopes. We measure both the direct and indirect emissions generated by the operational activities, entities and facilities in which we have a controlling stake.

During 2016, we emitted 22.9 million tonnes CO_2e of Scope 1 (direct emissions), a slight decrease on 2015. This figure includes emissions from fuels consumed and the reductants used in our metallurgical smelters. It also includes CO_2e of methane and CO_2 emissions from our coal seam emissions, which are around 38% of our Scope 1 emissions.

In 2016, we emitted 12.7 million tonnes CO_2 of Scope 2 – location-based (indirect emissions), which applied the grid emission factor to all our purchased electricity, regardless of specific renewable electricity contracts. This was a year-on-year decrease of 14%, primarily due to the closure of our US alumina operations.

Our Scope 3 emissions, which include those from a broad range of sources, including usage of our products, are reported in our sustainability report.

Total greenhouse gas emissions
Million tonnes CO_2



We do not currently provide normalised figures for our CO_2 emissions nor ratios of CO_2 to production, financial results or employee head count, as we do not believe that reporting a normalised figure meaningfully contributes to an understanding of our performance. The scope and diversity of our products make a single production figure impossible to calculate and our financial results are impacted by commodity prices and foreign exchange rates, which are outside of our control. In addition, due to the nature of the exploration, development and the production cycle, our CO_2 emissions do not necessarily correlate to our employee head count.

We publicly report to the CDP Climate Change programme. The score that Glencore receives from CDP Carbon has improved year-on-year as a result of improvements in our reporting disclosure and clearer linking of climate change to our business strategy.

Further information on our approach to climate change is available in our sustainability report and *Climate change considerations for our business*, both are available on our website:

www.glencore.com/sustainability/our-progress/reports

Ferroalloys improving energy efficiency, reducing emissions

The South African government has ratified the COP21 Paris agreement, which requires sizeable reductions in its greenhouse gas (GHG) emissions, as well as committing to transition to a green economy. The government is proposing a tax on carbon as one of the instruments in helping South Africa meet its international commitments to reduce GHG emissions.

Our ferroalloys business is mainly located in South Africa, where the cost of its production of ferrochrome is heavily exposed to energy prices and security. A carbon tax will further increase the cost of production and potentially lead to the closure of some of South Africa's marginal ferrochrome producers, resulting in major job losses.

To address this challenge, we have been improving energy efficiency through a range of initiatives, identifying alternative energy supplies and developing energy-efficient technologies, such as our proprietary Premus technology.

Over a number of years, our ferroalloys business has been planning and implementing new technology to address the challenges of rising energy costs and stricter emissions regulations:

- In 2007, we commissioned the Bokamoso Pelletiser at the Wonderkop smelter at a cost of ZAR800 million, improving the energy efficiency (Scope 2 emissions) of these smelters by 12.6% in 2016 compared to 2006.
- In 2007 Phase 1 and in 2014 Phase 2 were commissioned at Lion smelter, costing a total of ZAR6.6 billion and resulting in Glencore's largest proprietary Premus smelter, with 720,000tpa ferrochrome capacity. Premus is designed to reduce electrical energy consumption by using waste gas and heat. Its improved efficiency delivers substantial financial benefits over existing technologies. Lion's specific energy consumption (Scope 2 emissions) is 28% less than the South African average smelter's energy consumption.
- In 2012, the Tswelopele Pelletiser at the Rustenburg Smelter was completed at a cost of ZAR800 million, to replace the pellets that the smelter received from the Bokomaso facility. The utilisation of pellets improved the energy efficiency (Scope 2 emissions) of these smelters by 10.4% in 2016 compared to 2006.
- During 2017, we will be piloting co-generation technology at our Boshoek smelter. This technology generates electricity from the carbon monoxide to carbon dioxide combustion heat, which is currently a waste emission. If successful in terms of operational and financial viability, the co-generation technology will initially reduce Boshoek's Scope 2 emissions by 8%. In addition, the capacity at the Boshoek smelter could be doubled and the technology could also be considered for the Lion and Lydenburg smelters.

In total, the initiatives implemented by our ferroalloys business have improved energy efficiency and Scope 2 emissions at our smelters by 26% in 2016 compared to 2003.

Going forward, our ferroalloys business' cost of production and greenhouse gas emissions will be highly connected to the energy generation options that are implemented by the South African government's Integrated Resource Plan (IRP) 2010–30. The IRP provides scenarios for forecasting future energy demand and identifies the required increases in national energy generation. The IRP considers the impact on emissions from installing different energy generation options that include, amongst others, fossil fuel, solar, wind and nuclear.

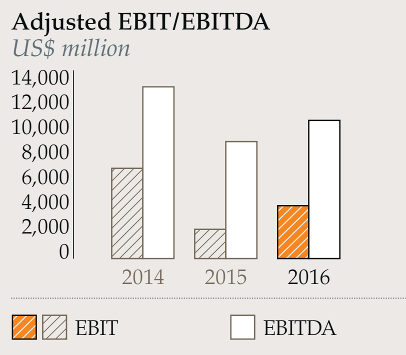
Key performance indicators

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

Financial key performance indicators

Adjusted EBIT/EBITDA

US$ million



Definition

Adjusted EBIT/EBITDA, as defined in note 2 to the financial statements, provide insight into our overall business performance (a combination of cost management, seizing market opportunities and growth), and are the corresponding flow drivers towards achieving an industry-leading return on equity. 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 underlying Adjusted EBIT of certain 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 adjustment for Proportionate Consolidation.

2016 performance

Adjusted EBITDA was $10.3 billion and Adjusted EBIT was $3.9 billion, increases of 18% and 81% respectively compared to 2015. These double digit increases resulted from our continuous focus on cost reduction and operational efficiency initiatives (supply chain, contractor management, employee productivity, etc.) with decisive action also taken to reduce supply and associated capex/opex, notably within our copper, zinc, coal and oil portfolios.

Funds from operations (FFO)

US$ million

12,000
10,000
8,000
6,000
4,000
2,000
0
2014 2015 2016

Definition

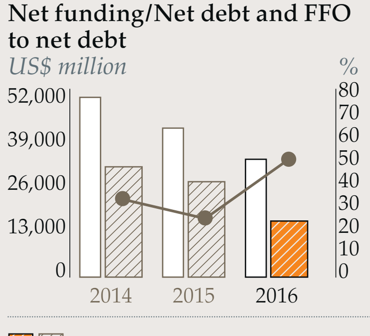
Funds from operations (FFO) is a measure that reflects our ability to generate cash for investment, debt servicing and distributions to shareholders. It comprises cash provided by operating activities before working capital changes, less tax and net interest payments plus dividends received, related adjustments for Proportionate Consolidation and certain other one-off (Significant items) identified expenses, comprising unrealised coal related hedging costs and a legal settlement in 2016 and a legal settlement and net incremental metal leak costs incurred in 2015.

2016 performance

FFO of $7.8 billion was 17% up on 2015, reflecting the improved Adjusted EBITDA noted above and a tax payments cycle reflective of last year's lower earnings.

Net funding/Net debt and FFO to net debt

US$ million



Net debt
FFO to net debt
Net funding

Definition

Net funding/debt demonstrates how our debt is being managed and is an important factor in ensuring we maintain an investment grade rating status and an attractive cost of capital. In addition, the relationship of FFO to net debt is an indication of our financial flexibility and strength.

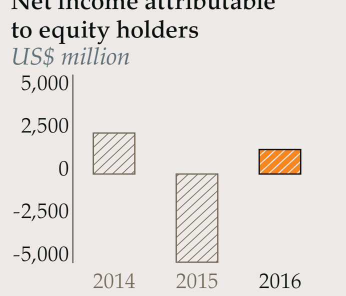
Net debt is defined as total current and non-current borrowings less cash and cash equivalents, marketable securities, readily marketable inventories and related adjustments for Proportionate Consolidation.

2016 performance

At 31 December 2016 net funding was down 21% at $32.6 billion and net debt was down 40% at $15.5 billion. This reflected proceeds of over $6 billion from asset disposals and streaming arrangements, healthy FFO and a reduction in capex of $2.5 billion year over year.

Net income attributable to equity holders

US$ million



Definition

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

2016 performance

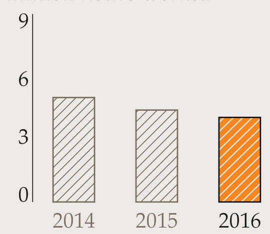
Net income attributable to equity holders increased from a loss of $5 billion in 2015 to a profit of $1.4 billion in 2016, following the Adjusted EBIT increase described above, and lower impairment charges, net of gains on disposals.

Non-financial key performance indicators

Safety

Total recordable injury frequency rate (TRIFR)

per million hours worked



Definition

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

The (TRIFR) is the sum of fatalities, lost time injuries, restricted work injuries and medical treatment injuries per million hours worked. The metric represents all injuries that require medical treatment beyond first aid.

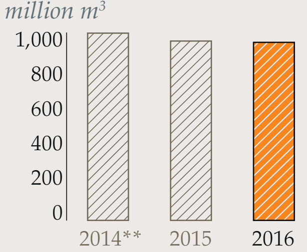
2016 performance

It is with great sadness to report that during 2016, 16 people lost their lives at our operations (2015: 10 fatalities). Our 2016 TRIFR of 4.05 is a 7% improvement over the 2015 TRIFR of 4.35.

Our long-term goal for TRIFR is to achieve a 50% reduction by 2020, using our 2014 TRIFR of 5.02 as the baseline.

Water withdrawn*

million m³



* 2016 data is not directly comparable to prior periods due to disclosed changes in data reporting methodology.
** Restated primarily due to improved estimation methods at three sites.

Definition

Water withdrawal is a measure of our operational resource efficiency.

Our operations have an ongoing responsibility to increase the reuse of processed and use of recycled waste water in order to reduce our impact on local water supplies. Recycled water is predominantly used in place of fresh water for processes such as dust suppression.

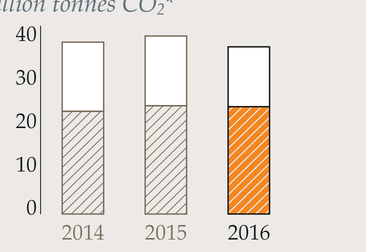
2016 performance

In 2016, we used 970 million m^3 of water, a slight increase on 2015 (954 million m^3), primarily due to a change of our reporting (alignment with Water Accounting Framework (WAF) of the Minerals Council of Australia).

During 2016, we rolled out our Group-wide strategic water management framework and developed a method for the identification of high-risk sites.

Greenhouse gas emissions

*million tonnes CO_2**



Scope 1 | Scope 2 – location-based

* Scope 1 emissions are measured in CO_2e

Definition

Our CO_2 emissions reporting is separated into Scope 1 and Scope 2 – location-based emissions. Scope 1 includes emissions from combustion in owned or controlled boilers, furnaces and vehicles/vessels, coal seam emissions and rice cultivation. Scope 2 – location-based emissions applies the grid emission factor to all our purchased electricity, regardless of specific renewable electricity contracts.

We monitor and report both the direct and indirect emissions generated by the operational activities, entities and facilities in which we have a controlling stake.

2016 performance

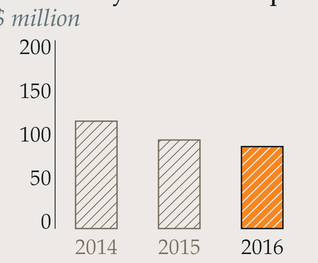
Our reporting on Scope 1 and Scope 2 emissions is in line with the Greenhouse Gas Protocol.

During 2016, our Scope 1 (direct) CO_2e emissions slightly decreased to 22.9 million tonnes and were mainly from fuel usage, reductants and coal seam emissions.

Our Scope 2 – location-based CO_2 emissions totalled 12.7 million tonnes. This was a year-on-year decrease of 14%, primarily due to the closure of our US alumina operations.

Community investment spend

$ million



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.

2016 performance

In 2016, the funds we made available for community investments were $84 million, a decrease on the amount invested in 2015 ($94 million).

Non-financial indicators includes information and data from our industrial activities, including only assets where we have operational control, and excluding investment, marketing and holding companies. The community investments spend also includes our marketing activities
For some 2015 and 2014 indicators, data has been restated to reflect improvements in our data collection, analysis and validation systems

Principal risks and uncertainties

Risk management is one of the key responsibilities of the Board and its Audit and HSEC Committees. Our principal risks and uncertainties – whether under our control or not – are highly dynamic and our assessment and our responses to them are critical to our future business and prospects.

Our risk management framework identifies and manages risk in a way that is supportive of our strategic priorities of opportunistically deploying capital, while protecting our future financial security and flexibility. Our approach towards risk management is framed by the ongoing challenge of our understanding of the risks that we are exposed to, our risk appetite and how these risks change over time.

The Board assesses and approves our overall risk appetite, monitors our risk exposure and sets the Group-wide limits, which are reviewed on an ongoing basis. This process is supported by the Audit and HSEC Committees, whose roles include evaluating and monitoring the risks inherent in their respective areas as described on pages 94 to 98. Our current assessment of our risks, according to exposure and impact, is detailed on the following pages. In compiling this assessment we have indicated the impact of these risks in comparison with a year ago in the table below.

The commentary on the risks in this section should be read in conjunction with a commentary under *Understanding the information on risks* which is set out on page 38.

To the extent that any of these risks are realised, they may affect, among other matters: our current and future business and prospects, financial position, liquidity, asset values, growth potential, sustainable development (negatively affecting health, safety, environmental, community effects or otherwise) and reputation.

The natural diversification of our portfolio of commodities, geographies, currencies, assets and liabilities is a source of mitigation for many of the risks we face. In addition, through our governance processes as noted previously and our proactive management approach we seek to mitigate, where possible, the impacts of certain risks should they materialise. In particular:

- our liquidity risk management policy requires us to maintain (via a $3 billion minimum prescribed level) sufficient cash and cash equivalents and other sources of committed funding available to meet anticipated and unanticipated funding needs;
- making use of credit enhancement products, such as letters of credit, insurance policies and bank guarantees and imposing limits on open accounts extended;
- our management of marketing risk, including daily analysis of Group value at risk (VaR); and
- adhering to the principles encapsulated in the Glencore Corporate Practice (GCP) programme.

2016 developments and overview of principal risks and uncertainties

- Reductions in commodity prices
- Fluctuations in supply of or demand for commodities
- Fluctuations in currency exchange rates
- Health, safety, environment, including potential catastrophes

- Liquidity risk

- Geopolitical risk
- Laws, enforcement, permits and licences to operate

- Counterparty credit and performance
- Sourcing, freight, storage infrastructure and logistics
- Development and operating risks and hazards
- Cost control
- Emissions and climate change
- Community relations

- Skills availability and retention

Key

Risk impact Low Medium High

Risk exposure Increase Decrease Static

2016 developments

The following remain the leading risks (i.e. those posing the greatest potential threat) which the Group faces:

1. Reductions in commodity prices: the falls in commodity prices experienced over the past few years appear to have subsided in 2016, whereby many of the prices appear to have, as a minimum, found a floor. Notwithstanding these less extreme price conditions, we remain mindful that underlying markets continue to be volatile and that we continue to focus on the partially controllable element of the margin equation – costs. Any significant downturn in the current commodity price environment, especially copper and coal, would have a severe drag on our financial performance. As a result, this continues to be the Group's foremost risk.
2. Fluctuations in supply of, or demand for commodities: the depression of commodity prices reflects the actual, perceived or prospective increases in supply of commodities and/or reductions in demand.
3. Fluctuations in currency exchange rates: the general appreciation of the US dollar during 2016, particularly against the currencies of emerging and commodity producing countries, has contributed to commodity price fluctuations. Although the strength of the US dollar is generally beneficial to our operating costs, this gain can be outweighed by the disruption to the world economy and falls in commodity prices.
4. Liquidity risk: while the delevering and positive repositioning of the balance sheet has been completed in 2016, we remain cognisant that access to credit is vital and that current market conditions are volatile.
5. Health, Safety, Environment, including potential catastrophes: the high-wall collapse at Katanga in early 2016 and the tailings dam disasters in Canada and Brazil experienced by other mining companies in the past three years remain reminders of major catastrophes that represent significant unquantifiable risks for resources companies and as a result this remains a leading concern subject to challenge and monitoring. During 2016, the HSEC Committee continued to concentrate on the Group's catastrophic hazards, following the launch of a new sustainability risks assurance process in 2016.

In response to the above challenges, the Group continues to ensure it takes appropriate measures to deliver on its strategic objective of repositioning the balance sheet to strong BBB/Baa investment grade ratings to ensure it is capable of supporting growth and shareholder returns regardless of the commodity price environment. In addition, capital expenditure programmes remain at subdued levels, initiatives continue to ensure we operate at optimal working capital levels and marginal operations continue to be carefully monitored.

Changes in risk exposure

Risk as a result of geopolitical events was brought to the forefront during 2016. The UK voted to exit the EU, while the EU along with other jurisdictions, increased their rigour in pursuit of perceived aggressive tax structuring by multinational companies. These events, in combination with the imposed new derivative trading regulations being implemented in Switzerland and the EU and heightened global tax reporting obligations (via the BEPS initiative) led to an increase, compared to 2015, in the potential risk exposure related to – (1) geopolitical risks and (2) laws, enforcement, permits and licences to operate.

The potential risk exposure related to liquidity risk was reduced compared to 2015, as a result of the progress achieved on the debt reduction initiatives and the successful bond issuances in the Euro and Swiss markets.

Principal risks and uncertainties

Understanding the information on risks

There are many risks and uncertainties which have the potential to significantly impact our business, including competitive, economic, political, legal, regulatory, social, business and financial risk. 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 223.

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

The comments below describe 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. 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. To understand the changes in outlook and for more detail on certain risks, our previous annual reports are on our website at: **www.glencore.com/investors/reports-and-results/reports/**

To provide for concise text:

- where we hold minority interests in certain businesses, although these entities are not generally subsidiaries, the interests are mostly taken as being referred to in analysing these risks, and "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;
- in each case our mitigation of risks will include the taking out of insurance where it is customary and economic to do so;
- "risk" includes uncertainty;
- "law" include regulation of any type;
- a reference to a note is a note to the 2016 financial statements; and
- refer to our 2016 sustainability report which will be published in May 2017.

Risk	Comments
External	
Reductions in commodity prices	
The revenue and earnings of substantial parts of our industrial activities and, to a lesser extent, our marketing activities, are dependent upon prevailing commodity prices. Commodity prices are influenced by a number of 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. A significant downturn in the price of commodities generally results in a decline in our profitability and could potentially result in impairment and balance sheet constraints. It is especially harmful to profitability in the industrial activities, which are more directly exposed to price risk due to the higher level of fixed costs, while our marketing activities are ordinarily substantially hedged in respect of price risk and principally operate a service-like margin-based model.	The dependence of the Group (especially our industrial business) on commodity prices, make this the Group's foremost risk. See the Chief Executive Officer's review on page 4 and the financial review on pages 45 to 51. While the price fundamentals of most of the Group's main production commodities currently appear to be stronger than at the end of 2015, the global economic outlook remains uncertain and any negative issues, especially if they affect China, could quickly lead to reductions in demand and price.
Fluctuations in the supply of, or demand for, the commodities in which we operate	
We are dependent on the expected volumes of supply or demand for commodities in which we are active, which can vary for many reasons, such as competitor supply policies, changes in resource availability, government policies and regulation, costs of production, global and regional economic conditions and events of nature.	This risk is currently prevalent, with demand growth uncertainty in various commodities we produce and market, notably within steel, coal and oil markets. On the supply side, China's implementation of a reduced working year in its coal industry demonstrated the ability and willingness of nation states to intervene directly in markets. Also in nickel, Indonesia prohibited exports of nickel concentrates and the authorities in the Philippines have in 2016 closed a quarter of the country's mines. Market price responses to such changes are neither instantaneous nor perfectly calibrated nor can the sustained implementation of such policies be certain. See the Chief Executive Officer's review on page 4.
Fluctuations in currency exchange rates	
The vast majority of our 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. The largest of these exposures is to the currencies listed on page 183.	This risk is currently prevalent in our industry. However, these fluctuations tend to move in symmetry with those in commodity prices and supply and demand fundamentals as noted above, such that decreases in commodity prices are generally associated with increases in the US dollar relative to local producer currencies and vice versa. If this occurs then it is detrimental to us through higher equivalent US dollar operating costs at the relevant operations. This negative, however, would usually be offset by the increases in commodity prices which had caused this change.

Principal risks and uncertainties

Risk	Comments

Geopolitical risk

Risk

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 climates. As a result, we are exposed to a wide range of political, economic, regulatory and tax environments. Policies or laws in these countries may change in a manner that may be adverse for us. Also, some countries with more stable political environments may nevertheless change policies and laws in a manner adverse to us. We have no control over changes to policies, laws and taxes.

The geopolitical risks associated with operating in a large number of regions and countries, if realised, could affect our ability to manage or retain interests in our industrial activities.

Comments

Increased scrutiny by governments and tax authorities in pursuit of perceived aggressive tax structuring by multinational companies has elevated the potential risk exposures related to geopolitical events. The Group continues actively to engage with governmental authorities in light of upcoming changes and developments in legislation and enforcement policies.

The global tax reporting initiative on Base Erosion and Profit Sharing ("BEPS") became effective in 2016.

Risks can also arise from the announcement and/or implementation of reductions in workforces and temporary or permanent production stoppages.

See map on pages 10 and 11 which sets out our global operational footprint.

Laws, enforcement, permits and licences to operate

Risk

We are exposed to and subject to extensive laws including those relating to bribery and corruption, taxation, anti-trust, financial markets regulation, management of natural resources, licences over resources owned by various governments, exploration, production and post-closure reclamation. The terms attaching to any permit or licence to operate may also be onerous. Furthermore, in certain countries title to land and rights and permits in respect of resources are not always clear or may be challenged.

The legal system and dispute resolution mechanisms in some countries may be uncertain so that we may be unable to enforce our understanding of our title, permits or other rights. Lawsuits may be brought, based upon damage resulting from past and current operations, and could lead to the imposition of substantial sanctions, the cessation of operations, compensation and remedial and/or preventative orders. Moreover, the costs associated with legal compliance, including regulatory permits, are substantial. Any changes to these laws or their more stringent enforcement or restrictive interpretation could cause additional material expenditure to be incurred (including in our marketing business) or impose suspensions of operations and delays in the development of industrial assets. Failure to obtain or renew a necessary permit could mean that we would be unable to proceed with the development or continued operation of an asset.

A dispute relating to an industrial asset could disrupt or delay relevant extraction, processing or other projects and/or impede our ability to develop new industrial properties.

Comments

We are committed to complying with or exceeding the laws and external requirements applicable to our operations and products. Through this and monitoring of legislative requirements, engagement with government and regulators, and compliance with applicable permits and licences, we strive to ensure full compliance. We also seek to manage these risks through the Glencore Corporate Practice (GCP) programme. Its practical application across our business is detailed in our code of conduct (**www.glencore.com/who-we-are/corporate-governance/policies/code-of-conduct/**) and this framework is reflected in our sustainability reports. The Group's anti-corruption policy may also be found at: **www.glencore.com/who-we-are/corporate-governance/policies/global-anti-corruption-policy/**.

Bribery and corruption risks remain highly relevant for businesses operating in emerging markets as shown by recent regulatory enforcement actions both inside and outside the resources sector.

The Group continues to evaluate the impact of proposed regulations to govern commodity market participants (principally MiFID 2) in Europe.

In 2016 we published our first *Payments to Governments* report. This detailed total government contributions in 2016 of around $5 billion. This report built upon the disclosures which had been provided in our annual sustainability report since 2010, and our commitment as an active member of the Extractive Industries Transparency Initiative (EITI).

Risk	Comments

Liquidity risk

Our failure to access funds (liquidity) would severely limit our ability to engage in desired activities.

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 on an unsecured or secured basis at an acceptable price to fund actual or proposed commitments. 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.

A lack of liquidity may mean that we will not have funds available to maintain or increase marketing and industrial activities, both of which employ substantial amounts of capital. If we do not have funds available to sustain or develop our marketing and industrial activities then these activities will decrease.

Note 24 details our financial and capital risk management approach.

During 2016, we have achieved our objectives in materially delevering the Group's balance sheet see pages 45 to 51. We also issued during the year the following bonds with applicable coupon and redemption dates: CHF250 million 2.25% 2021 and EUR1.0 billion 1.875% 2023. We have undertaken a programme to replace short dated paper with longer term bonds.

While significant progress on delevering and repositioning the balance sheet has occurred over 2016, we remain cognisant that access to credit is vital and that current market conditions are volatile.

As at 31 December 2016, the Group had available undrawn committed credit facilities and cash amounting to $16.7 billion (31 December 2015: $15.2 billion), comfortably ahead of our $3 billion minimum prescribed level.

Standard & Poor's and Moody's latest assessments for the Company's investment grade credit are BBB- (positive outlook) and Baa3 (stable) respectively.

Business activities

Counterparty credit and performance

Financial assets consisting principally of marketable securities, receivables and advances, derivative instruments and long-term advances and loans can expose us to concentrations of credit risk.

Furthermore, we are subject to non-performance risk by our suppliers, customers and hedging counterparties, in particular via our marketing activities.

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 or hedging counterparties may find themselves unable to honour their contractual obligations due to financial distress or other reasons.

We monitor the credit quality of our counterparties and seek to reduce the risk of customer non-performance by requiring credit support from creditworthy financial institutions including making extensive use of credit enhancement products, such as letters of credit, insurance policies and bank guarantees. Specific credit risk policy rules apply to open account risk with an established threshold for referral of credit positions by departments to central management. In addition, note 24 details our financial and capital risk management approach.

Principal risks and uncertainties

Risk	Comments

Sourcing, freight, storage, infrastructure and logistics

Risk

Our marketing activities require access to significant amounts of third party supplies of commodities, freight, storage, infrastructure and logistics support and we are exposed to reduced accessibility and/or increased pressure in the costs of these. In addition, we often compete with other producers, purchasers or marketers of commodities or other products for limited storage and berthing facilities at ports and freight terminals, which can result in delays in loading or unloading of products and expose us to significant delivery interruptions.

Increases in the costs of freight, storage, infrastructure and logistics support, or limitations or interruptions in the supply chain (including any disruptions, refusals or inabilities to supply), could adversely affect our business.

Comments

Our global network of infrastructure and logistics operations such as vessels, oil terminals and tank farms, metals and other warehouses and grain silos assists in mitigating risks related to disruptions to or limitations of sourcing, freight, storage, infrastructure and logistics.

See map on pages 10 and 11 that sets out our global operational footprint.

Development and operating risks and hazards

Risk

Our industrial activities are subject to numerous risks and hazards normally associated with the initiation, development, operation and/or expansion of natural resource projects, many of which are beyond our control. These include unanticipated variations in grade and other geological problems (so that anticipated or stated reserves, resources or mineralised potential may not conform to expectations and in particular may not reflect the reserves and resources which the Group reports and as a result the anticipated volumes or grades may not be achieved). Other examples include seismic activity, natural hazards, processing problems, technical and IT malfunctions, unavailability of materials and equipment, unreliability and/or constraints of infrastructure, industrial accidents, labour force insufficiencies, disruptions and disputes, disasters, protests, *force majeure* factors, cost overruns, delays in permitting or other regulatory matters, vandalism and crime. Cyber crime can also have materially adverse consequences for our marketing and industrial businesses.

The development and operating of assets may lead to future upward revisions in estimated costs, completion delays, cost overruns, suspension of current projects or other operational difficulties. Risks and hazards could result in damage to, or destruction of, properties or production facilities, may cause production to be reduced or to cease at those properties or production facilities, may result in a decrease in the quality of the products, personal injury or death, third party damage or loss, and may result in actual production differing from estimates of production.

In the resources business, the commodities we extract are finite and reserves replacement is an issue for the industry as a whole. Exploration and development necessarily require a level of investment ahead of identification, extraction and monetisation of such reserves.

Natural hazards, sabotage or other interference in operations, could increase costs or delay supplies. In some locations poor quality infrastructure is endemic. The realisation of these development and operating risks and hazards could require significant and additional capital and operating expenditures to fund abatement, restoration or compensation to third parties for any loss and/or payment of fines or damages.

Comments

Development and operating risks and hazards are managed through our continuous development status evaluation and reporting processes and ongoing assessment, reporting and communication of the risks that affect our operations through the annual risk review processes and updates to the risk register.

We publish quarterly our production results and annually our assessment of reserves and resources based on available drilling and other data sources. Conversion of resources to reserves and, eventually, reserves to production is an ongoing process that takes into account technical and operational challenges, economics of the particular commodities concerned and the impact on the communities in which we operate.

The geotechnical failure and high-wall collapse at Katanga resulted in the deaths of seven people. Other incidents during the year have led to a further nine deaths. While the mining workplace is inherently a dangerous one, we continue to believe that every death is preventable with appropriate planning, precautions taken, supervision and review.

Work on the whole ore leach process at Katanga is progressing well. Mopani's Synclinorium shaft was commissioned and started to hoist ore at the end of 2016.

Availability of continuous high-voltage power continues to be of critical importance to our copper operations in the Democratic Republic of Congo. We are continuing to invest in long-term power solutions via the Inga dam refurbishment.

Technological and cyber security risks are also relevant.

See also the next page for our assessment of and programmes to mitigate our health, safety and environmental risks and in particular catastrophic risks.

Details of the significant impairments recorded during the year are contained in note 5. The valuations used for this analysis remain sensitive to price and deterioration in the price outlook may result in additional impairments.

Risk	Comments
Cost control	
As commodity prices are outside of our control, the competitiveness and sustainable long-term profitability of our industrial asset portfolio depends significantly on our ability to closely manage costs and maintain a broad spectrum of low-cost, efficient operations. Costs associated with the operation of our industrial assets can be broadly categorised into labour costs and other operating and infrastructure costs. Overall production and operating costs are heavily influenced by the extent of ongoing development required, ore grades, mine planning, processing technology, logistics, energy and supply costs and the impact of exchange rate fluctuations. Over time, resources even on the same mine site tend to become more difficult and costly to extract, as challenges such as working at depth, increasing haulage distances and working with inconsistent or chemically complex ores are faced. All of our industrial assets are, to varying degrees, affected by changes in costs for labour and fuel. Unit production costs are also significantly affected by production volumes and therefore production levels are frequently a key factor in determining the overall cost competitiveness of an industrial asset.	While prices have recovered somewhat, cost control and reduction is still a significant area of management focus. A number of operations have adopted structured programmes to deconstruct their costs, identify marginal savings and implement these. These local measures are complemented by global procurement that leverages our scale to achieve the best possible value for money on high-consumption materials such as fuel, explosives and tyres. Maintaining costs and, where possible, lowering them is supported by our reporting on these measures, coupled with the inclusion of certain cost control evaluation measures in assessing management performance.
Sustainable development	
Health, safety, environment, including potential catastrophes	
Our operations are subject to health, safety and environmental laws along with compliance with our corporate sustainability framework. The processes and chemicals used in extraction and production methods, as well as transport and storage, may impose environmental hazards. A serious failure in these areas could lead to an emergency or catastrophe at a site. Environmental hazards may affect not only our properties but also third parties. The storage of tailings at our industrial assets and the storage and transport of oil are material examples of these risks. Environmental (including those associated with particular environmental hazards) and health and safety laws 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, including arising from (1) interruptions in production, litigation and imposition of penalties and sanctions and (2) having licences and permits withdrawn or suspended or being forced to undertake extensive remedial clean-up action or to pay for government-ordered remedial clean-up actions. In each case liability may arise where the hazards have been caused by any previous or subsequent owners or operators of the property, by any past or present owners of adjacent properties, or by third parties. Catastrophes can also arise due to cyber attacks, e.g. where there is malicious interference with operational software at industrial assets.	Our approach to sustainability and our expectations of our employees, our contractors and our business partners are outlined in our sustainability programme. This underpins our approach towards social, environmental, safety and compliance indicators, providing clear guidance on the standards we expect all our operations to achieve. Through the reporting function within the programme, our Board and senior management receive regular updates and have a detailed oversight on how our business is performing across all of the sustainability indicators. We monitor catastrophic risks, in particular, across our portfolio and operate emergency response programmes. Compliance with international and local regulations and standards are our top priorities. Our operating procedures and those of our partners in relation to owned tankers conform to industry best practice working under the guidelines of the International Maritime Organisation (IMO), relevant Flag States and top tier classification societies. We remain focused on the significant risks facing our industry arising from operational catastrophes such as the examples of tailings dam collapses in Canada and Brazil and the Turkish coal mine disaster experienced in the last three years. During 2016, the HSEC Committee continued to sponsor and monitor the Group's sustainability risks assurance process. Its focus continues to be on the Group's catastrophic hazards. In addition, considerable ongoing investment continues in the Group's SafeWork health and safety programme. See also pages 20 to 33 and the HSEC Committee report on pages 97 and 98. Further details will also be published in our 2016 sustainability report.

Principal risks and uncertainties

Risk	Comments
Emissions and climate change	
Our global presence exposes us to a number of jurisdictions in which regulations or laws have been or are being considered to limit or reduce emissions. The likely effect of these changes will be to increase the cost for fossil fuels, impose levies for emissions in excess of certain permitted levels and increase administrative costs for monitoring and reporting. Third parties, including potential or actual investors, may also introduce policies adverse to the Company due to its activities in fossil fuels. Increasing regulation of greenhouse gas (GHG) emissions, including the progressive introduction of carbon emissions trading mechanisms and tighter emission reduction targets is likely to raise costs and reduce demand growth.	Through our sustainability programme (operated under our GCP framework), we strive to ensure emissions and climate change issues are identified, understood and effectively managed and monitored in order to meet international best practice standards and ensure regulatory compliance. We seek to ensure that there is a balanced debate with regard to the ongoing use of fossil fuels. During the year, we published *Climate change considerations for our business* which set out information about how our business operates, our position on climate change and how we are managing the opportunities and challenges of climate change across our business. Our 2016 sustainability report will provide further details of the operation of our community engagement programme, including the international standards to which we voluntarily submit. During the year, there have been further announcements by some investment groups regarding the introduction of, or tightening of, policies concerning reduced investment in companies which have fossil fuel businesses. It should be noted that in 2016 around 5% and 15% of our revenue and EBITDA respectively were derived from coal and oil industrial activities.
Community relations	
The continued success of our existing operations and our future projects are in part dependent upon broad support and a healthy relationship with the respective local communities. A perception that we are not respecting or advancing the interests of the communities in which we operate, could have a negative impact on our "social licence to operate", our ability to secure access to new resources and our financial performance. The consequences of negative community reaction 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. Such events could lead to disputes with governments, with local communities or any other stakeholders, and give rise to reputational damage. Even in cases where no adverse action is actually taken, the uncertainty associated with such instability could negatively impact the perceived value of our assets.	We believe that the best way to manage these vital relationships is to adhere to the principles of open dialogue and cooperation. In doing so, we engage with local communities to demonstrate our operations' contribution to socio-economic development and seek to ensure that appropriate measures are taken to prevent or mitigate possible adverse impacts on the communities, along with the regular reporting as outlined on our website at: **www.glencore.com/sustainability/our-approach-to-sustainability/communities/engagement/**. Some of our mine sites are in remote locations where they are a – or the – key employer in the region. Inevitably, every mine will reach a point of depletion where it is no longer economic to operate and must be closed in an orderly fashion. We are working with all stakeholders at our mine sites to operate for as long as it is economically viable to do so, and to prepare long-term plans that provide for a gradual transition to the end of mine life.
Skills availability and retention	
The maintenance of positive employee and union relations and the ability to attract and retain skilled workers, including senior management, are key to our success. This can be challenging, especially in locations experiencing political or civil unrest, or in which they may be exposed to other hazardous conditions. Many employees 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.	We understand that 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 on our website at: **www.glencore.com/careers/our-people/**.

Financial review

Highlights

US$ million	2016	2015	Change %
Key statement of income and cash flows highlights[1]:			
Adjusted EBITDA[2]	**10,268**	8,694	18
Adjusted EBIT[2]	**3,930**	2,172	81
Net income attributable to equity holders pre-significant items[4]	**1,992**	1,342	48
Net income/(loss) attributable to equity holders as per financial statements	**1,379**	(4,964)	n.m.
Earnings per share (pre-significant items) (Basic) (US$)	**0.14**	0.10	40
Earnings per share as per financial statements (Basic) (US$)	**0.10**	(0.37)	n.m.
Funds from operations (FFO)[5,6]	**7,770**	6,615	17
Capital expenditure[3]	**3,497**	5,957	(41)

US$ million	31.12.2016	31.12.2015	Change %
Key financial position highlights:			
Total assets[7]	**124,600**	128,485	(3)
Current capital employed (CCE)[6,7]	**10,075**	12,443	(19)
Net funding[5,6]	**32,619**	41,245	(21)
Net debt[5,6]	**15,526**	25,889	(40)
Ratios:			
FFO to Net debt[5,6]	**50.0%**	25.6%	95
Net debt to Adjusted EBITDA[6]	**1.51x**	2.98x	(49)
Adjusted EBITDA to net interest[6]	**6.70x**	6.67x	–

1 *Refer to basis of preparation below.*
2 *Refer to note 2 of the financial statements for definition and reconciliation of Adjusted EBIT/EBITDA.*
3 *Refer to note 2 of the financial statements for reconciliation of capital expenditure.*
4 *Refer to significant items table on page 47.*
5 *Refer to page 49.*
6 *Refer to Glossary for definition.*
7 *2016 reflects completion of the disposal of 50% of the Agricultural Products division on 1 December 2016, refer to note 23 of the financial statements.*

Basis of presentation

The financial information in the Financial Review is on a segmental measurement basis (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 certain associates and joint ventures for which Glencore's attributable share of revenues and expenses are presented. Results are presented pre-significant items unless otherwise stated to provide an enhanced understanding and comparative basis of the underlying financial performance. Significant items (see reconciliation below) are items of income and expense which, due to their financial impact and nature or the expected infrequency of the events giving rise to them, are separated for internal reporting and analysis of Glencore's results.

Financial review

Financial results

Net income attributable to equity holders increased from a loss of $5 billion in 2015 to a profit of $1.4 billion in 2016. Adjusted EBITDA was $10,268 million and Adjusted EBIT was $3,930 million, increases of 18% and 81% respectively compared to 2015. These double digit increases resulted from our continuous focus on cost reduction and operational efficiency initiatives (supply chain, contractor management, employee productivity, etc.) with decisive action also taken to reduce supply and associated capex/opex, notably within our copper, zinc, coal and oil portfolios. To a lesser, but still meaningful extent, 2016 also benefited from currency depreciation relative to the US dollar e.g. Kazakhstan (53% lower) and South Africa (15% lower), while commodity prices themselves were a relatively minor contributor to the year-on-year progression with a mixed overall net result e.g. net average commodity prices were up for zinc and gold (9% and 8% respectively), offset by reductions in copper and nickel (12% and 19% respectively). In addition, during 2016, Energy industrial earnings bore an “opportunity cost” resulting from a corporate risk management decision in Q2 to lock-in/economically hedge pricing in respect of a large share of Glencore’s remaining 2016 future steam coal production.

Cyclical pricing lows were likely reached in a number of key markets in Q1 2016, with large average price increases seen in H2 relative to H1, notably thermal coal (GC Newcastle up 55%), coking coal (135%), zinc (33%) and nickel (22%).

Adjusted EBITDA/EBIT

Adjusted EBITDA by business segment is as follows:

US$ million	Marketing activities	Industrial activities	2016 Adjusted EBITDA	Marketing activities	Industrial activities	2015 Adjusted EBITDA	Change %
Metals and minerals	1,586	6,030	**7,616**	1,280	4,030	**5,310**	43
Energy products	959	1,503	**2,462**	826	2,269	**3,095**	(20)
Agricultural products	454	138	**592**	584	150	**734**	(19)
Corporate and other	(74)	(328)	**(402)**	(30)	(415)	**(445)**	n.m.
Total	**2,925**	**7,343**	**10,268**	**2,660**	**6,034**	**8,694**	**18**

Adjusted EBIT by business segment is as follows:

US$ million	Marketing activities	Industrial activities	2016 Adjusted EBIT	Marketing activities	Industrial activities	2015 Adjusted EBIT	Change %
Metals and minerals	1,562	2,182	**3,744**	1,255	148	**1,403**	167
Energy products	909	(842)	**67**	778	(88)	**690**	(90)
Agricultural products	418	104	**522**	461	63	**524**	–
Corporate and other	(74)	(329)	**(403)**	(30)	(415)	**(445)**	n.m.
Total	**2,815**	**1,115**	**3,930**	**2,464**	**(292)**	**2,172**	**81**

Marketing Adjusted EBITDA and EBIT increased by 10% and 14% to $2,925 million and $2,815 million respectively:

- Metals and minerals Adjusted marketing EBIT was up 24% over 2015, reflecting healthy demand and generally supportive marketing conditions. In percentage terms, albeit from a relatively low 2015 base, nickel and ferroalloys delivered markedly improved contributions, on account of the significantly higher stainless steel production, notably in China.
- Energy products Adjusted marketing EBIT was up 17% compared to 2015, with solid contributions from both oil and coal. Oil declined somewhat from the buoyant comparative prior period, while coal was able to capitalise on market driven supply and quality constraints and concerns, in the aftermath of Chinese policy amendments to curb domestic coal production.
- The Agricultural products Adjusted marketing EBIT was down 9% ($43 million) compared to 2015, in large part due to a lower Viterra Canada contribution.

Industrial Adjusted EBITDA increased by 22% to $7,343 million (Adjusted EBIT was $1,115 million, compared to negative $292 million in 2015), owing primarily to significant operating cost reductions and productivity efficiencies, comfortably offsetting any near-term volume impact from curtailing output across a number of operations. The reduction in US dollar costs was also greatly assisted by weaker producer currencies notably, in Kazakhstan, South Africa and Argentina. The benefits of the H2 rally in seaborne steam coal prices did not fully convert into reported Coal industrial earnings, following the corporate risk decision taken in Q2 2016 to economically hedge a portion of H2 2016 and H1 2017 future coal production. Reported Coal Industrial Adjusted EBITDA in H1 and H2 2016 was $506 million and $876 million respectively, giving a FY 2016 Adjusted EBITDA of $1,382 million. During 2016, the locking-in/capping of the effective realised sales price in respect of 44 million tonnes, resulted in an "opportunity cost" of $980 million being incurred i.e. EBITDA would have been higher in H2 and FY had no such economic hedging been in place.

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	**2016**	2015
Adjusted EBIT[1]	3,930	2,172
Net finance and income tax expense in certain associates and joint ventures[1]	(264)	(159)
Net finance and income tax expense of discontinued operations[2]	(201)	(198)
Net finance costs	(1,533)	(1,303)
Income tax (expense)/benefit[7]	(362)	469
Non-controlling interests	422	361
Income attributable to equity holders of the Parent from continuing and discontinued operations pre-significant items	**1,992**	**1,342**
Earnings per share (Basic) pre-significant items (US$)	0.14	0.10
Significant items		
Share of Associates' significant items[3]	(477)	(88)
Mark-to-market valuation on certain coal hedging contracts[4]	(225)	–
Unrealised intergroup (profit)/loss elimination and other[4]	(374)	445
Other expense – net[5]	(1,615)	(7,998)
Gain/(losses) on disposals and investments[6]	2,333	(994)
Income tax expense[7]	(276)	(460)
Non-controlling interests' share of other income[8]	21	2,789
Total significant items	**(613)**	**(6,306)**
Income/(Loss) attributable to equity holders of the Parent from continuing and discontinued operations	**1,379**	**(4,964)**
Earnings/(Loss) per share (Basic) (US$)	0.10	(0.37)

1 Refer to note 2 of the financial statements.

2 Refer to note 23 of the financial statements.

3 Recognised within share of income from associates and joint ventures, see note 2 of the financial statements.

4 Recognised within cost of goods sold, see note 2 of the financial statements.

5 Recognised within other expense – net, see notes 2 and 4 of the financial statements.

6 See notes 2 and 3 of the financial statements.

7 Refer to Glossary for the allocation of the total income tax (expense)/benefit between pre-significant and significant items.

8 Recognised within non-controlling interests.

Financial review

Significant items

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

In 2016, Glencore recognised a net $613 million of significant items, including $276 million of income tax adjustments mainly related to the gains on disposals. The net expense comprises primarily:

- Impairments of $622 million related to Chad oil, $311 million related to Equatorial Guinea oil operations, $345 million related to Cerrejón coal (recognised within share of income from associates) and various coal shipping investments ($61 million).
- A $225 million expense relating to an accounting measurement mismatch between the fair value of coal derivative positions in respect of portfolio risk management/hedging activities initiated in Q2 2016 and the anticipated future revenue to be generated from the sale of future unsold coal production. The derivative positions manage forward sales price exposure relating to some 11 million tonnes of future attributable coal production, substantially all of which is expected to be settled before 30 June 2017. These transactions were not able to be designated as hedging instruments under IFRS, which would have allowed for the deferment of any income statement effect until performance of the underlying future sale transactions. The fair value movements in the derivative portfolio will be offset against future revenue in the segment information as the related sales (of production) are realised, as was the case in 2016.
- $75 million relating to restructuring and closure costs, mainly associated with finalisation of the disposal of Optimum Coal ($28 million) and $92 million to settle a compliance dispute related to a U.S. biofuels program.
- Gains on disposals of $430 million related to GRail and $1,848 million related to Glencore Agri.

See notes 3, 4, 5 and 23 to the consolidated financial statements for further explanations.

In 2015, Glencore recognised a net $6,306 million of significant items, including $460 million of largely foreign exchange related income tax expense adjustments. The net expense comprised primarily impairments of $1,424 million ($3,989 million less $2,565 million attributable to non-controlling interests) related to Koniambo nickel and $1,031 million related to Chad oil and a $1,034 million loss (including $311 million of foreign currency translation losses previously recognised in equity) on cessation of control of Optimum Coal, placed into business rescue proceedings in August 2015, with subsequent sale agreed. See notes 3, 4 and 5 to the consolidated financial statements for further explanations.

Net finance costs

Net finance costs were $1,533 million in 2016 compared to $1,303 million incurred during the comparable reporting period. Interest expense in 2016 was $1,688 million, a 14% increase from $1,482 million in 2015, owing mainly to interest that was required to be capitalised in the prior period, in respect of certain capital development projects offset by additional accretion expenses in 2016, representing the time value of the upfront prepaid gold/silver streams entered into in late 2015 and 2016. Interest income in 2016 was $155 million, consistent with the prior year.

Income taxes

An income tax expense of $638 million was recognised during 2016 compared to an income tax benefit of $9 million in 2015. Adjusting for a net $276 million (2015: $460 million) of income tax expense related to significant items – $19 million (2015: $307 million) due to currency translation effects and a net $257 million of income tax arising from the significant items (mainly the gains on disposals), the 2016 pre-significant items income tax expense was $362 million (2015: a benefit of $469 million). The effective tax rate, pre-significant items, in 2016 was 32.4% compared to a calculated income tax benefit of 38.5% in 2015 as the mix of taxable profits between marketing and industrial, the latter generally in higher tax jurisdictions and subject to commodity price swings, began to normalise during 2016. In 2015, the income tax benefit relating to pre-significant items was estimated as Adjusted EBIT for marketing and industrial assets less an allocated interest expense multiplied by an estimated tax rate of 10% and 25% respectively. Refer to the Glossary for further information and a reconciliation of this calculation.

Assets, leverage and working capital

Total assets were $124,600 million as at 31 December 2016 compared to $128,485 million as at 31 December 2015, a period over which, current assets increased from $42,198 million to $43,412 million, due to increases in receivables and inventories as a result of commodity price rises, notably oil in late Q4. Non-current assets decreased from $86,287 million to $81,188 million, primarily due to the various disposals, notably Glencore Agri and GRail, as outlined in note 23 of the financial statements.

Cash flow and net funding/debt

Net funding

US$ million	31.12.2016	31.12.2015
Total borrowings as per financial statements	33,218	44,049
Associates and joint ventures net funding[1]	1,919	(58)
Cash and cash equivalents and marketable securities	(2,518)	(2,746)
Net funding	**32,619**	**41,245**

Cash and non-cash movements in net funding

US$ million	31.12.2016	31.12.2015
Cash generated by operating activities before working capital changes	7,868	7,454
Coal related hedging, legal settlement and incremental metal leak costs included above (via statement of income)	368	264
Associates and joint ventures Adjusted EBITDA[2]	1,447	995
Net interest paid	(1,271)	(1,085)
Tax paid[1]	(680)	(1,072)
Dividends received from associates[1]	38	59
Funds from operations	**7,770**	**6,615**
Working capital changes (excluding gold and silver streaming proceeds)[1]	(2,386)	6,686
Gold and silver streaming proceeds	971	900
Acquisition and disposal of subsidiaries[1]	5,944	(106)
Purchase and sale of investments[1]	(13)	(195)
Purchase and sale of property, plant and equipment[1]	(3,306)	(5,688)
Net margin calls in respect of financing related hedging activities	(695)	(618)
Acquisition of additional interests in subsidiaries	(7)	–
Share issuance	–	2,444
Distributions paid and purchase of own shares	(88)	(2,695)
Coal related hedging, legal settlement and incremental metal leak costs (refer above)	(368)	(264)
Cash movement in net funding	**7,822**	**7,079**
Foreign currency revaluation of borrowings and other non-cash items	804	1,434
Total movement in net funding	**8,626**	**8,513**
Net funding, beginning of period	(41,245)	(49,758)
Net funding, end of period	**(32,619)**	**(41,245)**
Less: Readily marketable inventories[3]	17,093	15,356
Net debt, end of period	**(15,526)**	**(25,889)**

1 Adjusted to include the impacts of proportionate consolidation of certain associates and joint ventures as outlined in the Glossary.

2 See note 2 of the financial statements.

3 Refer to Glossary for definition.

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

Net funding as at 31 December 2016 decreased by $8,626 million to $32,619 million from $41,245 million as at 31 December 2015. In addition to funds from operations and disposal proceeds of $5,944 million, the decrease was aided by $971 million received under gold/silver streaming arrangements, a 41% reduction in net capital expenditure, offset by a $2,386 million increase in net working capital as a result of higher year-end commodity prices and $515 million of non-current advances in support of oil marketing growth initiatives.

Financial review

Business and investment acquisitions and disposals

Net inflows from business divestures and investments was $5,944 million compared to an outflow on acquisitions of $301 million in 2015. See note 23 for further explanations.

Liquidity and funding activities

In 2016, the following significant financing activities took place:

- In February 2016, fully syndicated and effective from May 2016, Glencore signed a new one-year revolving credit facility for a total amount of $7.7 billion. This facility refinanced the $8.45 billion one-year revolving credit facility signed in May 2015. Funds drawn under the facilities bear interest at US$LIBOR plus a margin of 50/60 basis points per annum. The current facilities comprise:
  - a $7.7 billion short-term revolving credit facility with a 12 month borrower's term-out option (to May 2018) and 12 month extension option; and
  - a $6.8 billion medium-term revolving credit facility (to May 2020) with one 12 month extension option or 24 month extension option.
- In May, issued a 5 year CHF 250 million, 2.25% coupon bond.
- In September, issued a 7 year Euro 1,000 million, 1.875% coupon bond.
- In October, repurchased bonds with a nominal value of $1,492 million, comprising primarily 2018 and 2019 maturities.
- In December, repurchased bonds with a nominal value of $1,137 million, comprising primarily 2019 and 2020 maturities.

As at 31 December 2016, Glencore had available committed undrawn credit facilities and cash amounting to $16.7 billion.

Credit ratings

In light of the Group's extensive funding activities, maintaining an investment grade credit rating status is a financial priority/target. The Group's credit ratings are currently Baa3 (stable) from Moody's and BBB- (positive outlook) from Standard & Poor's. Glencore's publicly stated objectives, 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.

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 has set a consolidated VaR limit (1 day 95%) of $100 million representing some 0.2% of equity. In Q2 2016, this limit was technically breached for 1 day by $1 million as the VaR calculation did not account for the future physical coal production that was economically hedged with the corresponding captured and reported on coal derivatives. If such underlying hedged exposure had been included in the VaR calculation, the actual VaR number would have been substantially lower, with no resulting technical breach. Much of this hedge book has now been realised, as noted above. Glencore uses a VaR approach based on Monte Carlo simulations and is either a one day or one week time horizon computed at a 95% confidence level with a weighted data history.

Average market risk VaR (1 day 95%) during 2016 was $42 million, representing less than 0.1% of equity. Average equivalent VaR during 2015 was $35 million.

Subsequent events

- Further to the announcements in December 2016, Glencore and Qatar Investment Authority ("QIA") entered into various agreements establishing a 50:50 consortium that would acquire 19.5% of OSJC Rosneft Oil ("Rosneft"), enter into a five year offtake agreement with Rosneft on market terms and collectively evaluate and potentially enter into additional opportunities related to infrastructure, logistics and global trading. As at 31 December 2016, only the establishment of the 50:50 consortium and payment of Glencore's funding commitment of EUR 300 million were finalised. The balance of the funding and purchase of the 19.5% interest in Rosneft by the 50:50 consortium and completion of the five year offtake agreement was finalised on 3 January 2017.
- In February 2017, Glencore announced that it had acquired the remaining 31% stake in Mutanda Mining Sarl ("Mutanda"), which it did not previously own, and an additional 10.25% stake in Katanga Mining Limited ("Katanga") for a cash outlay of $534 million, including settlement of loan balances. Following the acquisition, Glencore owns 100% of the shares in Mutanda and approximately 86.3% of the shares in Katanga.

Distributions

The directors have recommended a 2016 financial year cash distribution of $7 cents per share amounting to $996 million, excluding any distribution on own shares and ignoring any attribution of shares which may take place prior to the record dates for each tranche. Payment will be effected as a $3.5 cents per share distribution in May 2017 (see below) and a $3.5 cents per share distribution in September 2017 (in accordance with the Company's announcement on the 2017 Distribution timetable also made on 23 February 2017).

First tranche of proposed distribution	**2017**
Applicable exchange rate determination date (Johannesburg Stock Exchange (JSE))	28 April
Last time to trade on JSE to be recorded in the register for distribution	9 May
Last day to effect removal of shares cum div between Jersey and JSE registers	9 May
Ex-dividend date (JSE)	10 May
Ex-dividend date (HK)	10 May
Ex-dividend date (Jersey)	11 May
Last time for lodging transfers in Hong Kong	4:30 p.m. (HK), 11 May
Record date in JSE	Close of business (SA) 12 May
Record date in Hong Kong	Opening of business (HK) 12 May
Record date in Jersey	Close of business (UK) 12 May
Deadline for return of currency elections form (Jersey shareholders)	15 May
Removal of shares between the Jersey and JSE registers permissible from	15 May
Applicable exchange rate reference date (Jersey and Hong Kong)	17 May
Annual General Meeting (shareholder vote to approve aggregate distribution)	24 May
Payment date	31 May

The distribution is proposed 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 2016, Glencore plc had CHF 38 billion of such capital contribution reserves in its statutory accounts. The distribution is subject to shareholders' approval at its AGM on 24 May 2017.

The distribution is proposed to be declared and 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 as stated above. Shareholders on the Hong Kong branch register will receive their distribution in Hong Kong dollars, while 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.

Metals and minerals

Highlights

Metals and minerals' Adjusted EBITDA of $7,616 million represents a $2,306 million (43%) increase over 2015.

Marketing and Industrial activities delivered higher Adjusted EBITDA of 24% and 50% respectively, over prior year. Unsurprisingly, the greater part of the increase flowed from the Industrial side, augmented by large productivity improvements and cost reductions implemented over the last 18 months, and to a lesser extent, by price increases in the second half of the year and the stronger US dollar effect on producer country costs. The more defensive/stable Marketing activities reported a solid earnings increase, supported by improved demand fundamentals, notably in China. Indications in early 2017 reflect a continuation of these positive fundamentals.

Adjusted EBITDA
US$ million

7,616

	2014	2015	2016
Marketing activities	1,545	1,280	**1,586**
Industrial activities	7,077	4,030	**6,030**

Adjusted EBIT
US$ million

3,744

	2014	2015	2016
Marketing activities	1,515	1,255	**1,562**
Industrial activities	3,674	148	**2,182**

Metals and minerals

US$ million	Marketing activities	Industrial activities	2016	Marketing activities	Industrial activities	2015
Revenue	42,142	24,196	66,338	41,151	24,782	65,933
Adjusted EBITDA	1,586	6,030	7,616	1,280	4,030	5,310
Adjusted EBIT	1,562	2,182	3,744	1,255	148	1,403
Adjusted EBITDA margin	3.8%	24.9%	11.5%	3.1%	16.3%	8.1%

Market conditions

Selected average commodity prices

	2016	2015	Change %
S&P GSCI Industrial Metals Index	272	291	(7)
LME (cash) copper price ($/t)	4,867	5,503	(12)
LME (cash) zinc price ($/t)	2,094	1,928	9
LME (cash) lead price ($/t)	1,868	1,785	5
LME (cash) nickel price ($/t)	9,606	11,835	(19)
Gold price ($/oz)	1,248	1,160	8
Silver price ($/oz)	17	16	6
Metal Bulletin cobalt price 99.3% ($/lb)	12	13	(8)
Metal Bulletin ferrochrome 6–8% C basis 60% Cr, max 1.5% Si (¢/lb)	90	94	(4)
Iron ore (Platts 62% CFR North China) price ($/DMT)	58	56	4

Currency table

	Average 2016	Spot 31 Dec 2016	Average 2015	Spot 31 Dec 2015	Change in average %
AUD : USD	0.75	0.72	0.75	0.73	–
USD : CAD	1.32	1.34	1.28	1.38	3
USD : COP	3,052	3,002	2,749	3,175	11
EUR : USD	1.11	1.05	1.11	1.09	–
GBP : USD	1.35	1.23	1.54	1.47	(12)
USD : CHF	0.99	1.02	0.96	1.00	3
USD : KZT	342	334	223	341	53
USD : ZAR	14.69	13.74	12.78	15.47	15

Marketing

Highlights

2016 is likely to be remembered as the year in which industrial metals prices found their cyclical floor and some meaningful year-over-year price appreciation (spot basis) was seen towards the end of the year. These increases were fundamentally supported by demand strength from China's industrial base and confidence in the sustainability thereof, together with the enhanced realisation that fear of a supply glut in many markets was overdone, as evidenced by declining stock levels in most key commodity categories.

Against this improving background, Marketing delivered an Adjusted EBIT of $1,562 million in 2016, a 24% increase over 2015.

Financial information

US$ million	2016	2015	Change %
Revenue	42,142	41,151	2
Adjusted EBITDA	1,586	1,280	24
Adjusted EBIT	1,562	1,255	24

Selected marketing volumes sold

	Units	2016	2015	Change %
Copper metal and concentrates[1]	mt	3.5	3.1	13
Zinc metal and concentrates[1]	mt	2.0	3.1	(35)
Lead metal and concentrates[1]	mt	0.9	1.1	(18)
Gold	moz	2.1	1.9	11
Silver	moz	92.1	89.3	3
Nickel	kt	221	231	(4)
Ferroalloys (incl. agency)	mt	7.6	5.0	52
Alumina/aluminium	mt	11.4	13.6	(16)
Iron ore	mt	47.1	41.2	14

1 *Estimated metal unit contained.*

Metals and minerals

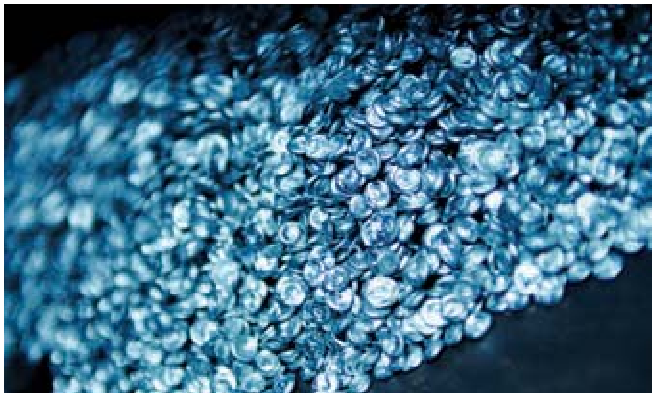
Copper

After underperforming the base metals complex for most of the year, the copper market sprang back into life in the closing months of 2016 amid a fundamental shift in sentiment. The no-show of the much-trumpeted "wall of supply", lack of inventory build during the year and significantly stronger than expected Chinese demand propelled copper up towards $6,000/t by year end, from a low of $4,310/t in early 2016. Copper averaged $4,867/t during the year.

Chinese government stimulus measures coupled with tighter scrap supply underpinned stronger global demand growth. European growth also lent support while North American cathode offtake was largely flat year-on-year. Near-term demand prospects appear positive. A political transition year in China should ensure continued positive fundamentals while the actual and looming infrastructure programmes in Japan and North America should start to lend support to non-Chinese consuming regions.

Supply-side fundamentals also improved markedly during the year. Despite some scaremongering, the "wall of supply" failed to emerge. New supply growth from Peru was almost fully offset by production decreases in Chile and elsewhere, and continued shutdowns in the African copper belt. Indeed, the copper market appears to be reverting to form, with an unusually low volume of mine disruptions seen in H1 2016, but increasing in the second half of the year. The stresses induced by 18 months of low pricing and related actions to enhance cash flows are only just starting to manifest themselves.

The prospect of demand growth across Asia, Europe and the US, as well as the likelihood of difficult labour contract negotiations at some of the industry's major mines over the coming year, suggest that pricing risks lie to the upside in 2017.



Zinc

Zinc was one of the best performing industrial metals in 2016, with an average year-over-year price increase of 9%. The widely anticipated zinc mining output reduction materialised and resulted in significantly tighter physical market conditions, particularly for zinc concentrate. Confirmation of decreasing supply, in combination with better than anticipated demand conditions driven by the recovery of the Chinese real estate and global automotive market, has resulted in destocking of both zinc concentrates and metal during the year and a higher corresponding LME price.

2016 Chinese zinc mine production was similar to 2015, despite the incentive of a higher SHFE zinc metal price, and a reduction in zinc mine production from the rest of the world ("ROW") of around 900kmtu (10.8%). Consequently, realised Benchmark TCs reduced by $32/dmt ($243 to $211) while average spot TCs were down by $99/dmt ($201 to $102). The tightness in zinc concentrates is yet to impact Chinese zinc metal production, even though Chinese concentrate imports were down by 640kmtu and domestic mine production was flat year-over-year. Chinese smelters reported similar production as in 2015, which is attributed to destocking of concentrates stock built up in prior years. ROW zinc metal production was down by 244kmtu compared to prior year.

ROW zinc metal continues to be shipped to China, following the trend of the last few years. Metal imports into China were stable year-on-year, causing further inventory drawdowns from LME exchanges (stocks down from 463kt to 428kt), while SHFE (199kt to 153kt) and Shanghai Metal Market stocks have also been drawn to cover the needs of the Chinese physical market. Published non-exchange stocks in China have also reduced by a further 50–80kt. Real estate and infrastructure end markets in China are performing better than expected, supported by Chinese government actions in H1 2016, while the automotive market continues to show strong growth both in China and ROW.

The lead supply side trend is similar, given that it is generally a by-product of zinc. Lead benchmark TCs were down by $22.50/dmt ($170 versus $192.50), while spot was down by $60/dmt ($117 versus $177) compared to 2015 averages. Chinese lead concentrates imports were also down by 24% year-over-year.

Going forward, we expect tight zinc concentrates supply to translate into lower metal production in 2017, which should cause further inventory drawdowns and provide support to the metal price.

Nickel

Whilst average nickel prices in 2016 were at multi-year lows with prices bottoming in February around $7,600/t, prices rebounded through the rest of the year, exceeding $12,000/t in November before closing the year at c.$10,000/t.

Despite a weak January and February 2016, global stainless steel production expanded materially in 2016, led by double-digit demand growth in China. Furthermore, we saw a continued shift to austenitic grades in Europe, India and the US which supported nickel demand growth.

We estimate global stainless production in 2016 at over 45 million tonnes, up over 7% on the prior year, including over 24 million tonnes from China. Globally 300S austenitic production totalled over 25 million tonnes which is a 10% increase versus 2015.

Developments in non-stainless remain mixed, with special steel producers reporting challenging conditions primarily due to continued oil and gas weakness, whilst demand from the critical alloys industry and battery sector remains robust.

Overall we estimate primary nickel demand in 2016 of 2.05 million tonnes, representing an ~8% increase versus 2015.

Nickel supply continued to fall in 2016 with further shutdowns (BCL, Tati, Votorantim, Mirabella), and lower nickel unit exports (in ore) from the Philippines all driving a fall in projected nickel output to approximately 1.95 million tonnes of nickel, down 2% versus 2015.

Consequently the market entered its first material deficit since 2010 enabling global inventories to fall by around 100,000 tonnes. Whilst inventories remain elevated, the outlook is for continued deficits and further draws in primary nickel inventories as demand remains strong. Supply increases relate to Indonesia exporting more nickel units in nickel pig iron, with production elsewhere continuing to flat-line or even fall.

Ferroalloys

Oversupply, raw material destocking and limited growth in key demand regions resulted in ferrochrome and chrome ore prices falling to multi-year lows during Q1 2016, eventually contributing to meaningful mine and foundry closures. Following these production cuts, a resurgent Chinese stainless steel market led to sharp recoveries in chrome pricing starting Q2 2016. Between Q2 2016 and Q4 2016, the European benchmark price for ferrochrome increased 34%, indicative of the improved market sentiment and a more positive global pricing environment going into 2017.

Reduced manganese ore and alloy supply caused a price recovery during the first half of 2016, which, together with improved demand from the global carbon steel sector during the second half, sparked a rally in prices towards the end of 2016.

Vanadium demand and prices increased through the year as a recovery in high-strength structural and specialty steel continued, together with increased order flow from premium aerospace and battery applications. This demand, coupled with a reduction in supply during the second half of the year, particularly from China, led to a global reduction in the stock overhang experienced over the last two years, resulting in a more balanced market heading into 2017.

Metals and minerals

Alumina/Aluminium

Average primary aluminium prices decreased by 3% during 2016, but as with other industrial metals the price increased strongly towards the end of the year, finishing at $1,693/t, up 12% from 31 December 2015. Demand for aluminium remains very healthy with growth expected in all three major sectors: automotive, packaging and construction. The market was in deficit in the west and oversupplied in China, yielding similar year-over-year exports from China.

Following the significant reductions seen last year, premiums completed their return to historical levels during 2016 with Europe and Japan trading around $70–120/t. The US premium closed 2016 at $184/t and is expected to remain the strongest of the three regions, due to its large deficit, importing over 4 million tonnes on an annualised basis.

The FOB Australia alumina price showed a reversal of the fall in 2015, opening the year at $199/t, and closing at $350/t. Increases in alumina production have lagged behind the increase in demand from increased aluminium production.

Iron Ore

Both iron ore and rebar (steel) experienced tremendous volatility throughout the year. Iron ore surpassed most analysts' expectations and continued to move higher despite an increase in inventories. As the year progressed, two factors impacted the iron ore market: steel demand improved on the back of renewed Chinese stimulus and coal capacity cuts created a surge in coking coal prices. The resulting increase in steel margins and higher coking coal prices led to an increase in demand for higher grade iron ore, which stepped up benchmark prices for iron ore, which are based on such higher grade cargoes.

Elsewhere in the market, India exported close to 40 million tonnes in 2016, compared to under 10 million tonnes in 2015. The increase in supply from India, which tends to be of lower quality and mills switching from low grade to high grade ore, led to significantly greater discounts for lower grade ore and certain product penalties. Finally, as financial players continued to become a bigger part of the market, prices often became disconnected from short-term physical fundamentals, all such factors contributing to a challenging price environment to manage.

Industrial activities

Highlights

The Metals and minerals industrial portfolio delivered a $2,000 million (50%) increase in Adjusted EBITDA to $6,030 million and a $1,454 million reduction in capex. Some external factors played a part, such as the relative strength of the US dollar versus key producer country currencies, notably in South Africa, Kazakhstan and Argentina, and price increases towards the end of the year, however the largest positive impact on earnings and cash generation was the extensive cost reduction and efficiency initiatives embedded into the businesses over the last 18 months.

It is noteworthy that among the asset groups where some tough decisions were made in 2015 regarding production curtailments, Adjusted EBITDA is up strongly year-over-year, demonstrating the successful implementation thereof. More generally, the overall portfolio has benefited from such supply discipline, which saw copper and zinc own production decline year-over-year by 5% and 24% respectively.

Financial information

US$ million	2016	2015	Change %
Revenue			
Copper assets			
African copper (Katanga, Mutanda, Mopani)	1,839	3,038	(39)
Collahuasi[1]	1,006	876	15
Antamina[1]	820	702	17
Other South America (Alumbrera, Lomas Bayas, Antapaccay, Punitaqui)	2,257	1,943	16
Australia (Mount Isa, Ernest Henry, Townsville, Cobar)	1,799	2,049	(12)
Custom metallurgical (Altonorte, Pasar, Horne, CCR)	6,572	5,988	10
Intergroup revenue elimination	(429)	(172)	n.m.
Copper	**13,864**	**14,424**	**(4)**
Zinc assets			
Kazzinc	2,602	2,244	16
Australia (Mount Isa, McArthur River)	1,133	1,211	(6)
European custom metallurgical (Portovesme, San Juan de Nieva, Nordenham, Northfleet)	1,209	1,172	3
North America (Matagami, Kidd, Brunswick, CEZ Refinery)	1,030	1,084	(5)
Other Zinc (AR Zinc, Los Quenuales, Sinchi Wayra, Rosh Pinah, Perkoa)	537	632	(15)
Zinc	**6,511**	**6,343**	**3**
Nickel assets			
Integrated Nickel Operations (Sudbury, Raglan, Nikkelverk)	1,432	1,340	7
Australia (Murrin Murrin)	503	600	(16)
Nickel	**1,935**	**1,940**	**–**
Ferroalloys	**1,873**	**1,717**	**9**
Aluminium/Alumina	**13**	**358**	**(96)**
Metals and minerals revenue	**24,196**	**24,782**	**(2)**

1 Represents the Group's share of these JVs.

Metals and minerals

	Adjusted EBITDA			Adjusted EBIT		
US$ million	**2016**	2015	Change %	**2016**	2015	Change %
Copper assets						
African copper	264	51	418	(240)	(533)	n.m.
Collahuasi[1]	542	343	58	286	85	236
Antamina[1]	602	463	30	341	220	55
Other South America	1,060	718	48	407	202	101
Australia	458	414	11	85	48	77
Custom metallurgical	407	301	35	280	210	33
Copper	**3,333**	**2,290**	**46**	**1,159**	**232**	**400**
Adjusted EBITDA mining margin[2]	38%	23%				
Zinc assets						
Kazzinc	989	490	102	539	44	n.m.
Australia	454	284	60	143	(81)	n.m.
European custom metallurgical	174	168	4	84	81	4
North America	184	121	52	104	21	395
Other Zinc	115	10	n.m.	1	(141)	n.m.
Zinc	**1,916**	**1,073**	**79**	**871**	**(76)**	**n.m.**
Adjusted EBITDA mining margin[2]	33%	18%				
Nickel assets						
Integrated Nickel Operations	446	421	6	(28)	(64)	n.m.
Australia	(19)	32	(159)	(61)	(7)	n.m.
Nickel	**427**	**453**	**(6)**	**(89)**	**(71)**	**n.m.**
Adjusted EBITDA margin	22%	23%				
Ferroalloys	**423**	**271**	**56**	**310**	**138**	**125**
Aluminium/Alumina	**(60)**	**(43)**	**n.m.**	**(60)**	**(60)**	**n.m.**
Iron ore	**(9)**	**(14)**	**n.m.**	**(9)**	**(15)**	**n.m.**
Metals and minerals Adjusted EBITDA/ EBIT	**6,030**	**4,030**	**50**	**2,182**	**148**	**n.m.**
Adjusted EBITDA mining margin[2]	33%	21%				

1 *Represents the Group's share of these JVs.*
2 *Adjusted EBITDA mining margin is Adjusted EBITDA (excluding custom metallurgical assets) divided by Revenue (excluding custom metallurgical assets and intergroup revenue elimination) i.e. the weighted average EBITDA margin of the mining assets. Custom metallurgical assets include the Copper custom metallurgical assets and Zinc European custom metallurgical assets and the Aluminium/Alumina group, as noted in the table above.*

US$ million	Sustaining 2016	Expansion 2016	Total 2016	Sustaining 2015	Expansion 2015	Total 2015
Capital expenditure						
Copper assets						
African copper	270	357	627	390	756	1,146
Collahuasi[1]	160	4	164	100	5	105
Antamina[1]	194	1	195	182	5	187
Other South America	310	34	344	464	67	531
Australia	176	2	178	198	23	221
Custom metallurgical	127	3	130	178	124	302
Copper	**1,237**	**401**	**1,638**	**1,512**	**980**	**2,492**
Zinc assets						
Kazzinc	127	26	153	189	37	226
Australia	209	–	209	357	29	386
European custom metallurgical	54	–	54	79	–	79
North America	61	4	65	62	9	71
Other Zinc	55	–	55	102	–	102
Zinc	**506**	**30**	**536**	**789**	**75**	**864**
Nickel assets						
Integrated Nickel Operations	96	34	130	140	88	228
Australia	14	–	14	20	–	20
Koniambo	–	263	263	–	360	360
Other nickel projects	–	–	–	–	4	4
Nickel	**110**	**297**	**407**	**160**	**452**	**612**
Ferroalloys	**101**	**13**	**114**	**118**	**25**	**143**
Aluminium/Alumina	**–**	**–**	**–**	**19**	**18**	**37**
Iron ore	**–**	**–**	**–**	**1**	**–**	**1**
Capital expenditure	**1,954**	**741**	**2,695**	**2,599**	**1,550**	**4,149**

1 Represents the Group's share of these JVs.

Metals and minerals

Production data

Production from own sources – Total[1]

		2016	2015	Change %
Copper	kt	1,425.8	1,502.2	(5)
Zinc	kt	1,094.1	1,444.8	(24)
Lead	kt	294.2	297.7	(1)
Nickel	kt	115.1	96.2	20
Gold	koz	1,027	964	7
Silver	koz	39,069	36,592	7
Cobalt	kt	28.3	23.0	23
Ferrochrome	kt	1,523	1,462	4
Platinum	koz	148	158	(6)
Palladium	koz	209	202	3
Rhodium	koz	16	18	(11)
Vanadium Pentoxide	mlb	21.1	20.9	1

Production from own sources – Copper assets[1]

		2016	2015	Change %
African Copper (Katanga, Mutanda, Mopani)				
Copper metal[2]	kt	254.4	421.9	(40)
Cobalt[3]	kt	24.5	19.4	26
Collahuasi[4]				
Copper metal	kt	2.1	9.8	(79)
Copper in concentrates	kt	220.8	190.6	16
Silver in concentrates	koz	3,276	2,828	16
Antamina[5]				
Copper in concentrates	kt	145.5	131.8	10
Zinc in concentrates	kt	66.8	79.3	(16)
Silver in concentrates	koz	6,778	5,987	13
Other South America (Alumbrera, Lomas Bayas, Antapaccay, Punitaqui)				
Copper metal	kt	80.0	71.1	13
Copper in concentrates	kt	308.8	272.0	14
Gold in concentrates and in doré	koz	382	318	20
Silver in concentrates and in doré	koz	2,366	1,918	23
Australia (Mount Isa, Ernest Henry, Townsville, Cobar)				
Copper metal	kt	205.1	205.6	–
Copper in concentrates	kt	53.9	50.8	6
Gold	koz	86	90	(4)
Silver	koz	1,794	1,723	4

Total Copper department				
Copper	kt	1,270.6	**1,353.6**	**(6)**
Cobalt	kt	24.5	**19.4**	**26**
Zinc	kt	66.8	**79.3**	**(16)**
Gold	koz	468	**408**	**15**
Silver	koz	14,214	**12,456**	**14**

1 *Controlled industrial assets and joint ventures only. Production is on a 100% basis, except as stated.*
2 *Copper metal includes copper contained in copper concentrates and blister.*
3 *Cobalt contained in concentrates and hydroxides.*
4 *The Group's pro-rata share of Collahuasi production (44%).*
5 *The Group's pro-rata share of Antamina production (33.75%).*
6 *The Group's attributable 79.5% share of the Glencore-Merafe Chrome Venture.*
7 *Consolidated 50% of Mototolo and 100% of Eland (placed on care and maintenance from October 2015).*

Production from own sources – Zinc assets[1]

		2016	2015	Change %
Kazzinc				
Zinc metal	kt	187.6	193.4	(3)
Lead metal	kt	44.0	26.3	67
Lead in concentrates	kt	15.2	–	n.m.
Copper metal[2]	kt	53.9	51.9	4
Gold	koz	521	520	–
Silver	koz	4,510	3,653	23
Silver in concentrates	koz	469	–	n.m.
Australia (Mount Isa, McArthur River)				
Zinc in concentrates	kt	488.4	750.9	(35)
Lead in concentrates	kt	185.4	216.0	(14)
Silver in concentrates	koz	8,741	8,248	6
North America (Matagami, Kidd)				
Zinc in concentrates	kt	130.1	115.2	13
Copper in concentrates	kt	48.0	48.3	(1)
Silver in concentrates	koz	2,292	2,368	(3)
Other Zinc (Aguilar, Los Quenuales, Sinchi Wayra, Rosh Pinah, Perkoa)				
Zinc metal	kt	–	26.1	(100)
Zinc in concentrates	kt	221.2	279.9	(21)
Lead metal	kt	12.7	12.7	–
Lead in concentrates	kt	36.9	42.7	(14)
Copper in concentrates	kt	2.1	2.4	(13)
Silver metal	koz	666	691	(4)
Silver in concentrates	koz	7,553	8,566	(12)

Total Zinc department				
Zinc	kt	1,027.3	**1,365.5**	**(25)**
Lead	kt	294.2	**297.7**	**(1)**
Copper	kt	104.0	**102.6**	**1**
Gold	koz	521	**520**	**–**
Silver	koz	24,231	**23,526**	**3**

Production from own sources – Nickel assets[1]

		2016	2015	Change %
Integrated Nickel Operations ("INO") (Sudbury, Raglan, Nikkelverk)				
Nickel metal	kt	65.6	49.1	34
Nickel in concentrates	kt	0.6	0.5	20
Copper metal	kt	16.6	14.9	11
Copper in concentrates	kt	34.6	31.1	11
Cobalt metal	kt	1.0	0.8	25
Gold	koz	37	35	6
Silver	koz	624	610	2
Platinum	koz	90	76	18
Palladium	koz	173	157	10
Rhodium	koz	6	5	20
Murrin Murrin				
Nickel metal	kt	35.3	37.5	(6)
Cobalt metal	kt	2.8	2.8	–
Koniambo				
Nickel in ferronickel	kt	13.6	9.1	49
Total Nickel department				
Nickel	kt	115.1	**96.2**	**20**
Copper	kt	51.2	**46.0**	**11**
Cobalt	kt	3.8	**3.6**	**6**
Gold	koz	37	**35**	**6**
Silver	koz	624	**610**	**2**
Platinum	koz	90	**76**	**18**
Palladium	koz	173	**157**	**10**
Rhodium	koz	6	**5**	**20**

1 Controlled industrial assets and joint ventures only. Production is on a 100% basis, except as stated.
2 Copper metal includes copper contained in copper concentrates and blister.
3 Cobalt contained in concentrates and hydroxides.
4 The Group's pro-rata share of Collahuasi production (44%).
5 The Group's pro-rata share of Antamina production (33.75%).
6 The Group's attributable 79.5% share of the Glencore-Merafe Chrome Venture.
7 Consolidated 50% of Mototolo and 100% of Eland (placed on care and maintenance from October 2015).

Production from own sources – Ferroalloys assets[1]

		2016	2015	Change %
Ferrochrome[6]	kt	1,523	1,462	4
PGM[7]				
Platinum	koz	58	82	(29)
Palladium	koz	36	45	(20)
Rhodium	koz	10	13	(23)
Gold	koz	1	1	–
4E	koz	105	141	(26)
Vanadium Pentoxide	mlb	21.1	20.9	1

Total production – Custom metallurgical assets[1]

		2016	2015	Change %
Copper (Altonorte, Pasar, Horne, CCR)				
Copper metal	kt	489.1	433.7	13
Copper anode	kt	522.5	502.8	4
Zinc (Portovesme, San Juan de Nieva, Nordenham, Northfleet)				
Zinc metal	kt	789.8	788.8	–
Lead metal	kt	216.6	199.2	9
Silver	koz	14,845	11,220	32
Ferroalloys				
Ferromanganese	kt	136	146	(7)
Silicon Manganese	kt	82	98	(16)

Metals and minerals

Operating highlights

Copper assets

Copper production of 1,425,800 tonnes was 76,400 tonnes (5%) below 2015, reflecting the production suspensions at African Copper, partly offset by improved grades and volumes at the South American assets.

African copper

Mutanda's production of 213,300 tonnes was in line with 2015. Cobalt production of 24,500 tonnes was 8,000 tonnes (48%) higher, reflecting various plant optimisation projects completed during the year.

Mopani produced 41,100 tonnes of copper from own sources, 51,000 tonnes (55%) lower than 2015, as a result of the partial suspension of production, while the major upgrade projects are being completed.

Collahuasi

Glencore's share of Collahuasi's production was 222,900 tonnes, a 22,500 tonne (11%) increase over 2015, due to improved milling rates and grades.

Antamina

Glencore's share of Antamina's copper production was 145,500 tonnes, a 13,700 tonne (10%) increase over 2015 and zinc production of 66,800 tonnes was 12,500 tonnes (16%) lower than 2015, reflecting the mix of copper and zinc/copper ore encountered in the mine.

Other South America

Copper production of 388,800 tonnes was 45,700 tonnes (13%) higher than 2015, mainly relating to higher grades at Alumbrera, the Tintaya plant being operational for the full year at Antapaccay and incremental expansion at the Antapaccay plant completed in the year. The increase in gold production (318,000 ounces to 382,000 ounces) mainly related to improved grades at Alumbrera.

Australia

Copper production of 259,000 tonnes was 2,600 tonnes up on 2015, reflecting a strong operating performance.

Custom metallurgical assets

Copper cathode production of 489,100 tonnes was 55,400 tonnes (13%) higher than 2015 and anode production of 522,500 tonnes was 19,700 tonnes (4%) higher, mainly as a result of the restart of Pasar, following its upgrade in 2015.

Zinc assets

Zinc production of 1,094,100 tonnes was 350,700 tonnes (24%) lower than 2015, mainly reflecting the production suspensions announced in October 2015.

Kazzinc

Own-sourced zinc production of 187,600 tonnes was slightly lower than 2015, as a result of the mix of own and third party feeds. Total zinc production of 305,500 tonnes was in line with 2015.

Own-sourced lead production of 59,200 tonnes was 32,900 tonnes (125%) higher than 2015, due to operational improvements at the lead smelter, following maintenance in 2015, and additional volumes from the Zhairem mine.

Own-sourced copper production of 53,900 tonnes was 2,000 tonnes (4%) higher than the previous year, mainly due to maintenance activities impacting volumes during 2015.

Own-sourced gold production of 521,000 ounces was in line with the comparable period.

Australia

Zinc production of 488,400 tonnes was 262,500 tonnes (35%) lower than 2015 and lead production of 185,400 tonnes was 30,600 tonnes (14%) lower, reflecting suspended production at George Fisher, Lady Loretta and McArthur River. Q4 zinc production of 138,200 tonnes was 19,700 tonnes (17%) higher than Q3, mainly reflecting higher head grades at McArthur River.

North America

Zinc production of 130,100 tonnes was 14,900 tonnes (13%) higher than in 2015, mainly due to higher grades being achieved at Kidd and Matagami. Copper production of 48,000 tonnes was in line with the previous year.

Other Zinc

Zinc production of 221,200 tonnes was 84,800 tonnes (28%) below 2015, mainly due to the suspension of the Iscaycruz mine in Peru (part of Los Quenuales).

European custom metallurgical assets

Zinc production of 789,800 tonnes was in line with 2015. Lead production of 216,600 tonnes was 17,400 tonnes (9%) higher than the comparable period, reflecting operational improvements at Northfleet and prior year maintenance at Portovesme.

Nickel assets

Own-sourced nickel production of 115,100 tonnes was 18,900 tonnes (20%) higher than 2015, due to the processing in 2016 of material stockpiled during maintenance work at the Sudbury smelter during the prior year.

Integrated Nickel Operations ("INO")

Own-sourced nickel production of 66,200 tonnes was 16,600 tonnes (33%) higher than 2015, mainly due to the Sudbury smelter shutdown in 2015. Total nickel production of 93,400 tonnes, including third-party sources, was in line with 2015.

Own-sourced copper production of 51,200 tonnes was an increase of 5,200 tonnes (11%) over the comparable period, due to improved mill throughput at Sudbury and the impact of the smelter shutdown on the base period.

Murrin Murrin

Own-sourced nickel production of 35,300 tonnes was 2,200 tonnes (6%) lower than 2015, reflecting maintenance throughout the year. Cobalt production of 2,800 tonnes from own sources was in line with 2015.

Koniambo

Nickel production of 13,600 tonnes was up 4,500 tonnes (49%) over the comparable period, reflecting the ongoing ramp-up of processing operations.

Ferroalloys assets

Ferrochrome

Attributable ferrochrome production of 1,523,000 tonnes was 4% higher than 2015, due to the timings of refurbishments in 2016 versus 2015 leading to more available furnace hours, and the full-year benefits of operating the Lion 2 furnace which was ramping up through H1 2015.

Platinum Group Metals ("PGM")

Glencore's share of Mototolo's production of 105,000 ounces was comparable with 2015, after adjusting for Eland mine, which has been on care and maintenance since October 2015.

Vanadium

Vanadium production of 21.1 million pounds was in line with 2015.

Manganese

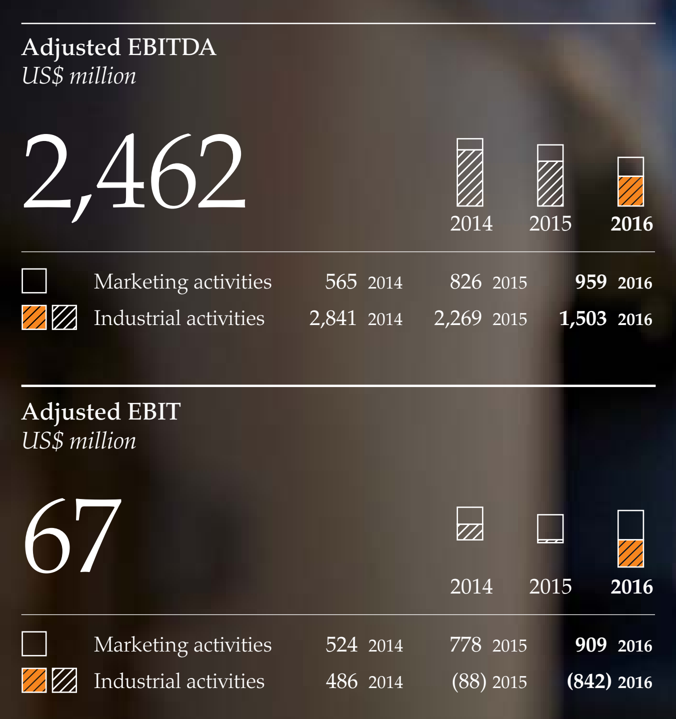
Manganese production of 218,000 tonnes was 26,000 tonnes (11%) below 2015, mainly due to maintenance activities, including a furnace rebuild in Norway that is now complete.

Energy products

Highlights

Energy products Adjusted EBITDA of $2,462 million was 20% down on 2015, with 2016 impacted by the corporate risk management decision in Q2 2016 to economically price hedge some 55 million tonnes of future coal production, thereby locking-in/capping the effective realised sales price of 44 million tonnes in 2016, resulting in an "opportunity cost" of $980 million being realised as coal markets rallied into H2 2016. Adjusting for this hedging impact, 2016 Adjusted EBITDA would have been up 11% over the prior year.

Marketing activities Adjusted EBIT delivered an improvement of 17%, while industrial activities, pre hedge impact, delivered a 3% Adjusted EBITDA margin improvement to 32%, the latter driven largely by the continuous and relentless focus on cost reduction and margin improvement initiatives.



Adjusted EBITDA
US$ million

2,462

	2014	2015	2016
Marketing activities	565	826	**959**
Industrial activities	2,841	2,269	**1,503**

Adjusted EBIT
US$ million

67

	2014	2015	2016
Marketing activities	524	778	**909**
Industrial activities	486	(88)	**(842)**

Energy products

US$ million	Marketing activities	Industrial activities	2016	Marketing activities	Industrial activities	2015
Revenue	81,872	7,149	89,021	75,206	8,406	83,612
Adjusted EBITDA	959	1,503	2,462	826	2,269	3,095
Adjusted EBIT	909	(842)	67	778	(88)	690
Adjusted EBITDA margin	1.2%	21.0%	2.8%	1.1%	27.0%	3.7%

Market conditions

Selected average commodity prices

	2016	2015	Change %
S&P GSCI Energy Index	151	175	(14)
Coal API4 ($/t)	64	57	12
Coal Newcastle (6,000) ($/t)	65	58	12
Oil price – Brent ($/bbl)	45	54	(17)

Marketing

Highlights

Coal and oil markets were notably impacted during 2016 by sovereign developments, key being China for coal and OPEC for oil. Coal news was dominated by China's effective domestic supply reduction campaign to restore/accelerate financial health to an oversupplied industry and its consequential effect on seaborne pricing. Oil's persistent fears of oversupply and inventory builds were eventually tackled by OPEC's first agreed production cut in almost a decade and pledges to do likewise by various non-OPEC countries, including Russia. Solid contributions from both the oil and coal divisions showcase Glencore's abilities to successfully navigate such choppy markets.

Financial information

US$ million	2016	2015	Change %
Revenue	81,872	75,206	9
Adjusted EBITDA	959	826	16
Adjusted EBIT	909	778	17

Selected marketing volumes sold

		2016	2015	Change %
Thermal coal[1]	mt	105.7	93.9	13
Metallurgical coal[1]	mt	2.4	2.5	(4)
Coke[1]	mt	0.9	0.7	29
Crude oil	mbbl	911	566	61
Oil products	mbbl	844	634	33

1 *Includes agency volumes.*

Thermal coal

The introduction of Chinese policy measures in Q2 2016 to limit domestic coal production (address overcapacity concerns) provided strong support for increased prices and thermal coal import demand, particularly during the second half of 2016. At the end of December 2016, market index prices for Newcastle, API4 and API2 closed respectively 88%, 77% and 85% higher than December 2015. Overall, Chinese thermal coal imports increased by over 40 million tonnes in 2016, which together with demand growth in the emerging economies of South East Asia, offset demand reductions in India and the EU, to hold overall 2016 seaborne demand in line with 2015. South East Asian demand growth continues to be supported by the construction of new coal fired generation capacity.

On the supply side, export declines from the US and Indonesia were offset by some growth from Colombia and Mozambique, while Australian exports and total seaborne supply volumes were broadly flat year-over-year. The price recovery from the lows at the beginning of 2016 has facilitated the return to positive cash margins for the majority of seaborne thermal coal producers, yet price volatility, access to capital and project lead times continue to limit supply growth. Indonesia, however, is looking to return some idled low quality capacity/production.

There continues to be a general decline in supply volumes of higher energy coal export products, particularly from Indonesia and South Africa, as high grade reserves are depleted. Consequently, high energy coals remain in tighter supply, supporting market segmentation and price differentiation.

Oil

The first half of 2016 saw a period of sustained recovery in oil prices up to $50 per barrel for Brent, after hitting a decade low, amidst surging volatility, of close to $27/bbl in January. Whilst price increases were initially driven by a recovery from perceived oversold levels, this was later supported by increasingly frequent supply disruptions and declining US production. However, the oil price trajectory stalled during the second half of 2016 and traded mostly within a range of $45 to $55 per barrel as oversupply concerns remained, inventories were high and refinery margins came under pressure. OPEC continued to produce at record levels, rig count increases indicated higher US production and higher prices prompted renewed producer hedging. On the demand side, expectations remained for robust demand growth.

December 2016 saw the first agreed output cut by OPEC since 2008, which marked a major shift from the “market share policy” it had followed for the past two years. Oil prices rallied to end the year at $56 per barrel, as the market viewed this as significantly accelerating oil market re-balancing expectations. A curve shift took place eroding contango or even shifting to backwardation. Looking into 2017, the focus is now firmly on OPEC compliance and non-OPEC producers delivering the agreed cuts as outlined.

Energy products

Industrial activities

Highlights

Energy Products' Adjusted EBITDA of $1.5 billion was down year-over-year, on account of the coal economic price hedging initiatives noted above. Prior to such hedging impact, underlying Coal Adjusted EBITDA was up 14% year-over-year, with Adjusted EBITDA margins consistent at ~30%. In a period of considerable uncertainty around the oil market, the development programme in Chad was significantly curtailed, resulting in year-over-year capex savings of almost $0.5 billion but, inevitably, also in lower production and earnings. Some limited development will recommence in 2017.

Financial information

US$ million	2016	2015	Change %
Net revenue			
Coal operating revenue			
Coking Australia	651	540	21
Thermal Australia	3,763	3,584	5
Thermal South Africa	1,349	1,458	(7)
Prodeco	1,130	1,089	4
Cerrejón[1]	606	620	(2)
Impact of corporate coal economic hedging	(980)	–	n.m.
Coal operating revenue	**6,519**	**7,291**	**(11)**
Coal other revenue			
Coking Australia	2	204	(99)
Thermal Australia	325	425	(24)
Thermal South Africa	9	3	200
Prodeco	12	2	n.m.
Cerrejón[1]	1	–	n.m.
Coal other revenue (buy-in coal)	**349**	**634**	**(45)**
Coal total revenue			
Coking Australia	653	744	(12)
Thermal Australia	4,088	4,009	2
Thermal South Africa	1,358	1,461	(7)
Prodeco	1,142	1,091	5
Cerrejón[1]	607	620	(2)
Impact of corporate coal economic hedging	(980)	–	n.m.
Coal total revenue	**6,868**	**7,925**	**(13)**
Oil	**281**	**481**	**(42)**
Energy products revenue	**7,149**	**8,406**	**(15)**

1 Represents the Group's share of this JV.

US$ million	Adjusted EBITDA 2016	2015	Change %	Adjusted EBIT 2016	2015	Change %
Coking Australia	154	117	32	12	(33)	n.m.
Thermal Australia	1,334	1,159	15	(26)	44	(159)
Thermal South Africa	456	386	18	213	56	280
Prodeco	178	228	(22)	16	62	(74)
Cerrejón[1]	240	189	27	62	3	n.m.
Coal result prior to hedging	**2,362**	**2,079**	**14**	**277**	**132**	**110**
Impact of corporate coal economic hedging	(980)	–	n.m.	(980)	–	n.m.
Total coal	**1,382**	**2,079**	**(34)**	**(703)**	**132**	**n.m.**
Adjusted EBITDA margin[2]	31%	29%				
Oil	**121**	**190**	**(36)**	**(139)**	**(220)**	**n.m.**
Adjusted EBITDA margin	43%	40%				
Energy products Adjusted EBITDA/ EBIT	**1,503**	**2,269**	**(34)**	**(842)**	**(88)**	**n.m.**
Adjusted EBITDA margin – pre economic hedge	32%	29%				
Adjusted EBITDA margin – post economic hedge	22%	29%				

1 Represents the Group's share of this JV.
2 Coal EBITDA margin is calculated on the basis of Coal operating revenue before corporate hedging, as set out in the preceding table.

US$ million	2016 Sustaining	2016 Expansion	2016 Total	2015 Sustaining	2015 Expansion	2015 Total
Capex						
Australia (thermal and coking)	181	110	291	277	177	454
Thermal South Africa	98	30	128	89	120	209
Prodeco	43	3	46	36	5	41
Cerrejón[1]	31	2	33	31	5	36
Total Coal	**353**	**145**	**498**	**433**	**307**	**740**
Oil	**72**	**1**	**73**	**431**	**132**	**563**
Capital expenditure	**425**	**146**	**571**	**864**	**439**	**1,303**

1 Represents the Group's share of this JV.

Energy products

Production data

Coal assets[1]

		2016	2015	Change %
Australian coking coal	mt	5.3	5.9	(10)
Australian semi-soft coal	mt	4.2	3.6	17
Australian thermal coal (export)	mt	52.5	52.4	–
Australian thermal coal (domestic)	mt	5.6	3.9	44
South African thermal coal (export)	mt	17.2	19.7	(13)
South African thermal coal (domestic)	mt	12.1	17.3	(30)
Prodeco	mt	17.3	17.6	(2)
Cerrejón[2]	mt	10.7	11.1	(4)
Total Coal department	mt	**124.9**	**131.5**	**(5)**

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 The Group's pro-rata share of Cerrejón production (33.3%).

Oil assets

		2016	2015	Change %
Glencore entitlement interest basis				
Equatorial Guinea	kbbl	3,629	4,937	(26)
Chad	kbbl	3,882	5,632	(31)
Total Oil department	kbbl	**7,511**	**10,569**	**(29)**
Gross basis				
Equatorial Guinea	kbbl	16,909	22,939	(26)
Chad	kbbl	5,308	7,699	(31)
Total Oil department	kbbl	**22,217**	**30,638**	**(27)**

Operating highlights

Coal assets

Production of 124.9 million tonnes was 6.6 million tonnes (5%) lower than 2015, mainly reflecting the deconsolidation and subsequent sale of Optimum Coal and scheduled mine closures in South Africa and weather-related constraints on production in Colombia.

Australian coking

Production of 5.3 million tonnes was 0.6 million tonnes lower than 2015, mainly due to geological issues at Oaky Creek earlier in the year.

Australian thermal and semi-soft

Production of 62.3 million tonnes was 2.4 million tonnes (4%) higher than 2015, mainly as a result of planned increases at Mangoola, Rolleston and Ravensworth North, along with improved production at South Blakefield, following geological challenges in 2015.

South African thermal

Production of 29.3 million tonnes was 7.7 million tonnes (21%) lower than 2015, mainly due to the deconsolidation and subsequent sale of Optimum Coal and some smaller scheduled mine closures.

Prodeco

Production of 17.3 million tonnes was 0.3 million tonnes (2%) less than in 2015, impacted by heavy rainfall during the year.

Cerrejón

Glencore's share of volumes from Cerrejón was 10.7 million tonnes, 0.4 million tonnes (4%) lower than the prior year, mainly due to weather-related production disruptions.

Oil assets

In 2016, Glencore's entitlement interest production was 7.5 million barrels, 3.1 million barrels (29%) lower than 2015, reflecting the natural depletion of existing fields. During the first quarter of 2016, the remaining workover rig in Chad was temporarily suspended; a one-rig drilling schedule is expected to recommence in 2017.

Agricultural products

Highlights

During 2016, 50% of our Agricultural Products business was sold to two partners, establishing a standalone business, Glencore Agriculture. This transaction contributed strongly to Glencore's net debt reduction and has positioned Glencore Agriculture well to take advantage of future opportunities in the sector.

Below average harvests in Canada and South Australia in September and October 2015 impacted handling margins in the first half of the year. The improved harvests of 2016 contributed to significantly improved performances, which are expected to carry over into the first quarter of 2017.

Adjusted EBITDA
US$ million

592

	2014	2015	2016
Industrial activities	213	150	**138**
Marketing activities	996	584	**454**

Adjusted EBIT
US$ million

522

	2014	2015	2016
Industrial activities	136	63	**104**
Marketing activities	856	461	**418**

Agricultural products

The disposal of 50% of the Agricultural Products division was completed on 1 December 2016, as discussed in the Financial review and the financial statements. These highlights reflect 11 months' results on a 100% consolidated basis and 1 month on a 50% proportionate consolidated basis.

US$ million	Marketing activities	Industrial activities	2016	Marketing activities	Industrial activities	2015
Revenue	18,678	3,292	21,970	20,617	2,529	23,146
Adjusted EBITDA	454	138	592	584	150	734
Adjusted EBIT	418	104	522	461	63	524
Adjusted EBITDA margin	2.4%	4.2%	2.7%	2.8%	5.9%	3.2%

Market conditions

Selected average commodity prices

	2016	2015	Change %
S&P GSCI Agriculture Index	295	295	–
CBOT wheat price (US¢/bu)	436	507	(14)
CBOT corn no.2 price (US¢/bu)	358	377	(5)
CBOT soya beans (US¢/bu)	989	945	5
ICE cotton price (US¢/lb)	66	63	5
ICE sugar # 11 price (US¢/lb)	18	13	38

Marketing

Highlights

Prices and volatility generally remained subdued during the period, with our grain and oilseed marketing business performing consistently well in the circumstances. The marketing of wheat, Brazilian corn, soyameal and the rapeseed complex, supported by our asset ownership, exceeded expectations, while sugar and cotton were below expectations.

Viterra Canada faced challenges in the first half of 2016, as the crop harvested in September 2015 was below average, with margins suffering from competition amongst handlers in the face of low prices and farmer retention. Margins improved in the final quarter with a near-record, albeit poor quality, crop harvested in September 2016. South Australia was broadly similar, with the first half impacted by the disappointing October 2015 harvest and the final quarter benefiting from a record 2016 South Australian crop. In the meantime, we had added storage and were well prepared for the large Viterra Australia intake. The crop size and delayed Australian harvest is also expected to positively impact results in the first quarter of 2017.

Financial information

US$ million	2016	2015	Change %
Revenue	18,678	20,617	(9)
Adjusted EBITDA	454	584	(22)
Adjusted EBIT	418	461	(9)

Selected marketing volumes sold

Million tonnes	2016	2015	Change %
Grain	43.8	43.7	–
Oil/Oilseeds	26.7	23.3	15
Cotton	0.4	0.4	–
Sugar	0.5	1.1	(55)

Operating highlights

Processing/production (100% basis) of 14.5 million tonnes reflected a year-on-year increase of 2.9 million tonnes (25%), mainly relating to the acquisitions, in late 2015 and early 2016, of the Becancour and Warden crush plants in Canada and the US, respectively, and higher capacity utilisation in Argentina.

At Becancour, margins were poor early in the year as sales of meal proved challenging, but increased in the second half. In Argentina, where the fiscal environment has improved, margins were reasonable in the post-harvest period, but contracted somewhat with farmer retention later in the year. Softseed crushing and biodiesel in Europe struggled with the smaller rapeseed crop and resulting over-capacity.

Sugar milling volumes increased as we attracted ample third-party cane and the business benefited from higher sugar and ethanol prices. Wheat milling in Brazil was challenging in early 2016 as demand contracted due to poor domestic economic conditions, however this business recovered well in the second half.

Financial information

US$ million	**2016**	2015	Change %
Revenue	3,292	2,529	30
Adjusted EBITDA	138	150	(8)
Adjusted EBIT	104	63	65
Adjusted EBITDA margin	4%	6%	
Sustaining capital expenditure	22	58	
Expansionary capital expenditure	22	40	
Total capital expenditure	**44**	**98**	

Processing/production data[1]

		2016	2015	Change %
Farming	kt	792	704	13
Crushing	kt	7,680	6,069	27
Long-term toll agreement	kt	804	284	183
Biodiesel	kt	687	556	24
Rice milling	kt	274	206	33
Wheat milling	kt	989	976	1
Sugarcane processing	kt	3,259	2,751	18
Total agricultural products	kt	**14,485**	**11,546**	**25**

1 Reported on a 100% basis.

Corporate governance

"2016 was a year of considerable action by your Company and your Board as we transitioned from a higher-geared company in a tough sector down-cycle to a business with a robust balance sheet and a more positive operating environment."

CHAIRMAN'S INTRODUCTION
(see page 80)

80 Chairman's introduction, Directors and Officers
84 Corporate governance report
99 Directors' remuneration report
109 Directors' report

SAFEWORK

Chairman's introduction

Dear Shareholders,

2016 was a year of considerable action by your Company and your Board as we transitioned from a higher-geared company in a tough sector down-cycle to a business with a robust balance sheet and a more positive operating environment.

From a governance and commercial perspective, our unrelenting focus has been on the rapid delivery of our debt reduction programme which we announced in September 2015. We ignored distractions, including gradually improving market conditions, to deliver an outturn that has surpassed our initial challenging objectives. I believe that this is testament to the strength of our Board and the quality of our management team.

New regulation and guidance on governance continue apace. We seek to engage with the Financial Reporting Council, the Investment Association and other bodies where appropriate. As an example, I participated in the FRC's consultation on culture, and its working group published their report in July last year. We agree that a healthy corporate culture leads to long-term success by both protecting and generating value. We believe that our reaction to our challenges over the past 18 months or so has been testament to the strong culture of Glencore which has endured in a time of stress and challenge for the business.

Safety remains critical to the Board. We remain committed to our goal of zero fatalities. Our condolences go to the families of the sixteen people who lost their lives last year, including ten people who died following two separate incidents at our copper operations in central Africa. All members of the HSEC Committee visited these sites in 2016, and have worked closely with the management of the operations to understand the causes of these tragic events and to address them. Similarly, as in previous years, we met with the management of each of the operations that experienced fatalities last year to discuss the incidents and ensure that appropriate learnings have been identified and shared throughout the organisation to prevent recurrence.

At the 2016 AGM, shareholders approved the 'Aiming for A' resolution, which called for a comprehensive response to the challenges posed by climate change. I am chairing an internal working group on climate change, which includes business heads and senior representatives of key functions. The working group is leading the delivery of our climate change commitments. We have used this year's budget planning process to develop a view of the projected energy use and emissions footprint of our operations until 2020, and will be using this information to identify strategic opportunities to reduce our emissions footprint and drive meaningful targets in the business. We also continue to engage positively in public policy debates in countries where we operate concerning carbon-related regulation.

We recognise that access to water is an essential need for our host communities, as it is for our operations. A working group comprising experts from across our business has worked this year to better understand operations where access to water may be a challenge, due either to its surplus or scarcity, and are now looking at appropriate management responses.

Our activities generate significant benefits for our host governments and communities. To support responsible management of revenues from extractive activities, we have this year published a report detailing our payments to host governments on a project-by-project level. We also continue to support the Extractive Industries Transparency Initiative (EITI), and participate in in-country efforts to strengthen this further.

We continue to focus on dialogue with our host communities; by supporting local training, business development and procurement; and by investment in public infrastructure such as roads and water and power distribution. We strive to do so while meeting our responsibility to respect human rights, as detailed by the UN Guiding Principles for Business and Human Rights. To achieve this, we identify and assess our human rights impacts, and maintain mechanisms at our operations to enable our host communities to raise concerns, complaints or grievances.

We aim to deliver competitively-priced commodities that meet our stakeholders' needs and contribute to global society. A number of our products, such as copper, cobalt and nickel, play a key role in the transition to a lower-carbon economy. We work to understand fully our products' properties in order to produce, transport and store them safely, and we share this knowledge with our stakeholders in our value chains.

Never before has the Group been so well positioned for the opportunities that lie ahead. Glencore today is a highly cash generative business, underpinned by the resilience of our marketing business, strong asset portfolio and excellent management team.

Anthony Hayward
Chairman

1 March 2017

Directors

Anthony Hayward
Chairman (Age 59)

Appointed: Anthony Hayward was appointed Independent Non-Executive Chairman in May 2013. Prior to being appointed Chairman he was the Senior Independent Non-Executive Director of the Company.

Committees: Health, Safety, Environment and Communities("HSEC")

Experience: Dr Hayward is non-executive chairman of Genel Energy plc (LON:GENL), a partner and member of the European advisory Board of AEA Capital and chairman of Compact GTL Limited.

Dr Hayward was chief executive of BP plc from 2007 to 2010, having joined BP in 1982 as a rig geologist in the North Sea. He became group treasurer in 2000, chief executive for BP upstream activities and member of the main Board of BP in 2003.

Dr Hayward studied geology at Aston University in Birmingham and completed a Ph.D at Edinburgh University. He is also a fellow of the Royal Society of Edinburgh and holds honorary doctorates from the University of Edinburgh, Aston University, the University of Birmingham and Aberdeen University.

Ivan Glasenberg
Chief Executive Officer (Age 60)

Appointed: Ivan Glasenberg joined Glencore in April 1984 and has been Chief Executive Officer since January 2002.

Committees: HSEC

Experience: Mr Glasenberg initially spent three years working in the coal commodity department in South Africa as a marketer, before spending two years in Australia as head of the Asian coal commodity division. Between 1988 and 1989, he was based in Hong Kong as head of Glencore's Hong Kong and Beijing offices, as well as head of coal marketing in Asia, where his responsibilities included overseeing the Asian coal marketing business of Glencore and managing the administrative functions of the Hong Kong and Beijing offices.

In January 1990, he was made responsible for the worldwide coal business of Glencore for both marketing and industrial assets, and remained in this role until he became Chief Executive Officer in January 2002.

Mr Glasenberg is a Chartered Accountant of South Africa and holds a Bachelor of Accountancy from the University of Witwatersrand. Mr Glasenberg also holds an MBA from the University of Southern California. He is currently a non-executive director of United Company Rusal plc (HKG: 0486). Before joining Glencore, Mr Glasenberg worked for five years at Levitt Kirson Chartered Accountants in South Africa.

Peter Coates AO
Non-Executive Director (Age 71)

Appointed: Peter Coates has been a Non-Executive Director since January 2014. Prior to this he served as an Executive Director from June to December 2013 and a Non-Executive Director from April 2011 to May 2013.

Committees: HSEC (Chairman)

Experience: Prior to joining Glencore in 1994 as a senior executive in the coal department, Mr Coates had occupied senior positions in a range of resource companies, including those mining silver, lead, nickel, iron ore, bauxite and coal. He joined Xstrata in 2002 as chief executive of Xstrata's coal business, when Glencore sold its Australian and South African coal assets to Xstrata, stepping down in December 2007.

He was non-executive chairman of Xstrata Australia from January 2008 until August 2009. From April 2008 until April 2011, he was a non-executive chairman of Minara Resources Ltd. From May 2013 to June 2016, he was a non-executive chairman of Sphere Minerals Limited. Mr. Coates is non-executive chairman of Santos Limited (ASX:STO) and a non-executive director of Event Hospitality and Entertainment Limited (ASX:EVT). Mr Coates is a past chairman of the Minerals Council of Australia, the NSW Minerals Council and the Australian Coal Association.

Mr Coates holds a Bachelor of Science degree in Mining Engineering from the University of New South Wales. He was appointed to the Office of the Order of Australia in June 2009 and awarded the Australasian Institute of Mining and Metallurgy Medal for 2010.

Directors and Officers

Leonhard Fischer
Independent Non-Executive Director (Age 54)

Appointed: Leonhard Fischer was appointed an Independent Non-Executive Director in April 2011.

Committees: Audit (Chairman), Nomination and Remuneration

Experience: Mr Fischer was chief executive officer of BHF Kleinwort Benson Group S.A. (formerly RHJ International S.A.) from January 2009 until April 2016, having been co-chief executive officer since May 2007.

Mr Fischer was chief executive officer of Winterthur Group from 2003 to 2006 and a member of the executive Board of Credit Suisse Group from 2003 to March 2007. He joined Credit Suisse Group from Allianz AG, where he had been a member of the management Board and head of the corporates and markets division. Prior to this, he had been a member of the executive Board of Dresdner Bank AG in Frankfurt.

Mr Fischer holds an M.A. in Finance from the University of Georgia.

William Macaulay
Independent Non-Executive Director (Age 71)

Appointed: William Macaulay was appointed as an Independent Non-Executive Director in April 2011.

Committees: Audit and Remuneration

Experience: Mr Macaulay is the chairman and chief executive officer of First Reserve Corporation, a private equity investment firm focused on the energy industry, and has been with the company since its founding in 1983.

Prior to joining First Reserve, Mr Macaulay was a co-founder of Meridien Capital Company, a private equity buyout firm. From 1972 to 1982, he served as director of corporate finance at Oppenheimer & Co. with direct responsibility for the firm's buyout business. He also served as president of Oppenheimer Energy Corporation.

Mr Macaulay is a director of Weatherford International (NYSE:WFT). He also serves on numerous private energy company Boards.

Mr Macaulay holds a B.B.A. degree (with honours) in Economics from City College of New York, and an MBA from the Wharton School of the University of Pennsylvania. He has also received an Honorary Doctor of Humane Letters degree from Baruch College.

Peter Grauer
Senior Independent Non-Executive Director (Age 71)

Appointed: Peter Grauer was appointed as an Independent Non-Executive Director in June 2013 and became the Senior Independent Non-Executive Director in May 2014.

Committees: Nomination (Chairman) and Audit

Experience: Mr Grauer is chairman of Bloomberg Inc., the global financial media company that was founded in 1981. Mr Grauer was chairman and chief executive officer from 2002 to 2011 and has been a member of Bloomberg's Board of Directors since 1996.

Prior to this, Mr Grauer was managing director of Donaldson, Lufkin & Jenrette from 1992 to 2000 when DLJ was acquired by Credit Suisse First Boston and founder of DLJ Merchant Banking. He served as managing director and senior partner of CSFB Private Equity until 2002. Mr Grauer is a director of Blackstone (NYSE:BX) and Davita Inc (NYSE:DVA). Mr Grauer is also a member of the International Business Council of the World Economic Forum, and a trustee of Rockefeller University.

Mr Grauer graduated from the University of North Carolina and the Harvard University Graduate School of Business Program for Management Development in 1975.

Patrice Merrin
Independent Non-Executive Director (Age 68)

Appointed: Patrice Merrin was appointed as an Independent Non-Executive Director in June 2014.

Committees: HSEC

Experience: Ms Merrin is currently a non-executive director of Stillwater Mining (NYSE:SWC) and Novadaq Technologies Inc (Nasdaq:NVDQ). She has been a director and then chairman of CML Healthcare from 2008 to 2013, of Enssolutions, a mine tailing solutions company, and of NB Power.

Following initial roles with Molson and Canadian Pacific, Ms Merrin worked at Sherritt, the Canadian diversified miner, for 10 years until 2004, latterly as COO. She then became CEO of Luscar, Canada's largest thermal coal producer.

Ms Merrin was a director of the Alberta Climate Change and Emissions Management Corporation from 2009 to 2014. She was also a member of the Canadian Advisory Panel on Sustainable Energy Science and Technology from 2005 to 2006, and from 2003 to 2006 was a member of Canada's Round Table on the Environment and the Economy.

Ms Merrin is a graduate of Queen's University, Ontario and completed the Advanced Management Programme at INSEAD.

John Mack
Independent Non-Executive Director (Age 72)

Appointed: John Mack was appointed as an Independent Non-Executive Director in June 2013.

Committees: Remuneration (Chairman) and Nomination

Experience: Mr Mack is a non-executive director of Enduring Hydro, Corinthian Opthalmic and Lending Club Corporation (NYSE:LC). Mr Mack also serves on the Advisory Board of China Investment Corporation, is a member of the International Business Council of the World Economic Forum, the NYC Financial Services Advisory Committee and the Shanghai International Financial Advisory Council.

Mr Mack previously served as chief executive officer of Morgan Stanley from June 2005 until December 2009. He retired as chairman in 2011. Mr Mack first joined Morgan Stanley in May 1972, becoming a Board Director in 1987 and was named President in 1993.

Before rejoining Morgan Stanley as chairman and chief executive officer in June 2005, Mr Mack served as co-chief executive officer of Credit Suisse Group and chief executive officer of Credit Suisse First Boston.

Mr Mack is a graduate of Duke University.

Officers

Steven Kalmin
Chief Financial Officer (Age 46)

Appointed: Steven Kalmin has been Chief Financial Officer since June 2005.

Experience: Steven Kalmin joined Glencore in September 1999 as general manager of finance and treasury functions at Glencore's coal industrial unit (which became part of Xstrata). Mr Kalmin moved to Glencore's Baar head office in October 2003 to oversee Glencore's accounting and reporting functions, becoming Chief Financial Officer in June 2005.

Mr Kalmin holds a Bachelor of Business (with distinction) from the University of Technology, Sydney and is a member of the 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 in Sydney, leaving the firm as a director.

John Burton
Company Secretary (Age 52)

Appointed: John Burton was appointed Company Secretary in September 2011.

Experience: He was formerly company secretary and general counsel of Informa plc and before that a partner of CMS in London specialising in corporate law. Mr Burton holds a B.A. degree in Law from Durham University. He was admitted as a Solicitor in England and Wales in 1990.

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

Overview

This governance report sets out how Glencore has applied the main principles of the UK Corporate Governance Code ("the Code") in a manner which enables shareholders to evaluate how these principles have been applied. As a London premium listed entity we seek to ensure full compliance with the Code. The Board believes that the Company has throughout the year complied with all relevant provisions contained in the Code.

Glencore's Board comprises seven 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. 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 which has been approved by the Board. 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 CEO and CFO have line of sight across the Group. The CEO is further supported by the Group's senior management team principally comprising the heads of the businesses and the head of strategy. The Company Secretary is responsible for ensuring that there is clear and effective information flow to the Non-Executive Directors.

Further details of these responsibilities are set out opposite.

Peter Grauer, Senior Independent Non-Executive Director, 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.

DIVISION OF RESPONSIBILITIES

Chairman
- Leader of the Board
- Responsible for effective communication flow between Directors
- Facilitates effective contribution of all Directors
- Responsible for effective Board governance
- Ensures effective communication with shareholders

Chief Executive Officer
- Leads and motivates management team
- Implements strategy and objectives as directed by the Board
- Develops Group policies and proposals for approval by the Board and ensures effective implementation

Senior Independent Director
- Is a confidant of the Chairman and (when appropriate) also acts as an intermediary for other independent Directors
- Will stand in for the Chairman if he is unable to attend
- Chairs the Nomination Committee
- Responsible for appraising the Chairman's performance along with other independent Directors
- Available to shareholders to answer questions

Other Non-Executive Directors
- Supply challenge and support to management
- Bring independent mindset and differing backgrounds and experience to Board debates
- Provide leadership and challenge as chair of, or a member of, the Board Committees which (except HSEC) comprise only Non-Executive Directors
- Scrutinise leadership of Chairman

Company Secretary
- Secretary to Board Committees
- Informs the Board on all matters reserved to it and ensures papers are provided in sufficient detail and on time
- Available to Directors in respect of Board procedures and provides support and advice
- Ensures the Board is kept informed on governance matters
- Coordinates and assists with the Board evaluation process along with the Chairman

Non-Executive Directors

The Company's Non-Executive Directors provide a broad range of skills and experience to the Board, which assists in their roles in formulating the Company's strategy and in providing constructive challenge to executive management.

Glencore regularly assesses its Non-Executive Directors' independence. Except for Peter Coates, due to his employment by the Group during 2013–14 they all are regarded by the Company 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.

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 such 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 2016, no abstention procedures for conflicts had to be activated.

Board Committees

The following four Committees are in place to assist the Board in exercising its functions: Audit, Nomination, Remuneration and Health, Safety, Environmental and Communities ("HSEC"), as set out in the diagram on the next page. Committee meetings are held prior to Board meetings and at each scheduled Board meeting the chairman of each Committee leads a discussion concerning the Committee's activities since the previous Board meeting.

The Committees carry out a considerable amount of work. In particular:

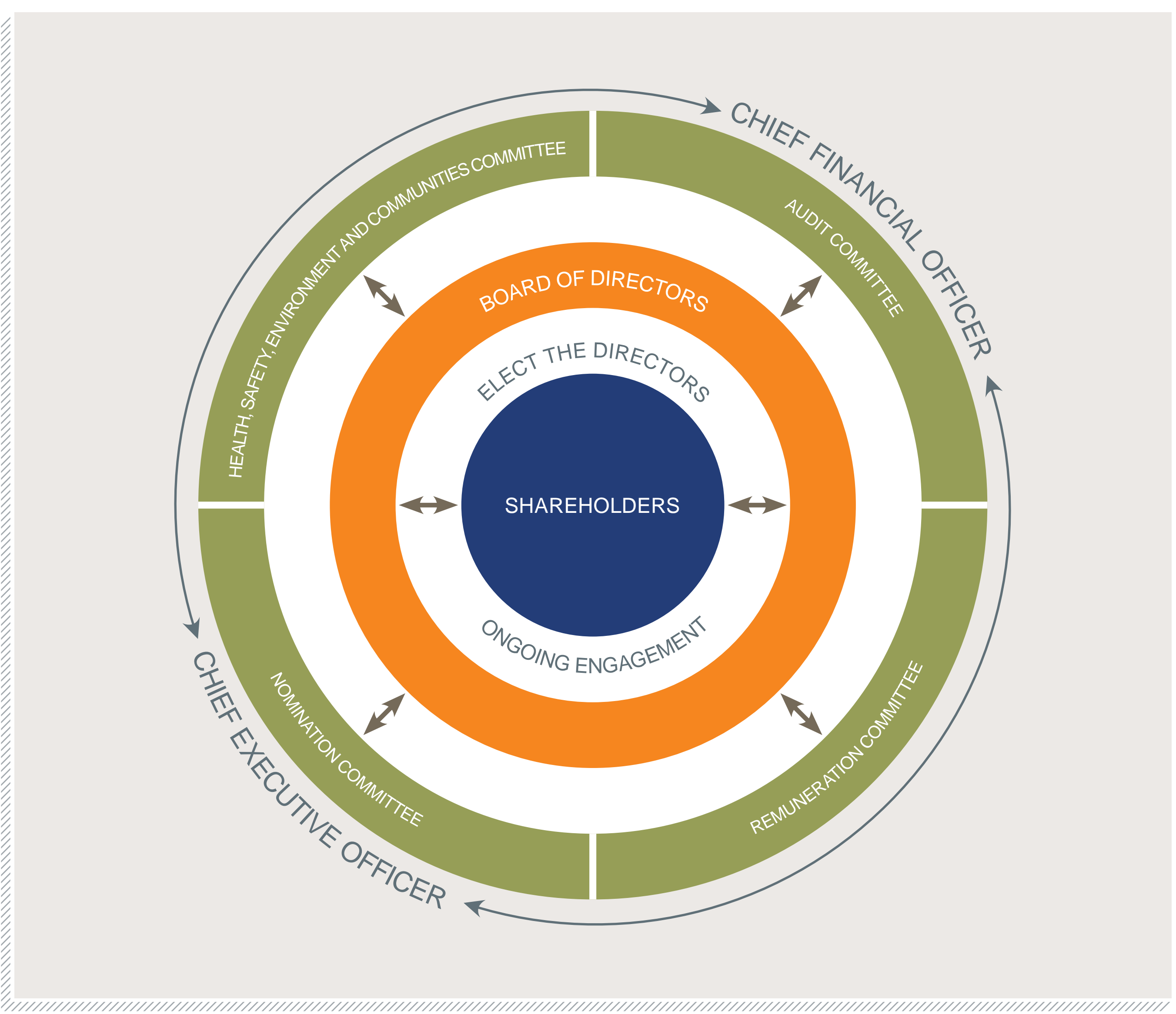
- the Audit Committee provides challenge and enquiry on the significant areas of financial and accounting oversight and risk management; and
- the HSEC Committee, whose membership includes both Chairman and CEO, continues to have the heaviest workload of all the committees due to its strong leadership of sustainability issues and the range of matters which it considers. Its work on driving improvements in the prevention of catastrophic events and safety performance continues to be of particular focus.

A report for 2016 from each Committee Chairman is set out later in this Corporate governance report.

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 reviewed its terms of reference during the year and as a result revisions were made to the HSEC Committee's terms of reference to ensure they continue to conform to best practice.

All Committees' terms of reference are available at: **www.glencore.com/who-we-are/board-of-directors/board-committees/**

Corporate governance report



Board meetings

The Board has approved a formal schedule which sets out those matters which are reserved for its decision-making alone such as strategy, the annual budget and material acquisitions and disposals. Meetings are usually held at the Company's headquarters in Baar, Switzerland. Details of the Board and Committee meetings held during the year are detailed below.

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 as to feedback from, the full Board. The Board and Committee meetings also benefit from presentations by senior executives and some technical and investor relations updates. Presentations from the business and senior management allow Directors to enhance their understanding of the business and the implementation of strategy, in turn contributing to a more effective Board. A summary of the Board's main activities during 2016 is set out on the next page.

Several times a year the Chairman holds meetings with the Non-Executive Directors without the Executive Director present, and at least once a year the Non-Executive Directors meet without the Chairman present.

Work at Board meetings

The main considerations and actions carried out at the meetings of the Board during 2016 are summarised below. The work of the committees is described later in this report.

At each main scheduled meeting the following standing matters are considered:

- consideration of any new conflicts of interest;
- review of minutes of previous meetings, including actions from previous meetings; and
- reports/updates from the CEO, CFO, Head of Strategy and Investor Relations and Head of Communications. These reports include consideration of strategic matters including possible asset expansions/contractions, acquisitions/disposals, material debt refinancing and analysis of risks.

In addition:

- regular updates are provided by the Company Secretary on governance, Board processes and other Company secretarial matters; and
- usually the Non-Executive Directors have a separate meeting, with sometimes a second session without the Chairman present.

Principal Board activities during 2016

First scheduled short agenda meeting

- Results/business update
- Initial discussion as to proposed impairment charges
- Consideration and approval of Antapaccay streaming transaction
- Review and approval of 2015 Production Report and Reserves and Resources Report

First scheduled meeting

- Annual Results, including review and approval, where appropriate, of:
  - report from the Audit Committee Chairman;
  - detailed consideration of principal risks/ uncertainties and mitigation to be disclosed;
  - report on going concern;
  - final distribution recommendation;
  - full-year results announcement for the prior year;
  - Annual Report draft; and
  - management representation letter
- Consideration of AGM resolutions
- Report from the Nomination Committee Chairman and discussion on whether all current Directors should stand at AGM
- Report from the Remuneration Committee Chairman
- Report from the HSEC Committee Chairman, in particular discussions on safety and draft sustainability report
- Reviewed updated Board governance documents and key policies

First short notice meeting

- Business update
- Approval of CPPIB $2.5 billion investment in Agriculture division

Second scheduled short agenda meeting

- Business update
- Considered and approved the Q1 Production Report

Second scheduled meeting

- Briefing on the business to be conducted at the AGM (and after, of the other issues raised)
- Report from the HSEC Committee Chairman, including discussion on several fatalities at Katanga
- Report from the Audit Committee Chairman
- Report from the Nomination Committee chairman

Second short notice meeting

- Business update
- Consideration and approval of $625 million investment by bcIMC in Agriculture division
- Market abuse regulation – review and next steps

Third scheduled meeting

- Business update and review of financial position
- Review of debt reduction programme
- Review of M&A policy and possibilities including other potential disposals and longer-term strategy
- Sustainability roadshow report
- Report from the HSEC Committee Chairman
- Report from the Audit Committee Chairman
- Report from the Nomination Committee Chairman

Third scheduled short agenda meeting

- Business update
- Review and approval of Half-year Production Report
- Consideration and approval of proposed Ernest Henry transaction
- Review of debt reduction programme

Fourth scheduled meeting

- Half-year results, including review and approval, where appropriate, of:
  - report from the Audit Committee Chairman;
  - principal risks and mitigation to be disclosed;
  - report on going concern;
  - Half-year results announcement; and
  - management representation letter
- Report from the HSEC Committee Chairman
- Report from the Audit Committee Chairman
- Report from the Nomination Committee Chairman
- Report from the Remuneration Committee Chairman
- Considered outcomes from multiple shareholder meetings on governance and sustainability issues

Fifth scheduled meeting

- In depth review of equity and credit markets and careful review of investor priorities
- Consideration of progress of debt reduction programme and review of debt management
- Review of Group's IT function including cyber security
- Review of legal and compliance function including actual or potential litigation and the Raising Concerns programme
- Report from the HSEC Committee Chairman

Fourth scheduled short agenda meeting

- Review of Q3 financial report
- Review and approval of Q3 Production Report
- Preliminary discussion as to the main topics and messages for the December investor update

Third short notice meeting

- Review of balance sheet strategy including new dividend policy and 2017 capex plans, future reinvestment criteria
- Consideration and approval of the issues to be disclosed in the December investor update including as to capex and distribution policy

Sixth scheduled meeting

- Review of principal risks and uncertainties and preparation for longer-term viability statement
- Presentations from the head of oil, head of copper and head of nickel
- Consideration and approval of the 2017 budget and 2018 – 20 business plan.
- Report from the HSEC Committee Chairman
- Report from the Audit Committee Chairman
- Report from the Nomination Committee Chairman

Corporate governance report

Attendance during the year for all scheduled full agenda Board and all Board Committee meetings is set out in the table below:

	Board of 6	Audit of 6	Remuneration of 2	Nomination of 4	HSEC of 7
Ivan Glasenberg	6				6
Anthony Hayward	6				7
William Macaulay	6	6	2		
Leonhard Fischer	6	6	2	4	
Peter Coates	6				7
John Mack	6		2	4	
Peter Grauer	4	4		2	
Patrice Merrin	6				7

In addition, there were another seven limited agenda meetings of the Board. Details of all these Board meetings are set out on the previous page.

Appointment and re-election of Directors

All Directors will be offering themselves for re-election at the 2017 AGM.

All of the Directors have service agreements or 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 except that Peter Coates received fees of AUD34,246 in 2016 relating to his directorship of Sphere Minerals Limited. Sphere was delisted part way through the year and Peter Coates subsequently retired from his role as Director and Chairman.

Information, management meetings, site visits and professional development

It is considered of great importance that the Non-Executive Directors (1) attain a good knowledge of the Company and its business and (2) 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. Directors are also given the opportunity to visit Group operations and discuss aspects of the business with employees, and regularly meet the heads of the Group's main departments and other senior executives. As well as internal briefings, Directors attend appropriate external seminars and briefings.

Normally meetings with heads of commodities and other senior Group functions take place alongside scheduled Board meetings. In addition, in order to better familiarise themselves with the industrial activities, regular site visits take place. During 2016 three operations were visited.

All Directors have access to the advice and services of the Company Secretary, who is responsible to the Board for ensuring the 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.

Director induction process

New Directors receive a full, formal and tailored induction on joining the Board, including meetings with senior management.

Board effectiveness

During the year no material conflicts have arisen concerning the private interests of the Directors with those of the Group.

Since an external evaluation was carried out during 2015 and no material governance issues arose during 2016, the Board resolved to carry out an internal evaluation for the year. As part of this process, the findings from the external evaluation (which were summarised in the 2015 Annual Report) were reviewed. The evaluation process has been augmented by the private sessions which take place between the Non-Executive Directors without management and ongoing discussions as to the efficiency and effectiveness of the Board and its committees. No material issues arose from this evaluation.

Remuneration

Remuneration is covered in the Directors' remuneration report which follows this section. It includes a description of the work of the Remuneration Committee.

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 a large number of 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 auditors in evaluating their impact, if any.

Risk management and internal control

The Board has applied Principle C.2 of the Code by establishing a continuous process for identifying, evaluating and managing the risks that are considered significant by the Group in accordance with the revised Turnbull Guidance on Internal Control published by the Financial Reporting Council. 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. The Directors confirm that they have carried out a robust assessment of the principal risks facing the Group and have reviewed the effectiveness of the risk management and internal control systems. This review excludes associates of the Group as Glencore does not have the ability to dictate or modify the internal controls of these entities. This report describes how the effectiveness of the Group's structure of internal controls including financial, operational and compliance controls and risk management systems is reviewed.

Risk – Board leadership

The Board provides leadership and oversight on risk management. Specifically it:

(1) provides a robust assessment of the principal risks facing the Group

The Board determines the nature and extent of the principal risks the Group should take in achieving its strategic objectives. The Board has carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity. The Directors' description of those risks and their explanation as to how they are being managed or mitigated are set out on pages 36 to 44.

(2) determines a longer-term viability statement

Taking account of the Group's position and principal risks, the Directors assess the prospects of the Group and conclude whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment. Their conclusions are set out on page 111 and 112.

(3) monitors the Group's risk management and internal control systems

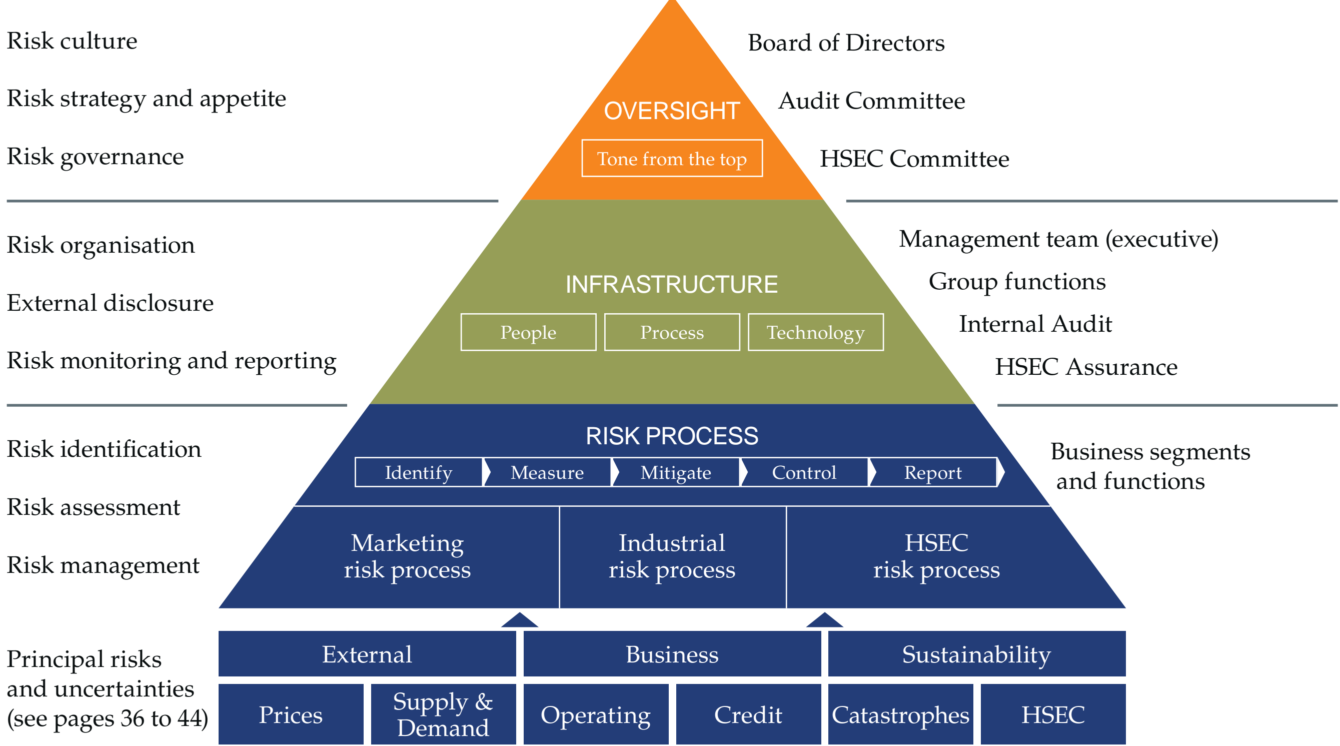
The Board oversees sound risk management and internal control systems. It carries out a regular review of their effectiveness including reviewing the Group's internal financial controls and the Group's internal control and risk management. This monitoring and review covers all material controls, including financial, operational and compliance controls. Their work and conclusions are described on pages 36, 89 and 90 to 93.

Corporate governance report

Approach to risk management

Effective risk management is crucial in helping the Group achieve its objectives of preserving its overall financial strength for the benefit of all shareholders and other stakeholders and safeguarding its ability to continue as a going concern while generating sustainable long-term profitability. Spanning the organisational structure, Glencore's disciplined approach to risk management and control originates with strategic responsibility in the hands of the Board, which also retains operational authority on matters exceeding agreed thresholds of materiality.

The Board retains final authority for assessing and approving the Group's overall risk appetite and sets overall limits which are subject to review annually. It is assisted by the work of the Audit Committee for oversight and by senior management for day-to-day operational matters, in order to maintain an effective risk management governance apparatus for the Group.



Risk Management Framework

Management engagement

The Company's senior management reviews the major risks facing the Group and decides if the level of risk is acceptable or whether further steps need to be taken to mitigate these risks. Together, central and business management set the level of risk appetite by ensuring that there is an appropriate balance between the level of risk assumed and the expected return.

Audit Committee

The Audit Committee is responsible for reviewing the risk management system and internal controls.

Mandated by the Board, the Audit and HSEC Committees are responsible for ensuring that the significant risks identified are properly managed.

Group functions

Group functions (Risk Management, Compliance, Legal and Sustainable Development) support the Business Risk Owners and senior management in mitigating risk across the Group.

Internal Audit

Internal Audit, as an independent assurance provider, reviews the risk management process and internal controls established by the management team.

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 the risks identified in the business risk registers, emerging risks, operational changes, new investments and capital projects.

The key results from this process are reported to the Audit Committee for their review.

As well as being subject to a review of the Audit Committee for its effectiveness, the Internal Audit function was also subject to external evaluation. The next review is planned to be carried out in 2017.

Industrial risk management

We believe that every employee should be accountable for the risks related to their role. As a result, we encourage our employees to escalate risks (not limited to hazards) 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.

The management teams at each industrial operation are responsible for implementing a risk management process that identifies, assesses and manages risk.

The risks that may impact on business objectives and plans are maintained in a business risk register. They include strategic, compliance, operational and reporting risks.

Any significant risks are reported to Management and the Audit Committee. A Corporate Risk Management Framework is implemented on a Group-wide basis to ensure consistency in the assessment and reporting of risks.

HSEC risk management

These risk management processes are operated at asset level subject to coordination and guidance from the central sustainability team and subject to the leadership and oversight of the HSEC Committee.

The Group's internal assurance programme continues to be developed for the assessment of compliance with leading practices in health and safety, environment and communities.

Further information is provided in the report from the HSEC Committee below and will be published in the Group's sustainability report for 2016.

Marketing risk management

Glencore's marketing activities are exposed to commodity price, basis, volatility, foreign exchange, interest rate, credit and performance, liquidity and regulatory risks.

Glencore devotes significant resources to developing and implementing policies and procedures to identify, monitor and manage these risks.

Glencore has a disciplined and conservative approach to Marketing Risk ("MR") management supported by its flat organisational structure. Glencore continues to update and implement policies which are intended to mitigate and manage commodity price, credit and other related 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 CEO, as the central figure of commercial leadership and control, drives functional risk management policy, supported by the CFO and CRO, with data and reporting from the central risk team and the other key functional units. In turn the CEO reports to, and seeks authority limits from the Board, with the main oversight role being performed by the Audit Committee which receives a report from the CRO at each of its scheduled meetings. It also approves (subject to Board confirmation) the Group-wide risk profile, and any exceptions to agreed positional thresholds.

At the heart of the risk management regime is the process of challenge that takes place between the CEO, the CRO and the business heads which sets risk appetite in accordance with Group requirements and market conditions for each commodity. The objective is to ensure that an appropriate balance is maintained between the levels of risk assumed and expected return, which relies on the commodity-specific expert knowledge provided by business heads. This is then subject to challenge from the CEO based on his overall Group knowledge and experience. This process is designed to manage risk effectively while facilitating the fast, commercial decision-making which is required in a dynamic commodity marketing company.

Another important consideration of the MR team is the challenge of dealing with the impact of large transactional flows across many locations. The function seeks to ensure effective supervision by its timely and comprehensive transaction recording, ongoing monitoring of the transactions and resultant exposures, providing all encompassing positional reporting, and continually assessing universal counterparty credit exposure.

Key focus points

Market Risk limits and reporting

The MR team provides a wide array of daily/weekly reporting. A daily risk report showing Group Value at Risk ("VaR") as shown on the next page and various other stress tests and analyses are distributed to the CEO, CFO and CRO. Business risk summaries showing positional exposure and other relevant metrics, together with potential margin call requirements, are also circulated daily. The MR function works to enhance its stress and scenario testing as well as enhancing measures to capture risk exposure within the specific areas of the business, e.g. within metals, concentrate treatment and refining charges are analysed.

Corporate governance report

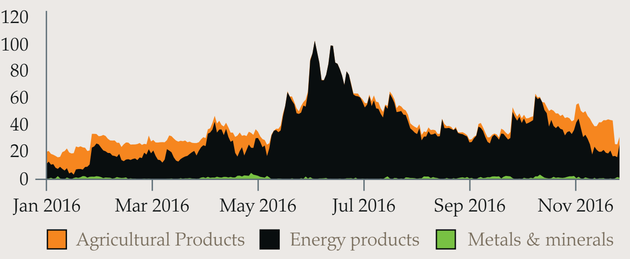
Value at Risk

The Group monitors its commodity price risk exposure by using a VaR computation assessing 'open' commodity positions which are subject to price risks. VaR is one of the risk measurement techniques the Group uses to monitor and limit its primary market exposure related to its physical marketing exposures and related derivative positions. VaR estimates the potential loss in value of open positions that could occur as a result of adverse market movements over a defined time horizon, given a specific level of confidence. The methodology is a statistically defined, probability based approach that takes into account market volatilities, as well as risk diversification benefits by recognising offsetting positions and correlations between commodities and markets. In this way, risks can be compared across all markets and commodities and risk exposures can be aggregated to derive a single risk value.

Last year, the Board approved the Audit Committee's recommendation of a one day, 95% VaR limit of $100 million for 2016, consistent with the previous year. This limit is subject to review and approval on an annual basis. The purpose of this Group limit is to assist senior management in controlling the Group's overall risk profile, within this tolerance threshold. During 2016 Glencore's reported average daily VaR was approximately $42 million, with an observed high of $101 million and a low of $16 million.

In Q2 2016, this limit was technically breached for 1 day by $1 million as the VaR calculation did not account for the future physical coal production that was economically hedged with the corresponding captured and reported on coal derivatives. If such underlying hedged exposure had been included in the VaR calculation, the actual VaR number would have been sunstantially lower, with no resulting technical breach. Much of this hedge book has now been realised.

VaR development ($m)



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 again approved the Audit Committee's recommendation of a one day, 95% VaR limit of $100 million for 2017.

Credit Risk Management

The Group continues to make 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 CFO/CEO (relating to unsecured amounts in excess of $75 million with BBB or lower rated counterparts). At lower levels of materiality, decisions may be taken by the business heads where key strategic transactions or established relationships suggest that an open account exposure may be warranted.

Systems and reporting

Whilst no single trading system that the Group can identify appears able to manage the broad range of requirements that the different business profiles of the Group would place on it, interfacing with multiple source systems and transferring data from one to another create enhanced risk to data integrity, granularity, consistency and timeliness.

Dealing with requirements arising from regulatory reform

In 2016, Glencore continued to implement the requirements of financial regulatory reform, including:

- the European Market Abuse Regulation ("MAR") which affects the protection and disclosure of inside information and the prevention of market manipulation; and
- the Dodd-Frank Act, the European Market Infrastructure Regulation ("EMIR") and the Swiss Financial Market Infrastructure Act ("FMIA") which affect in particular the areas of risk mitigation (trade confirmation timeframes, portfolio reconciliation, portfolio compression and dispute resolution) and trade reporting.

Upcoming financial regulatory reform proposals or requirements include:

- further requirements under EMIR including mandatory clearing and margining requirements;
- further requirements under FMIA including trade reporting, risk mitigation, margin requirements and mandatory clearing; and
- MIFID II including EU authorisations and position limits.

The impact of certain aspects of these and other new regulations to commodity market participants is potentially considerable. The impact on our marketing business will largely be in the form of compliance requirements (with associated costs), rather than meaningful commercial limitations. Glencore's compliance, finance, IT and risk teams continue to work together in monitoring and advising management on these developments.

Internal Audit

Glencore has a dedicated Internal Audit function reporting directly to the Audit Committee. The role of Internal Audit is to evaluate and improve the effectiveness of risk management, control, and business governance processes.

Internal Audit reviews areas of potential risk within the business and suggests control solutions to mitigate exposures identified. The Audit Committee considers and approves the risk-based 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 considered Internal Audit's high priority issues (with a particular focus on procurement and systems), its KPIs and the effectiveness and timeliness of management's responses to its findings.

The Audit Committee reviewed the effectiveness of the Internal Audit function. As part of this work, it considered the function's management framework and its improvement programme.

Relationships 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 one to one meetings. The full- and half-year reporting is followed by investor meetings in a variety of locations where we have institutional shareholders. We also regularly meet with existing and prospective shareholders to update or to introduce them to the Company and periodically arrange 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 the CEO, CFO and senior members of the Investor Relations team and an array of business heads. In addition, many major shareholders have meetings with the Chairman and appropriate senior personnel of the Group including other Non-Executive Directors, the Company Secretary and senior Sustainability managers.

In particular in 2016, the following were undertaken:

- a presentation and investor roadshow was held in May to provide a detailed account of the Company's sustainability policies and plans. Led by the Chairman of the HSEC Committee, presentations were also given by the Chairman and the CEO; and
- the Chairman and Company Secretary met with a large number of institutional shareholders in the summer, principally to discuss governance and reporting.

The Board receives regular updates from the Company's Head of Strategy on the views of shareholders through a briefing, which is a standing agenda item for all Board meetings, which is supplemented by input from the Chairman, CEO, CFO and, if applicable, the Senior Independent Director.

AGM

The Company's next AGM is due to be held in Zug on 24 May 2017. Full details of the meeting will be set out in the Notice of Meeting which will be sent to shareholders in April. Shareholders unable to attend are encouraged to vote by proxy as detailed in the Notice of Meeting.
All documents relating to the AGM will be available on the Company's website at: **www.glencore.com**

Corporate governance report

Audit Committee report

Chairman

Leonhard Fischer

Other members

William Macaulay
Peter Grauer

All members served throughout the year. All are considered to be Independent Non-Executive Directors and deemed to be financially literate by virtue of their business experience. Additionally, all Committee members are considered by the Board to have recent and relevant financial experience and have competence in accounting. The Committee held four scheduled and two additional meetings during the year, which all the Committee members attended (except that Mr Grauer was unable to attend two meetings). John Burton is Secretary to the Committee.

Governance processes

The Audit Committee usually invites the CEO, CFO, Group Financial Controller, CRO 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, and sometimes all other Directors, also attend its meetings. The Committee also holds private sessions with the external auditors and the Head of Internal Audit without members of management being present. The Committee has adopted guidelines allowing non-audit services to be contracted with the external auditors on the basis set out below.

Role, responsibilities and main activities

The primary function of the Audit Committee is to assist the Board in fulfilling its responsibilities with regard to financial reporting, external and internal audit, risk management and controls.

During the year, the Committee's principal work included the following:

- reviewing Glencore's internal financial and compliance controls and internal controls and risk management systems;
- reviewing and agreeing the preparation and scope of the year-end reporting process;
- determining the global audit plan, scope and fees of the audit work to be undertaken by the external auditors;
- evaluating the Group's procedures for ensuring that the Annual Report and accounts, taken as a whole, are fair, balanced and understandable;
- reviewing the full-year (audited), and half-year (unaudited), financial statements with management and the external auditors;
- reviewing the Group's financial and accounting policies and practices including discussing material issues with management and the external auditors, especially matters that influence or could affect the presentation of accounts and key figures;
- considering applicable regulatory changes to reporting obligations;
- evaluating the effectiveness of the external auditors;
- recommending to the Board a resolution to be put to the shareholders for their approval on the appointment of the external auditors and to authorise the Board to fix the remuneration and terms of engagement of the external auditors;
- monitoring the independence of the external auditor and reviewing the operation of the Company's policy for the provision of non-audit services by it;
- considering and approving two assignments above the approval threshold with the external auditors in respect of non-audit services;
- considering the output from the Group-wide processes used to identify, evaluate and mitigate risks, including credit and performance risks, across the industrial and marketing activities;
- considering the scope and methodologies to determine the Company's going concern and longer-term viability statements;
- reviewing the Internal Audit department's annual audit plan and reviewing the effectiveness of the Internal Audit function;
- monitoring and reviewing the effectiveness of Glencore's internal controls for which there were no significant failings or weaknesses noted; and
- reviewing reports on the operation of the Group's legal compliance programme, including material notifications under the Group's Raising Concerns whistleblowing programme.

Risk analysis

The Committee receives reports and presentations at its meetings on our management of marketing and other risks (excluding sustainability risks which are reviewed by the HSEC Committee).

Significant issues related to the financial statements

The Committee assesses whether suitable accounting policies have been adopted and whether management has made appropriate estimates and judgements. They also review external auditors' reports outlining audit work performed and conclusions reached in respect of key judgements, as well as identifying any issues in respect of these.

During the first half of the year, the most significant issue for the Committee concerned impairment analysis.

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 falls in commodity prices and some asset specific factors. We 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. The Committee discussed with the external auditors their work in respect of impairment review, which was the most significant area of audit focus for them.

These impairment analyses focused in particular on:

- oil exploration and production assets and investments, especially in Chad;
- copper assets in Africa, particularly following temporary production curtailments; and
- various coal assets.

The other main areas of analysis have been:

- robust assessment of principal risks and impact on longer-term viability;
- coal production economic hedging mark-to-market derivative losses;
- capital preservation and debt reduction programme, in particular the Agriculture, Antapaccay, Ernest Henry and GRail transactions;
- credit risk exposures; and
- taxation risks, especially concerning the recognition of deferred income tax assets, disputes and BEPS.

Internal Audit

The Committee monitored the internal audit function as described under Internal Audit on page 90.

External Audit

The Committee has evaluated the effectiveness of the external auditor and as part of this assessment, has considered:

- the steps taken by the auditors to ensure their objectivity and independence;
- the deep knowledge of the Company which enhances Deloitte's ability to perform as external auditor;
- competence when handling key accounting and audit judgements and ability to communicate these to the Committee and management;
- the extent of the auditor's resources and technical capability to deliver a robust and timely audit including consideration of the qualifications and expertise of the team;
- auditor's performance and progress against the agreed audit plan, including communication of changes to the plan and identified risks; and
- the proven stability that is gained from the continued engagement of Deloitte as external auditor.

The Committee assesses the quality and effectiveness of the external audit process on an annual basis in conjunction with the senior management team. Key areas of focus include consideration of the quality and robustness of the audit, identification of and response to areas of risk and the experience and expertise of the audit team, including the lead audit partner.

Provision of non-audit services by the external auditor

The Group's policy on non-audit services provided by the external auditor is designed to ensure the external auditor independence and objectivity is safeguarded. A specified wide range of services may not be provided as they have the potential to impair the external auditor's independence (Excluded Services). The Audit Committee's approval is required for (1) any Excluded Service (2) any other engagement where either (i) the fee is contingent, (ii) the fee may exceed $500,000, or (iii) where the fees for all non-audit work may exceed $15 million. Subject to these restrictions and other safeguards in the policy, the external auditors may be permitted to provide certain non-audit services when it is concluded that they are the most appropriate supplier due to efficiency and status as a leading firm for those specific services. For 2016, fees paid to the external auditors were $31 million, the total non-audit fees of which were $9 million; further details are contained in note 27 to the financial statements.

Corporate governance report

Reappointment of the external auditor

Deloitte has been the auditor of the listed entity since its IPO in 2011. A lead audit engagement partner rotation occurred prior to the financial year ended 31 December 2013 and is due to take place again during 2018 for which preparations have already commenced.

The Board and the Audit Committee acknowledge the greater investor scrutiny as to a tendering for, and rotation of, the external auditors and note the regulatory and guidance changes made during 2016.

Taking into account all relevant factors the Audit Committee has concluded that it is appropriate not to tender at the current time.

The Committee has determined that it is satisfied that the work of Deloitte LLP is effective, the scope is appropriate and significant judgements have been challenged robustly by the lead partner and team. Additionally, there are no contractual restrictions on the Company's choice of external auditor. The Committee has therefore recommended to the Board that a proposal be put to shareholders at the 2017 AGM for the reappointment of Deloitte LLP as external auditor.

Leonhard Fischer

Chairman of the Audit Committee

1 March 2017

Nomination Committee

Chairman

Peter Grauer

Other members

John Mack
Leonhard Fischer

All members served on the Committee throughout the year. The Committee only comprises Independent Non-Executive Directors. The Committee met four times during the year and all members attended these meetings (except that Mr Grauer was unable to attend two meetings). In addition, some of the discussions and deliberations in respect of the matters summarised below were carried out at Board meetings.

Roles 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 Chairman. This involves:

- evaluating the balance and skills, knowledge and experience of the Board and identifying the capabilities required for a particular appointment;
- overseeing the search process; and
- evaluating the need for Board refreshment and succession planning generally.

Main activities

The Committee focused on two main tasks during this year. Firstly, prior to the notice of 2016 AGM being compiled, the Committee considered the performance of each Director. It concluded 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 Director at the 2016 AGM.

Secondly, the Committee considered the composition of the Board and refreshment. It had been previously agreed that a further appointment would be beneficial and a search process had then been commenced. Following a delay during the first half of this year, the process was restarted and several candidates have been considered for one or more further appointments to the Board during 2017.

The Committee has noted 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. This is considered in conjunction with experience and qualifications.

External consultancy Spencer Stuart has been retained for the above search mandate. Other than this engagement Spencer Stuart do not provide additional services to Glencore.

Peter Grauer

Chairman of the Nomination Committee

1 March 2017

Health, Safety, Environment & Communities (HSEC) Committee

Chairman

Peter Coates

Other members

Ivan Glasenberg
Anthony Hayward
Patrice Merrin

The Committee met seven times during the year. Each Committee member served throughout the year and attended all of the meetings, except that Mr Glasenberg was not able to attend one meeting. Every scheduled meeting had a substantial agenda, reflecting the Committee's objective of providing leadership for the Group in continuing to achieve improved HSEC performance.

Role and responsibilities

The main responsibilities of the Committee are to:

- ensure 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 and community risks;
- ensure that the policies are effectively communicated throughout the Company and that appropriate processes and procedures are developed at operational level to comply with these policies;
- evaluate the effectiveness of policy implementation and HSEC risk management through:
  - assessment of operational performance;
  - review of recent internal and external reports; and
  - independent audits and reviews of performance in regard to HSEC matters, and action plans developed by management in response to issues raised;
- evaluate and oversee the quality and integrity of any reporting to external stakeholders concerning HSEC matters; and
- report to the Board.

Corporate governance report

Main activities

During the year, the Committee:

- reviewed and approved the Group's HSEC strategy;
- continued its work on reducing fatalities, especially at the higher risk "focus assets". For this purpose it received a report on, reviewed and made recommendations in respect of, each fatality. The multiple fatalities at the African copper assets in 2016 were a matter of particular scrutiny and included a site visit to all the African copper assets and a review of African copper safety management at each scheduled Committee meeting during the year;
- provided leadership for catastrophic hazard management which is the most important non-financial risk management issue for the Group;
- oversaw a re-evaluation of safety and effectiveness of tailings dams across the Group, including in particular a study of an incident at Kazzinc;
- continued the implementation of the SafeWork programme focusing on identification of fatal hazards and an appropriate safety culture;
- oversaw the continued implementation of the Group's revamped assurance programme for sustainability matters with an emphasis on catastrophic hazards and approved the assurance plan for 2017;
- oversaw the Crisis and Emergency Management Policy;
- assisted with management's engagement with the Aiming for A coalition and oversaw policy initiatives in order to comply with the requirements of the resolution proposed by them which was passed at the 2016 AGM;
- considered engagement with communities and NGOs on sustainability matters;
- reviewed and oversaw the Group's sustainability report;
- held an investor roadshow to inform and receive feedback on the Company's sustainable development strategy and approach to HSEC management; and
- considered a variety of other material HSEC issues such as resettlement programmes, incident reporting and health strategy.

Peter Coates

Chairman of the HSEC Committee

1 March 2017

Directors' remuneration report

For the year ended 31 December 2016

On behalf of the Remuneration Committee, I am pleased to present our Directors' Remuneration Report for the year ended 31 December 2016. As ever, we have sought to make this report as short, simple and straightforward as possible.

As a Jersey registered company headquartered in Switzerland, Glencore is not subject to the UK's reporting regime although as we consider it to be broadly reflective of good practice, this report is prepared in full compliance with the UK rules, unless stated otherwise. Accordingly, over the following pages, we have set out:

- the Group's forward-looking Directors' Remuneration Policy. While no material changes will be made to the Directors' Remuneration Policy for 2016, as the Company reaches the end of the third anniversary of the original policy approval at the 2014 AGM, a resolution will be tabled to approve a new Directors' Remuneration Policy at the 2017 AGM; and
- details of the implementation of our reward policy in 2016 including:
  - the governance surrounding pay decisions in 2016, members of the Committee and its advisers in 2016; and
  - details of what was paid to Directors during the financial year ended 31 December 2016.

As at the 2014 AGM, to reflect best practice, we shall be seeking shareholder approval of our remuneration arrangements through two votes, one on the Directors' Remuneration Report (excluding the Directors' Remuneration Policy) and a separate vote on our Directors' Remuneration Policy. Both will technically be advisory only as the Company is not subject to the UK statutory regime to make the latter binding although, clearly, the Committee will take any voting outcome extremely seriously.

The only change in Board remuneration is an increase in the fees of the Non-Executive Directors, the first since the rates were set in early 2011.

The Committee continues to ensure that the Directors' Remuneration Policy and its implementation are attractive to shareholders in reflecting good governance, complete simplicity and reasonable terms.

John Mack

Remuneration Committee Chairman

1 March 2017

Directors' remuneration report

For the year ended 31 December 2016

Introduction

We have presented this Remuneration Report 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 (the "UK Remuneration Regulations"). The Company aims to comply in all material respects with the reporting obligations within these regulations as a matter of good practice. 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.

Part A – Directors' Remuneration Policy

The Directors' Remuneration Policy as set out in this section of the report will take effect for all payments made to directors from the date of the 2017 AGM. Whilst it does not differ materially from that approved at the 2014 AGM, the policy approved by shareholders at the 2014 AGM will apply until approval is obtained for the new policy. Any changes to the policy are highlighted where relevant.

UK Remuneration Regulations and related investor guidance encourages companies to disclose a cap within which each element of remuneration policy will operate. The Committee has set an annual cap for each element of remuneration under the maximum opportunity column which will apply until a revised policy is approved by shareholders.

The General policy table which begins below must be read alongside the notes set out on page 102 which together set out and explain our remuneration policy. The policy for Executive Directors currently only applies to Mr Glasenberg as he is the only Executive Director.

General policy

Elements of the package

Remuneration Policy for the Directors is summarised in the table below:

General Policy for Executive Directors (this section does not technically form part of the Directors' Remuneration Policy and is for information only)	We have the same philosophy as any other Remuneration Committee, namely to set the Company's remuneration policies and practices so that they 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 entire approach to executive remuneration. The Committee is satisfied that the remuneration policy is in the best interests of shareholders and does not raise any environmental, social or governance issues and does not promote excessive risk taking. One exceptional aspect of our CEO's remuneration is that, at his instigation and reflecting his status as a major shareholder, he does not participate in bonus or LTI arrangements, a policy which will continue into 2017. As a result, we are currently able to set overall remuneration for our CEO at significantly lower levels than in comparable companies. The Committee believes that his significant personal shareholding creates sufficient alignment of interest with shareholders in the absence of participation in a bonus or LTI arrangement.

Element and purpose	Policy and operation	Maximum opportunity	Performance measures	Key changes to last approved policy
Base salary • Provides market competitive fixed remuneration that rewards relevant skills, responsibilities and contribution	• Salaries are positioned within a market competitive range for companies of a similar size and complexity • The Committee does not slavishly follow data but uses it as a reference point in considering, in its judgement, the appropriate level having regard to other relevant factors including corporate and individual performance and any changes in an individual's role and responsibilities • Base salary is paid monthly in cash	• Base salaries are reviewed annually with the next review due to take place in December 2017 • The Committee has not increased Executive Director salary levels since the Company's IPO in May 2011, demonstrating a responsible approach to setting base salaries • Mr Glasenberg, the CEO, is the only Executive Director on the Board. A base salary cap of $1,447,292 p.a., being his current salary, has been set so that no voluntary increase will be made to his base salary without shareholder approval or unless the law otherwise requires	• Not applicable (N/A)	• None

Element and purpose	Policy and operation	Maximum opportunity	Performance measures	Key changes to last approved policy
Benefits • To provide appropriate supporting non-monetary benefits	• Provides appropriate insurance cover benefits • Values are shown in the single figure table below but may fluctuate without the Committee taking action • The Company may periodically change the benefits available to staff for the office at which an Executive Director works in which case the director would normally be eligible to receive the amended benefits on similar terms to all relevant staff. In the case of Mr Glasenberg, this would be expected to mean employees generally in the Baar office	• Benefits received by Mr Glasenberg comprise salary loss (long-term sickness) and accident insurance/travel insurance • A monetary limit of $20,000 p.a for Mr Glasenberg has been set	• N/A	• None
Pension • Provides basic retirement benefits which reflects local market practice	• Mr Glasenberg participates in the defined contribution scheme for all Baar (Switzerland) -based employees	• An annual cap on the cost of provision of retirement benefits of $150,000 per Executive Director has been set	• N/A	• None
Annual Bonus Plan • Supports delivery of short-term operational, financial and strategic goals	• Annual Bonus plan levels and the appropriateness of measures are reviewed annually to ensure they continue to support the strategy • Any Annual Bonus plan outcome above 100% of salary is to be deferred into shares for a period of up to three years although the Committee reserves discretion to alter the current practice of deferral (whether by altering the portion deferred, the period of deferral or whether amounts are deferred into cash or shares) • Cash element paid in one tranche following the year end • Malus provisions apply to any amounts deferred	• The Committee has set a maximum annual bonus level of 200% of base salary p.a.	• The performance measures applied may be financial, non-financial and corporate, divisional or individual and in such proportions as the Committee considers appropriate • Additionally, the Committee will consider the outcomes against pre-set targets following their calculation and may moderate these outcomes to take account of a range of factors including the Committee's view of overall Company performance in the year	• None
Long-Term Incentives • Glencore Performance Share Plan incentivises the creation of shareholder value over the longer-term	• No Executive Director has, to date, participated, although this will be kept under review to ensure it remains appropriate • Malus clauses apply • The Company will honour the vesting of all awards granted under previous policies in accordance with the terms of such awards	• Overall annual Executive Directors' limit of 200% of salary for LTI grants (recognising that this is less than the formal limit in the plan)	• Executive Directors do not at present participate in the plan reflecting, in the case of the CEO, the significant alignment achieved through his personal shareholding. Accordingly, no performance conditions have been established for Executive Directors. On any future participation, the Committee may set such performance conditions on LTI awards as it considers appropriate (whether financial or non-financial and whether corporate, divisional or individual)	• None

Directors' remuneration report

For the year ended 31 December 2016

Element and purpose	Policy and operation	Maximum opportunity	Performance measures	Key changes to last approved policy
Significant Personal Shareholdings • Aligns the interests of executives and shareholders	• The Committee has set a formal shareholding requirement for Executive Directors of 300% of salary • Usually to be achieved within 5 years of Board appointment	• N/A	• N/A	• None
Chairman and Non-Executive Director fees • Reflects time commitment, experience, global nature and size of the Company	• The objective in setting the fees paid to the Chairman and the other Non-Executive Directors is to be competitive with other listed companies of equivalent size and complexity. Fee levels are periodically reviewed by the Board (for Non-Executives) and the Committee (for the Chairman). In both cases, the Company does not adopt a quantitative approach to pay positioning and exercises judgement as to what it considers to be reasonable in all the circumstances as regards quantum • Non-Executive Directors and the Senior Independent Director receive a base fee • Additional fees are paid for chairing or membership of a Board committee • Chairman receives a single inclusive fee • Reasonable business related expenses are reimbursed (subject to gross up if appropriate) • Non-Executive Directors are not eligible for any other remuneration or benefits of any nature • Reviewed every year with the next review due to take place in December 2017.	• Fees are paid monthly in cash • Aggregate fees for all Non-Executive Directors (including the Chairman) are subject to the cap set in the Articles of Association. This is currently set at $5,000,000	• N/A	• The fees payable to Non-Executive Directors have been increased as set out on page 105

Notes to the Policy table

1. Mr Glasenberg, the only Executive Director, has received no salary increase since the Company's IPO in May 2011.
2. Differences between the policy on remuneration for Directors from the policy on remuneration of other employees: the only Executive Director has waived any entitlement to participate in the variable pay arrangements. Arrangements also differ from its pay policies for Group employees as necessary to reflect the appropriate market rate position for the relevant roles. In particular, Mr Glasenberg's pension benefits are consistent with those provided to other Swiss-based employees and do not include any enhancement to reflect seniority.
3. For 2016, all remuneration and fees were paid in US dollars except for pension contributions and the provision of benefits which were provided in Swiss francs.

Recruitment Remuneration Policy

The Company's Recruitment Remuneration Policy aims to give the Committee sufficient flexibility to secure the appointment and promotion of high-calibre executives to strengthen the management team and secure the skill sets to deliver our strategic aims.

- The starting point for the Committee will be to look to the general policy for Executive Directors as set out above and structure a package in accordance with that policy. However, the policy was developed having regard to the specific circumstances of the current Executive Director and therefore (consistent with the UK regulations) for a newly appointed Executive Director the Committee is not constrained by the caps on fixed pay within the policy on a recruitment or at any subsequent annual review within the life of this policy as approved by shareholders. The Committee will not pay more than it considers to be necessary to secure the recruitment having regards to appropriate market rates and evolving best practice
- For an internal appointment, any variable pay element awarded in respect of the prior role may either continue on its original terms or be adjusted to reflect the new appointment as appropriate
- For external and internal appointments, the Committee may agree that the Company will meet certain relocation expenses as they consider appropriate and/or to make a contribution towards legal fees in connection with agreeing employment terms
- The Committee reserves the right to make awards of incentive pay that are necessary to secure a candidate, which may include either awards to compensate for the forfeiture of incentive awards in a previous employer or to provide appropriate incentives for a new recruit to the Group. Details of any such awards will be appropriately disclosed
- Where it is necessary to make a recruitment related pay award to an external candidate, the Company will not pay more than is, in the view of the Committee, necessary and will in all cases seek, in the first instance, to deliver any such awards under the terms of the existing incentive pay structure. It may, however, be necessary in some cases to make such awards on terms that are more bespoke than the existing annual and equity-based pay structures in the Group in order to secure a candidate
- All such awards for external appointments, whether under the annual bonus plan, Performance Share Plan or otherwise, to compensate for awards forfeited on leaving a previous employer will take account of the nature, time-horizons and performance requirements on those awards. In particular, the Committee's starting point will be to ensure that any awards being forfeited which remain subject to outstanding performance requirements (other than where these are substantially complete) are bought-out with replacement requirements and any awards with service requirements are bought out with similar terms. However, exceptionally the Committee may relax those obligations where it considers it to be in the interests of shareholders and those factors are, in the view of the Committee, equally reflected in some other way, for example through a significant discount to the face value of the awards forfeited. It will only include guaranteed sums where the Committee considers that it is necessary to secure the recruitment
- For the avoidance of doubt, where recruitment related awards are intended to replace existing awards held by a candidate in an existing employer, the maximum amounts for incentive pay as stated in the general policies will not apply to such awards. The Committee has not placed a maximum limit on any such awards which it may be necessary to make as it is not considered to be in shareholders' interests to set any expectations for prospective candidates regarding such awards. Any recruitment-related awards which do not replace awards with a previous employer will be subject to the limits on incentive awards as detailed in the general policy

The elements of any package for a new recruit and the approach taken by the Committee in relation to setting each element of the package will be consistent with the Executive Directors' Remuneration Policy described in this report, as modified by the above statement of principles where appropriate.

A new Non-executive Director would be recruited on the terms explained above in respect of the main policy for such directors.

Directors' remuneration report

For the year ended 31 December 2016

Potential rewards under various scenarios

Under the formal policy, consistent with other large FTSE companies, the total available variable pay (i.e. the maximum amount payable in respect of bonus and long-term incentives) available to Mr. Glasenberg would be approximately $5,790,000 (being four times base salary). As Mr Glasenberg has waived entitlement to all variable elements for 2016, including both bonus and long-term incentives, his base salary and all benefits are set at less than 25% of the aggregate remuneration which would potentially have been available to him had he not waived participation in these aspects. These waivers are considered appropriate as the level of his personal shareholding is sufficient to provide a keen alignment of interest between him and of shareholders more generally without the need to add additional aspects to his package (and cost to other shareholders). His fixed remuneration set out below is set at a modestly below market level so the waivers do not reflect any element of an excessive bias to fixed pay in the traditional sense. Consistent with UK legislation, it has been prepared using the following assumptions.

In 2016, Mr Glasenberg's base salary was paid in US dollars and his benefits and pension contributions were paid in Swiss francs, as described above and in the single figure table below.

Fixed	• Consists of base salary, benefits and pension. • Base salary is that to be paid in 2017. • Benefits measured as benefits figure in the single figure table. • Pension measured as pension figure in the single figure table.			
Ivan Glasenberg	**Base Salary $'000**	**Benefits $'000**	**Pension $'000**	**Total Fixed $'000**
	1,447	2	60	1,509
On-target and Maximum	Based on what the Director would receive if performance was on-target (excl. share price appreciation and dividends): • STI: Mr Glasenberg currently waives any right to participate in the annual bonus plan • LTI: He does not currently participate in the Performance Share Plan			

Executive Directors' contracts

The table below summarises the key features of the service contract for Ivan Glasenberg, the only person who served as an Executive Director during 2016.

All Directors' contracts and letters of appointment will be available for inspection on the terms to be specified in the Notice of 2017 AGM.

Provision	Service contract terms
Notice period	• Twelve months' notice by either party
Contract date	• 28 April 2011 (as amended on 30 October 2013)
Expiry date	• Rolling service contract
Termination payment	• No special arrangements or entitlements on termination. Any compensation would be limited to base salary only for any unexpired notice period (plus any accrued leave)
Change in control	• On a change of control of the Company, no provision for any enhanced payments, nor for any liquidated damages

External appointments

Any external appointments are noted on pages 81, 82 and 83. The Executive Director assigns to the Group any compensation received in relation to the appointment. The appropriateness of these appointments are considered as part of the annual review of Directors' interests/potential conflicts.

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. Further, in practice no Executive Director has, to date, participated in the PSP so the policy remains to be tested. 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 LTI arrangements. The potential treatments on termination under these plans are summarised below.

Incentives	Good leaver	Bad leaver
	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	No awards made
LTIP	Will receive a pro-rated award (if applicable, subject to the application of the performance conditions at the normal measurement date.) Committee discretion to disapply pro-rating	All awards will normally lapse

The UK Remuneration Regulations do 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 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.

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 reappointment 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.

The fees payable to the Non-Executive Directors have been increased with effect from 1 January 2017. The annual fees are paid in accordance with a Non-Executive Director's role and responsibilities. The fees payable for 2017 and those paid for 2016 are as follows:

US$ '000	2017	2016
Directors		
Chairman	1,150	1,056
Senior Independent Director	200	170
Non-Executive Director	135	124
Remuneration Committee		
Chairman	45	44
Member	25	23
Audit Committee		
Chairman	60	55
Member	35	31
Nomination Committee		
Chairman	40	36
Member	20	19
HSEC Committee		
Chairman	125	125
Member	40	19

Consideration of employment conditions elsewhere in the Group

The Committee has not, since IPO, awarded a salary increase to any Executive Director. It has not, therefore, in practice had to take into account Group-wide pay and employment conditions in making any decisions but would do so as and when such issues arise.

In accordance with prevailing commercial practice, the Committee did not consult with employees in preparing the Directors' Remuneration Policy.

Consideration of shareholders' views

Each year, the Committee takes into account the approval levels of remuneration related matters at our Annual General Meeting in determining that the current Directors' Remuneration Policy remains appropriate for the Company.

The Committee also seeks to have a productive dialogue with investors on developments in the remuneration aspects of corporate governance generally and any changes to the Company's executive pay arrangements in particular.

Directors' remuneration report

For the year ended 31 December 2016

Part B – Implementation Report

Implementation Report – Unaudited Information

Remuneration Committee

Membership and experience of the Remuneration Committee

We believe that the members of the Committee provide a useful balance of abilities, experience and perspectives to provide the critical analysis required in carrying out the Committee's function. John Mack, the Chairman of the Committee, has had a long career in investment bank management and therefore provides considerable experience of remuneration analysis and implementation. William Macaulay has had a long tenure in private equity which has involved exposure to remuneration issues many times and in a variety of situations while Leonhard Fischer is a career banker who similarly has had considerable exposure to issues of pay and incentives. All members of the Remuneration Committee are considered to be independent. Further details concerning independence of the Non-Executive Directors are contained on page 85 of the Annual Report.

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: **www.glencore.com/who-we-are/corporate-governance/board-committees**

Its principal responsibilities are, on behalf of the Board, to:

- set the Company's executive remuneration policy (and review its ongoing relevance and appropriateness);
- establish the remuneration packages for the Executive Director including the scope of pension benefits;
- determine the remuneration package for the Chairman, in consultation with the Chief Executive;
- have responsibility for overseeing schemes of performance related remuneration (including share incentive plans) for, and determine awards for, the Executive Director (as appropriate);
- ensure that the contractual terms on termination for the Executive Director are fair and not excessive; and
- monitor senior management remuneration.

The Committee considers corporate performance on HSEC and governance issues when setting remuneration for the Executive Director. The Committee seeks to ensure that the incentive structure for the Group's senior management does not raise HSEC or governance risks by inadvertently motivating irresponsible behaviour.

Remuneration Committee meetings

The Committee met two times during the year and considered, amongst other matters, the remuneration policy applicable to the Executive Director, senior management remuneration policy, including its level and structure, the form and structure of grants to employees under the Company's Deferred Bonus Plan and Performance Share Plan, and the content and approval of the remuneration Report.

The Chairman, CEO and CFO are usually invited to attend some or all of the proceedings of Remuneration Committee meetings. They do not participate in any decisions concerning their own remuneration.

Advisers to the Remuneration Committee

The Committee appointed and received independent remuneration advice during the year from its external adviser, FIT Remuneration Consultants LLP ("FIT"). FIT is a member of the Remuneration Consultants Group (the UK professional body for these consultants) and adheres to its code of conduct. The Committee was satisfied that the advice provided by FIT was objective and independent. FIT's fees for this advice in respect of 2016 were $10,410 (2015: $4,094). FIT's fees were charged on the basis of the firm's standard terms of business for advice provided. FIT provided no other services to the Group in the year.

The Committee also receives advice from John Burton, the Company Secretary.

Relative importance of remuneration spend

The table below illustrates the change in total remuneration, dividends paid and net profit from 2015 to 2016.

	2016 US$m	2015 US$m
Dividends and buy-backs	–	2,898
Net income/(loss) attributable to equity holders	1,379	(4,964)
Total remuneration	4,245	5,287

The figures presented have been calculated on the following bases:

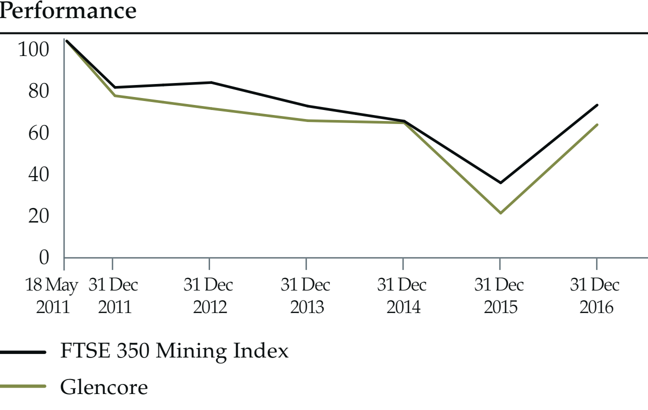
- **Dividends and buy-backs –** dividends paid during the financial year plus the cost of shares bought back during the year.
- **Net income/(loss) attributable to equity holders –** our reported net income in respect of the financial year. The Committee believes it is the most direct reflection of our financial performance.
- **Total remuneration –** represents total personnel costs as disclosed in note 21 to the financial statements which includes salaries, wages, social security, other personnel costs and share-based payments.

Performance graph and table

This graph shows the value to 31 December 2016, on a total shareholder return ("TSR") basis, of £100 invested in Glencore plc on 24 May 2011 (IPO date) compared with the value of £100 invested in the FTSE 350 Mining Index. The FTSE 350 Mining Index is considered to be an appropriate comparator for this purpose as it is an equity index consisting of 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:

Performance



		Single figure of total remuneration[1] (US$'000)	Annual variable element award rates against maximum opportunity[2]	Long-term incentive vesting rates against maximum opportunity[2]
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	–	–
2011	Ivan Glasenberg	1,483	–	–

1 *The value of benefits and pension provision in the single figure vary as a result of the application of exchange rates although in the relevant local currency these parts of Mr Glasenberg's remuneration have not altered since May 2011. In this table the figures are reported in US dollars, the currency in which Mr Glasenberg received his salary in 2016. The salary was payable in pounds sterling prior to 2014. Therefore those figures have been translated into US dollars at the exchange rates used for the preparation of the financial statements in those years. Mr Glasenberg's pension and other benefits are charged to the Group in Swiss francs and these amounts are translated into US dollar on the same basis.*

2 *The CEO has requested not to be considered for these potential awards.*

Percentage change in pay of Chief Executive Officer and comparative ratios

The UK Remuneration Regulations provide for disclosure of percentage changes of the CEO's remuneration against the average percentage change for employees generally or an appropriate group of employees. In addition, the UK Investment Association's 2016 Remuneration Principles recommend disclosure as to how the out-turn for a Company's CEO compares with that of a) its median employee and b) its Executive Committee. Given that the CEO has, since May 2011, waived any entitlement to any increase in salary (and given that his only other unwaived benefits are those provided to all employees at the Company's head office in Baar) no such comparisons or ratios have been made.

Most recent shareholder voting outcomes

The votes cast (1) to approve the Directors' remuneration report, for the year ended 31 December 2015, at the 2016 AGM held on 19 May 2016 and (2) to approve the Directors' Remuneration Policy at the 2014 AGM on 20 May 2014, were:

Votes "For"	Votes "Against"	Votes "Abstentions" (as a total of votes cast)
Directors' Remuneration Report		
99.14%	0.86%	0.00%
(9,213,244,369)	(80,083,116)	(9,725,264)
Directors' Remuneration Policy		
97.93%	2.07%	2.60%
(8,539,263,284)	(180,199,515)	(226,561,025)

While no changes will be made to the Directors' Remuneration Policy for 2017 (other than as set out on page 105), as the Company reaches the end of the three-year policy period approved by shareholders at the 2014 AGM, a resolution will be tabled to approve the Directors' Remuneration Policy at the 2017 AGM.

The Committee continues to seek a productive and ongoing dialogue with investors on the Directors' Remuneration Policy, remuneration aspects of corporate governance, any changes to the Company's executive pay arrangements and developments as to executive remuneration issues in general.

Directors' remuneration report

For the year ended 31 December 2016

Implementation of policy in 2017

No change to any aspect of Directors' remuneration is envisaged for 2017 except for the increase in the fees for Non-Executive Directors set out on page 105.

Implementation Report – Audited Information

Single Figure Table

	Salary		Benefits		Annual Bonus		Long-term incentives		Pension		Total	
US$'000	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015
Ivan Glasenberg	1,447	1,447	2	2	–	–	–	–	60	61	1,509	1,510

The notes to the performance table above also apply in relation to the compilation of this table. As no bonuses or long-term incentives have been granted to Mr Glasenberg, there are no relevant performance measures to be disclosed although see the first page of this report as to the alignment of his position with that of other shareholders.

Non-Executive fees

The emoluments of the Non-Executive Directors for 2016 were as follows:

Name	**Total 2016 US$'000**	Total 2015 US$'000
Non-Executive Chairman		
Anthony Hayward	1,056	1,056
Non-Executive Directors		
Leonhard Fischer	221	221
William Macaulay	178	178
Peter Coates	249	249
Peter Grauer	237	237
John Mack	187	187
Patrice Merrin	143	143

The aggregate emoluments of all Directors for 2016 (including pension contributions) were $3,780,000 (2015: $3,781,000). The only Director participant in a pension plan was Mr Glasenberg.

Directors' interests

The Directors' interests in shares are set out in the Directors' report which is set out after this report. Mr Glasenberg's holding is considerably in excess of the formal share ownership guideline for Executive Directors of 300% of salary.

Approval

This report in its entirety has been approved by the Committee and the Board of Directors and signed on its behalf by:

John Mack

Remuneration Committee Chairman

1 March 2017

Directors' report

For the year ended 31 December 2016

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 2016. 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 forms 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. References to the Company may also include references to the Group or part of the Group.

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, Johannesburg and Hong Kong Stock Exchanges.

Financial results and distributions

The Group's financial results are set out in the financial statements section of this Annual Report.

No distribution was declared or paid during the 2016 financial year.

The Board is recommending two distributions totalling US$0.07 per share in respect of the 2016 financial year (expected to be approximately $996 million in aggregate). It is proposed that these be payable in equal tranches of US$0.035 on 31 May and 26 September this year on the terms to be set out in, and subject to the passing of, a resolution to be put to shareholders at the Company's AGM on 24 May 2017.

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 23 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 24 and 25 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 Sustainable Development section of the Strategic report. The work of the HSEC Board committee is contained in the Corporate Governance report.

Taxation policy

During 2016 we published our first payments to Governments report **http://www.glencore.com/assets/sustainability/doc/sd_reports/GLEN-Payments-to-Government-2015.pdf** which we shall issue annually. As well as disclosing the payments made by the Group on a country-by-country and project-by-project basis, the report sets out the Company's approach to tax and transparency.

Exploration and research and development

The Group business units carry out exploration and research and development activities that are necessary to support and expand their operations.

Employee policies and involvement

Glencore operates an equal opportunities policy that aims to treat individuals fairly and not to discriminate on the basis of sex, race, ethnic origin, disability 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.

Where disability occurs during employment, the Group seeks to accommodate that disability where reasonably possible, including with appropriate training.

The Group places considerable value on the involvement of its employees which is reflected in the principles of its Code of Conduct and its related guidance, which requires regular, open, fair and respectful communication, zero tolerance for human rights violations, fair remuneration and, above all, a safe working environment.

Employee communication is mainly provided by the Group's intranet and corporate website. A range of information is made available to employees including all policies 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 operation or office.

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

Directors' report

For the year ended 31 December 2016

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' 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 2016, together with their biographical details and other information, are shown on pages 81 to 83.

Directors' interests

Details of interests in the ordinary shares of the Company of those Directors who held office during 2016 are given below:

Name	Number of Glencore Shares	Percentage of Total Voting Rights
Executive Directors		
Ivan Glasenberg	1,211,957,850	8.42
Non-Executive Directors		
Peter Coates	1,585,150 [1]	0.01
Anthony Hayward	244,907	0.00
Leonhard Fischer	–	–
William Macaulay	200,000	0.00
Peter Grauer	129,792	0.00
John Mack	750,000	0.00
Patrice Merrin	43,997	0.00

1 *Peter Coates also has 206,172 options over shares arising from his prior employment with Xstrata which are not included in the above table.*

No Director has any other interest in the share capital of the Company whether pursuant to any share plan or otherwise.

No changes in Directors' interests of those in office at the date of this report have occurred between 31 December 2016 and 1 March 2017.

Mr Glasenberg executed a Lock-Up Deed in 2011, pursuant to which he agreed, subject to certain customary exceptions, that during the period from 24 May 2011 to 24 May 2016 he would not dispose of a certain percentage of the ordinary shares held by him at 24 May 2011. These disposal restrictions have now expired entirely.

Share capital and shareholder rights

As at 1 March 2017, 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 191,459,158 shares are held in treasury and 144,418,070 shares are held by Group employee benefit trusts.

Major interests in shares

As at 1 March 2017 Glencore had been notified of the following interests representing 3% or more of the issued ordinary share capital of the Company:

Name of holder	Number of shares	Percentage of Total Voting Rights
Qatar Holding	1,221,497,099	8.49
Ivan Glasenberg	1,211,957,850	8.42
BlackRock Inc	820,422,580	5.70
Harris Associates	503,985,535	3.50
Daniel Maté	454,136,143	3.15
Aristotelis Mistakidis	450,175,134	3.13
Norges Bank	436,312,499	3.03

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 **www.glencore.com**. 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 dividend. 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 the proposal of resolutions 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 and on a poll, every holder of ordinary shares present in person or by proxy shall have one vote for every share of which he 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 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

At the end of the year, the Directors had authority, under a shareholder's resolution passed on 19 May 2016, to purchase through the market up to 10% of the Company's issued ordinary shares. No purchase was made by the Company during 2016. The Directors will seek a similar authority at the Company's AGM to be held in 2017.

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 24 and 25 to the financial statements includes 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.

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 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), assessment of asset disposal initiatives 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 paragraph C2.2 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. The Board has assessed the viability of the Group over a four-year period. 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 four-year plan considers Glencore's EBITDA, Capital Expenditure, Funds From Operations ("FFO") and Net Debt, and the key financial ratios of Net Debt to EBITDA and FFO to Net Debt over the forecasted years and

Directors' report

For the year ended 31 December 2016

incorporates stress tests to simulate the potential impacts of exposure to the Group's principal risks and uncertainties as set out on pages 36 to 44. These scenarios included:

- a prolonged downturn in the price and demand of commodities most impacting Glencore's operations;
- foreign exchange movements to which the Group is exposed as a result of its global operations; and
- consideration of the potential impact of adverse movements in macro-economic assumptions and their effect on certain 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.

Auditors

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 auditors are unaware; and

(b) the Director has taken all the steps that he ought to have taken as a director in order to make himself aware of any relevant audit information and to establish that the Company's auditors are aware of that information.

Deloitte LLP have expressed their willingness to continue in office as auditors and a resolution to reappoint them will be proposed at the forthcoming AGM.

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 each financial year. Under that law the Directors have elected to prepare the financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board and International Financial Reporting Standards as adopted for use in the European Union (together "IFRS"). 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. 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; and
- 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. Legislation in the UK governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

John Burton

Company Secretary

1 March 2017

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 7 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 16 to the financial statements
9.8.4(13)	Waivers of future dividends	See note 16 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 and interpretations as adopted by the European Union, International Financial Reporting Standards and interpretations 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 loss 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; and
- 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, strategy and business model of the Company.

The consolidated financial statements of the Group for the year ended 31 December 2016 were approved on the date below by the Board of Directors.

Signed on behalf of the Board:

Anthony Hayward
Chairman

Ivan Glasenberg
Chief Executive Officer

1 March 2017

Financial statements

"Our robust financial performance during 2016 reflects the quality of our industrial asset portfolio and the resilience of our large scale diversified marketing business."

IVAN GLASENBERG
Chief Executive Officer *(see page 04)*

116 Independent Auditor's Report
126 Consolidated statement of income/(loss)
127 Consolidated statement of comprehensive income/(loss)
128 Consolidated statement of financial position
129 Consolidated statement of cash flows
131 Consolidated statement of changes of equity
132 Notes to the financial statements

GLENCORE

Independent Auditor's Report to the members of Glencore plc

Opinion on financial statements of Glencore plc

In our opinion the financial statements:

- **give a true and fair view of the state of the Group's affairs as at 31 December 2016 and of the Group's income for the year then ended;**
- **have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union; and**
- **have been properly prepared in accordance with the Companies (Jersey) Law 1991.**

The financial statements that we have audited comprise:

- the Consolidated Statement of Income/(Loss);
- the Consolidated Statement of Comprehensive Income/(Loss);
- 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 33.

The financial reporting framework that has been applied in their preparation is applicable law and IFRSs as adopted by the European Union.

Summary of our audit approach

Key risks	The key risks that we identified in the current year were: • Capital preservation/Debt reduction plans; • Impairments; • Revenue recognition; • Fair value measurements within the marketing operations; • Classification of financial instruments; • Credit and performance risk; and • Taxation Our assessment of the Group's significant risks is consistent with 2015, except for Capital Projects and Commissioning which is no longer considered a significant risk as a result of the significant reduction in the Group's expansionary capital projects and related capital expenditures in 2016.
Materiality	We determined materiality for the Group to be $150 million, based on a normalised 3-year average pre-tax profit.
Scoping	We focused our Group audit scope primarily on the audit work at 45 components, representing the Group's most material marketing operations and industrial assets. These 45 components account for 92% of the Group's net assets, 95% of the Group's revenue and 89% of the Group's adjusted EBITDA.
Significant changes in our approach	There were no significant changes to our audit approach when compared to 2015.

Separate opinion in relation to IFRSs as issued by the IASB

As explained in note 1 to the financial statements, in addition to applying IFRSs as adopted by the European Union, the Group has also applied IFRSs as issued by the International Accounting Standards Board (IASB).

In our opinion the financial statements comply with IFRSs as issued by the IASB.

Going concern and the Directors' assessment of the principal risks that would threaten the solvency or liquidity of the Group

We have reviewed the Directors' statement regarding the appropriateness of the going concern basis of accounting contained within note 1 to the financial statements and the Directors' statement on the longer-term viability of the Group contained within the Governance section of the Annual Report.

We are required to state whether we have anything material to add or draw attention to in relation to:

- the Directors' confirmation on page 89 that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity;
- the disclosures on pages 36–44 and 89–93 that describe those risks and explain how they are being managed or mitigated;
- the Directors' statement in note 1 to the financial statements about whether they considered it appropriate to adopt the going concern basis of accounting in preparing them and their identification of any material uncertainties to the Group's ability to continue to do so over a period of at least 12 months from the date of approval of the financial statements; and
- the Director's explanation on page 112 as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We confirm that we have nothing material to add or draw attention to in respect of these matters.

We agreed with the Directors' adoption of the going concern basis of accounting and we did not identify any such material uncertainties. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the Group's ability to continue as a going concern.

Independence

We are required to comply with the Financial Reporting Council's Ethical Standards for Auditors and confirm that we are independent of the Group and we have fulfilled our other ethical responsibilities in accordance with those standards.

We confirm that we are independent of the Group and we have fulfilled our other ethical responsibilities in accordance with those standards. We also confirm we have not provided any of the prohibited non-audit services referred to in those standards.

Our assessment of risks of material misstatement

The assessed risks of material misstatement described below are those that had the greatest effect on our audit strategy, the allocation of resources in the audit and directing the efforts of the engagement team.

In arriving at our audit opinion on the financial statements, we have considered any significant changes in the Group's operations and the broader market conditions that may influence the audit risk profile of the Group.

Our assessment of the Group's significant risks is consistent with 2015, except for Capital Projects and Commissioning which is no longer considered a significant risk as a result of the significant reduction in the Group's expansionary capital projects and related capital expenditures in 2016.

The description of risks below should be read in conjunction with the significant issues considered by the Audit Committee discussed on page 95. 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.

Independent Auditor’s Report to the members of Glencore plc

Capital preservation/Debt reduction plans

Risk description

Following the September 2015 announcement of a number of measures to preserve capital and reduce debt by 31 December 2016, the Group’s initiatives are now completed with Net Funding reduced to $32,619 million as at 31 December 2016. Due to the bespoke nature of some of the specific reduction measures undertaken and the resultant market focus on them, we identified a heightened key audit risk relating to potential management override and earnings management with respect to fair presentation and disclosure of financial performance and position.

Key measures delivered in 2016 include:

- sale of interests in the Agriculture Products business (“Glencore Agri”) and the Ernest Henry Mining operations (“EHM”), disposal of Glencore Rail (NSW) Pty Ltd (“GRail”) and the Antapaccay streaming transaction;
- reduction in capital expenditure to $3,497 million from $5,957 million in 2015; and
- working capital management.

Fair presentation and disclosure is achieved when the transactions underpinning the announced measures have been recorded:

- when the transaction has occurred (occurrence and existence);
- in accordance with the substance of the transaction (rights and obligations and classification);
- in the correct amount in the appropriate accounting period (measurement and cut-off); and
- in accordance with the requirements of IFRS including appropriate presentation and disclosure (presentation and disclosure).

Refer to “Key judgements” within note 1 and additionally notes 10, 12, 19, 22 and 23.

How the scope of our audit responded to the risk

To scope our audit and respond to the risks associated with the announced measures we have:

- undertaken a detailed assessment of each of the measures to assess how it may impact the Group and therefore our audit response;
- enhanced our Group and component audit approach and risk assessment to address the risk of material misstatement and potential management bias associated with transactions underlying these measures, particularly where significant judgements, estimates and assumptions are applied;
- for individually material transactions relating to the announced measures that were completed during the year ended 31 December 2016, reviewed and tested these with reference to supporting documentation (e.g. contractual agreements) and assessed the associated accounting treatment focusing on fair presentation and disclosure;
- reviewed long-term advances (including streaming transactions) received and working capital movements to understand significant non-routine transactions impacting the year-end financial position and reviewed the associated accounting for compliance with IFRS and for evidence of potential management override and earnings management; and
- continued to monitor operations where production was curtailed or suspended through on-going focus on impairment of assets (see “Impairments” below).

Our conclusion

Our testing noted no significant bias in the accounting judgements, estimates and assumptions made by management on each of the significant transactions underpinning the measures and we concur with the accounting positions adopted.

We reviewed the disclosures of the sale of interests in Glencore Agri and EHM, the Antapaccay streaming transaction and the disposal of GRail transactions in notes 19 and 23 and found them to be in line with the relevant IFRS requirements.

Significant sales and purchase transactions affecting working capital and containing a financing element have been accounted for in line with IFRS requirements and the Group accounting policies as stated in note 1 of the financial statements.

Impairments

Risk description	How the scope of our audit responded to the risk
The carrying value of the Group's non-current assets, which includes intangible assets, property, plant and equipment, investments in associates and joint ventures, amounted to $81,188 million at 31 December 2016. The volatility in expected future prices of certain commodities key to the Group (particularly oil, copper, zinc and coal) and foreign exchange rates, requires management to closely monitor non-current asset carrying values. Given the nature of the Group's industrial assets, developments concerning geology, production or distribution of the Group's products may also trigger a need to consider impairment. The outcome of impairment assessments could vary significantly were different assumptions applied. Refer to "Key estimates and assumptions" within note 1 and additionally notes 4, 5 and 9. In total, impairments amounting to $1,268 million (note 5) and $345 million (note 9) were recognised in the year ended 31 December 2016 relating to oil and coal assets primarily resulting from a reduction in management's long-term oil price assumptions, specific production and reserve related issues.	We reviewed management's assessment of the indicators of impairment and challenged the significant assumptions used. Where significant indicators of impairment were identified, we utilised Deloitte mining valuation specialists to assess the appropriateness of management's recoverable value models, which included the underlying model inputs and significant assumptions. We challenged the significant inputs and assumptions used in impairment testing for intangible assets, property, plant and equipment, associates and joint ventures, specifically the commodity price, foreign exchange, assumed production levels, operating costs and discount rate assumptions, including consideration of the risk of management bias. Our challenge included comparing inputs and significant assumptions, such as commodity price, foreign exchange, and discount rates, to third party forecasts, Deloitte developed discount rates, production to life of mine and hydrocarbon extraction plans and reserves and resources estimates, assessing whether macro assumptions had been applied on a consistent basis across the Group. Operating costs and production levels were compared to the current period actual results, management approved budgets and life of mine models. We challenged management's sensitivity analysis by performing independent sensitivity analyses on selected assets, including those which were not identified as having indicators of impairment but have a higher risk of impairment due to lower available headroom in fair value models, volatility in key pricing assumptions or the existence of operational circumstances which may indicate potential for impairment. We also assessed the adequacy of impairment related disclosures in the financial statements, including the key assumptions used and the sensitivity of the financial statements to these assumptions.

Our conclusion

We concluded that management's assessment of impairment indicators was appropriate. Where there were impairment indicators, our procedures found that the impairment models were in line with the underlying mine and hydrocarbon extraction plans and supported by appropriate inputs and assumptions. We concluded that the key pricing and discount rate assumptions were in line with third party evidence and our expert's acceptable ranges.

We reviewed management's disclosures on key assumptions and impairment sensitivities and found them to be appropriate.

Independent Auditor's Report to the members of Glencore plc

Revenue recognition

Risk description	How the scope of our audit responded to the risk
Revenue recognition has been identified as a risk primarily relating to the following: Marketing operations: • The completeness and accuracy of the capture of trades within the trade book and the timing of revenue recognition for commodity sales with deliveries occurring on or around year-end • Judgement is required to determine when risks and rewards have transferred under certain contractual arrangements with third parties • Due to the significant volume of transactions and the complexity of the supporting IT systems, minor errors could, in aggregate, have a material impact on the financial statements Industrial assets: • Substantially all output from industrial assets will be sold by the Group's marketing divisions. For direct third party sales, a key risk relates to the consideration of embedded derivatives in sales contracts, particularly in commercial transactions with provisional pricing terms.	We have reviewed Glencore's revenue recognition policies for compliance with the requirements of IAS 18 Revenue ("IAS 18"). For marketing operations we: • evaluated the design, implementation and operating effectiveness of key controls over revenue and the trade cycle; • assessed general IT controls surrounding major technology applications and critical interfaces over revenue recognition and completeness and accuracy of trade capture; and • agreed, on a sample basis, deliveries occurring near 31 December 2016 to supporting documentation to assess that the IFRS revenue recognition criteria were met for recognised sales and obtained third party confirmations where relevant to check completeness and accuracy of trade books. For industrial assets we: • assessed the design and implementation of controls around the methodology adopted by management to identify the provisional pricing terms and the determination of estimates of metal in concentrate sold; and • reviewed key new contracts for the existence of embedded derivatives and performed valuation testing as appropriate. We also performed testing on journal entries using computer assisted profiling techniques to test for any management override of internal controls related to revenue recognition.

Our conclusion
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.

Fair value measurements within the marketing operations

Risk description	How the scope of our audit responded to the risk
Determination of fair values of marketing inventories, financial assets and liabilities is a complex and subjective area often requiring significant estimates, particularly where valuations utilise unobservable inputs (e.g. credit risk assessments, market volatility and forecast operational estimates). At 31 December 2016, total Level 3 Other financial assets and liabilities amounted to $558 million and $612 million respectively. As the Group's marketing inventories and other financial assets and liabilities are measured at fair value at each reporting date, these fair value measurements significantly impact the Group's results. Refer to "Key estimates and assumptions" within note 1 and additionally notes 25 and 26.	We performed internal control testing over management's processes for determining inputs to fair value measurements and performed detailed substantive testing on a sample basis of the related fair value measurements. We specifically tested the evidence supporting significant unobservable inputs utilised in Level 3 measurements in the fair value hierarchy as outlined in note 26 to the financial statements, which included reviews of broker quotes, recent transactions and other supporting documentation.

Our conclusion

Based on the results of our testing, we are satisfied that the Level 3 fair value measurements were supported by reasonable assumptions in line with externally verifiable information where possible.

We have reviewed the financial statement disclosures on fair value measurements in note 26 and found them to be adequate.

Classification of financial instruments

Risk description	How the scope of our audit responded to the risk
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 operations is a judgemental area, particularly distinguishing sales contracts where the Group physically delivers its own production to a third party ("own use"), from those which form part of the Group's marketing operations. Differences in classification affect recognition of associated gains and losses as contracts which are "own use" are exempt from mark-to-market accounting. Refer to notes 25 and 26.	We obtained an understanding of the trading strategies and associated product flows within the Group's marketing departments using financial instrument experts embedded within the audit team with experience in commodity trading. We analysed the trade books to identify incidents where contracts were not physically delivered ("net settled"), which may indicate tainting of the "own use" criteria. Where a contract had been net settled, we checked that the contract was appropriately ring-fenced from the "own use" trade book and mark-to-market reflecting the underlying facts and circumstances. We assessed the adequacy of related disclosures in the financial statements in accordance with the requirements of IFRS.

Our conclusion

Based on the results of our testing, we are satisfied that all significant assumptions applied in respect of the classification of financial instruments are appropriate and disclosure given around financial instruments to be in accordance with the requirements of IFRS.

Independent Auditor's Report to the members of Glencore plc

Credit and performance risk

Risk description	How the scope of our audit responded to the risk
The Group is exposed to credit and performance risk arising from the Group's global marketing operations and trade advances, particularly in markets demonstrating significant price volatility with limited liquidity and terminal markets. This risk is heightened in times of increased price volatility, where suppliers may be incentivised to default on delivery and customers are unable to make payments. At 31 December 2016, total Advances and loans and Accounts receivable amounted to $3,483 million and $20,066 million respectively. Refer to notes 10, 12 and 24.	We undertook internal control testing of the Group's centralised and local credit and performance risk monitoring procedures. We challenged management's assessment of the recoverability of aged and overdue receivables, loans and advance payments with delayed or overdue deliveries, considering historical patterns of trading and settlement as well as recent communications with the counterparties and other post balance sheet date evidence. In addition, we challenged the valuation of significant fixed price positions in commodities across the Group at year-end given the high price volatility during the year, particularly with respect to base metals and coal where the risk of non-performance is higher.

Our conclusion

We concluded that the Group's provisioning in relation to counterparty and performance risk was appropriately assessed.

Taxation

Risk description	How the scope of our audit responded to the risk
There is significant judgement around accounting for income taxes particularly in light of the number of jurisdictions in which the Group operates, including judgements concerning residency of key corporate operations and holding companies, provisioning for tax exposures, application of transfer pricing rules, the recognition of deferred income tax assets and the taxation impacts of any corporate restructurings. This gives 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. As at 31 December 2016, the Group has recorded a tax expense of $638 million, $3,904 million of net deferred tax liabilities (see note 6) and has disclosed its assessment of tax-related provisions in note 20.	We undertook a specific assessment of the material components impacting the Group's tax expense, balances and exposures and performed detailed audit procedures in relation to these. We considered the appropriateness of management's assumptions and estimates in relation to the likelihood of generating future taxable profits to support the recognition of deferred tax assets with reference to forecast taxable profits and consistency of these forecasts with the Group's budgets. We reviewed and challenged management's assessment of uncertain tax positions and conclusions on complex tax arrangements through discussions with the Group taxation department, reviewing correspondence with local tax authorities, reviewing third party expert tax opinions and utilising Deloitte tax specialists, where appropriate, to assess the adequacy of associated provisions and disclosures.

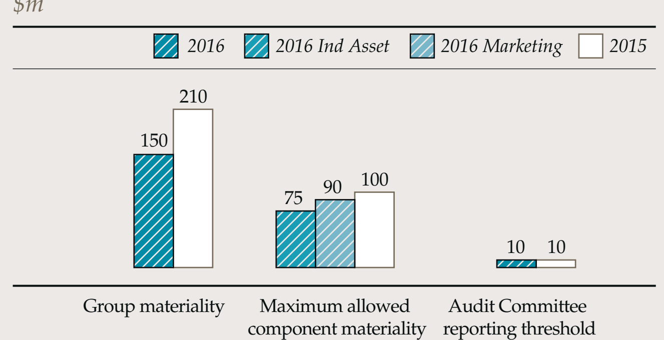
Our conclusion

The results of our testing were satisfactory and we concur that the level of tax provisions and disclosures are appropriate.

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.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

Group materiality	$150 million (2015: $210 million) The applied materiality is approximately 6.7% of normalised 3-year average pre-tax profit (2015: 6.0%), and equates to less than 1% (2015: 1%) of equity. *$m* 
Basis for determining materiality	Consistent with the methodology in the prior year, we have determined materiality by using a percentage of normalised 3-year average (2014 – 2016) of pre-tax profits. These normalising items are outlined in notes 3, 4 and 23 to the financial statements.
Rationale for the benchmark applied	The pre-tax profits for the 2014 – 2016 years have been normalised in determining materiality to exclude items which, due to their nature and/or expected infrequency of the underlying events, are not considered indicative of continuing operations of the Group and so do not form part of the Group's internally or externally monitored primary KPIs, and which if included, would distort materiality year-on-year. We consider this approach to be more appropriate given the nature of the mining industry which is exposed to cyclical commodity price fluctuations and to therefore provide a more stable base reflective of the scale of the Group's size and operations.

We agreed with the Audit Committee that we would report all individual audit differences in excess of $10 million (2015: $10 million) whilst retaining an internal aggregation threshold of $7.5 million, reported in aggregate to the Audit Committee, representing 5% of the Group materiality, 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

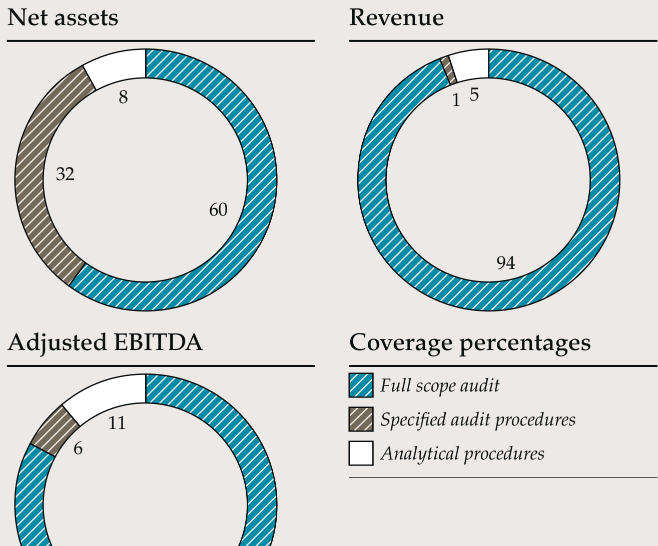
An overview of the scope of our audit

Our Group audit was scoped by obtaining an understanding of the Group and its environment, including group-wide controls, and assessing the risks of material misstatement at the Group level. Based on our continuing assessment, we focused our Group audit scope primarily on the audit work at 45 components (2015: 51 components), representing the Group's most material marketing operations and industrial assets, and utilised 21 component audit teams (2015: 19 component audit teams) in 18 countries (2015: 17 countries).

- 29 of these were subject to a full scope audit (2015: 34 components); and
- 16 were subject to specified audit procedures where the extent of our testing was based on our assessment of the risk of material misstatement and of the materiality of the Group's operations at those locations (2015: 17 components).

The reduction in the scoping compared to 2015 is primarily as a result of the restructuring of various Glencore Agri related components into one full scope component in the current year.

These 45 components account for 92% of the Group's net assets (2015: 90%), 95% of the Group's revenue (2015: 89%) and 89% of the Group's adjusted EBITDA (2015: 88%). The above mentioned reduction in Group materiality from 2015 did not significantly impact our assessment of audit coverage because of the significant number of marketing operations and industrial asset components already within Group audit scope.



Detailed audit instructions were sent to the auditors of these in-scope components. These detailed audit instructions specified areas of audit focus, identified the risks of material misstatement assessed by the Group audit team and set out the information to be reported back to the Group audit team.

The Group audit team continued to follow a programme of regular physical meetings with components that has been designed so that the Group Audit Partner or another senior member of the Group audit team periodically meets with local management and the component audit team on a rotational basis. In 2016, the Group audit team held meetings with 13 components (2015: 25 components).

Additionally for all in-scope components the Group audit team was involved in the audit work performed by the component auditors through a combination of our global planning conference call meetings, provision of referral instructions, 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), attendance at component audit closing conference calls and regular interaction on any related audit and accounting matters which arose.

At the parent entity level we also tested the consolidation process and carried out analytical procedures to confirm our conclusion that there were no significant risks of material misstatement of the aggregated financial information of the remaining components not subject to audit or audit of specified account balances.

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.

Corporate Governance Statement

Under the Listing Rules we are also required to review the part of the Corporate Governance Statement relating to the Company's compliance with certain provisions of the UK Corporate Governance Code.

We have nothing to report arising from our review.

Our duty to read other information in the Annual Report

Under International Standards on Auditing (UK and Ireland), we are required to report to you if, in our opinion, information in the Annual Report is:

- materially inconsistent with the information in the audited financial statements; or
- apparently materially incorrect based on, or materially inconsistent with, our knowledge of the Group acquired in the course of performing our audit; or
- otherwise misleading.

In particular, we are required to consider whether we have identified any inconsistencies between our knowledge acquired during the audit and the Directors' statement that they consider the Annual Report is fair, balanced and understandable and whether the Annual Report appropriately discloses those matters that we communicated to the Audit Committee which we consider should have been disclosed.

We confirm that we have not identified any such inconsistencies or misleading statements.

Other matter

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.

Respective responsibilities of Directors and auditor

As explained more fully in the Directors' Responsibilities Statement, the Directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view. Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and International Standards on Auditing (UK and Ireland). We also comply with International Standard on Quality Control 1 (UK and Ireland). Our audit methodology and tools aim to ensure that our quality control procedures are effective, understood and applied. Our quality controls and systems include our dedicated professional standards review team and independent partner reviews.

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/or those further matters we have expressly agreed to report to them on in our engagement letter 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.

Scope of the audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of: whether the accounting policies are appropriate to the Group's circumstances and have been consistently applied and adequately disclosed; the reasonableness of significant accounting estimates made by the Directors; and the overall presentation of the financial statements. In addition, we read all the financial and non-financial information in the Annual Report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies, we consider the implications for our report.

Matthew Sheerin, ACA CA (AUS)
for and on behalf of Deloitte LLP
Chartered Accountants and Recognised Auditor
London, UK

1 March 2017

Consolidated statement of income/(loss)

For the year ended 31 December 2016

US$ million	Notes	**2016**	2015 Restated[1]
Revenue		152,948	147,351
Cost of goods sold		(149,763)	(144,533)
Selling and administrative expenses		(1,102)	(1,096)
Share of income from associates and joint ventures	9	11	99
Gains/(losses) on disposals and investments	3	452	(994)
Other expense – net	4	(1,589)	(7,928)
Dividend income		27	25
Interest income		155	179
Interest expense		(1,688)	(1,482)
Loss before income taxes		**(549)**	**(8,379)**
Income tax (expense)/credit	6	(638)	9
Loss for the year from continuing operations		**(1,187)**	**(8,370)**
Income from discontinued operations, net of tax	23	2,123	256
Income/(loss) for the year		**936**	**(8,114)**
Attributable to:			
Non-controlling interests		(443)	(3,150)
Equity holders of the Parent		1,379	(4,964)
Loss per share – continuing operations:			
Basic (US$)	15	(0.05)	(0.39)
Diluted (US$)	15	(0.05)	(0.39)
Earnings/(loss) per share – continuing and discontinued operations:			
Basic (US$)	15	0.10	(0.37)
Diluted (US$)	15	0.10	(0.37)

1 Certain amounts shown here reflect the adjustment made relating to discontinued operations (see note 23), and therefore do not correspond to the consolidated statement of income/(loss) for the year ended 31 December 2015.

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

Consolidated statement of comprehensive income/(loss)

For the year ended 31 December 2016

US$ million	Notes	2016	2015 Restated[1]
Income/(loss) for the year		936	(8,114)
Other comprehensive income/(loss)			
Items not to be reclassified to the statement of income in subsequent periods:			
Defined benefit plan actuarial (losses)/gains, net of tax of $14 million (2015: $29 million)	21	(41)	76
Discontinued operations – Actuarial (losses)/gains net of tax of $1 million (2015: $5 million)	21	(4)	16
Net items not to be reclassified to the statement of income in subsequent periods:		**(45)**	**92**
Items that are or may be reclassified to the statement of income in subsequent periods:			
Exchange gain/(loss) on translation of foreign operations		472	(1,531)
Gains/(losses) on cash flow hedges, net of tax of $5 million (2015: $42 million)		99	(85)
Share of comprehensive loss from associates and joint ventures	9	–	(22)
Unrealised gain/(loss) on available for sale financial instruments	9	365	(488)
Discontinued operations[2]		43	(272)
Items recycled to the statement of income upon disposal of subsidiaries	3/23	602	311
Net items that are or may be reclassified to the statement of income in subsequent periods:		**1,581**	**(2,087)**
Other comprehensive income/(loss)		**1,536**	**(1,995)**
Total comprehensive income/(loss)		**2,472**	**(10,109)**
Attributable to:			
Non-controlling interests		(411)	(3,217)
Equity holders of the Parent		2,883	(6,892)

1 *Certain amounts shown here reflect the adjustment made relating to discontinued operations (see note 23), and therefore do not correspond to the consolidated statement of comprehensive income/(loss) for the year ended 31 December 2015.*

2 *Includes exchange gain on translation of foreign operations of $22 million (2015: loss of $264 million), gain on cash flow hedges net of tax of $21 million (2015: loss of $4 million) and share of comprehensive loss from associates and joint ventures of $Nil million (2015: $4 million).*

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

Consolidated statement of financial position

As at 31 December 2016

US$ million	Notes	2016	2015
Assets			
Non-current assets			
Property, plant and equipment	7	53,826	60,774
Intangible assets	8	6,716	7,516
Investments in associates and joint ventures	9	13,086	11,337
Other investments	9	1,753	1,305
Advances and loans	10	3,483	3,005
Inventories	11	564	504
Deferred tax assets	6	1,760	1,846
		81,188	**86,287**
Current assets			
Inventories	11	18,347	18,303
Accounts receivable	12	20,066	17,001
Other financial assets	26	2,212	3,701
Prepaid expenses and other assets		269	447
Marketable securities		10	39
Cash and cash equivalents	13	2,508	2,707
		43,412	**42,198**
Total assets		**124,600**	**128,485**
Equity and liabilities			
Capital and reserves – attributable to equity holders			
Share capital	14	146	146
Reserves and retained earnings		44,097	41,108
		44,243	**41,254**
Non-controlling interests	31	(462)	89
Total equity		**43,781**	**41,343**
Non-current liabilities			
Borrowings	18	23,188	32,932
Deferred income	19	2,266	1,452
Deferred tax liabilities	6	5,664	5,777
Other financial liabilities	26	403	186
Provisions	20	5,931	5,923
		37,452	**46,270**
Current liabilities			
Borrowings	18	10,030	11,117
Accounts payable	22	26,176	24,088
Deferred income	19	138	87
Provisions	20	458	474
Other financial liabilities	26	6,386	4,931
Income tax payable		179	175
		43,367	**40,872**
Total equity and liabilities		**124,600**	**128,485**

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

Consolidated statement of cash flows

For the year ended 31 December 2016

US$ million	Notes	2016[1]	2015[1]
Operating activities			
Loss before income taxes from continuing operations		(549)	(8,379)
Income before income taxes from discontinued operations	23	2,254	363
Adjustments for:			
Depreciation and amortisation		5,632	5,835
Share of income from associates and joint ventures	9	(26)	(101)
Decrease in employee benefit liabilities		(17)	(202)
(Gains)/losses on disposals and investments	3/23	(2,384)	994
Unrealised mark-to-market movements on other investments	4	121	262
Impairments	5	1,268	7,120
Other non-cash items – net[2]		(34)	168
Interest expense – net		1,603	1,394
Cash generated by operating activities before working capital changes		**7,868**	**7,454**
Working capital changes			
(Increase)/decrease in accounts receivable[3]		(5,005)	4,975
(Increase)/decrease in inventories		(2,707)	5,410
Increase/(decrease) in accounts payable[4]		5,540	(3,572)
Proceeds from gold and silver streaming	19	971	900
Total working capital changes		**(1,201)**	**7,713**
Income taxes paid		(584)	(865)
Interest received		111	119
Interest paid		(1,376)	(1,203)
Net cash generated by operating activities		**4,818**	**13,218**
Investing activities			
Net cash received/(used) in acquisition of subsidiaries	23	176	(318)
Net cash received from disposal of subsidiaries	23	5,535	212
Purchase of investments	9	(15)	(236)
Proceeds from sale of investments		3	41
Purchase of property, plant and equipment	7/8	(3,048)	(5,372)
Payments for exploration and evaluation	7	–	(147)
Proceeds from sale of property, plant and equipment		128	115
Dividends received from associates and joint ventures	9	833	428
Net cash generated/(used) by investing activities		**3,612**	**(5,277)**

1 *Includes results from discontinued operations.*
2 *Includes certain non-cash items as disclosed in note 4.*
3 *Includes movements in other financial assets, prepaid expenses, long-term advances and loans and other assets.*
4 *Includes movements in other financial liabilities, provisions and deferred income.*

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

Consolidated statement of cash flows

For the year ended 31 December 2016

US$ million	Notes	**2016[1]**	2015[1]
Financing activities[2]			
Proceeds from issuance of capital market notes[3]	18	1,366	4,901
Repayment of capital market notes		(4,748)	(4,459)
Repurchase of capital market notes	18	(2,629)	(529)
Repayment of other non-current borrowings		(2,848)	(5,176)
Margin payments in respect of financing related hedging activities		(695)	(618)
Proceeds from/(repayment of) current borrowings		1,020	(1,926)
Acquisition of additional interests in subsidiaries		(7)	–
Return of capital/distributions to non-controlling interests		(91)	(95)
Disposal/(repurchase) of own shares		3	(272)
Share issuance[3]		–	2,444
Distributions paid to equity holders of the Parent	16	–	(2,328)
Net cash used by financing activities		**(8,629)**	**(8,058)**
Decrease in cash and cash equivalents		(199)	(117)
Cash and cash equivalents, beginning of year		2,707	2,824
Cash and cash equivalents, end of year		**2,508**	**2,707**

1 *Includes results from discontinued operations.*

2 *Presented net of directly attributable issuance costs where applicable.*

3 *Net of issuance costs relating to capital market notes and shares of $9 million (2015: $16 million) and $Nil million (2015: $64 million) respectively.*

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

Consolidated statement of changes of equity

For the year ended 31 December 2016

US$ million	(Deficit)/ retained earnings	Share premium	Other reserves (Note 14)	Own shares	Total reserves and (deficit)/ retained earnings	Share capital	Total equity attributable to equity holders	Non-controlling interests (Note 31)	Total equity
1 January 2015	**(222)**	**52,533**	**(2,409)**	**(1,493)**	**48,409**	**133**	**48,542**	**2,938**	**51,480**
Loss for the year	(4,964)	–	–	–	(4,964)	–	(4,964)	(3,150)	(8,114)
Other comprehensive loss	66	–	(1,994)	–	(1,928)	–	(1,928)	(67)	(1,995)
Total comprehensive loss	**(4,898)**	**–**	**(1,994)**	**–**	**(6,892)**	**–**	**(6,892)**	**(3,217)**	**(10,109)**
Shares issued[1]	–	2,431	–	–	2,431	13	2,444	–	2,444
Own share purchases[1]	–	–	–	(281)	(281)	–	(281)	–	(281)
Own share disposal[1]	(45)	–	–	62	17	–	17	–	17
Equity-settled share-based expenses[2]	66	–	–	–	66	–	66	–	66
Change in ownership interest in subsidiaries	–	–	(16)	–	(16)	–	(16)	35	19
Disposal of business[3]	–	–	–	–	–	–	–	(257)	(257)
Cancellation of put option[4]	–	–	–	–	–	–	–	685	685
Distributions paid[5]	–	(2,626)	–	–	(2,626)	–	(2,626)	(95)	(2,721)
At 31 December 2015	**(5,099)**	**52,338**	**(4,419)**	**(1,712)**	**41,108**	**146**	**41,254**	**89**	**41,343**
1 January 2016	**(5,099)**	**52,338**	**(4,419)**	**(1,712)**	**41,108**	**146**	**41,254**	**89**	**41,343**
Income for the year	1,379	–	–	–	1,379	–	1,379	(443)	936
Other comprehensive (loss)/income	(45)	–	1,549	–	1,504	–	1,504	32	1,536
Total comprehensive income/(loss)	**1,334**	**–**	**1,549**	**–**	**2,883**	**–**	**2,883**	**(411)**	**2,472**
Own share disposal[1]	(9)	–	–	12	3	–	3	–	3
Equity-settled share-based expenses[2]	75	–	–	–	75	–	75	–	75
Change in ownership interest in subsidiaries	–	–	68	–	68	–	68	17	85
Disposal of business[3]	(40)	–	–	–	(40)	–	(40)	(66)	(106)
Distributions paid[5]	–	–	–	–	–	–	–	(91)	(91)
At 31 December 2016	**(3,739)**	**52,338**	**(2,802)**	**(1,700)**	**44,097**	**146**	**44,243**	**(462)**	**43,781**

1 *See note 14.*

2 *See note 17.*

3 *See note 23.*

4 *See note 26.*

5 *See note 16.*

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, energy products and agricultural 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 automotive, steel, power generation, oil and food processing 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 plc is a publicly traded limited company incorporated in Jersey and domiciled in Switzerland. Its ordinary shares are traded on the London, Hong Kong and Johannesburg stock exchanges.

These consolidated financial statements were authorised for issue in accordance with a Directors' resolution on 1 March 2017.

Statement of compliance

The accounting policies adopted in this preliminary announcement are based on the Company's financial statements which are prepared in accordance with:

- International Financial Reporting Standards ("IFRS") and interpretations as adopted by the European Union ("EU") effective as of 31 December 2016; and
- IFRS and interpretations as issued by the International Accounting Standards Board ("IASB") effective as of 31 December 2016.

Critical accounting judgements and key sources of estimation

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:

Key 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.

Determination of control of subsidiaries and joint arrangements (note 33)

Judgement is required to determine when Glencore has control of subsidiaries or joint control of joint 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.

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.

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 Glencore Agri 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.

Credit and performance risk (note 24)

The Group's global marketing operations expose it to credit and performance (the risk that counterparties fail to sell or purchase physical commodities on agreed terms) risks; these arise particularly in markets demonstrating significant price volatility with limited liquidity and terminal markets and when global and/or regional macro-economic conditions are weak.

Continuously, but particularly during such times, judgement is required to determine whether receivables, loans and advances are recoverable and if contracted product deliveries will be received. Judgements about recoverability and contractual performance may materially impact both non-current and current assets as recognised in the statement of financial position.

Recognition of deferred tax assets (note 6)

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 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. The recoverability of deferred tax assets including the estimates and assumptions contained therein are reviewed regularly by management.

Classification of transactions which contain a financing element (notes 18, 19 and 22)

Transactions for the sale or purchase of commodities may contain a financing element such as extended payment term agreements. 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, i.e. predominantly related to the sale or purchase of commodities as the financing element is insignificant and the entire cash flow will therefore be presented as operating in the statement of cash flow with a corresponding trade receivable or payable in the statement of financial position.

Key estimates and assumptions

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 impact on the financial position and the results of operations, 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.

Valuation of derivative instruments (note 26)

Derivative instruments are carried at fair value and Glencore evaluates the quality and reliability of the assumptions and data used to measure fair value in the three hierarchy levels, Level 1, 2 and 3, as prescribed by IFRS 13 Fair Value Measurement. Fair values are determined in the following ways: externally verified via comparison to quoted market prices in active markets (Level 1); by using models with externally verifiable inputs (Level 2); or by using alternative procedures such as comparison to comparable instruments and/or using models with unobservable market inputs requiring Glencore to make market-based assumptions (Level 3). Level 3 inputs therefore include the highest level of estimation uncertainty.

Depreciation and amortisation of mineral and petroleum rights, deferred mining costs and plant and equipment (note 7)

Mineral and petroleum rights, deferred mining costs and certain plant and equipment are depreciated/amortised using the Units of Production basis ("UOP"). The calculation of the UOP rate of depreciation/amortisation, and therefore the annual charge to operations, can fluctuate from initial estimates. This could generally result when there are significant changes in any of the factors or assumptions used in estimating mineral or petroleum reserves and resources, notably changes in the geology of the reserves and resources and assumptions used in determining the economic feasibility of the reserves. Such changes in reserves and resources could similarly impact the useful lives of assets depreciated on a straight-line basis, where those lives are limited to the life of the project, which in turn is limited to the life of the underlying reserves and resources. Estimates of proven and probable reserves and resources are prepared by experts in extraction, geology and reserve determination. Assessments of UOP rates against the estimated reserve and resource base and the operating and development plan are performed regularly.

Impairments (notes 3, 5, 7, 8 and 9)

Investments in associates and joint ventures, other investments, 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 may not be fully recoverable or at least annually for goodwill and other indefinite life intangible assets. If an asset's recoverable amount is less than the asset's carrying amount, an impairment loss is recognised in the consolidated statement of income. Future cash flow estimates which are used to calculate the asset's fair value are discounted using asset specific discount rates and are based on expectations about future operations, primarily comprising estimates about production and sales volumes, commodity prices (considering current and historical prices, price trends and related factors), reserves and resources, operating, rehabilitation and restoration costs and capital expenditures. Estimates are reviewed regularly by management. Changes in such estimates and in particular, deterioration in the pricing outlook, could impact the recoverable values of these assets, whereby some or all of the carrying amount may be impaired or the impairment charge reduced (if pricing outlook improves significantly) with the impact recorded in the statement of income.

Notes to the financial statements

1. ACCOUNTING POLICIES (continued)

Restoration, rehabilitation and decommissioning costs (note 20)

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, 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, static cost estimates of the future potential cash outflows based on, current studies of the expected rehabilitation activities and timing, assuming third party contractor rates and existing lives of operations are prepared. These static/deterministic forecasts are then discounted to their present value using a rate specific to the liability which is comprised of an estimate of the country specific risk free rate and adjustments based on management's judgements and experience for potential prolongation of the underlying timing assumptions and an anticipated benefit of eventually realising costs lower than those estimated.

Any changes in the expected future costs 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.

Fair value measurements (notes 9, 11, 24, 25 and 26)

In addition to recognising derivative instruments at fair value, as discussed above, an assessment of the fair value of assets and liabilities is also required in accounting for other transactions, most notably, business combinations and marketing inventories and disclosures related to fair values of financial assets and liabilities. In such instances, fair value measurements are estimated based on the amounts for which the assets and liabilities could be exchanged at the relevant transaction date or reporting period end, and are therefore not necessarily reflective of the likely cash flow upon actual settlements. Where fair value measurements cannot be derived from publicly available information, they are estimated using models and other valuation methods. To the extent possible, the assumptions and inputs used take into account externally verifiable inputs. However, such information is by nature subject to uncertainty, particularly where comparable market-based transactions often do not exist.

New and revised standards not yet effective

At the date of authorisation of these consolidated financial statements, the following new and revised IFRS standards, which are applicable to Glencore, were issued but are not yet effective:

Amendments to IAS 12 – Recognition of deferred tax assets for unrealised losses – effective for year ends beginning on or after 1 January 2017

The amendments to IAS 12 clarify the requirement on recognition of deferred tax assets related to debt instruments measured at fair value. The Group is assessing the potential impact of the change on its consolidated financial statements and so far, it does not expect any significant impact.

Amendments to IFRS 2 – Classification and measurement of share-based payment transactions – effective for year ends beginning on or after 1 January 2018

The amendments to IFRS 2 Share-based payments clarify the classification and measurement of share-based payments transactions with respect to accounting for cash-settled share-based payment transactions that include a performance obligation, the classification of share-based payment transactions with net settlement features and the accounting for modifications of share-based payment transactions from cash-settled to equity-settled. The Group is assessing the potential impact of the change on its consolidated financial statements and so far, it does not expect any significant impact.

IFRS 9 – Financial Instruments – effective for year ends beginning on or after 1 January 2018

IFRS 9 modifies the classification and measurement of certain classes of financial assets and liabilities. The most significant change is to rationalise from four to two primary categories of financial assets, reflecting the business model in which assets are managed and their cash flow characteristics. The Group's implementation activities to date have principally focussed on gaining an understanding of the likely effects of IFRS 9 given the nature of financial instruments currently held by the Group. The Group is assessing the potential impact of the change on its consolidated financial statements and so far, it does not expect any significant impact.

IFRS 15 – Revenue from Contracts with Customers – effective for year ends beginning on or after 1 January 2018

IFRS 15 applies to revenue from contracts with customers and replaces all of the revenue standards and interpretations in IFRS. The standard outlines the principles an entity must apply to measure and recognise revenue and the related cash flows. The Group is currently in the process of completing its review of the potential impact of adopting IFRS 15 with the primary focus being to understand whether the timing and amount of revenue recognised could differ under IFRS 15. As the majority of the Group's revenue is derived from arrangements in which the transfer of risks and rewards coincides with the fulfilment of performance obligations, no material changes in respect of timing and amount of revenue currently recognised by the Group are expected.

IFRS 16 – Leases – effective for year ends beginning on or after 1 January 2019

IFRS 16 provides a comprehensive model for identification of lease arrangements and their treatment (on-balance sheet) in the financial statements of both lessees and lessors. It supersedes IAS 17 Leases and its associated interpretative guidance. Under the new standard, a lessee is required to recognise all lease assets and liabilities (including those currently classified as operating leases) on the statement of financial position at the present value of the unavoidable lease payments and an amortisation charge on the leased assets and an interest charge on the leased liabilities. Although the Group is still evaluating the potential impact of IFRS 16 on the financial statements and performance measures, including an assessment of whether any arrangements the Group enters into will be considered a lease under IFRS 16, it is expected IFRS 16 will increase the Group's recognised assets and liabilities and affect the presentation and timing of related depreciation and interest charges in the consolidated statement of income/loss. Upon adoption of IFRS 16, the most significant impact is likely to be the present value of the operating lease commitments currently disclosed in note 28 being shown as a liability on the statement of financial position together with an asset representing the right of use.

Basis of preparation

The financial statements are prepared under the historical cost convention except for the revaluation of certain financial assets, liabilities and marketing inventories 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 generally based on the fair value of the consideration given in exchange for goods and services. The principal accounting policies adopted are set out below.

The Directors have assessed that they have, at the time of approving the financial statements, a reasonable expectation that the Group has adequate resources to continue in operational existence for the 12 months from the date of approval of the 2016 Annual Report and Accounts. Therefore they continue to adopt the going concern basis of accounting in preparing these financial statements. Also see page 112. Further information on Glencore's objectives, policies and processes for managing its capital and financial risks are detailed in note 24.

All amounts are expressed in millions of United States Dollars, unless otherwise stated, consistent with the predominant functional currency of Glencore's operations.

Comparative information

Certain comparative information for the year ended 31 December 2015 has been restated for the effects of the application of IFRS 5 Non-current assets held for sale and discontinued operations, see note 23. The nature of each change reflected in the restated financial statements is as follows:

- All income and expense items relating to the Agricultural products business segment ("Glencore Agri") have been removed from the individual line items in the statement of income and the statement of other comprehensive income. The net income of Glencore Agri, until close of transaction on 1 December 2016, is presented as a single amount in the line item – "Income from discontinued operations – net of tax".

The statement of financial position, statement of changes in equity and cash flow have not been restated as there is no requirement to do so.

Inventory with a net carrying value of $504 million disclosed under deferred mining cost within property, plant and equipment in 2015 were reclassified to non-current inventories to better reflect the nature of these items.

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.

Notes to the financial statements

1. ACCOUNTING POLICIES (continued)

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 IAS 39, when applicable, or the cost on the initial recognition of an investment in an associate or a joint venture.

Investments in associates and joint ventures

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

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

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

Joint operations

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

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

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

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.

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 acquire (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 cash-generating units ("CGU") that are expected to benefit from the synergies of the combination. CGUs to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata based on the carrying amount of each asset in the unit. Any impairment loss is recognised directly in profit or loss. An impairment loss recognised for goodwill is not able to be reversed in subsequent periods.

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

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

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

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

Revenue recognition

Revenue is recognised when Glencore has transferred to the buyer all significant risks and rewards of ownership of the assets sold. Revenue excludes any applicable sales taxes and is recognised at the fair value of the consideration received or receivable to the extent that it is probable that economic benefits will flow to Glencore and the revenues and costs can be reliably measured. In most instances sales revenue 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.

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. 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.

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 accrual basis in accordance with the substance of the relevant agreement. Interest income is accrued on a time basis, by reference to the principal outstanding and the applicable effective interest rate.

Foreign currency translation

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

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. The resulting exchange differences are recorded in the consolidated statement of income.

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 US dollar are translated into US dollars using year-end exchange rates, while their statements of income are translated using average rates of exchange for the year.

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. 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.

Notes to the financial statements

1. ACCOUNTING POLICIES (continued)

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.

Retirement benefits

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.

Glencore uses the Projected Unit Credit Actuarial method to determine the present value of its defined benefit obligations and the related current service cost and, where applicable, past service cost. Net interest is calculated by applying the discount rate at the beginning of the period to the net defined benefit liability or asset.

The cost of providing pensions is charged to the consolidated statement of income so as to recognise current and past service costs, interest cost on defined benefit obligations, and the effect of any curtailments or settlements, net of expected returns on plan assets. Actuarial gains and losses are recognised directly in other comprehensive income and will not be reclassified to the consolidated statement of income. The retirement benefit obligation/asset recognised in the consolidated statement of financial position represents the actual deficit or surplus in Glencore's defined benefit plans. Any surplus resulting from this calculation is limited to the present value of any economic benefits available in the form of refunds from the plans or reductions in future contributions to the plans.

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

Share-based payments

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.

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 but which 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.

Property, plant and equipment

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

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

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

Buildings	10 – 45 years
Freehold land	not depreciated
Plant and equipment	3 – 30 years/UOP
Mineral and petroleum rights	UOP
Deferred mining costs	UOP

Assets under finance leases, where substantially all the risks and rewards of ownership transfer to the Group as lessee, are capitalised and amortised over their expected useful lives on the same basis as owned assets or, where shorter, the term of the relevant lease. All other leases are classified as operating leases, the expenditures for which are charged against income over the accounting periods covered by the lease term.

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.

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.

Notes to the financial statements

1. ACCOUNTING POLICIES (continued)

Deferred stripping costs

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

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

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

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

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

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

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

Biological assets

Biological assets are carried at their fair value less estimated selling costs. Any changes in fair value less estimated selling costs are included in the consolidated statement of income in the period in which they arise.

Restoration, rehabilitation and decommissioning

Restoration, rehabilitation and decommissioning costs arising from the installation of plant and other site preparation work, discounted using a risk adjusted discount rate 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 the reduction in the provision is not greater than the depreciated capitalised cost of the related asset, in which case the capitalised cost is reduced to Nil and the remaining adjustment recognised in the consolidated statement of income. In the case of closed sites, changes to estimated costs are recognised immediately in the consolidated statement of income.

Intangible assets

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

Internally generated intangibles are not capitalised. Instead, the related expenditure is recognised in the consolidated statement of income and other comprehensive 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 depreciated, Glencore has no identifiable intangible assets with an indefinite life.

The major categories of intangibles are amortised on a straight-line basis as follows:

Port allocation rights	30 – 40 years
Licences, trademarks and software	3 – 20 years
Royalty arrangements	30 – 40 years
Acquired offtake arrangements	5 – 10 years

Other investments

Equity investments, other than investments in Associates, are recorded at fair value unless such fair value is not reliably determinable in which case they are carried at cost. Changes in fair value are recorded in the consolidated statement of income unless they are classified as available for sale, in which case fair value movements are recognised in other comprehensive income and are subsequently recognised in the consolidated statement of income when realised by sale or redemption, or when a reduction in fair value is judged to be a significant or prolonged decline.

Impairment

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. 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 test involves determining whether the carrying amounts are in excess of their recoverable amounts. An asset's recoverable amount is determined as the higher of its fair value less costs of disposal and its value in use. 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.

An impairment loss is reversed in the consolidated statement of income if there is a change in the estimates used to determine the recoverable amount since the prior impairment loss was recognised. The carrying amount is increased to the recoverable amount but not beyond the carrying amount net of depreciation or amortisation which would have arisen if the prior impairment loss had not been recognised. Goodwill impairments and impairments of available for sale equity investments cannot be subsequently reversed.

Provisions

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

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

Onerous contracts

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

Unfavourable contracts

An unfavourable contract is considered to exist when Glencore, in a business combination, acquires a contract under which the terms of the contract require Glencore to sell products or purchase 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 income over the term of the contract.

Inventories

The vast majority of inventories held by the marketing activities ("marketing inventories") are valued at fair value less costs of disposal with the remainder valued at the lower of cost or net realisable value. Unrealised gains and losses from changes in fair value are reported in cost of goods sold.

Inventories held by the industrial activities ("production inventories") are valued at the lower of cost or net realisable value. Cost is determined using the first-in-first-out ("FIFO") or the weighted average method and comprises material costs, labour costs and allocated production related overhead costs. Financing and storage costs related to inventory are expensed as incurred.

Cash and cash equivalents

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.

Financial instruments

Financial assets are classified as either financial assets at fair value through profit or loss, loans and receivables, held-to-maturity investments or available for sale financial assets depending upon the purpose for which the financial assets were acquired. Financial assets are initially recognised at fair value on the trade date, including, in the case of instruments not recorded at fair value through profit or loss, directly attributable transaction costs. Subsequently, financial assets are carried at fair value (other investments, derivatives and marketable securities) or amortised cost less impairment (accounts receivable and advances and loans). Financial liabilities other than derivatives are initially recognised at fair value of consideration received net of transaction costs as appropriate and subsequently carried at amortised cost.

Impairment of financial assets

Financial assets, other than those at FVTPL, are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

For financial assets carried at amortised cost, the amount of the impairment loss recognised is the difference between the asset's carrying amount and the present value of estimated future cash flows. The amount of the loss is recognised in the statement of income.

For financial assets that are carried at cost, the amount of the impairment loss is measured as the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the current market rate of return for a similar financial asset. Such impairment loss will not be reversed in subsequent periods.

Derecognition of financial assets

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.

On derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in other comprehensive income and accumulated in equity is recognised in profit or loss.

Notes to the financial statements

1. ACCOUNTING POLICIES (continued)

Own shares

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

Derivatives and hedging activities

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

Gains and losses on derivative instruments for which hedge accounting is not applied, other than the revenue adjustment mechanism embedded within provisionally priced sales, 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.

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 as a 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 "host contract". Such combinations are known as hybrid instruments and at the date of issuance, the embedded derivative is separated from the host contract and accounted for as a standalone derivative if the criteria for separation are met. The host contract is accounted for in accordance with its relevant accounting policy.

2. SEGMENT INFORMATION

Glencore is organised and operates on a worldwide basis in three core business segments – Metals and minerals, Energy products and Agricultural products, with each business segment responsible for the marketing, sourcing, hedging, logistics and industrial investment activities of their respective products and reflecting the structure used by Glencore's management to assess the performance of Glencore.

The business segments' contributions to the Group are primarily derived from the net margin or premium earned from physical marketing activities (net sale and purchase of physical commodities), provision of marketing and related value-add services and the margin earned from industrial asset activities (net resulting from the sale of physical commodities over the cost of production and/or cost of sales) and comprise the following underlying key commodities:

- Metals and minerals: Zinc, copper, lead, alumina, aluminium, ferroalloys, nickel, cobalt and iron ore, including smelting, refining, mining, processing and storage related operations of the relevant commodities;
- Energy products: Crude oil, oil products, steam coal and metallurgical coal, including investments in coal mining and oil production operations, ports, vessels and storage facilities; and
- Agriculture products: Wheat, corn, canola, barley, rice, oil seeds, meals, edible oils, biofuels, cotton and sugar supported by investments in farming, storage, handling, processing and port facilities.

Corporate and other: consolidated statement of income amount represents unallocated Group related expenses (including variable pool bonus charges). Statement of financial position amounts represent Group related balances.

The financial performance of the segments is principally evaluated with reference to Adjusted EBIT/EBITDA which is the net result of revenue less cost of goods sold and selling and administrative expenses, plus share of income from other associates and joint ventures, dividend income and the attributable share of underlying Adjusted EBIT/EBITDA of certain associates and joint ventures which are accounted for internally by means of proportionate consolidation, excluding significant items. In addition, the segment information includes Glencore Agri, which has been disclosed as a discontinued operation until close of transaction on 1 December 2016, see note 23.

The accounting policies of the operating segments are the same as those described in note 1 with the exception of certain associates and joint ventures. Under 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) and Glencore Agri (50% owned) are considered to be joint ventures. 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. Under IFRS 5, the Agricultural business segment is required to be presented as a discontinued operation following the agreed sale of a 50% interest in Glencore Agri, which completed on 1 December 2016 (see note 23). Prior to completion of the sale, Glencore evaluated the performance of this segment under the full consolidation method, consistent with prior periods. The balances presented for internal reporting purposes are reconciled to Glencore's statutory disclosures as outlined in the following tables.

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.

2016 US$ million	Metals and minerals	Energy products	Agricultural products[1]	Corporate and other	Total
Revenue – Marketing activities[2]	42,142	81,872	18,678	–	**142,692**
Revenue – Industrial activities	24,196	7,149	3,292	22	**34,659**
Revenue	**66,338**	**89,021**	**21,970**	**22**	**177,351**
Marketing activities					
Adjusted EBITDA	1,586	959	454	(74)	**2,925**
Depreciation and amortisation	(24)	(50)	(36)	–	**(110)**
Adjusted EBIT	**1,562**	**909**	**418**	**(74)**	**2,815**
Industrial activities					
Adjusted EBITDA	6,030	1,503	138	(328)	**7,343**
Depreciation and amortisation[3]	(3,848)	(2,345)	(34)	(1)	**(6,228)**
Adjusted EBIT	**2,182**	**(842)**	**104**	**(329)**	**1,115**
Total Adjusted EBITDA	**7,616**	**2,462**	**592**	**(402)**	**10,268**
Depreciation and amortisation	**(3,872)**	**(2,395)**	**(70)**	**(1)**	**(6,338)**
Total Adjusted EBIT	**3,744**	**67**	**522**	**(403)**	**3,930**
Share of associates' significant items[4,5]					(477)
Unrealised intergroup profit elimination adjustments[4,6]					(374)
Mark-to-market valuation on certain coal hedging contracts[4,7]					(225)
Gains on disposals and investments[8]					2,333
Other expense – net[9]					(1,615)
Interest expense – net[10]					(1,619)
Income tax expense[11]					(1,017)
Income for the year from continuing and discontinued operations					**936**

1 *Includes Glencore's proportionate share of the Agricultural products business (50%) since the disposal of Glencore Agri on 1 December 2016, see note 23.*

2 *Balance is net of intra-segment sales arising from transactions between the Industrial and Marketing activities. Metals and minerals segment: $16,602 million, Energy products segment: $2,263 million and Agricultural products: $2,253 million.*

3 *Includes an adjustment of $705 million to depreciation and amortisation expenses related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: $517 million, Energy products segment $178 million and Agricultural products $10 million, see reconciliation table below.*

4 *Refer to Glossary for definition of significant items.*

5 *Share of associates' significant items comprise Glencore's share of significant charges booked directly by various associates, primarily impairment charges recognised within coal shipping investments and $345 million of impairment related to Cerrejón, see reconciliation table below.*

6 *Represents the required adjustment to eliminate unrealised profit or losses arising on intergroup transactions. 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.*

7 *Represents an accounting measurement mismatch between the fair value of coal derivative positions in respect of portfolio risk management/hedging activities initiated in Q2 2016 and the anticipated future revenue to be generated from the sale of future unsold coal production. The derivative positions manage forward sales price exposure relating to some 11 million tonnes of future attributable coal production, which is expected to be settled before 31 December 2017. The derivative positions include pre-existing trading contracts, for which mark-to-market movements, up until the time of them being ring-fenced for hedging activities, were included in trading results. These transactions were not able to be designated as hedging instruments under IFRS, which would have allowed for the deferment of any income statement effect until performance of the underlying future sale transactions. The fair value movements in the derivative portfolio will be offset against future revenue in the segment information as the related sales (of production) are realised.*

8 *Gains on disposals and investments of $452 million as disclosed in note 3, $33 million gains on disposals and investments as reported by discontinued operations and $1,848 million gain on disposal of discontinued operations, see note 23.*

9 *Other expense – net of $1,589 million as disclosed in note 4 and $26 million of other expenses related to discontinued operations, see note 23.*

10 *Includes an adjustment for net finance costs of $70 million related to discontinued operations, see note 23, and $16 million related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: net finance costs of $12 million, Energy products segment: net finance costs of $5 million and Agricultural products segment: net finance income of $1 million, see reconciliation table below.*

11 *Includes an adjustment for income tax expenses of $131 million related to discontinued operations, see note 23, and $248 million related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: $216 million, Energy products segment: $16 million and Agricultural products segment: $16 million, see reconciliation table below.*

Notes to the financial statements

2. SEGMENT INFORMATION (continued)

2015 US$ million	Metals and minerals	Energy products	Agricultural products (Discontinued)	Corporate and other	Total
Revenue – Marketing activities[1]	41,151	75,206	20,617	–	**136,974**
Revenue – Industrial activities	24,782	8,406	2,529	4	**35,721**
Revenue	**65,933**	**83,612**	**23,146**	**4**	**172,695**
Marketing activities					
Adjusted EBITDA	1,280	826	584	(30)	**2,660**
Depreciation and amortisation	(25)	(48)	(123)	–	**(196)**
Adjusted EBIT	**1,255**	**778**	**461**	**(30)**	**2,464**
Industrial activities					
Adjusted EBITDA	4,030	2,269	150	(415)	**6,034**
Depreciation and amortisation[2]	(3,882)	(2,357)	(87)	–	**(6,326)**
Adjusted EBIT	**148**	**(88)**	**63**	**(415)**	**(292)**
Total Adjusted EBITDA	**5,310**	**3,095**	**734**	**(445)**	**8,694**
Depreciation and amortisation	**(3,907)**	**(2,405)**	**(210)**	**–**	**(6,522)**
Total Adjusted EBIT	**1,403**	**690**	**524**	**(445)**	**2,172**
Share of associates' significant items[3,4]					(88)
Unrealised intergroup loss elimination adjustments[3,5]					445
Losses on disposals and investments[6]					(994)
Other expense – net[7]					(7,998)
Interest expense – net[8]					(1,391)
Income tax expense[9]					(260)
Loss for the year from continuing and discontinued operations					**(8,114)**

1 *Balance is net of intra-segment sales arising from transactions between the Industrial and Marketing activities. Metals and minerals segment: $17,843 million, Energy products segment: $2,318 million and Agricultural products segment: $1,847 million.*

2 *Includes an adjustment of $687 million to depreciation and amortisation expenses related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: $501 million and Energy products segment: $186 million, see reconciliation table below.*

3 *Refer to Glossary for definition of significant items.*

4 *Share of associates' significant items comprise Glencore's share of significant charges booked directly by various associates, predominantly Century.*

5 *Represents the required adjustment to eliminate unrealised profit or losses arising on intergroup transactions. 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.*

6 *See note 3.*

7 *Other expense – net items of $7,928 million as disclosed in note 4 and $70 million of other expenses related to discontinued operations, see note 23.*

8 *Includes an adjustment for net finance costs of $91 million related to discontinued operations, see note 23, and net finance income of $3 million related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: net finance income of $9 million and Energy products segment: net finance costs of $6 million, see reconciliation table below.*

9 *Includes an adjustment for income tax expenses of $107 million related to discontinued operations, see note 23, and $162 million to income tax expenses related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: $103 million and Energy products segment: $59 million, see reconciliation table below.*

2016 US$ million	Metals and minerals	Energy products	Agricultural products	Corporate and other	Total
Current assets	23,904	17,456	–	(466)	**40,894**
Current liabilities	(13,853)	(18,902)	–	(582)	**(33,337)**
Allocatable current capital employed	**10,051**	**(1,446)**	**–**	**(1,048)**	**7,557**
Property, plant and equipment	32,635	20,795	–	396	**53,826**
Intangible assets	3,671	3,028	–	17	**6,716**
Investments in associates and other investments	7,963	3,721	3,155	–	**14,839**
Non-current advances and loans	1,737	1,737	–	9	**3,483**
Inventory	564	–	–	–	**564**
Allocatable non-current capital employed	**46,570**	**29,281**	**3,155**	**422**	**79,428**
Other assets[1]			–	4,278	**4,278**
Other liabilities[2]			–	(47,482)	**(47,482)**
Total net assets	**56,621**	**27,835**	**3,155**	**(43,830)**	**43,781**
Capital expenditure – Marketing activities	14	27	96	1	**138**
Capital expenditure – Industrial activities[3]	2,695	571	44	49	**3,359**
Capital expenditure	**2,709**	**598**	**140**	**50**	**3,497**

1 *Other assets include deferred tax assets, marketable securities and cash and cash equivalents.*

2 *Other liabilities include borrowings, non-current deferred income, deferred tax liabilities, non-current provisions and non-current financial liabilities.*

3 *Includes an adjustment to capital expenditure of $407 million related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: $359 million Energy products segment: $33 million and Agricultural products segment: $15 million, see reconciliation table below.*

2015 US$ million	Metals and minerals	Energy products	Agricultural products	Corporate and other	Total
Current assets	21,707	12,131	5,720	(106)	**39,452**
Current liabilities	(10,848)	(15,913)	(2,685)	(309)	**(29,755)**
Allocatable current capital employed	**10,859**	**(3,782)**	**3,035**	**(415)**	**9,697**
Property, plant and equipment	34,161	23,443	2,836	334	**60,774**
Intangible assets	3,695	2,915	889	17	**7,516**
Investments in associates and other investments	8,088	3,926	628	–	**12,642**
Non-current advances and loans	1,414	1,369	114	108	**3,005**
Inventory	504	–	–	–	**504**
Allocatable non-current capital employed	**47,862**	**31,653**	**4,467**	**459**	**84,441**
Other assets[1]				4,592	**4,592**
Other liabilities[2]				(57,387)	**(57,387)**
Total net assets	**58,721**	**27,871**	**7,502**	**(52,751)**	**41,343**
Capital expenditure – Marketing activities	81	17	146	–	**244**
Capital expenditure – Industrial activities[3]	4,149	1,303	98	163	**5,713**
Capital expenditure	**4,230**	**1,320**	**244**	**163**	**5,957**

1 *Other assets include deferred tax assets, marketable securities and cash and cash equivalents.*

2 *Other liabilities include borrowings, non-current deferred income, deferred tax liabilities, non-current provisions and non-current financial liabilities.*

3 *Includes an adjustment to capital expenditure of $244 million related to discontinued operations and $328 million related to presenting certain associates and joint ventures on a proportionate consolidation basis. Metals and minerals segment: $292 million, Energy products segment: $36 million and Agricultural products segment: $244 million, see reconciliation table below.*

Notes to the financial statements

2. SEGMENT INFORMATION (continued)

The reconciliation of revenue, certain associates' and joint ventures' Adjusted EBIT to "Share of net income from associates and joint ventures" and capital expenditure for the years ended 31 December 2016 and 2015 is as follows:

2016 US$ million	Metals and minerals	Energy products	Agricultural products	Corporate and other	Total
Revenue					
Revenue	66,338	89,021	21,970	22	**177,351**
Impact of:					
Presenting certain associates and joint ventures on a proportionate consolidation basis	(1,826)	(607)	(1,085)	–	**(3,518)**
Discontinued operations	–	–	(20,885)	–	**(20,885)**
Revenue – reported measure	**64,512**	**88,414**	**–**	**22**	**152,948**
Share of income from certain associates and joint ventures					
Associates' and joint ventures' Adjusted EBITDA	1,144	240	63	–	**1,447**
Depreciation and amortisation	(517)	(178)	(10)	–	**(705)**
Associates' and joint ventures' Adjusted EBIT	627	62	53	–	**742**
Impairment, net of tax[1]	–	(345)	–	–	**(345)**
Net finance costs	(12)	(5)	1	–	**(16)**
Income tax expense	(216)	(16)	(16)	–	**(248)**
	(228)	(366)	(15)	–	**(609)**
Share of income/(loss) from certain associates and joint ventures	**399**	**(304)**	**38**	**–**	**133**
Share of loss from other associates	(113)	(9)	–	–	**(122)**
Share of income/(loss) from associates and joint ventures[2]	**286**	**(313)**	**38**	**–**	**11**
Capital expenditure					
Capital expenditure	2,709	598	140	50	**3,497**
Impact of:					
Presenting certain associates and joint ventures on a proportionate consolidation basis	(359)	(33)	(15)	–	**(407)**
Capital expenditure – reported measure	**2,350**	**565**	**125**	**50**	**3,090**

1 *Energy products segment comprises an impairment of $345 million, net of taxes of $176 million relating to Cerrejón, resulting from reduced near term production estimates due to increased risk related to the possibility of delays in sourcing approvals as a result of the continued social and environmental challenges to current mine plans.*

2 *Comprises share in earnings of $12 million from marketing activities and losses of $1 million from industrial activities.*

2015 US$ million	Metals and minerals	Energy products	Agricultural products (Discontinued)	Corporate and other	Total Restated[1]
Revenue					
Revenue	65,933	83,612	23,146	4	**172,695**
Impact of:					
Presenting certain associates and joint ventures on a proportionate consolidation basis	(1,578)	(620)	–	–	**(2,198)**
Discontinued operations	–	–	(23,146)	–	**(23,146)**
Revenue – reported measure	**64,355**	**82,992**	**–**	**4**	**147,351**
Share of income from certain associates and joint ventures					
Associates' and joint ventures' Adjusted EBITDA	806	189	–	–	**995**
Depreciation and amortisation	(501)	(186)	–	–	**(687)**
Associates' and joint ventures' Adjusted EBIT	305	3	–	–	**308**
Net finance costs	9	(6)	–	–	**3**
Income tax expense	(103)	(59)	–	–	**(162)**
	(94)	(65)	–	–	**(159)**
Share of income/(loss) from certain associates and joint ventures	**211**	**(62)**	**–**	**–**	**149**
Share of (loss)/income from other associates	(35)	(15)	2	–	**(48)**
Discontinued operations	–	–	(2)	–	**(2)**
Share of income/(loss) from associates and joint ventures[2]	**176**	**(77)**	**–**	**–**	**99**
Capital expenditure					
Capital expenditure	4,230	1,320	244	163	**5,957**
Impact of:					
Presenting certain associates and joint ventures on a proportionate consolidation basis	(292)	(36)	–	–	**(328)**
Discontinued operations	–	–	(244)	–	**(244)**
Capital expenditure – reported measure	**3,938**	**1,284**	**–**	**163**	**5,385**

1 Certain amounts shown here reflect the adjustments made relating to discontinued operations (see note 23).

2 Comprises share in earnings of $80 million from industrial activities and $19 million from marketing activities.

Notes to the financial statements

2. SEGMENT INFORMATION (continued)

Adjusted EBIT is 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 underlying Adjusted EBIT of certain associates and joint ventures and the discontinued Agricultural products segment, excluding significant items. Adjusted EBITDA consists of Adjusted EBIT plus depreciation and amortisation. The reconciliation of Adjusted EBIT/EBITDA to the reported measures is as follows:

US$ million	2016	2015 Restated[1]
Reported measures		
Revenue	152,948	147,351
Cost of goods sold	(149,763)	(144,533)
Selling and administrative expenses	(1,102)	(1,096)
Share of income from associates and joint ventures	11	99
Dividend income	27	25
	2,121	**1,846**
Adjustments to reported measures		
Share of associates' significant items	477	88
Unrealised intergroup profit/(loss) elimination	374	(445)
Mark-to-market valuation on certain coal hedging contracts	225	–
Net finance and income tax expense impact of presenting certain associates and joint ventures on a proportionate consolidation basis	264	159
Adjusted EBIT from discontinued operations	469	524
Adjusted EBIT from continuing and discontinued operations	**3,930**	**2,172**
Depreciation and amortisation from continuing operations	5,573	5,625
Depreciation impact of presenting certain associates and joint ventures on a proportionate consolidation basis	705	687
Depreciation from discontinued operations	60	210
Adjusted EBITDA from continuing and discontinued operations	**10,268**	**8,694**

1 *Certain amounts shown here reflect the adjustments made relating to discontinued operations (see note 23).*

Geographical information

US$ million	2016	2015 Restated[1]
Revenue from third parties[2]		
The Americas	22,401	29,422
Europe	55,021	46,758
Asia	61,060	55,879
Africa	3,934	4,824
Oceania	10,532	10,468
	152,948	**147,351**
Non-current assets[3]		
The Americas	18,713	22,663
Europe	10,434	8,447
Asia	4,895	5,416
Africa	19,596	19,841
Oceania	20,554	23,764
	74,192	**80,131**

1 *Certain amounts shown here reflect the adjustments made relating to discontinued operations (see note 23).*

2 *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 counterpart's ultimate parent and/or final destination of product.*

3 *Non-current assets are non-current assets excluding other investments, advances and loans and deferred tax assets.*

3. GAINS/(LOSSES) ON DISPOSALS AND INVESTMENTS

US$ million	2016	2015
Gain on sale of GRail	430	–
Loss on cessation of control of Optimum	–	(1,034)
Loss on distribution of interest in Lonmin	–	(256)
Gain on sale of other operations	22	296
Total	**452**	**(994)**

GRail

In December 2016, Glencore disposed its New South Wales' coal rail haulage business, resulting in a gain of $430 million (see note 23).

Optimum

In August 2015, the directors of Optimum Coal placed the company under the control and supervision of business rescue practitioners, resulting in the Group ceasing to have control over Optimum. In December 2015, the business rescue practitioners reached agreement to sell the business, which closed in 2016. Due to cessation of control of Optimum, the net assets were deconsolidated, with the fair value of such determined to be $Nil, being the amount to be received. As a result, a loss of $1,034 million was recognised, which includes $311 million of foreign currency translation losses previously recognised in equity and $152 million of related impairments (see note 23).

Lonmin

On 9 June 2015, following approval by shareholders at the Annual General Meeting, Glencore completed the in specie distribution of its 23.9% stake in Lonmin plc. Based on the closing Lonmin share price (a Level 1 valuation technique) at the time of distribution, its fair value was determined to be $298 million and as a result, a $256 million loss on disposal of the investment was recognised (see notes 9 and 16).

Other

In 2015, the gain on sale of other operations arose primarily from the disposals of the Tampakan and Falcondo operations in August 2015, which resulted in a net gain of $192 million and $87 million respectively (see note 23).

4. OTHER EXPENSE – NET

US$ million	Notes	2016	2015 Restated[1]
Impairments	5	(1,268)	(7,104)
Net changes in mark-to-market valuations on investments held for trading		(121)	(265)
Net foreign exchange losses		(70)	(128)
Legal settlement		(92)	(89)
Loss on metal leak		–	(235)
Gain on bond buy-backs		–	35
Other expense – net[2]		(38)	(142)
Total		**(1,589)**	**(7,928)**

1 *Certain amounts shown here reflect the adjustment made relating to discontinued operations (see note 23).*

2 *"Other expense – net" for the year ended 31 December 2016 comprised of $37 million gain on disposal of property, plant and equipment offset by restructuring and closure costs of $47 million and a settlement of a financial guarantee in relation to Optimum of $28 million. "Other expense – net" for the year ended 31 December 2015 mainly comprises restructuring and closure costs.*

Together with foreign exchange movements and mark-to-market movements on investments held for trading, other expense – net includes other significant items of income and expense which due to their non-operational nature or expected infrequency of the events giving rise to them are reported separately from operating segment results. Other expense – net includes, but is not limited to, impairment charges and restructuring and closure costs.

Changes in mark-to-market valuations on investments held for trading – net

Primarily relates to movements on interests in investments classified as held for trading (see note 9) and the ARM Coal non-discretionary dividend obligation (see note 26) carried at fair value. In 2016, positive fair value movements in Glencore's interest in Volcan Compania Minera S.A.A. and Century Aluminum cash-settled equity swaps were offset by the movement in the ARM Coal derivative (see note 26), accounting for the majority of the net expense.

Legal settlement

In September 2016, a subsidiary of the Group reached a settlement with U.S. agencies to pay a penalty of $27 million and retire around $65 million of credits in relation to compliance with a U.S. biofuels programme in the years 2011/12.

In April 2015, OMV Petrom was awarded $89 million related to a dispute over oil deliveries in the early 1990s.

Notes to the financial statements

4. OTHER EXPENSE – NET (continued)

Loss from metal leak

In December 2014, a metal leak in Line 1 of the metallurgical plant at Koniambo was detected and the related production suspended. Following an extensive investigation during H1 2015, it was determined that the furnace would need to be rebuilt/repaired at a cost of approximately $60 million and incremental net operating costs of an additional $175 million were incurred in relation to this incident.

Gain on bond buy-backs

In 2015, Glencore acquired $564 million of outstanding bonds, at a discount to their carrying values, realising a gain of $35 million (see note 18).

5. IMPAIRMENTS

US$ million	Notes	**2016**	2015 Restated[1]
Property, plant and equipment and intangible assets	7/8	(1,268)	(6,028)
Investments	9	–	(193)
Advances and loans – non-current		–	(455)
Trade advances and deposits	12	–	(359)
Non-current inventory and other[2]		–	(69)
Total impairments[3]		**(1,268)**	**(7,104)**

1 *Certain amounts shown here reflect the adjustment made relating to discontinued operations (see note 23).*

2 *These items, if classified by function of expense would be recognised in cost of goods sold.*

3 *Impairments recognised during the year are allocated to Glencore's operating segments as follows: Metals and minerals $50 million (2015: $5,135 million) and Energy products $1,218 million (2015: $1,969 million).*

As part of a regular portfolio review, Glencore carries out an assessment of whether there is an indication of asset impairment 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"), determined by discounted cash flow techniques based on the most recent approved financial budgets and three-year business plans, which are underpinned and supported by life of mine plans of the respective operations. The valuation models use the most recent reserve and resource estimates, relevant cost assumptions generally based on past experience and where possible, market forecasts of commodity price and foreign exchange rate assumptions discounted using operation specific discount rates ranging from 7% – 11% (2015: 6% – 12%). The valuations remain sensitive to price and further deterioration/improvements in the pricing outlook may result in additional impairments/reversals. The determination of FVLCD uses Level 3 valuation techniques for both years.

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

2016

Property, plant and equipment and intangible assets

- Due to changes in estimated reserve life and revised mining plans, the estimated mine life of Tahmoor in Australia (Energy products segment) was reduced from 2020 to 2017. As a result, the carrying value of this operation was impaired by $168 million, to its estimated recoverable amount of $100 million, which is expected to be depleted over the following year as the mine approaches its completion.
- As a result of a write down of appraisal expenditure and certain operational challenges at the Equatorial Guinea oil operations (Energy products segment), an impairment charge of $311 million has been recognised resulting in a remaining recoverable value of $194 million. The valuation remains sensitive to price and further deterioration in the pricing outlook may result in additional impairment. The short- to long-term Brent crude oil price assumptions used in the valuation were between $50 – $75 per barrel and should these fall by 10%, a further $46 million of impairment would be recognised.
- During 2016, Glencore's long-term oil price assumptions were revised downwards, which together with delayed work programmes, resulted in a $622 million impairment of the onshore Chad oil operations (Energy products segment), to their estimated recoverable amount of $1,480 million. The valuation remains sensitive to price and further deterioration in the pricing outlook may result in additional impairment. The short to long-term Brent crude oil price assumptions used in the valuation were between $50 – $75 per barrel and should these fall by 10%, a further $695 million of impairment would be recognised.
- The balance of property, plant and equipment related impairment charges (none of which were individually material) arose due to changes in production and development plans and resulted in impairments of $50 million and $117 million being recognised in our Metals and minerals and Energy products segments respectively.

2015

Property, plant and equipment and intangible assets

- Following the sharp decline in oil prices in 2015, significant amendments were made to Chad's work programme, with the objective of preserving value for the long term, while reducing cash outlays in the near term. This included changes to the fields' capex and production profiles and significantly reducing the number of drilling rigs in operation. As a result, the carrying value of these fields/blocks (Energy products segment) was impaired by $1,031 million, to their estimated recoverable amount of $2,012 million. The valuation remains sensitive to price and further deterioration in the pricing outlook may result in additional impairment. The short- to long-term oil price assumptions used in the valuation were between $40 – $80 per barrel.
- Upon further review and evaluation of the exploration activities on the Tilapia licence in Cameroon (Energy product segment) it was determined that the technical risk of continuing to evaluate/develop the field was unacceptably high and as a result, the full carrying value of $27 million was impaired.
- As a result of the current subdued coking coal market and resulting weak shorter-term price outlook, the Oaky Creek coking coal operations (Energy products segment) were determined to be impaired by $240 million, to their estimated recoverable amount of $959 million, given the relatively short life of one of the relevant mines. The valuation remains sensitive to coking coal prices and further deterioration in the pricing outlook may result in additional impairment. The short- to long-term coking coal price assumptions used in the valuation were between $81 – $135 per metric tonne.
- In Q4 2015, it was determined, for the foreseeable future, to defer the Blakefield North coal project and place the Ravensworth underground coal operations (Energy products segment) on care and maintenance. As a result, the full carrying value of these projects ($82 million) was impaired.
- Due to continued subdued current and long-term nickel prices and the ongoing operational and technical challenges at the Koniambo processing plant, it was determined, post significant line one furnace redesign/repair work, to operate only one processing line (of two) for an extended period of time until it proves itself to be technically robust. As a result of this updated plan and reflecting the lower nickel price environment, Koniambo (Metal and minerals segment) was written down to its recoverable value of $917 million, resulting in a $3,989 million impairment. The valuation remains sensitive to price and further deterioration in the pricing outlook may result in additional impairment. The short- to long-term nickel prices used in the valuation were between $12,500 – $16,000 per metric tonne.
- Sherwin Alumina (Metal and minerals segment) is an alumina production facility located in Corpus Christi, USA. Adverse market conditions resulted in a decrease in its valuation to an estimated recoverable value of $Nil and, as a result, an impairment of $128 million was recognised. Since January 2016, Sherwin has been under United States Chapter 11 proceedings.
- Kabanga (Metal and minerals segment) is an undeveloped nickel deposit in Tanzania, in which Glencore has a 50% interest. During 2015, a sales process was undertaken to find a potential buyer. No acceptable bids were received and as a result the project was written down to $Nil, reflective of the lower nickel price environment noted above, resulting in an impairment of $115 million.
- Following a strategic review of the Komarovskoe (within Kazzinc) gold mining deposit (Metal and minerals segment) it was determined to cease further development and, as a result, the full carrying value of $70 million was impaired.
- Following the placing of Eland Platinum (Metal and minerals segment) on care and maintenance in October 2015 and a further deterioration in platinum prices, it was determined that its recoverable value was $Nil and, as a result, an impairment of $77 million was recognised.
- The London Metal Exchange ("LME") proposed changes to its warehousing regulations in a further attempt to reduce metal queues via increasing load-out rates and capping longer-term rental income streams. As a result, the goodwill of $169 million relating to the Pacorini metals warehousing business (Metals and minerals segment) was impaired by $119 million to a recoverable value of $50 million (see notes 8 and 9).
- The balance of the property, plant and equipment related impairment charges (none of which were individually material) arose due to changes in production and development plans and resulted in impairments of $85 million and $65 million being recognised in our Metals and minerals and Energy products segments respectively.

Investments

Based on lower mid- to long-term aluminium price assumptions, it was determined that the recoverable value of our investment in Century Aluminum Company was $592 million with a resulting impairment of $162 million. The recoverable amount was determined using similar valuation techniques and inputs described above. The valuation remains sensitive to price and further deterioration in the pricing outlook may result in additional impairment. The short- to long-term aluminium prices used in the valuation were between $1,550 – $1,790 per metric tonne.

Advances and loans – non-current

- In November 2015, Glencore and Russneft effected a debt to equity conversion which resulted in Glencore exchanging its loan balance of $984 million and investments in operating subsidiaries carried at $Nil for a 46% interest in Russneft. The fair value of the equity received was determined to be $685 million, resulting in a $300 million impairment recognised upon settlement of the loan.
- In December 2015, an impairment of $155 million was recognised reflecting non-performance of contractual terms and rescheduling of the timing in product supply and a recoverable value provision in respect of other advances and loans.

Notes to the financial statements

6. INCOME TAXES

Income taxes consist of the following:

US$ million	2016	2015 Restated[1]
Current income tax expense	**(765)**	(365)
Adjustments in respect of prior year income tax	**3**	30
Deferred income tax credit	**117**	354
Adjustments in respect of prior year deferred income tax	**7**	(10)
Total tax (expense)/credit reported in the statement of income/(loss)	**(638)**	9
Current income tax (expense)/credit recognised directly in other comprehensive income	**–**	–
Deferred income tax credit/(expense) recognised directly in other comprehensive income	**24**	(77)
Total tax credit/(expense) recognised directly in other comprehensive income	**24**	(77)

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

US$ million	2016	2015 Restated[1]
Loss before income taxes and attribution from continuing operations	(549)	(8,379)
Income before income taxes and attribution from discontinued operations	2,254	363
Income/(loss) before income taxes and attribution from continuing and discontinued operations	**1,705**	**(8,016)**
Less: Share of income from associates and joint ventures from continuing operations	(11)	(99)
Less: Share of income from associates and joint ventures from discontinued operations	(15)	(2)
Parent Company's and subsidiaries' income/(loss) before income tax and attribution from continuing and discontinued operations	**1,679**	**(8,117)**
Income tax (expense)/credit calculated at the Swiss income tax rate of 15% (2015: 15%)	(252)	1,218
Tax effects of:		
Different tax rates from the standard Swiss income tax rate	205	(154)
Tax exempt income ($160 million (2015: $326 million) from recurring items and $283 million (2015: $15 million) from non-recurring items)	443	341
Items not tax deductible ($365 million (2015: $618 million) from recurring items and $269 million (2015: $424 million) from non-recurring items)	(634)	(1,042)
Foreign exchange fluctuations	(19)	(307)
Changes in tax rates	3	24
Utilisation and changes in recognition of tax losses and temporary differences	(41)	(24)
Tax losses not recognised	(483)	(175)
Adjustments in respect of prior years	10	20
Other	(1)	1
Income tax expense	**(769)**	**(98)**
Income tax (expense)/credit reported in the statement of income/(loss)	(638)	9
Income tax expense attributable to discontinued operations	(131)	(107)

1 Certain amounts shown here reflect the adjustments made relating to discontinued operations (see note 23).

The non-tax deductible items of $634 million (2015: $1,042 million) primarily relate to non-deductible exploration charges, financing costs, impairments and various other expenses. The impact of tax exempt income of $443 million (2015: $341 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. In 2016, in relation to our Australian tax group, an election was finalised to change the tax functional currency to align with the accounting functional currency.

Deferred taxes as at 31 December 2016 and 2015 are attributable to the items in the table below:

US$ million	Notes	2016	2015
Deferred tax assets[1]			
Tax losses carried forward		1,653	1,680
Other		107	166
Total		**1,760**	**1,846**
Deferred tax liabilities[1]			
Depreciation and amortisation		(5,546)	(5,483)
Mark-to-market valuations		(76)	(238)
Other		(42)	(56)
Total		**(5,664)**	**(5,777)**
Total Deferred tax – net		**(3,904)**	**(3,931)**
Reconciliation of deferred tax – net			
1 January		(3,931)	(4,768)
Recognised in income for the year from continuing and discontinued operations		52	345
Recognised in other comprehensive income from continuing and discontinued operations		24	(77)
Business combination	23	–	17
Disposal of subsidiaries	23	100	205
Effect of foreign currency exchange movements		(130)	349
Other		(19)	(2)
31 December		**(3,904)**	**(3,931)**

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 recognised for tax losses carried forward only to the extent that realisation of the related tax benefit is probable. As at 31 December 2016, $2,898 million (2015: $3,736 million) of deferred tax assets related to available loss carry forwards have been brought to account, of which $1,653 million (2015: $1,680 million) are disclosed as deferred tax assets with the remaining balance being offset against deferred tax liabilities arising in the same respective entity. $1,241 million (2015: $1,149 million) of net deferred tax assets arise in entities, primarily domiciled in Switzerland and the DRC that have been loss making for tax purposes in either 2016 or 2015. 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 and that 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.

The recognised losses carried forward in Switzerland primarily relate to non-recurring events in 2011 and 2012. Based on the core business activities conducted in Switzerland, sufficient taxable profits are expected to fully utilise the recognised tax losses prior to expiration.

The losses carried forward in the DRC have an unlimited carry forward period, subject to an annual utilisation limitation. The DRC entity has temporarily ceased operations to complete facility improvements.

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	2016	2015
1 year	34	153
2 years	320	69
3 years	2,408	534
Thereafter	13,507	16,266
Unlimited	2,149	1,444
Total	**18,418**	**18,466**

As at 31 December 2016, unremitted earnings of $40,088 million (2015: $41,285 million) have been retained by subsidiaries for reinvestment. No provision is made for income taxes that would be payable upon the distribution of such earnings.

Notes to the financial statements

7. PROPERTY, PLANT AND EQUIPMENT

US$ million	Notes	Freehold land and buildings	Plant and equipment	Mineral and petroleum rights	Exploration and evaluation	Deferred mining costs	Total
Gross carrying amount:							
1 January 2016		5,326	56,037	20,579	2,337	2,393	**86,672**
Business combination	23	22	37	–	–	–	**59**
Disposal of subsidiaries	23	(694)	(4,012)	(712)	–	(95)	**(5,513)**
Additions		62	2,606	110	–	296	**3,074**
Disposals		(85)	(409)	(14)	–	(14)	**(522)**
Effect of foreign currency exchange movements		28	401	303	–	1	**733**
Other movements		149	(38)	66	6	(219)	**(36)**
31 December 2016		**4,808**	**54,622**	**20,332**	**2,343**	**2,362**	**84,467**
Accumulated depreciation and impairment:							
1 January 2016		995	19,067	4,324	784	728	**25,898**
Disposal of subsidiaries	23	(137)	(1,284)	(224)	–	(80)	**(1,725)**
Depreciation		263	4,063	978	–	233	**5,537**
Disposals		(44)	(404)	(3)	–	(2)	**(453)**
Impairments	5	–	807	105	351	–	**1,263**
Effect of foreign currency exchange movements		3	85	50	–	–	**138**
Other movements		(19)	58	(11)	3	(48)	**(17)**
31 December 2016		**1,061**	**22,392**	**5,219**	**1,138**	**831**	**30,641**
Net book value 31 December 2016		**3,747**	**32,230**	**15,113**	**1,205**	**1,531**	**53,826**

US$ million	Notes	Freehold land and buildings	Plant and equipment	Mineral and petroleum rights	Exploration and evaluation	Deferred mining costs	Total
Gross carrying amount:							
1 January 2015		5,568	52,840	22,505	2,196	2,330	**85,439**
Business combination	23	85	201	–	–	–	**286**
Disposal and cessation of control of subsidiaries	23	(125)	(597)	(541)	–	–	**(1,263)**
Additions		121	4,534	428	147	355	**5,585**
Disposals		(34)	(476)	(14)	–	(4)	**(528)**
Effect of foreign currency exchange movements		(131)	(1,300)	(843)	–	–	**(2,274)**
Reclassification to non-current inventory[1]		–	–	–	–	(607)	**(607)**
Other movements		(158)	835	(956)	(6)	319	**34**
31 December 2015		**5,326**	**56,037**	**20,579**	**2,337**	**2,393**	**86,672**
Accumulated depreciation and impairment:							
1 January 2015		775	10,405	2,887	681	581	**15,329**
Depreciation		251	4,168	1,028	–	259	**5,706**
Disposal and cessation of control of subsidiaries	23	(22)	(166)	(89)	–	–	**(277)**
Disposals		(6)	(416)	(5)	–	–	**(427)**
Impairments	5	18	5,147	641	74	–	**5,880**
Effect of foreign currency exchange movements		(16)	(227)	(102)	–	–	**(345)**
Reclassification to non-current inventory[1]		–	–	–	–	(103)	**(103)**
Other movements		(5)	156	(36)	29	(9)	**135**
31 December 2015		**995**	**19,067**	**4,324**	**784**	**728**	**25,898**
Net book value 31 December 2015		**4,331**	**36,970**	**16,255**	**1,553**	**1,665**	**60,774**

1 *Represents a net reclassification of $504 million, including net realisable value adjustments of $103 million, from deferred mining costs to non-current inventory to better reflect the nature of these items (see note 11).*

Plant and equipment includes expenditure for construction in progress of $4,599 million (2015: $5,011 million) and a net book value of $592 million (2015: $596 million) of obligations recognised under finance lease agreements. Mineral and petroleum rights include biological assets of $21 million (2015: $71 million). Depreciation expenses included in cost of goods sold are $5,457 million (2015: $5,683 million), in selling and administrative expenses $20 million (2015: $23 million) and in discontinued operation $60 million (2015: $Nil).

During 2016, $49 million (2015: $163 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% (2015: 2.9%).

As at 31 December 2016, no property, plant or equipment was pledged as security for borrowings (2015: $Nil).

Notes to the financial statements

8. INTANGIBLE ASSETS

US$ million	Notes	Goodwill	Port allocation rights	Licences, trademarks and software	Royalty and acquired offtake arrangements	Total
Cost:						
1 January 2016		14,122	1,252	394	318	**16,086**
Disposal of subsidiaries	23	(829)	(15)	(8)	(98)	**(950)**
Additions		–	–	13	3	**16**
Disposals		–	(1)	(15)	–	**(16)**
Effect of foreign currency exchange movements		–	166	2	2	**170**
Other movements		–	6	(1)	33	**38**
31 December 2016		**13,293**	**1,408**	**385**	**258**	**15,344**
Accumulated amortisation and impairment:						
1 January 2016		8,243	67	156	104	**8,570**
Disposal of subsidiaries	23	–	(9)	(5)	(20)	**(34)**
Amortisation expense[1]		–	28	31	36	**95**
Impairments	5	–	–	5	–	**5**
Disposals		–	–	(15)	–	**(15)**
Effect of foreign currency exchange movements		–	14	1	–	**15**
Other movements		–	–	(10)	2	**(8)**
31 December 2016		**8,243**	**100**	**163**	**122**	**8,628**
Net carrying amount 31 December 2016		**5,050**	**1,308**	**222**	**136**	**6,716**

1 Recognised in cost of goods sold.

US$ million	Notes	Goodwill	Port allocation rights	Licences, trademarks and software	Royalty and acquired offtake arrangements	Total
Cost:						
1 January 2015		14,122	2,369	365	485	**17,341**
Disposal and cessation of control of subsidiaries	23	–	(670)	–	(116)	**(786)**
Additions		–	–	26	18	**44**
Disposals		–	–	(2)	(73)	**(75)**
Effect of foreign currency exchange movements		–	(479)	(10)	(9)	**(498)**
Other movements		–	32	15	13	**60**
31 December 2015		**14,122**	**1,252**	**394**	**318**	**16,086**
Accumulated amortisation and impairment:						
1 January 2015		8,124	94	111	146	**8,475**
Disposal and cessation of control of subsidiaries	23	–	(46)	–	(28)	**(74)**
Amortisation expense[1]		–	42	29	58	**129**
Impairments	5	119	–	29	–	**148**
Disposals		–	–	(2)	(70)	**(72)**
Effect of foreign currency exchange movements		–	(23)	(7)	(5)	**(35)**
Other movements		–	–	(4)	3	**(1)**
31 December 2015		**8,243**	**67**	**156**	**104**	**8,570**
Net carrying amount 31 December 2015		**5,879**	**1,185**	**238**	**214**	**7,516**

1 Recognised in cost of goods sold.

Goodwill

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

US$ million	2016	2015
Grain marketing business	–	829
Metals and minerals marketing businesses	3,326	3,326
Coal marketing business	1,674	1,674
Metals warehousing business	50	50
Total	**5,050**	**5,879**

Grain marketing business

Goodwill of $829 million was recognised in previous business combinations attributable to synergies associated with the grain marketing division CGU, which was derecognised as a result of the disposal of Glencore Agri (see note 23).

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.

Metals warehousing business

Goodwill of $50 million (2015: $50 million) relates to the Pacorini warehousing business CGU.

Port allocation rights

Port allocation rights represent contractual entitlements to export certain amounts of coal on an annual basis from Richard Bay Coal Terminal in South Africa recognised as part of previous business combinations. The rights are amortised on a straight-line basis over the estimated economic life of the port of 40 years.

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 10 – 15 years.

Royalty and acquired offtake arrangements

The fair value of a royalty income stream related to output from the Antamina copper mine was recognised as part of a previous business combination. This amount is amortised on a unit of production basis through to 2027, the expected mine life.

Acquired offtake arrangements represent contractual entitlements acquired from third parties to provide marketing services and receive certain products produced from a mining or processing operation over a finite period of time. These rights are amortised on a straight-line basis over the contractual term which currently ranges between 10 – 15 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 is not reversed in subsequent periods.

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 (compared against a VIU cash flow projection) which utilises a price to earnings multiple approach based on the 2016 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 13.5 times (2015: 11.0 times) is derived from observable market data for broadly comparable businesses; and
- Glencore believes that no reasonably possible change in any of the above key assumptions would cause the recoverable amount to fall below the carrying value of the CGU. The determination of FVLCD for each of the marketing CGUs uses Level 3 valuation techniques in both years.

Notes to the financial statements

9. INVESTMENTS IN ASSOCIATES, JOINT VENTURES AND OTHER INVESTMENTS

Investments in associates and joint ventures

US$ million	Notes	2016	2015 Restated[1]
1 January		11,337	12,274
Additions		15	236
Disposals		(9)	(612)
Share of income from associates and joint ventures		11	99
Share of income from associates and joint ventures from discontinued operations	23	15	2
Share of other comprehensive income from associates and joint ventures		–	(26)
Fair value of retained interest in Glencore Agri	23	3,125	–
Disposal of equity accounted investments within Glencore Agri	23	(624)	–
Dividends received		(833)	(428)
Impairments	5	–	(193)
Discontinued operations share of impairments	5	–	(16)
Reclassification		46	46
Other movements		3	(45)
31 December		**13,086**	**11,337**
Of which:			
Investments in associates		6,910	8,166
Investments in joint ventures		6,176	3,171

1 *Certain amounts shown here reflect the adjustments made relating to discontinued operations (see note 23).*

As at 31 December 2016, the fair value of listed associates and joint ventures, which have a carrying value of $555 million (2015: $681 million), using published price quotations (a Level 1 fair value measurement) was $424 million (2015: $255 million). The 2016 and 2015 balance mainly comprises Century Aluminum which has a carrying value of $460 million (2015: $592 million).

Additions

In June 2015, Glencore completed the acquisition of a 50% stake in the Barcarena grain terminal in northern Brazil for $115 million. With this acquisition, Glencore now owns two key ports in the Northern corridor of Brazil which is expected to give access to fast growing origination areas like Mato Grosso and Matopiba, enabling the Group to increase its marketing of corn and soya beans.

Disposals

2015 disposals mainly relate to the in specie distribution of the stake in Lonmin plc (see notes 3 and 16).

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	Glencore Agri	Total material joint ventures	Total material associates and joint ventures
2016							
Non-current assets	2,487	4,313	**6,800**	4,504	4,461	**8,965**	**15,765**
Current assets	670	952	**1,622**	1,164	6,354	**7,518**	**9,140**
Non-current liabilities	(604)	(1,064)	**(1,668)**	(1,032)	(841)	**(1,873)**	**(3,541)**
Current liabilities	(291)	(470)	**(761)**	(442)	(6,286)	**(6,728)**	**(7,489)**
The above assets and liabilities include the following:							
Cash and cash equivalents	108	90	**198**	127	147	**274**	**472**
Current financial liabilities[1]	(1)	(77)	**(78)**	(2)	(3,420)	**(3,422)**	**(3,500)**
Non-current financial liabilities[1]	–	(135)	**(135)**	(77)	(603)	**(680)**	**(815)**
Net assets 31 December 2016	**2,262**	**3,731**	**5,993**	**4,194**	**3,688**	**7,882**	**13,875**
Glencore's ownership interest	33.3%	33.8%		44.0%	50.0%		
Acquisition fair value and other adjustments	1,028	2,021	**3,049**	1,176	1,311	**2,487**	**5,536**
Carrying value	1,781	3,282	**5,063**	3,021	3,155	**6,176**	**11,239**

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 2016, 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	Glencore Agri	Total material joint ventures	Total material associates and joint ventures
2016							
Revenue	1,822	2,429	**4,251**	2,285	2,170	**4,455**	**8,706**
(Loss)/income for the year	(913)	584	**(329)**	459	76	**535**	**206**
Other comprehensive (loss)/income	–	–	**–**	(11)	10	**(1)**	**(1)**
Total comprehensive (loss)/income	(913)	584	**(329)**	448	86	**534**	**205**
Glencore's share of dividends paid	105	338	**443**	352	–	**352**	**795**
The above profit for the year includes the following:							
Depreciation and amortisation	(534)	(774)	**(1,308)**	(581)	(20)	**(601)**	**(1,909)**
Interest income[1]	–	28	**28**	1	12	**13**	**41**
Interest expense[2]	(14)	(31)	**(45)**	(25)	(11)	**(36)**	**(81)**
Impairment, net of tax[3]	(1,036)	–	**(1,036)**	–	–	**–**	**(1,036)**
Income tax expense	(49)	(420)	**(469)**	(168)	(32)	**(200)**	**(669)**

1 *Includes foreign exchange gains and other income of $37 million.*

2 *Includes foreign exchange losses of $49 million.*

3 *Glencore's attributable share of impairments relating to Cerrejón amounts to $345 million, net of taxes of $176 million, resulting from reduced near term production estimates due to increased risks related to delays in securing approvals as a result of continued social and environmental challenges to current mine plans. The valuation remains sensitive to price and a 10% decrease of the price assumptions would result in a further impairment of $293 million.*

Notes to the financial statements

9. INVESTMENTS IN ASSOCIATES, JOINT VENTURES AND OTHER INVESTMENTS (continued)

US$ million	Cerrejón	Antamina	Total material associates	Collahuasi	Total material joint ventures	Total material associates and joint ventures
2015						
Non-current assets	2,744	4,279	**7,023**	4,609	**4,609**	**11,632**
Current assets	595	951	**1,546**	1,144	**1,144**	**2,690**
Non-current liabilities	(859)	(948)	**(1,807)**	(986)	**(986)**	**(2,793)**
Current liabilities	(202)	(286)	**(488)**	(273)	**(273)**	**(761)**
The above assets and liabilities include the following:						
Cash and cash equivalents	150	133	**283**	166	**166**	**449**
Current financial liabilities[1]	(5)	(61)	**(66)**	(3)	**(3)**	**(69)**
Non-current financial liabilities[1]	–	(167)	**(167)**	(75)	**(75)**	**(242)**
Net assets 31 December 2015	**2,278**	**3,996**	**6,274**	**4,494**	**4,494**	**10,768**
Glencore's ownership interest	33.3%	33.8%		44.0%		
Acquisition fair value and other adjustments	1,431	2,073	**3,504**	1,194	**1,194**	**4,698**
Carrying value	2,190	3,422	**5,612**	3,171	**3,171**	**8,783**

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 venture's relevant figures for the year ended 31 December 2015, is set out below.

US$ million	Cerrejón	Antamina	Total material associates	Collahuasi	Total material joint ventures	Total material associates and joint ventures
2015						
Revenue	1,859	2,080	**3,939**	1,991	**1,991**	**5,930**
(Loss)/income for the year	(187)	411	**224**	166	**166**	**390**
Other comprehensive income	–	–	**–**	(9)	**(9)**	**(9)**
Total comprehensive (loss)/income	(187)	411	**224**	157	**157**	**381**
Glencore's share of dividends paid	53	206	**259**	110	**110**	**369**
The above profit for the year includes the following:						
Depreciation and amortisation	(557)	(721)	**(1,278)**	(586)	**(586)**	**(1,864)**
Interest income[1]	–	2	**2**	36	**36**	**38**
Interest expense[2]	(18)	(9)	**(27)**	(10)	**(10)**	**(37)**
Income tax expense	(178)	(233)	**(411)**	(54)	**(54)**	**(465)**

1 *Includes foreign exchange gains and other income of $37 million.*
2 *Includes foreign exchange losses of $7 million.*

Aggregate information of associates that are not individually material:

US$ million	**2016**	2015
The Group's share of loss	(122)	(48)
The Group's share of other comprehensive income/(loss)	–	(22)
The Group's share of total comprehensive income/(loss)	(122)	(70)
Aggregate carrying value of the Group's interests	1,847	2,554

Glencore's share of total comprehensive income did not include joint ventures other than the material joint ventures discussed above.

The amount of corporate guarantees in favour of associates and joint ventures as at 31 December 2016 was $470 million (2015: $337 million). In addition, there still exist guarantees amounting to $7,339 million in favour of Glencore Agri and, following release of its 2016 consolidated financial results (expected by end of Q1 2017), as part of post-completion matters, Glencore expects to terminate these, with the exception of $400 million related to legacy Viterra 2020 bonds outstanding. No amounts have been claimed or provided as at 31 December 2016. Glencore's share of joint ventures' capital commitments amounts to $154 million (2015: $176 million).

Other investments

US$ million	2016	2015
Available for sale		
United Company Rusal plc	562	407
OAO NK Russneft	895	685
	1,457	1,092
Fair value through profit and loss		
Volcan Compania Minera S.A.A.	124	95
Century Aluminum Company cash-settled equity swaps	78	40
Other	94	78
	296	**213**
Total	**1,753**	**1,305**

Available for sale investments

Glencore accounts for its interests in United Company Rusal plc and OAO NK Russneft ("Russneft") as available for sale investments at fair value with mark-to-market movements recognised in other comprehensive income. Although Glencore holds a 25% interest in Russneft, it does not exercise significant influence over the financial and operating policy decisions of Russneft.

10. ADVANCES AND LOANS

US$ million	2016	2015
Loans to associates[1]	526	436
Rehabilitation trust fund	193	152
Other non-current receivables and loans[2]	2,764	2,417
Total	**3,483**	**3,005**

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

2 *Includes advances, net of $2,284 million (2015: $1,427 million) provided by various banks.*

Rehabilitation trust fund

Glencore makes contributions to controlled funds that were 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.

Other non-current receivables and loans comprise the following:

US$ million	2016	2015
Counterparty		
Secured marketing related financing arrangements[1]	1,043	1,004
Société Nationale d'Electricité ("SNEL") power advances	295	266
Chad State National Oil Company	389	544
Société Nationale des Pétroles du Congo	292	165
Iron ore prepayment	89	–
Other	656	438
Total	**2,764**	**2,417**

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

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 will contribute $386 million to a major electricity infrastructure refurbishment programme, including transmission and distribution systems. This is expected to facilitate a progressive increase in power availability to 450 megawatts by the end of 2017. Funding commenced in the second quarter of 2012 and will continue until the end of 2017. The loans are being repaid via discounts on electricity purchases, which will accelerate upon completion of the refurbishment programme.

Notes to the financial statements

10. ADVANCES AND LOANS (continued)

Chad State National Oil Company

Glencore has provided a net $418 million (2015: $544 million) to the Chad State National Oil Company ("SHT") to be repaid through future oil deliveries over seven years. As at 31 December 2016, the advance is net of $972 million (2015: $905 million) provided by a syndicate of banks, 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, $389 million (2015: $544 million) is receivable after 12 months and is presented within Other non-current receivables and loans and $29 million (2015: $Nil) is due within 12 months, such amounts included within Accounts receivable.

Société Nationale des Pétroles du Congo ("SNPC")

In 2016, Glencore advanced an additional $118 million to SNPC, repayable through future oil deliveries over five years. As at 31 December 2016, the total advance of $336 million (2015: $218 million) is recorded net of $512 million (2015: $522 million) provided by the bank market, 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, $292 million (2015: $165 million) is due after 12 months and is presented within Other long-term receivables and loans and $44 million (2015: $53 million) is due within 12 months and included within Accounts receivable.

Iron ore prepayment

In 2016, Glencore advanced $160 million to iron ore suppliers to be repaid through future iron ore deliveries over two years. As at 31 December 2016, the total advance of $1,571 million is recorded net of $1,414 million provided by the bank market, the repayment terms of which are contingent upon and connected to the future receipt of iron ore contractually due from the counterpart. Of the net amount advanced, $89 million is due after 12 months and presented within Other long-term receivables and loans and $68 million is due within 12 months and included within Accounts receivable.

11. INVENTORIES

Current inventory

Inventories of $18,347 million (2015: $18,303 million) comprise $11,323 million (2015: $10,928 million) of inventories carried at fair value less costs of disposal and $7,024 million (2015: $7,375 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 year approximates the cost of goods sold balance.

Fair value of inventories is a Level 2 fair value measurement (see note 26) 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 retains the principal risks and rewards of ownership. The proceeds received are recognised as current borrowings (see note 18). As at 31 December 2016, the total amount of inventory secured under such facilities was $1,632 million (2015: $1,649 million). The proceeds received and recognised as current borrowings were $1,320 million (2015: $1,607 million) and $61 million (2015: $Nil) were recognised as non-current borrowings.

Non-current inventory

$564 million (2015: $504 million) of inventories valued at the lower of cost or net realisable value are not expected to be utilised or sold within 12 months and are therefore classified as non-current inventory.

12. ACCOUNTS RECEIVABLE

US$ million	**2016**	2015
Trade receivables[1]	10,482	10,175
Trade advances and deposits[1,2,3]	7,053	4,206
Associated companies[1]	444	414
Income tax receivable	201	306
Other receivables	1,886	1,900
Total	**20,066**	**17,001**

1 *Collectively referred to as receivables presented net of allowance for doubtful debts.*

2 *Includes advances, net of $614 million (2015: $180 million) provided by banks, the repayment terms of which are contingent upon and connected to the future delivery of contractual production over the next 12 months.*

3 *In December 2015, impairments of $359 million were recognised reflecting non-performance of contractual terms and a recoverable value provision in respect of trade advances and deposits (see note 5).*

The average credit period on sales of goods is 25 days (2015: 27 days).

As at 31 December 2016, 7% (2015: 6%) of receivables were between 1 to 60 days overdue, and 4% (2015: 5%) were greater than 60 days overdue. Such receivables, although contractually past their due dates, are not considered impaired as there has not been a significant change in credit quality of the relevant counterparty, and the amounts are still considered recoverable taking into account customary payment patterns and in many cases, offsetting accounts payable balances.

The movement in allowance for doubtful accounts is detailed below:

US$ million	2016	2015
1 January	269	293
Released during the year	(58)	(62)
Charged during the year	232	80
Utilised during the year	(46)	(42)
Disposal of subsidiaries	(102)	–
31 December	**295**	**269**

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 18). As at 31 December 2016, the total amount of trade receivables secured was $1,917 million (2015: $2,205 million) and proceeds received and classified as current borrowings amounted to $1,670 million (2015: $1,937 million).

13. CASH AND CASH EQUIVALENTS

US$ million	2016	2015
Bank and cash on hand	2,050	2,059
Deposits and treasury bills	458	648
Total	**2,508**	**2,707**

As at 31 December 2016, $22 million (2015: $22 million) was restricted.

14. SHARE CAPITAL AND RESERVES

	Number of shares (thousand)	Share capital (US$ million)	Share premium (US$ million)
Authorised:			
31 December 2016 and 2015 Ordinary shares with a par value of $0.01 each	50,000,000	–	–
Issued and fully paid up:			
1 January 2015	13,278,405	133	52,533
Share issuance	1,307,795	13	2,431
Distributions paid (see note 16)	–	–	(2,626)
31 December 2015 – Ordinary shares	**14,586,200**	**146**	**52,338**
31 December 2016 – Ordinary shares	**14,586,200**	**146**	**52,338**

In September 2015, a total of 1,307,794,600 new ordinary shares in Glencore were placed at a price of 125 pence per share, raising gross proceeds of approximately $2.5 billion. The new shares issued represented approximately 10% of the Company's issued ordinary share capital prior to the placing.

	Treasury Shares		Trust Shares		**Total**	
	Number of shares (thousand)	Share premium (US$ million)	Number of shares (thousand)	Share premium (US$ million)	**Number of shares (thousand)**	**Share premium (US$ million)**
Own shares:						
1 January 2015	143,278	(758)	150,462	(735)	**293,740**	**(1,493)**
Own shares purchased during the year	58,050	(240)	28,843	(41)	**86,893**	**(281)**
Own shares transferred to satisfy employee share awards	(9,869)	50	9,869	(50)	–	–
Own shares disposed during the year	–	–	(14,770)	62	**(14,770)**	**62**
31 December 2015	**191,459**	**(948)**	**174,404**	**(764)**	365,863	(1,712)
1 January 2016	191,459	(948)	174,404	(764)	**365,863**	**(1,712)**
Own shares purchased during the year	–	–	–	–	–	–
Own shares transferred to satisfy employee share awards	–	–	–	–	–	–
Own shares disposed during the year	–	–	(7,474)	12	**(7,474)**	**12**
31 December 2016	**191,459**	**(948)**	**166,930**	**(752)**	**358,389**	**(1,700)**

Notes to the financial statements

14. SHARE CAPITAL AND RESERVES (continued)

Own shares

Own shares comprise shares acquired under the Company's previous share buy-back programme 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, primarily assumed as part of previous business combinations.

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

As at 31 December 2016, 358,389,443 shares (2015: 365,863,517 shares), equivalent to 2.5% (2015: 2.5%) of the issued share capital were held at a cost of $1,700 million (2015: $1,712 million) and market value of $1,227 million (2015: $488 million).

Other reserves

US$ million	Translation adjustment	Cash flow hedge reserve	Net unrealised gain/(loss)	Net ownership changes in subsidiaries	Other reserves	**Total**
1 January 2015	(2,163)	58	501	(815)	10	**(2,409)**
Exchange loss on translation of foreign operations	(1,727)	–	–	–	–	**(1,727)**
Loss on cash flow hedges, net of tax	–	(89)	–	–	–	**(89)**
Loss on available for sale financial instruments	–	–	(489)	–	–	**(489)**
Change in ownership interest in subsidiaries	–	–	–	(16)	–	**(16)**
Foreign currency translation losses recycled to the statement of income	311	–	–	–	–	**311**
31 December 2015	**(3,579)**	**(31)**	**12**	**(831)**	**10**	**(4,419)**
1 January 2016	(3,579)	(31)	12	(831)	10	**(4,419)**
Exchange gain on translation of foreign operations	440	–	–	–	–	**440**
Gain on cash flow hedges, net of tax	–	99	–	–	–	**99**
Gain on available for sale financial instruments	–	–	365	–	–	**365**
Reclassifications	(31)	30	–	1	–	**–**
Change in ownership interest in subsidiaries	–	–	–	68	–	**68**
Discontinued operations	22	21	–	–	–	**43**
Items recycled to the statement of income upon disposal of subsidiaries (see note 23)	595	(3)	–	10	–	**602**
31 December 2016	**(2,553)**	**116**	**377**	**(752)**	**10**	**(2,802)**

15. EARNINGS PER SHARE

US$ million	2016	2015 Restated[1]
Profit/(loss) attributable to equity holders of the Parent		
Continuing operations	(744)	(5,220)
Discontinued operations	2,123	256
Profit/(loss) attributable to equity holders of the Parent for basic earnings per share	1,379	(4,964)
Weighted average number of shares for the purposes of basic earnings per share (thousand)	14,224,100	13,317,970
Effect of dilution:		
Equity-settled share-based payments (thousand)[2]	134,179	–
Weighted average number of shares for the purposes of diluted earnings per share (thousand)[2]	14,358,279	–
Basic earnings/(loss) per share (US$)		
Continuing operations	(0.05)	(0.39)
Discontinued operations	0.15	0.02
Total basic earnings/(loss) per share	**0.10**	**(0.37)**
Diluted earnings/(loss) per share (US$)[2]		
Continuing operations	(0.05)	(0.39)
Discontinued operations	0.15	0.02
Total diluted earnings/(loss) per share	**0.10**	**(0.37)**

1 *Certain amounts shown here reflect the adjustments made relating to discontinued operations (see note 23).*

2 *As both the result attributable to equity holders and to Headline results is a loss in 2015, the effect has not been presented as this would be anti-dilutive.*

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 2/2015 as issued by the South African Institute of Chartered Accountants ("SAICA"), is reconciled using the following data:

US$ million	2016	2015
Profit/(loss) attributable to equity holders of the Parent from continuing and discontinued operations for basic earnings per share	1,379	(4,964)
Net (gain)/loss on disposals[2]	(2,370)	1,061
Net loss on disposals – non-controlling interest	–	(31)
Net loss/(gain) on disposals – tax	148	(263)
Impairments[3]	1,789	6,692
Impairments – non-controlling interest	(16)	(2,611)
Impairments – tax	(573)	(316)
Headline and diluted earnings/(loss) for the year	**357**	**(432)**
Headline earnings/(loss) per share (US$)	**0.03**	**(0.03)**
Diluted headline earnings/(loss) per share (US$)[1]	**0.03**	**(0.03)**

1 *In 2016 equity-settled share-based payments are only dilutive with respect to Headline earnings per share calculation. As both the result attributable to equity holders and to Headline results is a loss in 2015, the effect has not been presented as this would be anti-dilutive.*

2 *2016 comprises gain on disposals and investments of $452 million, gain on disposals of property, plant and equipment of $37 million, gain on disposal of Glencore Agri of $1,848 million and gain on disposals and investments as reported in discontinued operations of $33 million (see notes 3, 4 and 23). 2015 comprises losses on disposals and investments of $994 million, loss from metal leak of $60 million and loss on vessel charter contract and net other expenses of $7 million (see notes 3 and 4).*

3 *Comprises impairments of property, plant and equipment and intangible assets (see note 5) and impairments related to Cerrejón of $521 million.*

Notes to the financial statements

16. DISTRIBUTIONS

US$ million	**2016**	2015
Paid during the year:		
Final distribution for 2015 – $Nil per ordinary share (2014: $0.12 per ordinary share)	–	1,551
Interim distribution for 2016 – $Nil per ordinary share (2015: $0.06 per ordinary share)	–	777
In specie distribution of Group's 23.9% in Lonmin plc	–	298
Total	**–**	**2,626**

As announced on 7 September 2015, the final distribution for 2015 and the interim distribution for 2016 were suspended.

The proposed distribution of $7 cents per ordinary share amounting to $996 million is subject to approval by shareholders at the Annual General Meeting and has not been included as a liability in these financial statements. Distributions declared in respect of the year ended 31 December 2016 are expected to be paid equally ($3.5 cents each) in May 2017 and September 2017.

17. SHARE-BASED PAYMENTS

	Number of awards granted (thousand)	Fair value at grant date (US$ million)	**Number of awards outstanding 2016 (thousand)**	Number of awards outstanding 2015 (thousand)	**Expense recognised 2016 (US$ million)**	Expense recognised 2015 (US$ million)
Deferred Bonus Plan						
2014 Series	3,633	20	–	2,455	–	–
2015 Series	15,634	35	14,315	15,634	–	35
2016 Series	14,177	34	14,177	–	34	–
	33,444		28,492	18,089	34	35
Performance Share Plan						
2013 Series	12,048	65	–	4,075	6	20
2014 Series	20,908	115	10,485	11,035	21	46
2015 Series	77,062	106	75,316	44,475	48	–
2016 Series	6,835	24	6,835	–	–	–
	116,853		92,636	59,585	75	66
Total	150,297		**121,128**	**77,674**	**109**	**101**

Deferred Bonus Plan

Under the Glencore Deferred Bonus Plan ("DBP"), the payment of a portion of a participant's annual bonus is deferred for a period of one to two years as an award of either ordinary shares (a "Bonus Share Award") or cash (a "Bonus Cash Award"). The awards are vested at grant date with no further service conditions, however they are subject to 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 these awards in shares. The associated expense is recorded in the statement of income/loss as part of the expense for performance bonuses.

Performance Share Plan

Under the Glencore Performance Share Plan ("PSP"), participants are awarded PSP awards which vest in annual tranches over a specified period, subject to continued employment and forfeiture for malus events. At grant date, each PSP award is equivalent to one ordinary share of Glencore. The awards vest in three or five equal tranches on 30 June, 31 December or 31 January 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 market price of Glencore's ordinary shares at grant date. The PSP 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.

Share-based awards assumed in previous business combinations

	Total options outstanding (thousands)	Weighted average exercise price (GBP)
1 January 2015	148,562	3.83
Forfeited	–	–
Lapsed	–	–
Exercised[1]	(1,960)	1.69
31 December 2015	**146,602**	
1 January 2016	146,602	3.89
Dilution due to share issue	322	–
Forfeited	–	–
Lapsed	(5,424)	2.85
Exercised[1]	(228)	1.10
31 December 2016	**141,272**	

1 *The weighted average share price at date of exercise of the share based awards was GBP2.80 (2015: GBP2.89).*

As at 31 December 2016, a total of 141,271,783 options (2015: 146,601,834 options) were outstanding and exercisable, having a range of exercise prices from GBP1.095 to GBP6.87 (2015: GBP1.098 to GBP6.880) and a weighted average exercise price of GBP3.8941 (2015: GBP3.853). These outstanding awards have expiry dates ranging from March 2017 to February 2022 (2015: March 2016 to February 2022) and a weighted average contractual life of 3.6 years (2015: 2.8 years). The awards may be satisfied at Glencore's option, 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. Glencore currently intends to settle these awards, when exercised, by the transfer of ordinary shares held in treasury.

18. BORROWINGS

US$ million	Notes	**2016**	2015
Non-current borrowings			
Capital market notes		21,968	28,938
Committed syndicated revolving credit facilities		476	2,994
Finance lease obligations	28	326	376
Other bank loans		418	624
Total non-current borrowings		**23,188**	**32,932**
Current borrowings			
Secured inventory/receivables facilities	11/12	2,990	3,544
U.S. commercial paper		–	15
Capital market notes		4,388	4,474
Finance lease obligations	28	75	88
Other bank loans[1]		2,577	2,996
Total current borrowings		**10,030**	**11,117**

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

Committed syndicated revolving credit facilities

In February 2016, fully syndicated and effective from May 2016, Glencore signed a new one-year revolving credit facility for a total amount of $7.7 billion. This facility refinanced the $8.45 billion one-year revolving credit facility signed in May 2015. Funds drawn under the facilities bear interest at US$LIBOR plus a margin of 50/60 basis points per annum.

As at 31 December 2016, the active facilities comprise:

- a $7.7 billion short-term revolving credit facility with a 12 month borrower's term-out option (to May 2018) and 12 month extension option; and
- a $6.8 billion medium-term revolving credit facility (to May 2020) with one 12 month extension option or 24 month extension option.

Notes to the financial statements

18. BORROWINGS (continued)

Capital Market Notes

US$ million	Maturity	2016	2015
AUD 500 million 4.500% coupon bonds	Sep 2019	**370**	**374**
Euro 1,250 million 5.250% coupon bonds	Mar 2017	–	1,281
Euro 500 million 5.250% coupon bonds	Jun 2017	–	556
Euro 1,250 million 4.625% coupon bonds	Apr 2018	1,296	1,337
Euro 1,000 million 2.625% coupon bonds	Nov 2018	1,055	1,086
Euro 750 million 3.375% coupon bonds	Sep 2020	781	801
Euro 1,250 million 1.250% coupon bonds	Mar 2021	1,294	1,330
Euro 600 million 2.750% coupon bonds	Apr 2021	617	633
Euro 700 million 1.625% coupon bonds	Jan 2022	733	753
Euro 1,000 million 1.875% coupon bonds	Sep 2023	1,048	–
Euro 400 million 3.700% coupon bonds	Oct 2023	420	432
Euro 750 million 1.750% coupon bonds	Mar 2025	784	804
Euro 500 million 3.750% coupon bonds	Apr 2026	524	539
Eurobonds		**8,552**	**9,552**
JPY 10 billion 1.075% coupon bonds	May 2022	**86**	**83**
GBP 650 million 6.500% coupon bonds	Feb 2019	798	948
GBP 500 million 7.375% coupon bonds	May 2020	689	821
GBP 500 million 6.000% coupon bonds	Apr 2022	621	747
Sterling bonds		**2,108**	**2,516**
CHF 450 million 2.625% coupon bonds	Dec 2018	443	449
CHF 175 million 2.125% coupon bonds	Dec 2019	172	174
CHF 500 million 1.250% coupon bonds	Dec 2020	492	498
CHF 250 million 2.250% coupon bonds	May 2021	246	–
Swiss Franc bonds		**1,353**	**1,121**
US$ 700 million 3.600% coupon bonds	Jan 2017	–	707
US$ 250 million 5.500% coupon bonds	Jun 2017	–	262
US$ 1,750 million 2.700% coupon bonds	Oct 2017	–	1,753
US$ 250 million LIBOR plus 1.06% coupon bonds	Apr 2018	48	233
US$ 500 million 2.125% coupon bonds	Apr 2018	159	463
US$ 200 million LIBOR plus 1.200% coupon bonds	May 2018	200	200
US$ 500 million LIBOR plus 1.360% coupon bonds	Jan 2019	279	499
US$ 1,500 million 2.500% coupon bonds	Jan 2019	690	1,474
US$ 1,000 million 3.125% coupon bonds	Apr 2019	451	1,006
US$ 1,000 million 2.875% coupon bonds	Apr 2020	416	990
US$ 400 million 5.950% coupon bonds	Aug 2020	–	400
US$ 1,000 million 4.950% coupon bonds	Nov 2021	1,056	1,066
US$ 250 million LIBOR plus 1.650% coupon bonds	May 2022	250	250
US$ 1,000 million 4.250% coupon bonds	Oct 2022	1,013	1,016
US$ 1,500 million 4.125% coupon bonds	May 2023	1,536	1,553
US$ 1,000 million 4.625% coupon bonds	Apr 2024	1,034	1,046
US$ 500 million 4.000% coupon bonds	Apr 2025	484	485
US$ 250 million 6.200% coupon bonds	Jun 2035	273	274
US$ 500 million 6.900% coupon bonds	Nov 2037	597	600
US$ 500 million 6.000% coupon bonds	Nov 2041	540	541
US$ 500 million 5.550% coupon bonds	Oct 2042	473	474
US$ bonds		**9,499**	**15,292**
Total non-current bonds		**21,968**	**28,938**

Capital Market Notes

US$ million	Maturity	2016	2015
Euro 1,250 million 1.750% coupon bonds	May 2016	–	1,228
Euro 1,250 million 5.250% coupon bonds	Mar 2017	1,244	–
Euro 500 million 5.250% coupon bonds	Jun 2017	514	–
Eurobonds		**1,758**	**1,228**
US$ 500 million LIBOR plus 1.16% coupon bonds	May 2016	–	489
US$ 1,000 million 1.700% coupon bonds	May 2016	–	1,000
US$ 1,000 million 5.800% coupon bonds	Nov 2016	–	934
US$ 700 million 3.600% coupon bonds	Jan 2017	660	–
US$ 250 million 5.500% coupon bonds	Jun 2017	254	–
US$ 1,750 million 2.700% coupon bonds	Oct 2017	1,716	–
US$ bonds		**2,630**	**2,423**
CHF 825 million 3.625% coupon bonds	Apr 2016	–	823
Total current bonds		**4,388**	**4,474**

2016 Bond activities

- In May, issued a 5 year CHF 250 million, 2.25% coupon bond.
- In September, issued a 7 year Euro 1,000 million, 1.875% coupon bond.
- In October, repurchased bonds with a nominal value of $1,492 million, comprising primarily 2018 and 2019 maturities.
- In December, repurchased bonds with a nominal value of $1,137 million, comprising primarily 2019 and 2020 maturities.

Secured facilities

US$ million	Maturity	Borrowing base	Interest	2016	2015
Syndicated committed metals inventory/receivables facilities	Mar 2017	100	US$ LIBOR + 160 bps	100	350
Syndicated uncommitted metals inventory/receivables facilities	Jan[1]/Mar/Apr/Oct 2017	2,936	US$ LIBOR + 50/95/110/160 bps	2,340	2,161
Syndicated uncommitted oil receivables facilities	Oct 2017	550	US$ LIBOR + 95 bps	550	550
Syndicated uncommitted agricultural products inventory/receivables facilities	Jan/Oct 2016	–	US$ LIBOR + 70 bps	–	483
Total		3,586		**2,990**	**3,544**

1 *Since year-end, in the ordinary course of business, these maturities have been rolled/extended as required.*

Notes to the financial statements

19. DEFERRED INCOME

US$ million	Notes	Unfavourable contracts	Prepayments	**Total**
1 January 2015		1,138	135	**1,273**
Additions		–	900	**900**
Utilised in the year		(146)	(149)	**(295)**
Disposals and loss of control of subsidiaries	23	(212)	–	**(212)**
Effect of foreign currency exchange difference		(127)	–	**(127)**
31 December 2015		**653**	**886**	**1,539**
Current		53	34	**87**
Non-current		600	852	**1,452**
1 January 2016		653	886	**1,539**
Additions		–	971	**971**
Utilised in the year		(74)	(70)	**(144)**
Effect of foreign currency exchange difference		38	–	**38**
31 December 2016		**617**	**1,787**	**2,404**
Current		56	82	**138**
Non-current		561	1,705	**2,266**

Unfavourable contracts

In previous business combinations, Glencore recognised liabilities related to various assumed contractual agreements to deliver tonnes of coal and zinc concentrates over periods ending between 2017 and 2034 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 implied forward price curves at the time of the acquisitions.

Prepayments

Antapaccay

In February 2016, Glencore entered into a long-term streaming agreement with Franco-Nevada, for the delivery of gold and silver calculated by reference to copper produced by the Antapaccay mine in Peru. Glencore will deliver 300 ounces of gold per 1,000 tonnes of copper in concentrate until 630,000 ounces of gold have been delivered and 30% of gold production thereafter, and 4,700 ounces of silver per 1,000 tonnes of copper in concentrate until 10,000,000 ounces of silver have been delivered and 30% of silver production thereafter. In consideration, Franco-Nevada made an advance payment of $500 million and pays an ongoing amount of 20% of the spot gold and silver price per ounce delivered, increasing to 30% of the respective spot prices after 750,000 ounces of gold and 12,800,000 ounces of silver have been delivered under the streaming agreement. The arrangement has been accounted for as an executory contract whereby the advance payment has been recorded as deferred revenue. The revenue from the advance payment is being recognised as the silver and gold is delivered to Franco-Nevada at an amount consistent with the implied forward price curve at the time of the transaction along with the ongoing cash payments. An accretion expense, representing the time value of the upfront deposit on the deferred revenue balance, is also being recognised.

Ernest Henry

In October 2016, Glencore entered into an agreement with Evolution Mining Limited (“Evolution”), whereby Glencore received $669 million cash in return for a 30% economic interest in the Ernest Henry Mine mining operation (“EHM”) and an entitlement to 100% of the gold produced from Glencore’s remaining 70% interest in EHM. The consideration received was allocated between the two elements of the transaction (sale of the 30% interest and the 70% gold prepaid streaming arrangement) by estimating the fair value of the gold stream by reference to the net present value of the anticipated gold to be delivered over the life of mine ($471 million) with the residual amount representing the consideration for the 30% interest ($198 million, see note 23). The gold streaming element of the arrangement has been accounted for as an executory contract whereby the advance payment ($471 million) has been recorded as deferred revenue. The revenue from the advance payment is being recognised as the gold is delivered to Evolution at an amount consistent with the implied forward price curve at the time of the transaction. An accretion expense, representing the time value of the upfront deposit on the deferred revenue balance, is also being recognised.

Antamina

In December 2015, effective 1 October 2015, Glencore entered into a long-term streaming agreement with Silver Wheaton Corporation (“Silver Wheaton”), for the delivery of the equivalent of 33.75% of the silver produced by the Antamina mine (“Antamina”) until 140 million ounces of silver is delivered, at which time, the designated percentage reduces to 22.50% of the silver production from Antamina over the remaining life of mine. In consideration, Silver Wheaton made an up-front advance payment of $900 million and pays an ongoing amount of 20% of the spot silver price for each ounce of silver delivered under the streaming agreement. The arrangement has been accounted for as an executory contract whereby the advance payment has been recorded as deferred revenue. The revenue from the advance payment is being recognised as the silver is delivered to Silver Wheaton at an amount consistent with the implied forward price curve at the time of the transaction along with the ongoing cash payments. An accretion expense, representing the time value of the upfront deposit on the deferred revenue balance, is also being recognised.

20. PROVISIONS

US$ million	Post-retirement employee benefits	Other employee entitlements	Rehabilitation costs	Onerous contracts	Other	**Total**
1 January 2015	1,070	308	3,836	1,730	1,187	**8,131**
Provision utilised in the year	(249)	(137)	(448)	(447)	(457)	**(1,738)**
Accretion in the year	–	–	178	6	–	**184**
Assumed in business combination[1]	–	–	–	–	21	**21**
Disposals and cessation of control of subsidiaries[1]	(2)	–	(241)	–	(18)	**(261)**
Additional provision in the year	102	52	(302)	189	268	**309**
Effect of foreign currency exchange difference	(118)	(2)	(118)	–	(11)	**(249)**
31 December 2015	**803**	**221**	**2,905**	**1,478**	**990**	6,397
Current	–	–	89	155	230	**474**
Non-current	803	221	2,816	1,323	760	**5,923**
1 January 2016	803	221	2,905	1,478	990	**6,397**
Provision utilised in the year	(92)	(34)	(140)	(381)	(555)	**(1,202)**
Accretion in the year	–	–	181	2	–	**183**
Assumed in business combination[1]	–	5	154	84	4	**247**
Disposals of subsidiaries[1]	(6)	(6)	(107)	–	(78)	**(197)**
Additional provision in the year	160	32	164	122	448	**926**
Effect of foreign currency exchange difference	(5)	–	37	–	3	**35**
31 December 2016	**860**	**218**	**3,194**	**1,305**	**812**	6,389
Current	–	–	144	178	136	**458**
Non-current	860	218	3,050	1,127	676	**5,931**

1 *See note 23.*

Post-retirement employee benefits

The provision for post-retirement employee benefits includes pension plan liabilities of $428 million (2015: $346 million) and post-retirement medical plan liabilities of $432 million (2015: $457 million), see note 21.

Other employee entitlements

The employee entitlement 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.

Notes to the financial statements

20. PROVISIONS (continued)

Rehabilitation costs

Rehabilitation provision represents the accrued cost 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 16 years. As outlined in note 1, significant estimates are required in determining the rehabilitation provisions, one of which is the determination of appropriate discount rates. Decreasing the rates used for active mining and processing operations by 2% would result in an increase in the overall rehabilitation provision by $288 million, with a resulting equal movement in property, plant and equipment. In the following year, the depreciation expense would increase by some $23 million, with an opposite direction interest expense adjustment of $8 million. The resulting net impact in the statement of income would be a decrease of $15 million, eventually netting to $Nil over the weighted average settlement date of the provision.

Onerous contracts

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

Other

Other comprises provisions for possible demurrage, mine concession, tax and construction related claims.

Tax disputes

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. The 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, none of which are individually material. Accordingly, management does not anticipate a significant risk of material change in estimates within the next financial year.

21. PERSONNEL COSTS AND EMPLOYEE BENEFITS

Total personnel costs, which include salaries, wages, social security, other personnel costs and share-based payments, incurred for the years ended 31 December 2016 and 2015, were $4,245 million and $5,287 million, respectively. Personnel costs related to consolidated industrial subsidiaries of $3,355 million (2015: $4,344 million) are included in cost of goods sold. Other personnel costs, including the 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 $118 million in 2016 (2015: $199 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.

Defined benefit pension plans

The Company operates defined benefit plans in various countries, the main locations being Canada, Switzerland, UK and the US. Approximately 72% of the present value of obligations accrued to date 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	Post-retirement medical plans	Present value of defined benefit obligation	Fair value of plan assets	Net liability for defined benefit pension plans
1 January 2016	**457**	3,405	(3,059)	**346**
Current service cost	7	67	–	67
Past service cost – plan amendments	1	(3)	–	(3)
Settlement	–	(94)	90	(4)
Termination benefit	–	4	–	4
Interest expense/(income)	18	126	(116)	10
Total expense recognised in consolidated statement of income	**26**	100	(26)	**74**
Gain on plan assets, excluding amounts included in interest expense – net	–	–	(59)	(59)
Gain from change in demographic assumptions	–	(13)	–	(13)
Loss from change in financial assumptions	5	137	–	137
Gain from actuarial experience	(3)	(3)	–	(3)
Change in asset ceiling, excluding amounts included in interest expense	–	(4)	–	(4)
Actuarial losses/(gains) recognised in consolidated statement of comprehensive income	**2**	117	(59)	**58**
Employer contributions	–	–	(72)	(72)
Employee contributions	–	1	(1)	–
Benefits paid directly by the Company	(20)	(9)	9	–
Benefits paid from plan assets	–	(192)	192	–
Net cash (outflow)/inflow	**(20)**	(200)	128	**(72)**
Disposal of subsidiaries[1]	(48)	(487)	529	42
Exchange differences	15	11	(31)	(20)
Other	**(33)**	(476)	498	**22**
31 December 2016	**432**	2,946	(2,518)	**428**

1 *See note 23.*

The Group expects to make a contribution of $101 million to the defined benefit pension and post-retirement medical plans during the next financial year.

Notes to the financial statements

21. PERSONNEL COSTS AND EMPLOYEE BENEFITS (continued)

US$ million	Post-retirement medical plans	Defined benefit pension plans: Present value of defined benefit obligation	Fair value of plan assets	Net liability for defined benefit pension plans
1 January 2015	**539**	4,185	(3,654)	**531**
Current service cost	9	72	–	72
Past service cost – plan amendments	(1)	1	–	1
Settlement	–	(183)	177	(6)
Termination benefit	–	–	–	–
Interest expense/(income)	20	139	(123)	16
Total expense recognised in consolidated statement of income	**28**	29	54	**83**
Gain on plan assets, excluding amounts included in interest expense – net	–	–	(86)	(86)
Loss from change in demographic assumptions	(1)	(3)	–	(3)
Loss/(gain) from change in financial assumptions	2	(39)	–	(39)
(Gain)/loss from actuarial experience	(5)	10	–	10
Change in asset ceiling, excluding amounts included in interest expense	–	(4)	–	(4)
Actuarial gains recognised in consolidated statement of comprehensive income	**(4)**	(36)	(86)	**(122)**
Employer contributions	–	–	(108)	(108)
Employee contributions	–	2	(2)	–
Benefits paid directly by the Company	(24)	(10)	10	–
Benefits paid from plan assets	–	(217)	217	–
Net cash (outflow)/inflow	**(24)**	(225)	117	**(108)**
Disposal of subsidiaries[1]	–	(3)	1	(2)
Exchange differences	(82)	(545)	509	(36)
Other	**(82)**	(548)	510	**(38)**
31 December 2015	**457**	3,405	(3,059)	**346**

1 *See note 23.*

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 2016 and 2015. The defined benefit obligation of any other of the Group's defined benefit plans as at 31 December 2016 does not exceed $227 million (2015: $195 million).

2016 US$ million	**Canada**	**Other**	**Total**
Post-retirement medical plans			
Present value of defined benefit obligation	402	30	**432**
of which: amounts owing to active members	123	4	**127**
of which: amounts owing to pensioners	279	26	**305**
Defined benefit pension plans			
Present value of defined benefit obligation	2,112	834	**2,946**
of which: amounts owing to active members	545	383	**928**
of which: amounts owing to non-active members	44	241	**285**
of which: amounts owing to pensioners	1,523	210	**1,733**
Fair value of plan assets	(1,981)	(537)	**(2,518)**
Net defined benefit liability at 31 December 2016	**131**	**297**	**428**
Weighted average duration of defined benefit obligation – years	12	18	**14**

2015 US$ million	Canada	Other	Total
Post-retirement medical plans			
Present value of defined benefit obligation	395	62	**457**
of which: amounts owing to active members	121	21	**142**
of which: amounts owing to pensioners	274	41	**315**
Defined benefit pension plans			
Present value of defined benefit obligation	2,534	871	**3,405**
of which: amounts owing to active members	571	457	**1,028**
of which: amounts owing to non-active members	102	197	**299**
of which: amounts owing to pensioners	1,861	217	**2,078**
Fair value of plan assets	(2,454)	(605)	**(3,059)**
Net defined benefit liability at 31 December 2015	**80**	**266**	**346**
Weighted average duration of defined benefit obligation – years	13	18	**14**

The actual return on plan assets in respect of defined benefit pension plans amounted to a gain of $206 million (2015: loss of $300 million).

The plan assets consist of the following:

US$ million	2016	2015
Cash and short-term investments	105	88
Fixed income	1,210	1,605
Equities	1,076	1,180
Other[1]	127	186
Total	**2,518**	3,059

1 *Includes securities in non-active markets in the amount of $18 million (2015: $58 million).*

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.

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.

Notes to the financial statements

21. PERSONNEL COSTS AND EMPLOYEE BENEFITS (continued)

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

	Post-retirement medical plans		Defined benefit pension plans	
	2016	2015	**2016**	2015
Discount rate	4.1%	4.2%	3.5%	3.7%
Future salary increases	2.8%	2.8%	2.8%	2.7%
Future pension increases	–	–	0.3%	0.4%
Ultimate medical cost trend rate	4.2%	4.3%	–	–

Mortality assumptions are based on the latest available standard mortality tables for the individual countries concerned. As at 31 December 2016, these tables imply expected future life expectancy, for employees aged 65, 19 to 24 years for males (2015: 19 to 24) and 22 to 25 years for females (2015: 23 to 26). The assumptions for each country are reviewed each year and are adjusted where necessary to reflect changes in fund experience and actuarial recommendations.

The sensitivity of the defined benefit obligation to changes in principal assumptions as at 31 December 2016 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 100 basis points	(58)	(352)	**(410)**
Decrease by 100 basis points	66	422	**488**
Rate of future salary increase			
Increase by 100 basis points	–	41	**41**
Decrease by 100 basis points	–	(38)	**(38)**
Rate of future pension benefit increase			
Increase by 100 basis points	–	33	**33**
Decrease by 100 basis points	–	(29)	**(29)**
Medical cost trend rate			
Increase by 100 basis points	56	–	**56**
Decrease by 100 basis points	(45)	–	**(45)**
Life expectancy			
Increase in longevity by one year	13	68	**81**

22. ACCOUNTS PAYABLE

US$ million	**2016**	2015
Trade payables	22,438	19,424
Trade advances from buyers	1,071	1,684
Associated companies	635	467
Other payables and accrued liabilities	2,032	2,513
Total	**26,176**	**24,088**

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

23. ACQUISITION AND DISPOSAL OF SUBSIDIARIES

2016 Acquisitions

In 2016, Glencore acquired controlling interests in Newlands Collinsville Abbot Point Joint Venture ("NCA"). The net cash received in the acquisition of subsidiaries and the provisional fair value of assets acquired and liabilities assumed on the acquisition date are detailed below:

US$ million	NCA	Other	Total
Non-current assets			
Property, plant and equipment	39	20	**59**
Advances and loans	2	–	**2**
	41	20	**61**
Current assets			
Inventories	41	7	**48**
Accounts receivable[1]	24	6	**30**
Cash and cash equivalents	11	–	**11**
	76	13	**89**
Non-current liabilities			
Provisions	(242)	(4)	**(246)**
	(242)	(4)	**(246)**
Current liabilities			
Borrowings	–	(10)	**(10)**
Accounts payable	(33)	(17)	**(50)**
Provisions	(1)	–	**(1)**
Other financial liabilities	(8)	–	**(8)**
	(42)	(27)	**(69)**
Total fair value of net (liabilities)/assets acquired	**(167)**	**2**	**(165)**
Less: cash and cash equivalents acquired	(11)	–	**(11)**
Net cash (received)/used in acquisition of subsidiaries	**(178)**	**2**	**(176)**

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

NCA

In September 2016, Glencore completed the acquisition of the remaining 45% interest in NCA, for cash consideration received of $167 million. This increased Glencore's ownership from 55% to 100%, providing the ability to exercise control over NCA.

If the acquisition had taken place effective 1 January 2016, the operation would have contributed additional revenue of $173 million and an additional attributable loss of $21 million. From the date of acquisition, the operation contributed $72 million and $25 million of revenue and attributable income, respectively.

Notes to the financial statements

23. ACQUISITION AND DISPOSAL OF SUBSIDIARIES (continued)

2015 Acquisitions

In 2015, Glencore acquired controlling interests in Prokon Pflanzenöl GmbH, subsequently renamed Glencore Magdeburg GmbH ("Magdeburg") and Twin Rivers Technologies Enterprises De Transformation De Graines Oléagineuses Du Québec Inc. ("TRT"). These operations are part of the Glencore Agri Group, which was disposed on 1 December 2016, see below. The net cash used in the acquisition of subsidiaries and the provisional fair value of assets acquired and liabilities assumed on the acquisition dates are detailed below:

US$ million	Magdeburg	TRT	Total
Non-current assets			
Property, plant and equipment	178	108	**286**
Deferred tax assets	–	39	**39**
	178	147	**325**
Current assets			
Inventories	5	44	**49**
Accounts receivable[1]	6	22	**28**
Other financial assets	1	3	**4**
Cash and cash equivalents	4	5	**9**
	16	74	**90**
Non-current liabilities			
Deferred tax liabilities	(22)	–	**(22)**
Provisions	(21)	–	**(21)**
	(43)	–	**(43)**
Current liabilities			
Accounts payable	(14)	(23)	**(37)**
Other financial liabilities	(3)	(5)	**(8)**
	(17)	(28)	**(45)**
Total fair value of net assets acquired	**134**	**193**	**327**
Less: cash and cash equivalents acquired	(4)	(5)	**(9)**
Net cash used in acquisition of subsidiaries	**130**	**188**	**318**

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

Magdeburg

In March 2015, Glencore completed the acquisition of a 100% interest in Magdeburg for a cash consideration of $134 million. The acquisition of Magdeburg, an integrated oilseeds crushing and biodiesel plant located in Germany, adds further value to and enlarges our crushing portfolio in Europe, allowing Glencore to further optimise around this business sector.

If the acquisition had taken place effective 1 January 2015, the operation would have contributed additional revenue of $15 million and an additional attributable loss of $2 million. From the date of acquisition the operation contributed $161 million and $10 million of revenue and attributable loss, respectively.

TRT

In November 2015, Glencore completed the acquisition of a 100% interest in TRT for a cash consideration of $193 million. TRT owns the largest oilseed crushing and refining plant in Quebec, Canada with a capacity of 1.05 million tonnes per year.

If the acquisition had taken place effective 1 January 2015, the operation would have contributed additional revenue of $237 million and an additional attributable loss of $20 million. From the date of acquisition the operation contributed $65 million and $1 million of revenue and attributable income, respectively.

The acquisition accounting for Magdeburg and TRT have now been finalised, with no adjustments to the previously reported provisional fair values.

2016 Disposals

In 2016, Glencore disposed of its controlling interest in the Glencore Agricultural products business ("Glencore Agri"), Ernest Henry mining operation ("EHM") and its New South Wales' coal rail haulage business ("GRail").

The carrying value of the assets and liabilities over which control was lost and the net cash received from these disposals are detailed below:

US$ million	Glencore Agri	EHM	GRail	Others	Total
Non-current assets					
Property, plant and equipment	2,919	244	413	212	**3,788**
Intangible assets	892	–	–	24	**916**
Investments in associates	624	–	–	–	**624**
Advances and loans	116	–	–	13	**129**
Deferred tax assets	103	–	–	1	**104**
	4,654	244	413	250	**5,561**
Current assets					
Inventories	2,725	6	–	57	**2,788**
Accounts receivable	2,774	1	2	77	**2,854**
Other financial assets	746	–	–	2	**748**
Cash and cash equivalents	469	–	–	27	**496**
	6,714	7	2	163	**6,886**
Non-controlling interest	(37)	–	–	(29)	**(66)**
Non-current liabilities					
Borrowings	(602)	–	–	(1)	**(603)**
Deferred tax liabilities	(138)	(36)	–	(30)	**(204)**
Provisions	(111)	(9)	–	(40)	**(160)**
	(851)	(45)	–	(71)	**(967)**
Current liabilities					
Borrowings	(3,751)	–	–	(35)	**(3,786)**
Accounts payable	(2,315)	(7)	(5)	(54)	**(2,381)**
Provisions	(36)	(1)	–	–	**(37)**
Other financial liabilities	(629)	–	–	(2)	**(631)**
	(6,731)	(8)	(5)	(91)	**(6,835)**
Carrying value of net assets disposed	**3,749**	**198**	**410**	**222**	**4,579**
Cash and cash equivalents received	(3,125)	(198)	(840)	(198)	**(4,361)**
Future consideration	–	–	–	(46)	**(46)**
Items recycled to the statement of income	602	–	–	–	**602**
Reclassified to investment in joint venture[1]	(3,125)	–	–	–	**(3,125)**
Transaction fees	51	–	–	–	**51**
Net gain on disposal	**(1,848)**	**–**	**(430)**	**(22)**	**(2,300)**
Cash and cash equivalents received	3,125	198	840	198	**4,361**
Less: Cash and cash equivalents disposed	(469)	–	–	(27)	**(496)**
Settlement of debt due from Glencore Agri	1,670	–	–	–	**1,670**
Net cash received from disposal	**4,326**	**198**	**840**	**171**	**5,535**

1 *Includes a gain of $1,252 million attributable to the remeasurement of the retained Glencore Agri investment to its fair value upon change in control.*

Notes to the financial statements

23. ACQUISITION AND DISPOSAL OF SUBSIDIARIES (continued)

Glencore Agri

On 6 April 2016, Glencore announced that it had entered into an agreement with the Canada Pension Plan Investment Board for the sale of a 40% equity interest in Glencore Agri and on 9 June 2016, entered into an agreement with British Columbia Investment Management Corporation for the sale of a 10% equity interest in Glencore Agri. The aggregate equity consideration for the combined 50% interest, including the indirect assumption of certain levels of net working capital and debt, amounted to $3.125 billion, payable in cash upon closing.

Glencore Agri represents the entire Agricultural products operating segment and was determined to be a discontinued operation prior to the close of transaction on 1 December 2016, and has been disclosed as such. Upon closing of the sale, Glencore is no longer able to unilaterally direct the key strategic, operating and capital decisions of Glencore Agri and was deemed to dispose 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 of the resulting joint venture using the equity method in accordance with IFRS 11 and IAS 28 (see note 9).

The results of Glencore Agri included in the consolidated statement of income until loss of control are detailed below:

US$ million	**2016**	2015
Revenue	20,885	23,146
Cost of goods sold	(20,256)	(22,449)
Selling and administrative expenses	(175)	(175)
Share of income from associates	15	2
Gain on disposals and investments	33	–
Other expense – net	(26)	(70)
Interest income	9	12
Interest expense	(79)	(103)
Income before income taxes from discontinued operations	**406**	**363**
Income tax expense	(131)	(107)
	275	256
Gain on disposal of Glencore Agri, including items recycled to the statement of income of $602 million	1,848	–
Income for the year from discontinued operations	**2,123**	**256**
Attributable to:		
Non-controlling interests	–	–
Equity holders of the Parent	2,123	256
Earnings per share – discontinued operations:		
Basic (US$)	0.15	0.02
Diluted (US$)	0.15	0.02

The net cash flows incurred by Glencore Agri are as follows:

US$ million	**2016**	2015
Net cash (used)/generated from operating activities, after working capital changes	(855)	1,276
Net cash used in investing activities	(11)	(677)
Net cash generated/(used) in financing activities	671	(579)
Net cash (used)/generated in discontinued operations	**(195)**	**20**

EHM

In October 2016, Glencore entered into an agreement with Evolution Mining Limited ("Evolution"), whereby Glencore received $669 million cash in return for a 30% economic interest in the Ernest Henry Mine mining operation ("EHM") and an entitlement to 100% of the gold produced from Glencore's remaining 70% interest in EHM. The consideration received was allocated between the two elements of the transaction (sale of the 30% interest and the 70% gold prepaid streaming arrangement) by estimating the fair value of the gold stream by reference to the net present value of the anticipated gold to be delivered over the life of mine ($471 million) with the residual amount representing the consideration for the 30% interest ($198 million). Also see note 19. As part of the transaction, Glencore and Evolution entered into a 70/30 joint venture agreement governing the operations of EHM. As Glencore is no longer able to unilaterally direct the key strategic, operating and capital decisions of EHM, it is deemed to have lost control of EHM and, together with Evolution, jointly controls it. As the new arrangement is an unincorporated joint venture, Glencore derecognised 30% of the identified assets and liabilities of EHM against the proceeds received as noted above.

GRail

In December 2016, Glencore disposed of its New South Wales' coal rail haulage business to Genesee & Wyoming for cash consideration of $840 million (A$1.1 billion).

2015 Disposals

In 2015, Glencore disposed of its controlling interest in Tampakan and Falcondo. Furthermore, upon Optimum Coal commencing business rescue proceedings, Glencore ceased having control over Optimum in August 2015. As a result of such loss of control, Optimum was no longer accounted for as a subsidiary and has been deconsolidated (see note 3).

The carrying value of the assets and liabilities over which control was lost and net cash received from these disposals are detailed below:

US$ million	Tampakan	Falcondo	Optimum[1]	Other	Total
Non-current assets					
Property, plant and equipment	161	11	809	5	**986**
Intangible assets	–	–	712	–	**712**
Loans and advances	1	–	256	–	**257**
	162	11	1,777	5	**1,955**
Current assets					
Inventories	–	45	39	12	**96**
Accounts receivable	21	12	34	12	**79**
Cash and cash equivalents	–	1	15	22	**38**
	21	58	88	46	**213**
Non-controlling interest	(14)	–	(243)	–	**(257)**
Non-current liabilities					
Borrowings	(142)	–	(277)	–	**(419)**
Deferred income	–	–	(150)	–	**(150)**
Deferred tax liabilities	–	(1)	(203)	(1)	**(205)**
Provisions	(8)	(110)	(137)	–	**(255)**
	(150)	(111)	(767)	(1)	**(1,029)**
Current liabilities					
Accounts payable	(3)	(5)	(64)	(42)	**(114)**
Deferred income	–	–	(62)	–	**(62)**
Provisions	–	–	(6)	–	**(6)**
	(3)	(5)	(132)	(42)	**(182)**
Carrying value of net assets/(liabilities) disposed	**16**	**(47)**	**723**	**8**	**700**
Less: Cash and cash equivalents received	(208)	(40)	–	(2)	**(250)**
Add: Foreign currency translation losses recycled to the statement of income	–	–	311	–	**311**
Net (gain)/loss on disposal	**(192)**	**(87)**	**1,034**	**6**	**761**
Cash and cash equivalents received	208	40	–	2	250
Less: Cash and cash equivalents disposed	–	(1)	(15)	(22)	**(38)**
Net cash received from disposal	**208**	**39**	**(15)**	**(20)**	**212**

1 Includes associated impairments of $152 million (see note 3).

Notes to the financial statements

24. 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 Baa3 (stable) from Moody's and BBB- (positive outlook) from S&P.

Distribution policy and other capital management initiatives

In September 2015, the Board determined that no cash distributions would be made in 2016, in an effort to preserve capital and investment grade credit ratings. In December 2016, Glencore announced the reinstatement of distributions to shareholders. Initially Glencore will return approximately $1 billion to shareholders in two equal tranches in 2017, to be paid following preliminary full-year results and half-year results. In 2018, the new cash distribution policy, in respect of 2017 cash flows, comprises the fixed $1 billion component and a variable element representing a minimum 25% of free cash flow attributable to our industrial assets. The actual variable distribution component (minimum 25% pay-out guidance) will reflect prevailing market conditions and outlook and be confirmed annually in respect of prior period's cash flows. Distributions are expected to be formally declared by the Board semi-annually (with the preliminary full-year results and half-year results). Distributions, when declared, will be paid in US dollars, although 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 Hong Kong branch register will receive their distributions in Hong Kong dollars, while 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 of 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's Board has set a consolidated VaR limit (one day 95% confidence level) of $100 million representing less than 0.5% of total equity, which the Board reviews annually. In Q2 2016, this limit was technically breached for 1 day by $1 million as the VaR calculation did not account for the future physical coal production that was economically hedged with the corresponding captured and reported on coal derivatives. If such underlying hedged exposure had been included in the VaR calculation, the actual VaR number would have been substantially lower, with no resulting technical breach. Much of this hedge book has now been realised.

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.

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

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

US$ million	**2016**	2015
Year-end position	31	18
Average during the year	42	35
High during the year	101	52
Low during the year	16	17

VaR does not purport to represent actual gains or losses in fair value on 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 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, cobalt, freight and some risk associated with 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 energy, metals and minerals and agricultural 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. 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 and equity for the year ended 31 December 2016 would decrease/increase by $100 million (2015: $134 million).

Currency risk

The US 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 US 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 hedged through forward exchange contracts. Consequently, foreign exchange movements against the US 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 overwhelmingly denominated in or swapped using hedging instruments into US dollars. Glencore's operating expenses, being a small portion of its revenue base, are incurred in a mix of currencies of which the US 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, Yen and Australian dollar denominated bonds (see note 18). 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 cash flow hedges of the foreign currency risks associated with the bonds. The fair value of these derivatives is as follows:

	Notional amounts		**Recognised fair values**		
US$ million	**Buy**	**Sell**	**Assets**	**Liabilities**	**Average maturity**[1]
Cross currency swap agreements – 2016	–	14,179	26	2,873	2020
Cross currency swap agreements – 2015	–	15,905	34	2,418	2020

1 *Refer to note 18 for details.*

Notes to the financial statements

24. FINANCIAL AND CAPITAL RISK MANAGEMENT (continued)

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. 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 2.9% (2015: 1.9%) of its trade receivables (on a gross basis taking into account credit enhancements) or accounting for more than 3.9% of its revenues over the year ended 31 December 2016 (2015: 4.7%).

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 25).

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 prices beyond three months, with the main exception being coal, where longer-term fixed price contracts are common, 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 development of more transparent and liquid spot markets, e.g. coal and iron ore and 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 (2015: $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 and proposed investments, as well as credit facility refinancing/extension requirements, well ahead of time.

As at 31 December 2016, Glencore had available committed undrawn credit facilities, cash and marketable securities amounting to $16,740 million (2015: $15,155 million). The maturity profile of Glencore's financial liabilities based on the contractual terms is as follows:

US$ million 2016	After 5 years	Due 3 – 5 years	Due 2 – 3 years	Due 1 – 2 years	Due 0 – 1 year	Total
Borrowings	10,687	5,726	2,937	3,838	10,030	**33,218**
Expected future interest payments	3,318	1,018	616	650	635	**6,237**
Accounts payable	–	–	–	–	26,176	**26,176**
Other financial liabilities	403	–	–	–	6,386	**6,789**
Total	**14,408**	**6,744**	**3,553**	**4,488**	**43,227**	**72,420**
Current assets					43,412	**43,412**

US$ million 2015	After 5 years	Due 3 – 5 years	Due 2 – 3 years	Due 1 – 2 years	Due 0 – 1 year	Total
Borrowings	11,401	10,949	2,823	7,759	11,117	**44,049**
Expected future interest payments	3,965	1,515	796	814	935	**8,025**
Accounts payable	–	–	–	–	24,088	**24,088**
Other financial liabilities	186	–	–	–	4,931	**5,117**
Total	**15,552**	**12,464**	**3,619**	**8,573**	**41,071**	**81,279**
Current assets					42,198	**42,198**

25. 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 $33,218 million (2015: $44,049 million) of borrowings, the fair value of which at 31 December 2016 was $33,673 million (2015: $39,406 million) based on observable market prices applied to the borrowing portfolio (a Level 2 fair value measurement).

US$ million 2016	Carrying value[1]	Available for sale	FVtPL[2]	Total
Assets				
Other investments[3]	–	1,457	296	**1,753**
Advances and loans	3,483	–	–	**3,483**
Accounts receivable	20,066	–	–	**20,066**
Other financial assets (see note 26)	–	–	2,212	**2,212**
Cash and cash equivalents and marketable securities[4]	–	–	2,518	**2,518**
Total financial assets	**23,549**	**1,457**	**5,026**	**30,032**
Liabilities				
Borrowings	33,218	–	–	**33,218**
Non-current other financial liabilities (see note 26)	–	–	403	**403**
Accounts payable	26,176	–	–	**26,176**
Other financial liabilities (see note 26)	–	–	6,386	**6,386**
Total financial liabilities	**59,394**	**–**	**6,789**	**66,183**

1 *Carrying value comprises investments, loans, accounts receivable, accounts payable and other liabilities measured at amortised cost.*

2 *FVtPL – Fair value through profit and loss – held for trading.*

3 *Other investments of $1,715 million are classified as Level 1 measured using quoted market prices with the remaining balance of $38 million being investments in private companies whose fair value cannot be reliably measured and therefore carried at cost. The movement in Level 1 measured investments compared to prior year (see below), mainly relates to the Group's share in Russneft, which after the listing on the Moscow stock exchange in November 2016, is measured at fair value.*

4 *Classified as Level 1, measured using quoted exchange rates and/or market prices.*

Notes to the financial statements

25. FINANCIAL INSTRUMENTS (continued)

US$ million 2015	Carrying value[1]	Available for sale	FVtPL[2]	Total
Assets				
Other investments[3]	–	1,092	213	**1,305**
Advances and loans	3,005	–	–	**3,005**
Accounts receivable	17,001	–	–	**17,001**
Other financial assets (see note 26)	–	–	3,701	**3,701**
Cash and cash equivalents and marketable securities[4]	–	–	2,746	**2,746**
Total financial assets	**20,006**	**1,092**	**6,660**	**27,758**
Liabilities				
Borrowings	44,049	–	–	**44,049**
Non-current other financial liabilities (see note 26)	–	–	186	**186**
Accounts payable	24,088	–	–	**24,088**
Other financial liabilities (see note 26)	–	–	4,931	**4,931**
Total financial liabilities	**68,137**	**–**	**5,117**	**73,254**

1 *Carrying value comprises investments, loans, accounts receivable, accounts payable and other liabilities measured at amortised cost.*

2 *FVtPL – Fair value through profit and loss – held for trading.*

3 *Other investments of $568 million are classified as Level 1 measured using quoted market prices with the remaining balance of $737 million being investments in private companies whose fair value cannot be reliably measured and therefore carried at cost.*

4 *Classified as Level 1, measured using quoted exchange rates and/or market prices.*

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 2016 and 2015 were as follows:

	Amounts eligible for set off under netting agreements			**Related amounts not set off under netting agreements**				
US$ million 2016	**Gross amount**	**Amounts offset**	**Net amount**	**Financial instruments**	**Financial collateral**	**Net amount**	**Amounts not subject to netting agreements**	**Total as presented in the consolidated statement of financial position**
Derivative assets[1]	10,679	(9,834)	**845**	(288)	(171)	386	**1,367**	**2,212**
Derivative liabilities[1]	(14,288)	9,834	**(4,454)**	288	3,784	(382)	**(1,932)**	**(6,386)**

1 *Presented within current other financial assets and current other financial liabilities.*

	Amounts eligible for set off under netting agreements			Related amounts not set off under netting agreements				
US$ million 2015	Gross amount	Amounts offset	Net amount	Financial instruments	Financial collateral	Net amount	Amounts not subject to netting agreements	Total as presented in the consolidated statement of financial position
Derivative assets[1]	6,164	(4,282)	**1,882**	(406)	(494)	982	**1,819**	**3,701**
Derivative liabilities[1]	(6,799)	4,282	**(2,517)**	406	1,674	(437)	**(2,414)**	**(4,931)**

1 *Presented within current other financial assets and current 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 when both elect to settle on a net basis. In the absence of such an election, financial assets and liabilities may be settled on a gross basis, however, each party to the master netting or similar agreement will have the option to settle all such amounts on a net basis in the event of default of the other party. 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.

26. FAIR VALUE MEASUREMENTS

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

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

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

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

Level 1 classifications primarily include futures with a tenor of less than one year and options that are exchange traded, whereas Level 2 classifications primarily include futures with a tenor greater than one year, over the counter options, swaps and physical forward transactions which derive their fair value primarily from exchange quotes and readily observable broker quotes. Level 3 classifications primarily include physical forward transactions which derive their fair value predominantly from models that use broker quotes and applicable market-based estimates surrounding location, quality and credit differentials and financial liabilities linked to the fair value of certain mining operations. In circumstances where Glencore cannot verify fair value with observable market inputs (Level 3 fair values), it is possible that a different valuation model could produce a materially different estimate of fair value.

It is Glencore's policy that transactions and activities in trade related financial instruments be concluded under master netting agreements or long form confirmations to enable balances due to/from a common counterparty to be offset in the event of default, insolvency or bankruptcy by the counterparty.

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 liabilities as at 31 December 2016 and 2015. Other assets and liabilities which are measured at fair value on a recurring basis are marketing inventories, other investments, cash and cash equivalents and marketable securities. Refer to notes 11 and 25 for disclosures in connection with these fair value measurements. There are no non-recurring fair value measurements.

Other financial assets

US$ million 2016	**Level 1**	**Level 2**	**Level 3**	**Total**
Commodity related contracts				
Futures	207	154	–	**361**
Options	31	37	–	**68**
Swaps	166	146	–	**312**
Physical forwards	–	763	558	**1,321**
Financial contracts				
Cross currency swaps	–	26	–	**26**
Foreign currency and interest rate contracts	–	124	–	**124**
Total	**404**	**1,250**	**558**	**2,212**

US$ million 2015	Level 1	Level 2	Level 3	**Total**
Commodity related contracts				
Futures	889	246	–	**1,135**
Options	30	15	–	**45**
Swaps	112	556	–	**668**
Physical forwards	–	1,299	224	**1,523**
Financial contracts				
Cross currency swaps	–	34	–	**34**
Foreign currency and interest rate contracts	–	296	–	**296**
Total	**1,031**	**2,446**	**224**	**3,701**

Notes to the financial statements

26. FAIR VALUE MEASUREMENTS (continued)

Other financial liabilities

US$ million 2016	Level 1	Level 2	Level 3	Total
Commodity related contracts				
Futures	1,068	150	–	**1,218**
Options	5	12	6	**23**
Swaps	846	321	–	**1,167**
Physical forwards	–	859	203	**1,062**
Financial contracts				
Cross currency swaps	–	2,873	–	**2,873**
Foreign currency and interest rate contracts	–	43	–	**43**
Current other financial liabilities	**1,919**	**4,258**	**209**	**6,386**
Non-current other financial liabilities				
Non-discretionary dividend obligation[1]	–	–	403	**403**
Non-current other financial liabilities	**–**	**–**	**403**	**403**
Total	**1,919**	**4,258**	**612**	**6,789**

US$ million 2015	Level 1	Level 2	Level 3	Total
Commodity related contracts				
Futures	414	33	–	**447**
Options	40	4	1	**45**
Swaps	197	323	–	**520**
Physical forwards	–	1,156	205	**1,361**
Financial contracts				
Cross currency swaps	–	2,418	–	**2,418**
Foreign currency and interest rate contracts	3	137	–	**137**
Current other financial liabilities	**654**	**4,071**	**206**	**4,931**
Non-current other financial liabilities				
Non-discretionary dividend obligation[1]	–	–	186	**186**
Non-current other financial liabilities	**–**	**–**	**186**	**186**
Total	**654**	**4,071**	**392**	**5,117**

1 *A ZAR denominated derivative liability payable to ARM Coal, 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 20 years as at 31 December 2016) and has no fixed repayment date and is not cancellable within 12 months.*

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

US$ million	Physical forwards	Options	Other	Total Level 3
1 January 2015	75	(724)	(295)	**(944)**
Total gain/(loss) recognised in cost of goods sold	36	(1)	–	**35**
Cancellation of put option over non-controlling interest	–	685	–	**685**
Non-discretionary dividend obligation	–	–	109	**109**
Realised	(92)	39	–	**(53)**
31 December 2015	**19**	**(1)**	**(186)**	**(168)**
1 January 2016	19	(1)	(186)	**(168)**
Total gain/(loss) recognised in cost of goods sold	258	(6)	–	**252**
Non-discretionary dividend obligation	–	–	(217)	**(217)**
Realised	78	1	–	**79**
31 December 2016	**355**	**(6)**	**(403)**	**(54)**

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.

Some of the Group's financial assets and financial liabilities are measured at fair value at the end of each reporting period. The following table provides information about how the fair values of these financial assets and financial liabilities are determined, in particular, the valuation techniques and inputs used.

Fair value of financial assets/financial liabilities

US$ million			2016	2015
Futures – Level 1		Assets	**207**	889
		Liabilities	**(1,068)**	(414)
Valuation techniques and key inputs:	Quoted bid prices in an active market			
Significant unobservable inputs:	None			
Futures – Level 2		Assets	**154**	246
		Liabilities	**(150)**	(33)
Valuation techniques and key inputs:	Discounted cash flow model			
	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.			
Significant unobservable inputs:	None			
Options – Level 1		Assets	**31**	30
		Liabilities	**(5)**	(40)
Valuation techniques and key inputs:	Quoted bid prices in an active market			
Significant unobservable inputs:	None			
Options – Level 2		Assets	**37**	15
		Liabilities	**(12)**	(4)
Valuation techniques and key inputs:	Discounted cash flow model			
	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.			
Significant unobservable inputs:	None			
Options – Level 3		Assets	**–**	–
		Liabilities	**(6)**	(1)
Valuation techniques and key inputs:	Standard option pricing model			
Significant unobservable inputs:	Prices are adjusted by volatility differentials. This significant unobservable input generally represents 2% – 20% of the overall value of the instruments. A change to a reasonably possible alternative assumption would not result in a material change in the underlying value.			

Notes to the financial statements

26. FAIR VALUE MEASUREMENTS (continued)

Fair value of financial assets/financial liabilities

US$ million			2016	2015
Swaps – Level 1		Assets	**166**	**112**
		Liabilities	**(846)**	**(197)**
Valuation techniques and key inputs:	Quoted bid prices in an active market			
Significant unobservable inputs:	None			
Swaps – Level 2		Assets	**146**	**556**
		Liabilities	**(321)**	**(323)**
Valuation techniques and key inputs:	Discounted cash flow model 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.			
Significant unobservable inputs:	None			
Physical Forwards – Level 2		Assets	**763**	**1,299**
		Liabilities	**(859)**	**(1,156)**
Valuation techniques and key inputs:	Discounted cash flow model 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, such as history of non-performance, collateral held and current market developments, as required.			
Significant unobservable inputs:	None			
Physical Forwards – Level 3		Assets	**558**	**224**
		Liabilities	**(203)**	**(205)**
Valuation techniques and key inputs:	Discounted cash flow model 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 significant unobservable inputs generally represent 2% – 30% of the overall value of the instruments. These differentials are generally symmetrical with an increase/decrease in one input resulting in an opposite movement in another input, resulting in no material change in the underlying value.			

Fair value of financial assets/financial liabilities

US$ million			2016	2015
Cross currency swaps – Level 2		Assets	**26**	34
		Liabilities	**(2,873)**	(2,418)
Valuation techniques and key inputs:	Discounted cash flow model 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.			
Significant unobservable inputs:	None			
Foreign currency and interest rate contracts – Level 1		Assets	**–**	–
		Liabilities	**–**	(3)
Valuation techniques and key inputs:	Quoted bid prices in an active market			
Significant unobservable inputs:	None			
Foreign currency and interest rate contracts – Level 2		Assets	**124**	296
		Liabilities	**(43)**	(137)
Valuation techniques and key inputs:	Discounted cash flow model 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.			
Significant unobservable inputs:	None			
Non-discretionary dividend obligation – Level 3		Assets	**–**	–
		Liabilities	**(403)**	(186)
Valuation techniques:	Discounted cash flow model			
Significant observable inputs:	– 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 valuation remains sensitive to price and a 10% increase/decrease in commodity price assumptions would result in an $127 million adjustment to the current carrying value.			

Notes to the financial statements

27. AUDITORS' REMUNERATION

US$ million	2016	2015
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	17	19
Audit-related assurance services[1]	2	3
Total audit and related assurance fees	**22**	**25**
Transaction services	3	–
Taxation compliance services	3	3
Other taxation advisory services	2	2
Other assurance services	1	1
Total non-audit fees	**9**	**6**
Total professional fees	**31**	**31**

1 *Audit-related assurance services primarily related to interim reviews of the Group's half-year accounts and quarterly accounts of the Group's publicly listed subsidiaries.*

28. 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 2016, $776 million (2015: $1,088 million), of which 81% (2015: 77%) 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 2016, $177 million (2015: $144 million) of such development expenditures are to be incurred, of which 20% (2015: 29%) are for commitments to be settled over the next year.

Glencore procures seagoing vessels/chartering services to meet its overall marketing objectives and commitments. As at 31 December 2016, Glencore has committed to future hire costs to meet future physical delivery and sale obligations and expectations of $217 million (2015: $894 million), of which $105 million (2015: $145 million) are with associated companies. 46% (2015: 60%) of the total charters are for services to be received over the next two years.

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 2016, $17,358 million (2015: $15,385 million) of procurement and $2,972 million (2015: $2,642 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.

Glencore has entered into various operating leases mainly as lessee for office and warehouse/storage facilities. Rental expenses for these leases totalled respectively $157 million and $237 million for the years ended 31 December 2016 and 2015. Future net minimum lease payments under non-cancellable operating leases are as follows:

US$ million	2016	2015
Within 1 year	106	143
Between 2 – 5 years	245	346
After 5 years	97	170
Total	**448**	**659**

Glencore has entered into finance leases for various plant and equipment items, primarily vessels and machinery. Future net minimum lease payments under finance leases together with the future finance charges are as follows:

	Undiscounted minimum lease payments		Present value of minimum lease payments	
US$ million	**2016**	2015	**2016**	2015
Within 1 year	99	116	75	88
Between 1 and 5 years	259	267	172	193
After 5 years	222	277	154	183
Total minimum lease payments	**580**	**660**	**401**	**464**
Less: amounts representing finance lease charges	179	196	–	–
Present value of minimum lease payments	**401**	**464**	**401**	**464**

29. CONTINGENT LIABILITIES

The amount of corporate guarantees in favour of third parties as at 31 December 2016 was $Nil (2015: $Nil). Also see note 9.

The Group is subject to various claims which arise in the ordinary course of business as detailed below. These contingent liabilities are reviewed on a regular basis and where practical an estimate is made of the potential financial impact on the Group. As at 31 December 2016 and 2015 it was not practical to make such an assessment.

Litigation

Certain legal actions, other claims and unresolved disputes are pending against Glencore. Whilst Glencore cannot predict the results of any litigation, it believes that it has meritorious defences against those actions or claims. Glencore believes the likelihood of any material liability arising from these claims to be remote and that the liability, if any, therefore resulting from any litigation will not have a material adverse effect on its consolidated income, financial position or cash flows.

Environmental contingencies

Glencore's operations are subject to various environmental laws and regulations. Glencore is in material 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 these allegations is not expected to have a material adverse effect on its consolidated income, financial position or cash flows.

30. 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 10, 12, and 22). 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 2016, sales and purchases with associates and joint ventures amounted to $1,570 million (2015: $1,196 million) and $3,194 million (2015: $3,562 million) respectively.

Remuneration of key management personnel

Glencore's key management personnel are the members of the Board of Directors, CEO, CFO and the heads of the operating segments. 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 $13 million (2015: $10 million). There were no other long-term benefits or share-based payments to key management personnel (2015: $Nil). Further details on remuneration of Directors are set out in the Director's remuneration report on page 99.

Notes to the financial statements

31. PRINCIPAL SUBSIDIARIES WITH MATERIAL NON-CONTROLLING INTERESTS

Non-controlling interest is comprised of the following:

US$ million	2016	2015
Kazzinc	1,396	1,316
Koniambo	(2,653)	(2,460)
Katanga	(511)	(196)
Mutanda	767	713
Alumbrera	118	126
Other[1]	421	590
Total	**(462)**	89

1 Other comprises various subsidiaries in which no individual balance attributable to non-controlling interests is material.

Summarised financial information in respect of Glencore's subsidiaries that have material non-controlling interest as at 31 December 2016, reflecting 100% of the underlying subsidiary's relevant figures, is set out below.

US$ million	Kazzinc	Koniambo	Katanga	Mutanda
31 December 2016				
Non-current assets	4,703	1,226	4,424	4,763
Current assets	1,014	294	652	549
Total assets	**5,717**	**1,520**	**5,076**	**5,312**
Non-current liabilities	719	9,494	3,380	1,885
Current liabilities	391	101	1,848	281
Total liabilities	**1,110**	**9,595**	**5,228**	**2,166**
Net assets	**4,607**	**(8,075)**	**(152)**	**3,146**
Equity attributable to owners of the Company	3,211	(5,422)	359	2,379
Non-controlling interests	1,396	(2,653)	(511)[1]	767
Non-controlling interests in %	30.3%	51.0%	24.7%	31.0%
2016				
Revenue	2,602	152	–	1,322
Expenses	(2,211)	(529)	(625)	(1,147)
Net profit/(loss) for the year	**391**	**(377)**	**(625)**	**175**
Profit attributable to owners of the Company	273	(184)	(310)	121
Profit attributable to non-controlling interests	118	(193)	(315)[1]	54
Other comprehensive income attributable to owners of the Company	–	–	–	–
Other comprehensive income attributable to non-controlling interests	–	–	–	–
Total comprehensive income/(loss) for the year	**391**	**(377)**	**(625)**	**175**
Dividends paid to non-controlling interests	(38)	–	–	–
Net cash inflow/(outflow) from operating activities	856	–	(161)	428
Net cash outflow from investing activities	(122)	(263)	(213)	(234)
Net cash (outflow)/inflow from financing activities	(567)	210	338	(195)
Total net cash inflow/(outflow)	**167**	**(53)**	**(36)**	**(1)**

1 Glencore has a 75.3% interest in Katanga Mining Limited, which in turn has a 75% interest in Kamoto Copper Company ("KCC") the entity engaged in copper mining activities. The "non-controlling interests" balance includes negative $629 million and the "profit attributable to non-controlling interests" balance includes negative $214 million related to non-controlling interests arising at the KCC level.

US$ million	Kazzinc	Koniambo	Katanga	Mutanda
31 December 2015				
Non-current assets	4,796	958	4,468	4,814
Current assets	872	337	639	440
Total assets	**5,668**	**1,295**	**5,107**	**5,254**
Non-current liabilities	975	8,878	3,072	2,028
Current liabilities	344	114	1,562	255
Total liabilities	**1,319**	**8,992**	**4,634**	**2,283**
Net assets	**4,349**	**(7,697)**	**473**	**2,971**
Equity attributable to owners of the Company	3,033	(5,237)	669	2,258
Non-controlling interests	1,316	(2,460)	(196)[1]	713
Non-controlling interests in %	30.3%	51.0%	24.7%	31.0%
2015				
Revenue	2,244	–	691	1,315
Expenses	(2,494)	(4,824)	(1,357)	(1,232)
Net (loss)/profit for the year	**(250)**	**(4,824)**	**(666)**	**83**
Profit attributable to owners of the Company	(174)	(2,364)	(347)	57
Profit attributable to non-controlling interests	(76)	(2,460)	(319)[1]	26
Other comprehensive income attributable to owners of the Company	–	–	–	–
Other comprehensive income attributable to non-controlling interests	–	–	–	–
Total comprehensive (loss)/income for the year	**(250)**	**(4,824)**	**(666)**	**83**
Dividends paid to non-controlling interests	(10)	–	–	–
Net cash inflow/(outflow) from operating activities	591	–	(600)	330
Net cash outflow from investing activities	(262)	(360)	(542)	(261)
Net cash (outflow)/inflow from financing activities	(319)	404	1,190	(170)
Total net cash inflow/(outflow)	**10**	**44**	**48**	**(101)**

1 Glencore has a 75.3% interest in Katanga Mining Limited, which in turn has a 75% interest in Kamoto Copper Company ("KCC") the entity engaged in copper mining activities. The "non-controlling interests" balance includes negative $416 million and the "profit attributable to non-controlling interests" balance includes negative $205 million related to non-controlling interests arising at the KCC level.

32. SUBSEQUENT EVENTS

- Further to the announcements in December 2016, Glencore and Qatar Investment Authority ("QIA") entered into various agreements establishing a 50:50 consortium that would acquire 19.5% of OSJC Rosneft Oil ("Rosneft"), enter into a five year offtake agreement with Rosneft on market terms and collectively evaluate and potentially enter into additional opportunities related to infrastructure, logistics and global trading. As at 31 December 2016, only the establishment of the 50:50 consortium and payment of Glencore's funding commitment of EUR 300 million were finalised. The balance of the funding and purchase of the 19.5% interest in Rosneft by the 50:50 consortium and completion of the five year offtake agreement was finalised on 3 January 2017.
- In February 2017, Glencore announced that it had acquired the remaining 31% stake in Mutanda Mining Sarl ("Mutanda"), which it did not previously own, and an additional 10.25% stake in Katanga Mining Limited ("Katanga") for a cash outlay of $534 million, including settlement of loan balances. Following the acquisition, Glencore owns 100% of the shares in Mutanda and approximately 86.3% of the shares in Katanga.

Notes to the financial statements

33. PRINCIPAL OPERATING, FINANCE AND INDUSTRIAL SUBSIDIARIES AND INVESTMENTS

	Country of incorporation	**% interest 2016**	% interest 2015	Main activity
Principal subsidiaries				
Metals and minerals				
Minera Alumbrera Limited[1]	Antigua	50.0	50.0	Copper production
Cobar Group	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
Minera Altos de Punitaqui Limitada	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	73.1	Copper production
Sable Zinc Kabwe Limited	Zambia	100.0	100.0	Copper production
Katanga Mining Limited[2]	Canada	75.3	75.3	Copper/Cobalt production
Mutanda Group	DRC	69.0	69.0	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
Vasilkovskoye Gold	Kazakhstan	69.7	69.7	Gold production
Energia Austral Joint Venture	Chile	66.6	66.6	Hydroelectric project
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	97.5	Iron Ore production
Britannia Refined Metals Limited	UK	100.0	100.0	Lead production
Glencore Manganese Group	France/Norway	100.0	100.0	Manganese furnace
Access World Group (formerly Pacorini Group)	Switzerland	100.0	100.0	Metals warehousing
Murrin Murrin Group	Australia	100.0	100.0	Nickel production
Koniambo Nickel S.A.S.[3]	New Caledonia	49.0	49.0	Nickel production
Glencore Nikkelverk AS	Norway	100.0	100.0	Nickel production
Eland Platinum Mines (Pty) Limited	South Africa	74.0	74.0	Platinum production
McArthur River Mining Pty Ltd	Australia	100.0	100.0	Zinc production
Perkoa Group	Burkina Faso	90.0	90.0	Zinc production
Nordenhammer Zinkhütte GmbH	Germany	100.0	100.0	Zinc production
Asturiana de Zinc S.A.	Spain	100.0	100.0	Zinc production

1 *This investment is treated as a subsidiary as the Group is entitled to elect the chairman of the Board who has the casting vote where any vote is split equally between the four board positions. Minera Alumbrera Limited's principal place of business is Argentina.*

2 *Publicly traded on the Toronto Stock Exchange under the symbol KAT.TO and principal place of business is DRC. Glencore owns 1,435,848,228 shares.*

3 *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.*

	Country of incorporation	% interest 2016	% interest 2015	Main activity
Metals and minerals (continued)				
AR Zinc Group	Argentina	100.0	100.0	Zinc/Lead production
Portovesme S.r.L.	Italy	100.0	100.0	Zinc/Lead production
Rosh Pinah Zinc Corporation (Pty) Limited	Namibia	80.1	80.1	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
Energy products				
Cumnock No. 1 Colliery Pty Ltd	Australia	100.0	100.0	Coal production
Enex Foydell Limited	Australia	100.0	100.0	Coal production
Enex Liddell Pty Ltd	Australia	100.0	100.0	Coal production
Oakbridge Pty Ltd	Australia	78.0	78.0	Coal production
Glencore Coal Queensland Pty Limited	Australia	100.0	100.0	Coal production
Jonsha Pty Limited	Australia	100.0	100.0	Coal production
Mangoola Coal Operations Pty Limited	Australia	100.0	100.0	Coal production
Newlands, Collinsville	Australia	100.0	55.0	Coal production
Oceanic Coal Australia Pty Limited	Australia	100.0	100.0	Coal production
Ravensworth Operations Pty Ltd	Australia	100.0	100.0	Coal production
Ulan Coal Mines Limited	Australia	90.0	90.0	Coal production
United Collieries Pty Ltd	Australia	95.0	95.0	Coal production
Prodeco Group	Colombia	100.0	100.0	Coal production
Optimum Coal Holdings (Pty) Limited[4]	South Africa	0.0	67.6	Coal production
Izimbiwa Coal (Pty) Ltd[5]	South Africa	49.9	49.9	Coal production
Umcebo Mining (Pty) Ltd[6]	South Africa	48.7	48.7	Coal production
Tavistock Collieries (Pty) Limited	South Africa	100.0	100.0	Coal production
Topley Corporation	B.V.I.	100.0	100.0	Ship owner
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
Chemoil Energy Limited	Hong Kong	100.0	100.0	Oil storage and bunkering
Agricultural products[7]				
Glencore Magdeburg GmbH	Germany	0.0	100.0	Biofuel production
Glencore Biofuels AG	Switzerland	0.0	100.0	Biofuel production
Moreno Group	Argentina	0.0	100.0	Edible oil production
Usti Oilseed Group	Czech Republic	0.0	100.0	Edible oil production
Pannon Vegetable Oil Manufacturing LLC	Hungary	0.0	100.0	Edible oil production
Zaklady Tluszczowe w Bodaczowie Sp.z.o.o.	Poland	0.0	100.0	Edible oil production
Viterra Group (incl. TRT)	Canada/Australia	0.0	100.0	Grain handling
Glencane Bioenergia S.A.	Brazil	0.0	100.0	Sugar cane/ethanol production
Correcta Industria e Comercio Ltdo.	Brazil	0.0	100.0	Wheat flour milling

4 *Although Glencore held 67.6% of the voting rights in Optimum at 31 December 2015, it was not able to exercise control from August 2015, see note 3.*

5 *Although Glencore holds less than 50% of the voting rights, it has the ability to exercise control over Izimbiwa (previously Shanduka Coal) through the ability to direct the key activities of the operation and to appoint key management personnel provided by the terms of the shareholders agreement.*

6 *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.*

7 *In 2016, Glencore disposed of its controlling interest in the Agricultural products business segment and retained a 49.9% interest, see note 23.*

Notes to the financial statements

33. PRINCIPAL OPERATING, FINANCE AND INDUSTRIAL SUBSIDIARIES AND INVESTMENT (continued)

	Country of incorporation	% interest 2016	% interest 2015	Main activity
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
Glencore Canada Financial Corp	Canada	100.0	100.0	Finance
Glencore Finance (Europe) S.A.	Luxembourg	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 Canada Corporation	Canada	100.0	100.0	Operating
Glencore Agriculture B.V.[7]	Netherlands	0.0	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
Principal joint ventures[8]				
Glencore Agriculture Limited[7]	Jersey	49.9	0.0	Agriculture business
Clermont Coal Mines Limited[9]	Australia	25.1	25.1	Coal production
Compania Minera Dona Ines de Collahuasi	Chile	44.0	44.0	Copper production
El Aouj Joint Venture	Mauritania	50.0	44.0	Iron Ore production
Principal joint operations[10]				
Pentland Joint Venture	Australia	75.0	75.0	Coal exploration
Redrock Joint Venture	Australia	75.0	75.0	Coal exploration
Togara North Joint Venture	Australia	70.0	70.0	Coal exploration
Wandoan Joint Venture	Australia	75.0	75.0	Coal exploration
Bulga Joint Venture	Australia	68.3	68.3	Coal production
Cumnock Joint Venture	Australia	90.0	90.0	Coal production
Foybrook Joint Venture	Australia	67.5	67.5	Coal production
Liddell Joint Venture	Australia	67.5	67.5	Coal production
Oaky Creek Coal Joint Venture	Australia	55.0	55.0	Coal production
Ravensworth Underground Mine Joint Venture	Australia	70.0	70.0	Coal production
Rolleston Joint Venture	Australia	75.0	75.0	Coal production
Ulan Coal Mines Joint Venture	Australia	90.0	90.0	Coal production
United Joint Venture	Australia	95.0	95.0	Coal production

8 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.

9 The Group's effective 25.05% economic interest in Clermont Coal is held through GS Coal Pty Ltd, a 50:50 joint venture with Sumitomo Corporation.

10 Classified as joint operations under IFRS 11, as these joint arrangements are not structured through separate vehicles.

	Country of incorporation	% interest 2016	% interest 2015	Main activity
Principal joint operations (continued)				
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	100.0	Copper production
Merafe Pooling and Sharing Joint Venture	South Africa	79.5	79.5	Ferroalloys production
Kabanga Joint Venture	Tanzania	50.0	50.0	Nickel production
Mototolo Joint Venture	South Africa	37.0	37.0	Platinum production
Rhovan Pooling and Sharing Joint Venture	South Africa	74.0	74.0	Vanadium production
Principal associates				
Renova S.A.[7]	Argentina	0.0	50.0	Biofuel production
Carbones del Cerrejon LLC	Colombia	33.3	33.3	Coal production
Port Kembla Coal Terminal Limited	Australia	29.7	29.7	Coal terminal
Port Waratah Coal Services Ltd	Australia	15.5	15.5	Coal terminal
Richards Bay Coal Terminal Company Limited	South Africa	26.7	26.7	Coal terminal
Polymet Mining Corp.	Canada	28.4	28.4	Copper production
Century Aluminum Company[11]	USA	47.5	47.5	Diversified production
Terminal de Grãos Ponta da Montanha (Barcarena)[7]	Brazil	0.0	49.9	Grain terminal
Noranda Income Fund	Canada	25.0	25.0	Zinc production
Compania Minera Antamina S.A.	Peru	33.8	33.8	Zinc/Copper production
Recylex S.A.	France	32.2	32.2	Zinc/Lead production
Other investments				
United Company Rusal plc	Jersey	8.8	8.8	Aluminium production
OAO NK Russneft[12]	Russia	25.0	46.0	Oil production
Volcan Compania Minera S.A.A.	Peru	7.3	7.3	Zinc production

11 Represents the Group's economic interest in Century, comprising 42.9% (2015: 42.9%) voting interest and 4.6% non-voting interest (2015: 4.6%). Century is publicly traded on NASDAQ under the symbol CENX.

12 Although the Group holds more than 20% of the voting rights in Russneft, it is unable to exercise significant influence over the financial and operating policy decisions of Russneft.

Additional information

201 Glossary
206 Production by quarter – Q4 2015 to Q4 2016
213 Resources and reserves
222 Shareholder information
IBC Forward looking statements

Glossary

Available committed liquidity[1]

US$ million	2016	2015
Cash and cash equivalents and marketable securities – reported	2,518	2,746
Cash and cash equivalents of certain associates and joint ventures	198	168
Headline committed syndicated revolving credit facilities	14,500	15,250
Amount drawn under syndicated revolving credit facilities	(476)	(2,994)
Amounts drawn under U.S. commercial paper programme	–	(15)
Total	**16,740**	**15,155**

1 *Presented on an adjusted measured basis.*

Adjusted EBIT/EBITDA

Adjusted EBIT/EBITDA, as defined in note 2 of the financial statements, 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 underlying Adjusted EBIT of certain associates and joint ventures which are accounted for internally by means of proportionate consolidation, excluding significant items. In addition, the segment information includes Glencore Agri, which has been disclosed as a discontinued operation until close of transaction on 1 December 2016, see note 23 of the financial statements.

Adjusted EBITDA consists of Adjusted EBIT plus depreciation and amortisation, including the related adjustment for Proportionate Consolidation. In addition, the relationships Net debt to Adjusted EBITDA and Adjusted EBITDA to net interest (interest expense less interest income disclosed on the face of the consolidated statement of income/(loss)) are an indication of our financial flexibility and ability to service debt.

Adjustment for Proportionate Consolidation

For internal reporting and analysis, management evaluates the performance of Antamina copper/zinc mine (34% owned), Cerrejón coal mine (33% owned), Collahuasi copper mine (44% owned) and Glencore Agri (50% owned) under the proportionate consolidation method reflecting Glencore’s proportionate share of the revenues, expenses, assets and liabilities of these investments.

Current capital employed (“CCE”)

Current capital employed is current assets less accounts payable, current deferred income, current provisions, current other financial liabilities and income tax payable.

Funds from operations (“FFO”)

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, related adjustments for Proportionate Consolidation and certain other one-off (Significant items) identified expenses, comprising unrealised coal related hedging costs and a legal settlement in 2016 and a legal settlement and net incremental metal leak costs incurred in 2015. See reconciliation table below.

Net funding/debt and FFO to net debt

Net funding/debt demonstrates how our debt is being managed and is an important factor in insuring we maintain an investment grade rating status and an attractive cost of capital. In addition, the relationship of FFO to net debt is an indication of our financial flexibility and strength. Net debt is defined as total current and non-current borrowings less cash and cash equivalents, marketable securities, readily marketable inventories and related adjustments for Proportionate Consolidation. See reconciliation table below.

Net income attributable to equity shareholders pre-significant items

Net income attributable to equity shareholders pre-significant items is a measure of our ability to generate shareholder returns. For 2016, calculation of tax items to be excluded from Net income, includes tax significant items and the tax effect of non-tax significant items themselves. Previously, the calculation was driven by estimated notional effective tax rates; refer to the reconciliation of tax expense below.

Glossary

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 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 2016, $17,093 million (2015: $15,356 million) of inventories were considered readily marketable. This comprises $12,707 million (2015: $10,928 million) of inventories carried at fair value less costs of disposal and $4,386 million (2015: $4,428 million) carried at the lower of cost or net realisable value. Total readily marketable inventories includes $1,718 million related to certain associates and joint ventures (see note 2) accounted under the proportionate consolidation method, comprising $1,384 million of inventory carried at fair value less cost of disposal and $334 million 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.

Significant items

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

Reconciliation of selected reported financial information to those applying the proportionate consolidation method to certain associates and joint ventures

Cash flow related adjustments 2016

US$ million	Reported measure	Adjustment for proportionate consolidation	**Adjusted measure**
Cash generated by operating activities before working capital changes	7,868	–	**7,868**
Addback EBITDA of certain associates and joint ventures	–	1,447	**1,447**
Cash generated by operating activities before working capital changes	7,868	1,447	**9,315**
Coal related hedging and legal costs included above (via statement of income – refer to note 2)	368	–	**368**
Income taxes paid	(584)	(96)	**(680)**
Interest received	111	–	**111**
Interest paid	(1,376)	(6)	**(1,382)**
Dividend received from associates and joint ventures	833	(795)	**38**
Funds from operations ("FFO")	**7,220**	**550**	**7,770**
Working capital changes (excluding gold and silver streaming proceeds)	(2,172)	(214)	**(2,386)**
Gold and silver streaming proceeds	971	–	**971**
Net cash received in acquisitions of subsidiaries	176	–	**176**
Net cash received from disposal of subsidiaries	5,535	233	**5,768**
Purchase of investments	(15)	(1)	**(16)**
Proceeds from sale of investments	3	–	**3**
Purchase of property, plant and equipment	(3,048)	(394)	**(3,442)**
Proceeds from sale of property, plant and equipment	128	8	**136**
Margin calls in respect of financing related hedging activities	(695)	–	**(695)**
Acquisition of additional interests in subsidiaries	(7)	–	**(7)**
Return of capital/distributions to non-controlling interests	(91)	–	**(91)**
Proceeds from own shares	3	–	**3**
Coal related hedging and legal costs (refer above)	(368)	–	**(368)**
Cash movement in net funding	**7,640**	**182**	**7,822**

Cash flow related adjustments 2015

US$ million	Reported measure	Adjustment for proportionate consolidation	**Adjusted measure**
Cash generated by operating activities before working capital changes	7,454	–	**7,454**
Addback EBITDA of certain associates and joint ventures	–	995	**995**
Cash generated by operating activities before working capital changes	7,454	995	**8,449**
Legal settlement and incremental metal leak costs included above (via statement of income – refer to note 4)	264	–	**264**
Income taxes paid	(865)	(207)	**(1,072)**
Interest received	119	–	**119**
Interest paid	(1,203)	(1)	**(1,204)**
Dividend received from associates and joint ventures	428	(369)	**59**
Funds from operations ("FFO")	**6,197**	**418**	**6,615**
Net working capital changes (excluding silver streaming proceeds)	6,813	(127)	**6,686**
Silver streaming proceeds	900	–	**900**
Net cash used in acquisition of subsidiaries	(318)	–	**(318)**
Net cash received from disposal of subsidiaries	212	–	**212**
Purchase of investments	(236)	–	**(236)**
Proceeds from sale of investments	41	–	**41**
Purchase of property, plant and equipment	(5,372)	(298)	**(5,670)**
Payments for exploration and evaluation	(147)	–	**(147)**
Proceeds from sale of property, plant and equipment	115	14	**129**
Margin calls in respect of financing related hedging activities	(618)	–	**(618)**
Return of capital/distributions to non-controlling interests	(95)	–	**(95)**
Purchases of own shares	(272)	–	**(272)**
Share issuance	2,444	–	**2,444**
Distributions paid to equity holders of the Parent	(2,328)	–	**(2,328)**
Legal settlement and incremental metal leak costs (refer above)	(264)	–	**(264)**
Cash movement in net funding	**7,072**	**7**	**7,079**

Glossary

Net funding/debt at 31 December 2016

US$ million	Reported measure	Adjustment for proportionate consolidation	**Adjusted measure**
Non-current borrowings	23,188	380	**23,568**
Current borrowings	10,030	1,737	**11,767**
Total borrowings	**33,218**	**2,117**	**35,335**
Less: cash and cash equivalents and marketable securities	(2,518)	(198)	**(2,716)**
Net funding	**30,700**	**1,919**	**32,619**
Less: Readily marketable inventories	(15,375)	(1,718)	**(17,093)**
Net debt	**15,325**	**201**	**15,526**

Net funding/debt at 31 December 2015

US$ million	Reported measure	Adjustment for proportionate consolidation	**Adjusted measure**
Non-current borrowings	32,932	89	**33,021**
Current borrowings	11,117	21	**11,138**
Total borrowings	**44,049**	**110**	**44,159**
Less: cash and cash equivalents and marketable securities	(2,746)	(168)	**(2,914)**
Net funding	**41,303**	**(58)**	**41,245**
Less: Readily marketable inventories	(15,356)	–	**(15,356)**
Net debt	**25,947**	**(58)**	**25,889**

Reconciliation of tax expense 2016

US$ million	**Total**
Adjusted EBIT, pre-significant items[1]	3,930
Net finance costs	(1,533)
Adjustments for:	
Net finance costs from certain associates and joint ventures[1]	(16)
Net finance costs from discontinued operations[2]	(70)
Share of income from other associates pre-significant items[1]	(10)
Share of income from associates from discontinued operations[2]	(15)
Profit on a proportionate consolidation basis before tax and pre-significant items	**2,286**
Income tax expense, pre-significant items	(362)
Adjustments for:	
Tax expense from certain associates and joint ventures[1]	(248)
Tax expense from discontinued operations[2]	(131)
Tax expense on a proportionate consolidation basis	**(741)**
Applicable tax rate	**32.4%**

1 See note 2 of the financial statements.
2 See note 23 of the financial statements.

US$ million	Pre-significant tax expense	Significant items tax	**Total tax expense**
Tax expense on a proportionate consolidation basis	741	276	**1,017**
Adjustment in respect of certain associates and joint ventures tax	(248)	–	**(248)**
Adjustment in respect of discontinued operations	(131)	–	**(131)**
Tax expense on the basis of the income statement	**362**	**276**	**638**

Reconciliation of tax expense 2015

US$ million	Marketing activities	Industrial activities	Total
Adjusted EBIT, pre-significant items	2,464	(292)	**2,172**
Interest expense allocation	(153)	(1,432)	**(1,585)**
Adjustments for:			
Certain associates and joint ventures' net finance costs	–	(3)	**(3)**
Share of income in associates and dividend income	(110)	45	**(65)**
Allocated profit before tax for the basis of tax calculation	2,201	(1,682)	**519**
Applicable tax rate	10.0%	25.0%	**(38.5%)**
Pre-significant tax expense/(credit)	**220**	**(420)**	**(200)**

US$ million	Pre-significant tax expense	Significant items tax	**Total tax expense**
Tax (credit)/expense on a proportionate consolidation basis	(200)	460	**260**
Adjustment in respect of certain associates and joint ventures' tax	(162)	–	**(162)**
Adjustment in respect of discontinued operations	(107)	–	**(107)**
Tax (credit)/expense on the basis of the income statement	**(469)**	**460**	**(9)**

Reconciliation of net significant items 2016

US$ million	Gross significant charges	Non-controlling interests' share	**Equity holders' share**
Share of Associates' significant items[1]	(477)	–	**(477)**
Mark-to-market valuation on certain coal hedging contracts[1]	(225)	–	**(225)**
Unrealised intergroup profit elimination[1]	(374)	–	**(374)**
Gains on disposals and investments[2]	452	–	**452**
Other expense – net[3]	(1,589)	21	**(1,568)**
Other expense – net related to discontinued operations[4]	7	–	**7**
Gain on disposal of discontinued operations[4]	1,848	–	**1,848**
Income tax expense	(276)	–	**(276)**
Total significant items	**(634)**	**21**	**(613)**

1 See note 2 of the financial statements.

2 See note 3 of the financial statements.

3 See notes 4 and 5 of the financial statements.

4 See note 23 of the financial statements.

Reconciliation of net significant items 2015

US$ million	Gross significant charges	Non-controlling interests' share	**Equity holders' share**
Share of Associates' significant items[1]	(88)	–	**(88)**
Unrealised intergroup loss elimination[1]	445	–	**445**
Losses on disposals and investments[2]	(994)	–	**(994)**
Other expense – net[3]	(7,928)	2,789	**(5,139)**
Other expense – net related to discontinued operations[4]	(70)	–	**(70)**
Income tax expense	(460)	–	**(460)**
Total significant items	**(9,095)**	**2,789**	**(6,306)**

1 See note 2 of the financial statements.

2 See note 3 of the financial statements.

3 See notes 4 and 5 of the financial statements.

4 See note 23 of the financial statements.

Production by quarter – Q4 2015 to Q4 2016

Metals and minerals

Production from own sources – Total[1]

		Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Copper	kt	374.7	335.0	368.0	358.2	364.6	1,425.8	1,502.2	(5)	(3)
Zinc	kt	317.7	257.1	249.4	282.7	304.9	1,094.1	1,444.8	(24)	(4)
Lead	kt	69.2	71.0	74.3	74.3	74.6	294.2	297.7	(1)	8
Nickel	kt	27.5	27.6	29.5	25.3	32.7	115.1	96.2	20	19
Gold	koz	275	215	257	273	282	1,027	964	7	3
Silver	koz	9,979	9,009	9,804	10,177	10,079	39,069	36,592	7	1
Cobalt	kt	6.2	5.8	6.9	8.3	7.3	28.3	23.0	23	18
Ferrochrome	kt	390	400	362	344	417	1,523	1,462	4	7
Platinum	koz	33	35	46	35	32	148	158	(6)	(3)
Palladium	koz	45	47	73	44	45	209	202	3	–
Rhodium	koz	3	4	4	5	3	16	18	(11)	–
Vanadium Pentoxide	mlb	5.5	5.6	4.5	5.5	5.5	21.1	20.9	1	–

Production from own sources – Copper assets[1]

			Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
African Copper (Katanga, Mutanda, Mopani)											
Katanga	Copper metal[2]	kt	–	–	–	–	–	–	113.7	(100)	n.m.
	Cobalt	kt	–	–	–	–	–	–	2.9	(100)	n.m.
Mutanda	Copper metal[2]	kt	55.1	54.7	54.2	53.4	51.0	213.3	216.1	(1)	(7)
	Cobalt[3]	kt	5.3	4.9	6.0	7.3	6.3	24.5	16.5	48	19
Mopani	Copper metal	kt	12.8	10.7	10.6	9.3	10.5	41.1	92.1	(55)	(18)
African Copper – total production including third party feed											
Mopani	*Copper metal*	*kt*	*30.9*	*26.7*	*27.8*	*27.1*	*28.4*	*110.0*	*184.8*	*(40)*	*(8)*
	Total Copper metal[2]	**kt**	**67.9**	**65.4**	**64.8**	**62.7**	**61.5**	**254.4**	**421.9**	**(40)**	**(9)**
	Total Cobalt[3]	**kt**	**5.3**	**4.9**	**6.0**	**7.3**	**6.3**	**24.5**	**19.4**	**26**	**19**
Collahuasi[4]	**Copper metal**	**kt**	**1.4**	**0.8**	**0.7**	**0.3**	**0.3**	**2.1**	**9.8**	**(79)**	**(79)**
	Copper in concentrates	**kt**	**60.2**	**50.3**	**55.5**	**56.7**	**58.3**	**220.8**	**190.6**	**16**	**(3)**
	Silver in concentrates	**koz**	**1,086**	**774**	**876**	**865**	**761**	**3,276**	**2,828**	**16**	**(30)**
Antamina[5]	**Copper in concentrates**	**kt**	**38.6**	**36.8**	**40.1**	**35.4**	**33.2**	**145.5**	**131.8**	**10**	**(14)**
	Zinc in concentrates	**kt**	**19.6**	**14.1**	**7.7**	**18.3**	**26.7**	**66.8**	**79.3**	**(16)**	**36**
	Silver in concentrates	**koz**	**1,818**	**1,945**	**1,732**	**1,494**	**1,607**	**6,778**	**5,987**	**13**	**(12)**
Other South America (Alumbrera, Lomas Bayas, Antapaccay, Punitaqui)											
Alumbrera	Copper in concentrates	kt	25.8	20.1	17.2	20.1	24.5	81.9	61.8	33	(5)
	Gold in concentrates and in doré	koz	68	68	53	64	71	256	196	31	4
	Silver in concentrates and in doré	koz	190	161	154	165	268	748	498	50	41
Lomas Bayas	Copper metal	kt	19.5	18.4	20.9	19.7	21.0	80.0	71.1	13	8

Production from own sources – Copper assets[1]

			Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Antapaccay	Copper in concentrates	kt	49.9	48.0	57.3	59.0	55.6	219.9	202.1	9	11
	Gold in concentrates	koz	36	19	27	32	37	115	122	(6)	3
	Silver in concentrates	koz	357	334	381	419	402	1,536	1,315	17	13
Punitaqui	Copper in concentrates	kt	2.0	1.9	1.6	1.7	1.8	7.0	8.1	(14)	(10)
	Gold in concentrates	koz	–	1	3	3	4	11	–	n.m.	n.m.
	Silver in concentrates	koz	25	24	13	21	24	82	105	(22)	(4)
Punitaqui – total production including third party feed											
	Copper in concentrates	*kt*	*2.6*	*2.9*	*2.5*	*2.7*	*2.4*	*10.5*	*10.3*	*2*	*(8)*
	Gold in concentrates	*koz*	*–*	*2*	*3*	*3*	*4*	*12*	*–*	*n.m.*	*n.m.*
	Silver in concentrates	*koz*	*28*	*34*	*23*	*29*	*32*	*118*	*123*	*(4)*	*14*
	Total Copper metal	**kt**	**19.5**	**18.4**	**20.9**	**19.7**	**21.0**	**80.0**	**71.1**	**13**	**8**
	Total Copper in concentrates	**kt**	**77.7**	**70.0**	**76.1**	**80.8**	**81.9**	**308.8**	**272.0**	**14**	**5**
	Total Gold in concentrates and in doré	**koz**	**104**	**88**	**83**	**99**	**112**	**382**	**318**	**20**	**8**
	Total Silver in concentrates and in doré	**koz**	**572**	**519**	**548**	**605**	**694**	**2,366**	**1,918**	**23**	**21**
Australia (Mount Isa, Ernest Henry, Townsville, Cobar)											
Mount Isa, Ernest Henry, Townsville	Copper metal	kt	55.0	41.0	57.3	50.7	56.1	205.1	205.6	–	2
	Gold	koz	24	17	19	25	25	86	90	(4)	4
	Silver	koz	412	181	309	418	343	1,251	1,227	2	(17)
Mount Isa, Ernest Henry, Townsville – total production including third party feed											
	Copper metal	*kt*	*72.5*	*70.2*	*71.2*	*69.5*	*64.6*	*275.5*	*288.7*	*(5)*	*(11)*
	Gold	*koz*	*37*	*28*	*31*	*42*	*34*	*135*	*147*	*(8)*	*(8)*
	Silver	*koz*	*455*	*556*	*657*	*533*	*525*	*2,271*	*2,140*	*6*	*15*
Cobar	Copper in concentrates	kt	13.7	11.9	14.4	12.2	15.4	53.9	50.8	6	12
	Silver in concentrates	koz	133	114	145	130	154	543	496	9	16
	Total Copper	**kt**	**55.0**	**41.0**	**57.3**	**50.7**	**56.1**	**205.1**	**205.6**	**–**	**2**
	Total Copper in concentrates	**kt**	**13.7**	**11.9**	**14.4**	**12.2**	**15.4**	**53.9**	**50.8**	**6**	**12**
	Total Gold	**koz**	**24**	**17**	**19**	**25**	**25**	**86**	**90**	**(4)**	**4**
	Total Silver	**koz**	**545**	**295**	**454**	**548**	**497**	**1,794**	**1,723**	**4**	**(9)**
Total Copper department											
	Copper	**kt**	**334.0**	**294.6**	**329.8**	**318.5**	**327.7**	**1,270.6**	**1,353.6**	**(6)**	**(2)**
	Cobalt	**kt**	**5.3**	**4.9**	**6.0**	**7.3**	**6.3**	**24.5**	**19.4**	**26**	**19**
	Zinc	**kt**	**19.6**	**14.1**	**7.7**	**18.3**	**26.7**	**66.8**	**79.3**	**(16)**	**36**
	Gold	**koz**	**128**	**105**	**102**	**124**	**137**	**468**	**408**	**15**	**7**
	Silver	**koz**	**4,021**	**3,533**	**3,610**	**3,512**	**3,559**	**14,214**	**12,456**	**14**	**(11)**

Production by quarter – Q4 2015 to Q4 2016

Metals and minerals

Production from own sources – Zinc assets[1]

			Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Kazzinc											
	Zinc metal	**kt**	**51.4**	**42.9**	**46.3**	**47.4**	**51.0**	**187.6**	**193.4**	**(3)**	**(1)**
	Lead metal	**kt**	**8.1**	**12.2**	**11.9**	**8.1**	**11.8**	**44.0**	**26.3**	**67**	**46**
	Lead in concentrates	**kt**	**–**	**–**	**7.8**	**5.9**	**1.5**	**15.2**	**–**	**n.m.**	**n.m.**
	Copper metal[2]	**kt**	**14.6**	**12.7**	**12.4**	**16.4**	**12.4**	**53.9**	**51.9**	**4**	**(15)**
	Gold	**koz**	**138**	**101**	**142**	**141**	**137**	**521**	**520**	**–**	**(1)**
	Silver	**koz**	**1,046**	**886**	**1,212**	**1,135**	**1,277**	**4,510**	**3,653**	**23**	**22**
	Silver in concentrates	**koz**	**–**	**–**	**202**	**238**	**29**	**469**	**–**	**n.m.**	**n.m.**
Kazzinc – total production including third party feed											
	Zinc metal	*kt*	*77.3*	*76.0*	*76.1*	*76.0*	*77.4*	*305.5*	*304.5*	*–*	*–*
	Lead metal	*kt*	*34.6*	*33.1*	*35.0*	*33.2*	*32.3*	*133.6*	*119.8*	*12*	*(7)*
	Lead in concentrates	*kt*	*–*	*–*	*7.8*	*5.9*	*1.5*	*15.2*	*–*	*n.m.*	*n.m.*
	Copper metal	*kt*	*17.6*	*16.7*	*16.9*	*19.3*	*15.3*	*68.2*	*62.2*	*10*	*(13)*
	Gold	*koz*	*179*	*124*	*178*	*181*	*175*	*658*	*674*	*(2)*	*(2)*
	Silver	*koz*	*7,839*	*6,060*	*8,495*	*6,507*	*6,346*	*27,408*	*30,049*	*(9)*	*(19)*
	Silver in concentrates	*koz*	*–*	*–*	*202*	*238*	*29*	*469*	*–*	*n.m.*	*n.m.*
Australia (Mount Isa, McArthur River)											
Mount Isa	Zinc in concentrates	kt	96.3	80.3	62.2	70.4	75.3	288.2	478.2	(40)	(22)
	Lead in concentrates	kt	34.6	35.9	30.9	37.0	39.5	143.3	163.0	(12)	14
	Silver in concentrates	koz	1,427	1,760	1,643	1,891	2,038	7,332	6,524	12	43
McArthur River	Zinc in concentrates	kt	54.0	43.7	45.5	48.1	62.9	200.2	272.7	(27)	16
	Lead in concentrates	kt	12.3	11.1	10.5	9.7	10.8	42.1	53.0	(21)	(12)
	Silver in concentrates	koz	428	395	374	347	293	1,409	1,724	(18)	(32)
	Total Zinc in concentrates	**kt**	**150.3**	**124.0**	**107.7**	**118.5**	**138.2**	**488.4**	**750.9**	**(35)**	**(8)**
	Total Lead in concentrates	**kt**	**46.9**	**47.0**	**41.4**	**46.7**	**50.3**	**185.4**	**216.0**	**(14)**	**7**
	Total Silver in concentrates	**koz**	**1,855**	**2,155**	**2,017**	**2,238**	**2,331**	**8,741**	**8,248**	**6**	**26**
North America (Matagami, Kidd, Brunswick, CEZ Refinery)											
Matagami	Zinc in concentrates	kt	14.4	14.2	11.8	14.6	11.0	51.6	52.0	(1)	(24)
	Copper in concentrates	kt	2.7	3.0	2.4	2.5	1.8	9.7	8.2	18	(33)
Kidd	Zinc in concentrates	kt	14.8	12.8	19.5	24.0	22.2	78.5	63.2	24	50
	Copper in concentrates	kt	11.9	10.2	8.4	9.8	9.9	38.3	40.1	(4)	(17)
	Silver in concentrates	koz	569	359	520	739	674	2,292	2,368	(3)	18
	Total Zinc in concentrates	**kt**	**29.2**	**27.0**	**31.3**	**38.6**	**33.2**	**130.1**	**115.2**	**13**	**14**
	Total Copper in concentrates	**kt**	**14.6**	**13.2**	**10.8**	**12.3**	**11.7**	**48.0**	**48.3**	**(1)**	**(20)**
	Total Silver in concentrates	**koz**	**569**	**359**	**520**	**739**	**674**	**2,292**	**2,368**	**(3)**	**18**

Production from own sources – Zinc assets[1]

			Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
North America – total production including third party feed											
Brunswick Smelter	*Lead metal*	*kt*	*20.9*	*19.8*	*13.7*	*19.6*	*16.4*	*69.5*	*70.8*	*(2)*	*(22)*
	Silver metal	*koz*	*5,157*	*5,122*	*4,299*	*6,295*	*5,048*	*20,764*	*21,354*	*(3)*	*(2)*
CEZ Refinery[6]	*Zinc metal*	*kt*	*18.0*	*16.9*	*17.3*	*17.0*	*18.1*	*69.3*	*68.2*	*2*	*1*
Other Zinc (Aguilar, Los Quenuales, Sinchi Wayra, Rosh Pinah, Perkoa)											
	Zinc metal	**kt**	**5.7**	**–**	**–**	**–**	**–**	**–**	**26.1**	**(100)**	**(100)**
	Zinc in concentrates	**kt**	**61.5**	**49.1**	**56.4**	**59.9**	**55.8**	**221.2**	**279.9**	**(21)**	**(9)**
	Lead metal	**kt**	**3.5**	**2.8**	**3.3**	**3.1**	**3.5**	**12.7**	**12.7**	**–**	**–**
	Lead in concentrates	**kt**	**10.7**	**9.0**	**9.9**	**10.5**	**7.5**	**36.9**	**42.7**	**(14)**	**(30)**
	Copper in concentrates	**kt**	**0.6**	**0.4**	**0.5**	**0.7**	**0.5**	**2.1**	**2.4**	**(13)**	**(17)**
	Silver metal	**koz**	**210**	**120**	**186**	**154**	**206**	**666**	**691**	**(4)**	**(2)**
	Silver in concentrates	**koz**	**2,127**	**1,746**	**1,861**	**2,041**	**1,905**	**7,553**	**8,566**	**(12)**	**(10)**
Total Zinc department											
	Zinc	**kt**	**298.1**	**243.0**	**241.7**	**264.4**	**278.2**	**1,027.3**	**1,365.5**	**(25)**	**(7)**
	Lead	**kt**	**69.2**	**71.0**	**74.3**	**74.3**	**74.6**	**294.2**	**297.7**	**(1)**	**8**
	Copper	**kt**	**29.8**	**26.3**	**23.7**	**29.4**	**24.6**	**104.0**	**102.6**	**1**	**(17)**
	Gold	**koz**	**138**	**101**	**142**	**141**	**137**	**521**	**520**	**–**	**(1)**
	Silver	**koz**	**5,807**	**5,266**	**5,998**	**6,545**	**6,422**	**24,231**	**23,526**	**3**	**11**

Production by quarter – Q4 2015 to Q4 2016

Metals and minerals

Production from own sources – Nickel assets[1]

			Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Integrated Nickel Operations (Sudbury, Raglan, Nikkelverk)											
	Nickel metal	**kt**	**15.5**	**15.7**	**17.8**	**13.8**	**18.3**	**65.6**	**49.1**	**34**	**18**
	Nickel in concentrates	**kt**	**0.1**	**0.2**	**0.1**	**0.1**	**0.2**	**0.6**	**0.5**	**20**	**100**
	Copper metal	**kt**	**3.9**	**4.8**	**3.6**	**3.6**	**4.6**	**16.6**	**14.9**	**11**	**18**
	Copper in concentrates	**kt**	**7.0**	**9.3**	**10.9**	**6.7**	**7.7**	**34.6**	**31.1**	**11**	**10**
	Cobalt metal	**kt**	**0.2**	**0.2**	**0.3**	**0.2**	**0.3**	**1.0**	**0.8**	**25**	**50**
	Gold	**koz**	**9**	**9**	**12**	**8**	**8**	**37**	**35**	**6**	**(11)**
	Silver	**koz**	**151**	**210**	**196**	**120**	**98**	**624**	**610**	**2**	**(35)**
	Platinum	**koz**	**17**	**20**	**30**	**21**	**19**	**90**	**76**	**18**	**12**
	Palladium	**koz**	**35**	**38**	**63**	**36**	**36**	**173**	**157**	**10**	**3**
	Rhodium	**koz**	**1**	**1**	**2**	**2**	**1**	**6**	**5**	**20**	**–**
Integrated Nickel Operations – total production including third party feed											
	Nickel metal	*kt*	*23.2*	*23.3*	*22.8*	*23.3*	*23.3*	*92.7*	*91.2*	*2*	*–*
	Nickel in concentrates	*kt*	*0.1*	*0.2*	*0.2*	*0.1*	*0.2*	*0.7*	*0.6*	*17*	*100*
	Copper metal	*kt*	*7.9*	*7.6*	*6.5*	*7.1*	*6.9*	*28.1*	*35.5*	*(21)*	*(13)*
	Copper in concentrates	*kt*	*8.8*	*10.7*	*13.0*	*7.8*	*9.1*	*40.6*	*38.2*	*6*	*3*
	Cobalt metal	*kt*	*0.9*	*0.9*	*0.9*	*0.7*	*1.0*	*3.5*	*3.1*	*13*	*11*
	Gold	*koz*	*13*	*12*	*17*	*10*	*11*	*50*	*50*	*–*	*(15)*
	Silver	*koz*	*253*	*336*	*322*	*195*	*141*	*994*	*1,046*	*(5)*	*(44)*
	Platinum	*koz*	*26*	*27*	*43*	*28*	*25*	*123*	*106*	*16*	*(4)*
	Palladium	*koz*	*59*	*55*	*95*	*52*	*52*	*254*	*242*	*5*	*(12)*
	Rhodium	*koz*	*1*	*2*	*2*	*2*	*2*	*8*	*6*	*33*	*100*
Murrin Murrin											
	Total Nickel metal	**kt**	**10.5**	**9.3**	**8.4**	**7.5**	**10.1**	**35.3**	**37.5**	**(6)**	**(4)**
	Total Cobalt metal	**kt**	**0.7**	**0.7**	**0.6**	**0.8**	**0.7**	**2.8**	**2.8**	**–**	**–**
Murrin Murrin – total production including third party feed											
	Total Nickel metal	*kt*	*12.8*	*12.0*	*10.9*	*9.9*	*13.2*	*46.0*	*46.7*	*(1)*	*3*
	Total Cobalt metal	*kt*	*0.9*	*0.8*	*0.7*	*0.9*	*0.8*	*3.2*	*3.3*	*(3)*	*(11)*
Koniambo	**Nickel in ferronickel**	**kt**	**1.4**	**2.4**	**3.2**	**3.9**	**4.1**	**13.6**	**9.1**	**49**	**193**
Total Nickel department											
	Nickel	**kt**	**27.5**	**27.6**	**29.5**	**25.3**	**32.7**	**115.1**	**96.2**	**20**	**19**
	Copper	**kt**	**10.9**	**14.1**	**14.5**	**10.3**	**12.3**	**51.2**	**46.0**	**11**	**13**
	Cobalt	**kt**	**0.9**	**0.9**	**0.9**	**1.0**	**1.0**	**3.8**	**3.6**	**6**	**11**
	Gold	**koz**	**9**	**9**	**12**	**8**	**8**	**37**	**35**	**6**	**(11)**
	Silver	**koz**	**151**	**210**	**196**	**120**	**98**	**624**	**610**	**2**	**(35)**
	Platinum	**koz**	**17**	**20**	**30**	**21**	**19**	**90**	**76**	**18**	**12**
	Palladium	**koz**	**35**	**38**	**63**	**36**	**36**	**173**	**157**	**10**	**3**
	Rhodium	**koz**	**1**	**1**	**2**	**2**	**1**	**6**	**5**	**20**	**–**

Production from own sources – Ferroalloys assets[1]

			Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Ferrochrome[7]		kt	390	400	362	344	417	1,523	1,462	4	7
PGM[8]	Platinum	koz	16	15	16	14	13	58	82	(29)	(19)
	Palladium	koz	10	9	10	8	9	36	45	(20)	(10)
	Rhodium	koz	2	3	2	3	2	10	13	(23)	–
	Gold	koz	–	–	1	–	–	1	1	–	n.m.
	4E	**koz**	**28**	**27**	**29**	**25**	**24**	**105**	**141**	**(26)**	**(14)**
Vanadium Pentoxide		mlb	5.5	5.6	4.5	5.5	5.5	21.1	20.9	1	–

Total production – Custom metallurgical assets[1]

			Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Copper (Altonorte, Pasar, Horne, CCR)											
	Copper metal	kt	121.7	113.9	127.7	122.5	125.0	489.1	433.7	13	3
	Copper anode	kt	123.1	136.1	129.0	98.9	158.5	522.5	502.8	4	29
Zinc (Portovesme, San Juan de Nieva, Nordenham, Northfleet)											
	Zinc metal	kt	200.8	197.6	197.3	199.4	195.5	789.8	788.8	–	(3)
	Lead metal	kt	50.9	55.5	54.8	56.4	49.9	216.6	199.2	9	(2)
	Silver	koz	3,342	3,058	4,247	3,270	4,270	14,845	11,220	32	28
Ferroalloys											
	Ferromanganese	kt	44	45	28	30	33	136	146	(7)	(25)
	Silicon Manganese	kt	18	19	25	23	15	82	98	(16)	(17)

1 Controlled industrial assets and joint ventures only. Production is on a 100% basis, except as stated.

2 Copper metal includes copper contained in copper concentrates and blister.

3 Cobalt contained in concentrates and hydroxides.

4 The Group's pro-rata share of Collahuasi production (44%).

5 The Group's pro-rata share of Antamina production (33.75%).

6 The Group's pro-rata share of CEZ production (25%).

7 The Group's attributable 79.5% share of the Glencore-Merafe Chrome Venture.

8 Consolidated 50% of Mototolo and 100% of Eland (placed on care and maintenance from October 2015).

Production by quarter – Q4 2015 to Q4 2016

Energy products

Production from own sources – Coal assets[1]

		Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Australian coking coal	mt	1.7	1.2	0.8	1.6	1.7	5.3	5.9	(10)	–
Australian semi-soft coal	mt	0.9	1.0	1.2	0.9	1.1	4.2	3.6	17	22
Australian thermal coal (export)	mt	13.6	11.6	12.5	13.7	14.7	52.5	52.4	–	8
Australian thermal coal (domestic)	mt	1.0	1.7	1.5	1.4	1.0	5.6	3.9	44	–
South African thermal coal (export)	mt	3.5	4.1	4.3	4.5	4.3	17.2	19.7	(13)	23
South African thermal coal (domestic)	mt	1.7	3.2	2.5	3.3	3.1	12.1	17.3	(30)	82
Prodeco	mt	3.7	4.3	4.0	4.7	4.3	17.3	17.6	(2)	16
Cerrejón[2]	mt	2.7	2.6	2.3	3.0	2.8	10.7	11.1	(4)	4
Total Coal department	**mt**	**28.8**	**29.7**	**29.1**	**33.1**	**33.0**	**124.9**	**131.5**	**(5)**	**15**

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 *The Group's pro-rata share of Cerrejón production (33.3%).*

Production from own sources – Oil assets

		Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Glencore entitlement interest basis										
Equatorial Guinea	kbbl	1,238	1,147	953	821	708	3,629	4,937	(26)	(43)
Chad	kbbl	1,297	1,253	997	855	777	3,882	5,632	(31)	(40)
Total Oil department	**kbbl**	**2,535**	**2,400**	**1,950**	**1,676**	**1,485**	**7,511**	**10,569**	**(29)**	**(41)**
Gross basis										
Equatorial Guinea	kbbl	5,651	5,177	4,464	3,959	3,309	16,909	22,939	(26)	(41)
Chad	kbbl	1,773	1,713	1,363	1,169	1,063	5,308	7,699	(31)	(40)
Total Oil department	**kbbl**	**7,424**	**6,890**	**5,827**	**5,128**	**4,372**	**22,217**	**30,638**	**(27)**	**(41)**

Agricultural products

Processing/production data

		Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	2015	Change 2016 vs 2015 %	Change Q4 16 vs Q4 15 %
Farming	kt	124	6	183	461	142	792	704	13	15
Crushing	kt	1,627	1,826	1,935	1,586	2,333	7,680	6,069	27	43
Long-term toll agreement	kt	62	141	214	436	13	804	284	183	(79)
Biodiesel	kt	144	119	158	200	210	687	556	24	46
Rice milling	kt	32	56	59	113	46	274	206	33	44
Wheat milling	kt	236	239	241	262	247	989	976	1	5
Sugarcane processing	kt	776	219	1,046	1,248	746	3,259	2,751	18	(4)
Total Agricultural products	**kt**	**3,001**	**2,606**	**3,836**	**4,306**	**3,737**	**14,485**	**11,546**	**25**	**25**

Resources and reserves

The resource and reserve data in the following tables is a summary of the Glencore Resources and Reserves report as at 31 December 2016, as published on the Glencore website on 2 February 2017. 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 2007 edition (as amended July 2009) 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 2016, unless otherwise noted. For comparison purposes, data for 2015 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	**2016**	2015	**2016**	2015	**2016**	2015	**2016**	2015
African copper									
Katanga	(Mt)	**16**	14	**259**	194	**276**	207	**168**	200
	Copper (%)	**3.58**	3.53	**3.66**	3.53	**3.66**	3.53	**3.78**	3.81
	Cobalt (%)	**0.57**	0.49	**0.54**	0.52	**0.55**	0.52	**0.44**	0.43
Mutanda	(Mt)	**245**	242	**194**	197	**439**	439	**235**	221
	Copper (%)	**1.52**	1.57	**1.10**	1.06	**1.33**	1.34	**0.81**	0.79
	Cobalt (%)	**0.60**	0.63	**0.40**	0.39	**0.51**	0.52	**0.24**	0.23
Mopani	(Mt)	**202**	199	**74**	71	**277**	270	**77**	80
	Copper (%)	**2.11**	2.11	**2.00**	1.99	**2.08**	2.08	**2.06**	2.08
	Cobalt (%)	**0.08**	0.08	**0.08**	0.09	**0.08**	0.08	**0.10**	0.09
Collahuasi	(Mt)	**859**	791	**4,263**	4,310	**5,122**	5,102	**4,853**	4,876
	Copper (%)	**0.80**	0.81	**0.79**	0.82	**0.80**	0.82	**0.76**	0.80
	Molybdenum (%)	**0.02**	0.02	**0.02**	0.02	**0.02**	0.02	**0.01**	0.02
Antamina	(Mt)	**239**	256	**846**	841	**1,085**	1,097	**1,247**	1,273
	Copper (%)	**0.91**	0.93	**0.88**	0.90	**0.89**	0.91	**0.88**	0.90
	Zinc (%)	**0.72**	0.70	**0.79**	0.82	**0.78**	0.79	**0.62**	0.68
	Silver (g/t)	**10**	11	**11**	11	**11**	11	**10**	11
	Molybdenum (%)	**0.025**	0.027	**0.019**	0.020	**0.021**	0.021	**0.018**	0.017
Other South America	(Mt)	**701**	673	**2,195**	2,104	**2,896**	2,777	**886**	870
	Copper (%)	**0.41**	0.39	**0.37**	0.40	**0.38**	0.40	**0.33**	0.37
	Gold (g/t)	**0.09**	0.11	**0.04**	0.04	**0.05**	0.06	**0.05**	0.05
	Silver (g/t)	**0.6**	0.5	**0.6**	0.7	**0.6**	0.6	**0.4**	0.6
Australia	(Mt)	**122**	119	**182**	182	**304**	301	**162**	161
	Copper (%)	**1.89**	1.89	**1.37**	1.36	**1.58**	1.57	**1.1**	1.1
	Gold (g/t)	**0.08**	0.10	**0.23**	0.24	**0.17**	0.18	**0.03**	0.03
	Silver (g/t)	**0.6**	0.6	**0.4**	0.3	**0.5**	0.5	**0.8**	0.8

Resources and reserves

Metals and minerals: Copper

Copper mineral resources (continued)

Name of operation	Commodity	Measured Mineral Resources 2016	Measured Mineral Resources 2015	Indicated Mineral Resources 2016	Indicated Mineral Resources 2015	Measured and Indicated Resources 2016	Measured and Indicated Resources 2015	Inferred Mineral Resources 2016	Inferred Mineral Resources 2015
Other projects	(Mt)	**534**	534	**1,551**	1,549	**2,085**	2,083	**2,537**	2,479
(El Pachon, West Wall)	Copper (%)	**0.67**	0.67	**0.51**	0.51	**0.55**	0.55	**0.44**	0.44
	Gold (g/t)	**–**	–	**0.02**	0.02	**0.01**	0.01	**0.02**	0.02
	Silver (g/t)	**2.4**	2.4	**1.4**	1.4	**1.7**	1.7	**1.1**	1.1
	Molybdenum (%)	**0.01**	0.01	**0.01**	0.01	**0.01**	0.01	**0.01**	0.01

Copper ore reserves

Name of operation	Commodity	Proved Ore Reserves 2016	Proved Ore Reserves 2015	Probable Ore Reserves 2016	Probable Ore Reserves 2015	Total Ore Reserves 2016	Total Ore Reserves 2015
African copper							
Katanga	(Mt)	**10**	10	**114**	88	**125**	99
	Copper (%)	**3.63**	3.62	**3.50**	3.94	**3.51**	3.91
	Cobalt (%)	**0.41**	0.41	**0.53**	0.49	**0.52**	0.48
Mutanda	(Mt)	**116**	114	**43**	43	**159**	157
	Copper (%)	**1.88**	2.14	**1.53**	1.77	**1.79**	2.04
	Cobalt (%)	**0.74**	0.85	**0.65**	0.69	**0.72**	0.81
Mopani	(Mt)	**112**	114	**30**	30	**142**	144
	Copper (%)	**1.90**	1.90	**1.95**	1.92	**1.91**	1.90
	Cobalt (%)	**0.08**	0.08	**0.08**	0.07	**0.08**	0.08
Collahuasi	(Mt)	**419**	516	**2,669**	2,607	**3,088**	3,123
	Copper (%)	**1.08**	0.99	**0.87**	0.82	**0.90**	0.85
	Molybdenum (%)	**0.03**	0.02	**0.02**	0.02	**0.02**	0.02
Antamina	(Mt)	**174**	191	**378**	407	**552**	598
	Copper (%)	**1.01**	1.04	**0.92**	0.91	**0.95**	0.95
	Zinc (%)	**0.82**	0.79	**1.10**	1.06	**1.01**	0.97
	Silver (g/t)	**11**	11	**11**	11	**11**	11
	Molybdenum (%)	**0.028**	0.028	**0.020**	0.020	**0.022**	0.023
Other South America	(Mt)	**531**	490	**834**	740	**1,365**	1,230
	Copper (%)	**0.42**	0.42	**0.46**	0.35	**0.45**	0.37
	Gold (g/t)	**0.08**	0.07	**0.05**	0.05	**0.07**	0.06
	Silver (g/t)	**0.7**	0.6	**1.1**	0.7	**0.9**	0.6
Australia	(Mt)	**26**	34	**80**	59	**106**	93
	Copper (%)	**2.25**	2.17	**1.38**	1.30	**1.59**	1.63
	Gold (g/t)	**0.20**	0.19	**0.31**	0.42	**0.28**	0.34
	Silver (g/t)	**2.2**	1.6	**0.5**	0.8	**0.9**	1.1

Metals and minerals: Zinc

Zinc mineral resources

Name of operation	Commodity	Measured Mineral Resources 2016	Measured Mineral Resources 2015	Indicated Mineral Resources 2016	Indicated Mineral Resources 2015	Measured and Indicated Resources 2016	Measured and Indicated Resources 2015	Inferred Mineral Resources 2016	Inferred Mineral Resources 2015
Kazzinc									
Kazzinc Polymetallic	(Mt)	**87.2**	27.7	**100**	152	**190**	180	**97**	94
	Zinc (%)	**3.98**	3.42	**1.9**	2.8	**2.9**	2.9	**2**	3
	Lead (%)	**1.54**	0.89	**0.6**	1.1	**1.0**	1.1	**1**	0.7
	Copper (%)	**0.33**	1.20	**0.3**	0.2	**0.3**	0.3	**0.3**	0.3
	Silver (g/t)	**19.5**	36.0	**17**	17	**18**	20	**31**	28
	Gold (g/t)	**0.43**	1.42	**0.9**	0.6	**0.7**	0.7	**1**	2
Kazzinc Gold (Vasilkovskoye)	(Mt)	**87.0**	61.5	**40**	22	**127**	83	**26**	7.6
	Gold (g/t)	**2.2**	2.2	**2.1**	2.2	**2.2**	2.2	**1.7**	1.9
Australia									
Mount Isa	(Mt)	**118**	141	**340**	330	**460**	470	**200**	210
	Zinc (%)	**7.20**	6.86	**5.9**	5.2	**6.2**	5.7	**5**	5
	Lead (%)	**4.49**	4.26	**3.1**	2.9	**3.5**	3.3	**3**	3
	Silver (g/t)	**87.5**	80.3	**59**	57	**66**	64	**60**	50
McArthur River	(Mt)	**123**	118	**64**	60	**190**	180	**–**	–
	Zinc (%)	**9.94**	10.2	**8.9**	9.4	**9.6**	9.9	**–**	–
	Lead (%)	**4.64**	4.81	**4.1**	4.4	**4.5**	4.7	**–**	–
	Silver (g/t)	**46.9**	48.6	**43**	46	**46**	48	**–**	–
North America									
Zinc North America	(Mt)	**24.0**	25.8	**36**	36	**60**	62	**60**	60
	Zinc (%)	**4.32**	4.42	**4.7**	4.9	**4.6**	4.7	**4**	4
	Lead (%)	**0.44**	0.41	**0.5**	0.5	**0.5**	0.5	**0.5**	0.5
	Copper (%)	**1.56**	1.62	**0.7**	0.7	**1.0**	1.1	**0.5**	0.5
	Silver (g/t)	**47.7**	48.2	**107**	107	**83**	83	**140**	140
	Gold (g/t)	**0.38**	0.35	**0.4**	0.4	**0.4**	0.4	**0.2**	0.2
Copper North America	(Mt)	**75.0**	75.0	**255**	255	**330**	330	**120**	120
	Copper (%)	**0.39**	0.39	**0.4**	0.4	**0.4**	0.4	**0.4**	0.4
	Gold (g/t)	**0.16**	0.16	**0.2**	0.2	**0.2**	0.2	**0.1**	0.1
Other Zinc	(Mt)	**16.6**	10.6	**31**	37	**48**	48	**58**	59
	Zinc (%)	**9.27**	9.78	**5.9**	6.1	**7.1**	6.9	**7**	7
	Lead (%)	**2.19**	2.65	**1.7**	1.0	**1.8**	1.4	**1**	1
	Copper (%)	**0.18**	0.06	**0.3**	0.2	**0.2**	0.1	**0.1**	0.1
	Silver (g/t)	**163**	88.0	**150**	80	**154**	82	**24**	20

Resources and reserves

Metals and minerals: Zinc

Zinc ore reserves

Name of operation	Commodity	Proved Ore Reserves 2016	Proved Ore Reserves 2015	Probable Ore Reserves 2016	Probable Ore Reserves 2015	Total Ore Reserves 2016	Total Ore Reserves 2015
Kazzinc							
Kazzinc Polymetallic	(Mt)	**70.7**	14.4	**20**	15	**91**	30
	Zinc (%)	**3.88**	2.80	**4.8**	5.5	**4.1**	4.2
	Lead (%)	**1.57**	0.72	**0.8**	0.6	**1.4**	0.7
	Copper (%)	**0.14**	0.95	**0.6**	0.8	**0.2**	0.9
	Silver (g/t)	**16.1**	32.3	**20**	27	**17**	29
	Gold (g/t)	**0.20**	1.15	**0.6**	0.8	**0.3**	1.0
Kazzinc Gold (Vasilkovskoye)	(Mt)	**70.6**	64.2	**30**	23	**101**	87
	Gold (g/t)	**2.3**	2.0	**2.2**	2.0	**2.3**	2.0
Australia							
Mount Isa	(Mt)	**22.4**	30.5	**55**	47	**78**	78
	Zinc (%)	**9.08**	8.27	**7.9**	7.1	**8.2**	7.5
	Lead (%)	**4.78**	4.49	**3.8**	3.7	**4.1**	4.0
	Silver (g/t)	**92.1**	77.9	**69**	64	**75**	69
McArthur River	(Mt)	**71.2**	49.4	**45**	53	**117**	102
	Zinc (%)	**10.6**	12.1	**7.4**	8.3	**9.4**	10
	Lead (%)	**5.00**	5.66	**3.6**	4.0	**4.5**	4.8
	Silver (g/t)	**50.1**	57.5	**37**	41	**45**	49
North America	(Mt)	**7.66**	8.20	**4.8**	7.5	**12**	16
	Zinc (%)	**4.21**	4.38	**6.2**	5.9	**5.0**	5.1
	Copper (%)	**1.84**	1.91	**1.4**	1.4	**1.7**	1.7
	Silver (g/t)	**44.9**	45.1	**35**	35	**41**	40
	Gold (g/t)	**0.06**	0.05	**0.4**	0.4	**0.2**	0.2
Other Zinc	(Mt)	**7.34**	3.46	**14**	16	**22**	20
	Zinc (%)	**8.99**	11.4	**6.2**	7.4	**7.1**	8.1
	Lead (%)	**1.96**	3.28	**1.4**	1.1	**1.6**	1.5
	Copper (%)	**0.08**	0.02	**0.2**	0.1	**0.1**	0.1
	Silver (g/t)	**120**	79.5	**96**	69	**104**	71

Metals and minerals: Nickel

Nickel mineral resources

Name of operation	Commodity	Measured Mineral Resources 2016	Measured Mineral Resources 2015	Indicated Mineral Resources 2016	Indicated Mineral Resources 2015	Measured and Indicated Resources 2016	Measured and Indicated Resources 2015	Inferred Mineral Resources 2016	Inferred Mineral Resources 2015
INO	(Mt)	**14.9**	15.6	**29.9**	31.4	**44.8**	47.0	**38**	33
	Nickel (%)	**2.58**	2.59	**2.75**	2.76	**2.70**	2.70	**2.1**	2.5
	Copper (%)	**1.44**	1.56	**0.99**	1.08	**1.14**	1.24	**2.4**	1.8
	Cobalt (%)	**0.06**	0.05	**0.06**	0.06	**0.06**	0.06	**0.1**	0.1
	Platinum (g/t)	**0.98**	1.00	**0.71**	0.69	**0.80**	0.79	**1.1**	1.0
	Palladium (g/t)	**1.60**	1.54	**1.33**	1.30	**1.42**	1.37	**1.9**	1.8
Murrin Murrin	(Mt)	**186.1**	167.3	**88.3**	79.0	**274.4**	246.3	**21**	18
	Nickel (%)	**0.97**	1.01	**0.98**	0.99	**0.97**	1.00	**0.9**	0.9
	Cobalt (%)	**0.071**	0.071	**0.078**	0.083	**0.073**	0.075	**0.06**	0.07
Koniambo	(Mt)	**13.1**	18.1	**46.3**	29.1	**59.6**	47.2	**88**	95
	Nickel (%)	**2.50**	2.48	**2.44**	2.42	**2.46**	2.44	**2.5**	2.5
Other Nickel	(Mt)	**13.8**	13.8	**23.4**	23.4	**37.2**	37.2	**21**	21
(Kabanga)	Nickel (%)	**2.49**	2.49	**2.72**	2.72	**2.63**	2.63	**2.6**	2.6
	Copper (%)	**0.34**	0.34	**0.36**	0.36	**0.35**	0.35	**0.3**	0.3
	Cobalt (%)	**0.21**	0.21	**0.19**	0.19	**0.20**	0.20	**0.2**	0.2
	Platinum (g/t)	**0.16**	0.16	**0.42**	0.42	**0.32**	0.32	**0.3**	0.3
	Palladium (g/t)	**0.19**	0.19	**0.28**	0.28	**0.25**	0.25	**0.3**	0.3

Nickel ore reserves

Name of operation	Commodity	Proved Ore Reserves 2016	Proved Ore Reserves 2015	Probable Ore Reserves 2016	Probable Ore Reserves 2015	Total Ore Reserves 2016	Total Ore Reserves 2015
INO	(Mt)	**9.8**	10.9	**9.3**	10.6	**19.1**	21.4
	Nickel (%)	**2.02**	1.95	**2.59**	2.47	**2.29**	2.21
	Copper (%)	**1.46**	1.60	**0.73**	0.78	**1.10**	1.20
	Cobalt (%)	**0.04**	0.04	**0.06**	0.05	**0.05**	0.04
	Platinum (g/t)	**0.95**	1.02	**0.66**	0.67	**0.81**	0.85
	Palladium (g/t)	**1.40**	1.44	**1.47**	1.40	**1.44**	1.43
Murrin Murrin	(Mt)	**183.7**	151.6	**54.2**	39.9	**237.9**	191.6
	Nickel (%)	**0.94**	0.97	**0.92**	0.96	**0.94**	0.97
	Cobalt (%)	**0.064**	0.070	**0.061**	0.069	**0.064**	0.069
Koniambo	(Mt)	**9.7**	14.2	**26.2**	20.9	**35.9**	35.1
	Nickel (%)	**2.30**	2.33	**2.28**	2.29	**2.29**	2.30

Resources and reserves

Metals and minerals: Ferroalloys

Ferroalloys mineral resources

Name of operation	Commodity	Measured Mineral Resources		Indicated Mineral Resources		Measured and Indicated Resources		Inferred Mineral Resources	
		2016	2015	**2016**	2015	**2016**	2015	**2016**	2015
Chrome	(Mt)	**115**	118	**83**	83	**197**	201	**297**	297
	Cr_2O_3 (%)	**41.2**	41.1	**41.0**	40.9	**41.1**	41.0	**40**	40
Vanadium	(Mt)	**49.18**	48.85	**39.4**	38.7	**88.5**	87.6	**95**	95
	V_2O_5 (%)	**0.48**	0.48	**0.5**	0.5	**0.5**	0.5	**0.5**	0.5
PGM	(Mt)	**80**	85	**26**	26	**106**	111	**83**	83
	3PGE + Gold (g/t)	**4.31**	4.37	**3.1**	3.1	**4.0**	4.1	**4.3**	4.3
Silica	(Mt)	**–**	–	**23.27**	23.81	**23.27**	23.81	**–**	–
	SiO_2 (%)	**–**	–	**91**	91	**91**	91	**–**	–

Ferroalloys ore reserves

Name of operation	Commodity	Proved Ore Reserves		Probable Ore Reserves		Total Ore Reserves	
		2016	2015	**2016**	2015	**2016**	2015
Chrome	(Mt)	**43**	47	**17**	17	**59**	63
	Cr_2O_3 (%)	**32.7**	34.0	**31.1**	32.6	**32.2**	33.6
Vanadium	(Mt)	**26.83**	26.66	**13.0**	12.9	**39.8**	39.6
	V_2O_5 (%)	**0.47**	0.48	**0.5**	0.5	**0.5**	0.5
PGM	(Mt)	**12.795**	18.731	**–**	–	**12.80**	18.73
	3PGE + Gold (g/t)	**3.58**	3.82	**–**	–	**3.6**	3.8
Silica	(Mt)	**–**	–	**2.05**	2.15	**2.05**	2.15
	SiO_2 (%)	**–**	–	**91**	91	**91**	91

Metals and minerals: Iron Ore

Iron ore mineral resources

Name of operation	Commodity	Measured Mineral Resources 2016	Measured Mineral Resources 2015	Indicated Mineral Resources 2016	Indicated Mineral Resources 2015	Measured and Indicated Resources 2016	Measured and Indicated Resources 2015	Inferred Mineral Resources 2016	Inferred Mineral Resources 2015
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 2016	Proved Ore Reserves 2015	Probable Ore Reserves 2016	Probable Ore Reserves 2015	Total Ore Reserves 2016	Total Ore Reserves 2015
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

Resources and reserves

Energy products: Coal

Coal resources

Name of operation	Commodity	Measured Coal Resources 2016	Measured Coal Resources 2015	Indicated Coal Resources 2016	Indicated Coal Resources 2015	Inferred Coal Resources 2016	Inferred Coal Resources 2015
Australia							
New South Wales	Coking/Thermal Coal (Mt)	**3,145**	3,170	**2,943**	2,869	**5,211**	5,271
Queensland	Coking/Thermal Coal (Mt)	**3,033**	3,028	**3,685**	3,373	**8,030**	8,269
South Africa	Thermal Coal (Mt)	**2,895**	2,914	**1,136**	1,151	**435**	435
Prodeco	Thermal Coal (Mt)	**175**	185	**210**	220	**70**	70
Cerrejón	Thermal Coal (Mt)	**3,000**	2,950	**1,250**	1,150	**650**	800
Canada projects (Suska, Sukunka)	Coking/Thermal Coal (Mt)	**45**	45	**113**	113	**130**	130

Coal reserves

Name of operation	Commodity	Coal Reserves Proved 2016	Coal Reserves Probable 2016	Marketable Coal Reserves Proved 2016	Marketable Coal Reserves Probable 2016	Total Marketable Coal Reserves 2016	Total Marketable Coal Reserves 2015
Australia							
New South Wales	Thermal Coal (Mt)	**926**	**155**	**671**	**109**	**780**	839
	Coking Coal (Mt)	**18**	**42**	**11**	**28**	**39**	40
Queensland	Thermal Coal (Mt)	**890**	**401**	**799**	**353**	**1,152**	1,220
	Coking Coal (Mt)	**83**	**42**	**55**	**28**	**83**	108
South Africa	Thermal Coal (Mt)	**756**	**307**	**468**	**179**	**646**	670
Prodeco	Thermal Coal (Mt)	**100**	**80**	**100**	**80**	**180**	200
Cerrejón	Thermal Coal (Mt)	**490**	**70**	**470**	**70**	**540**	610

Energy products: Oil

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 2015	19	–	166	–	–	–	**185**	**–**	**185**
Revisions	(2)	–	(9)	–	–	–	**(11)**	**–**	**(11)**
Production	(4)	–	(5)	–	–	–	**(9)**	**–**	**(9)**
31 December 2016	13	–	152	–	–	–	**165**	**–**	**165**

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 2015	23	562	9	–	47	595	**79**	**1,157**	**278**
Revisions	2	(32)	–	–	–	–	**2**	**(32)**	**(3)**
Divestments	–	–	–	–	(29)	(595)	**(29)**	**(595)**	**(132)**
31 December 2016	25	530	9	–	18	–	**52**	**530**	**143**

1 "Net" reserves or resources are equivalent to Glencore's working interest in the asset/property.

Shareholder information

Glencore plc is registered in Jersey, with headquarters in Switzerland and operations around the world.

Headquarters	Baarermattstrasse 3 P.O. Box 777 CH-6341 Baar Switzerland
Registered Office	Queensway House Hilgrove Street St Helier Jersey JE1 1ES

The Company has a primary quote on the London Stock Exchange (LSE) and a secondary quote on both the Johannesburg Stock Exchange (JSE) and the Hong Kong Stock Exchange (HKEx).

Share registrars *Jersey:*	 Computershare Investor Services (Jersey) Limited Queensway House Hilgrove Street St Helier, Jersey JE1 1ES Channel Islands Tel.: +44 (0) 870 707 4040
Johannesburg:	Computershare Investor Services (Pty) Ltd 70 Marshall Street Johannesburg 2001 South Africa Tel.: +27 (0) 11 370 5000
Hong Kong:	Computershare Hong Kong Investor Services Limited Hopewell Centre 46th Floor 183 Queen's Road East Wan Chai Hong Kong Tel.: +852 2862 8628
Enquiries	Company Secretary John Burton john.burton@glencore.com Glencore plc Baarermattstrasse 3 CH-6340 Baar Switzerland Tel.: +41 41 709 2000 Fax: +41 41 709 3000 Email: info@glencore.com

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Glencore plc
Baarermattstrasse 3
CH-6340 Baar
Switzerland
Tel: +41 41 709 2000
Fax: +41 41 709 3000
E-mail: info@glencore.com

www.glencore.com