riotinto.com/ar2015

RioTinto

2015 Annual report

Contents

Strategic report

Performance highlights 1
Group overview 2
Chairman's letter 4
Chief executive's statement 5
Strategic context 7
Key performance indicators 8
Group strategy 10
Business model 12
Principal risks and uncertainties 16
Sustainable development 22
Independent assurance statement 29
Capital allocation 30
Product groups
Aluminium 32
Copper & Coal 34
Diamonds & Minerals 36
Iron Ore 38
Exploration 40
Technology & Innovation 41
Financial overview 42
Five year review 43

Directors' report

Contents 45
Directors' report 46
Board of directors 51
Executive Committee 54
Corporate governance 55
Remuneration Report
Annual statement by the Remuneration Committee chairman 67
Remuneration Policy Report 70
Remuneration Implementation Report 78

Financial statements

Contents 106
Group income statement 107
Group statement of comprehensive income 108
Group cash flow statement 109
Group balance sheet 110
Group statement of changes in equity 111
Notes to the 2015 financial statements 113
Rio Tinto plc Company balance sheet 190
Rio Tinto financial information by business unit 194
Australian Corporations Act – summary of ASIC relief 199
Directors' declaration 200
Auditor's independence declaration 201
Independent auditors' report 202
Financial summary 2006-2015 209
Summary financial data 211

Production, reserves and operations

Contents 212
Metals and minerals production 213
Ore reserves 217
Mineral resources 221
Competent Persons 226
Mines and production facilities 228

Additional information

Shareholder information 236
UK Listing Rules cross reference table 242
Financial calendar 243
Contact details 244

Navigating through Rio Tinto's Annual and Strategic report

The first 43 pages of Rio Tinto's 2015 Annual report constitute its 2015 Strategic report. References to page numbers beyond 43 are references to pages in the full 2015 Annual report. This is available online at riotinto.com/ar2015 or shareholders may obtain a hard copy free of charge by contacting Rio Tinto's registrars, whose details are set out on page 244 of this document.

Please visit Rio Tinto's website to learn more about the Group's performance in 2015.

This Annual report, which includes the Group's 2015 Strategic report, complies with Australian and UK reporting requirements. Copies of Rio Tinto's shareholder documents – the 2015 Annual report and 2015 Strategic report, along with the 2016 Notices of annual general meeting – are available to view on the Group's website: riotinto.com/ar2015

To be more environmentally friendly, Rio Tinto is reducing the print run of all publications. We encourage you to visit: riotinto.com for more information, and view all available PDFs of this Annual report.

Key

Page reference for more information within this report

KPI Denotes key performance indicators

Cautionary statement about forward-looking statements

This document contains certain forward-looking statements with respect to the financial condition, results of operations and business of the Rio Tinto Group. These statements are forward-looking statements within the meaning of Section 27A of the US Securities Act of 1933, and Section 21E of the US Securities Exchange Act of 1934. The words "intend", "aim", "project", "anticipate", "estimate", "plan", "believes", "expects", "may", "should", "will", "target", "set to" or similar expressions, commonly identify such forward-looking statements.

Examples of forward-looking statements in this Annual report include those regarding estimated ore reserves, anticipated production or construction dates, costs, outputs and productive lives of assets or similar factors. Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors set forth in this document that are beyond the Group's control. For example, future ore reserves will be based in part on market prices that may vary significantly from current levels. These may materially affect the timing and feasibility of particular developments. Other factors include the ability to produce and transport products profitably, demand for our products, changes to the assumptions regarding the recoverable value of our tangible and intangible assets, the effect of foreign currency exchange rates on market prices and operating costs, and activities by governmental authorities, such as changes in taxation or regulation, and political uncertainty.

In light of these risks, uncertainties and assumptions, actual results could be materially different from projected future results expressed or implied by these forward-looking statements which speak only as to the date of this Annual report. Except as required by applicable regulations or by law, the Group does not undertake any obligation to publicly update or revise any forward-looking statements, whether as a result of new information or future events. The Group cannot guarantee that its forward-looking statements will not differ materially from actual results.

Performance highlights

2015 results demonstrate decisive early actions taken with focus on cash

Against a highly challenging environment, Rio Tinto delivered a strong performance in 2015 with underlying earnings of US$4.5 billion. The Group continued to take decisive action to preserve cash through further cost reductions, lower capital expenditure and the release of working capital. This focus on cash resulted in operating cash flows of US$9.4 billion.

A net loss of US$0.9 billion reflected non-cash exchange rate and derivative losses of US$3.3 billion and impairment charges of US$1.8 billion. The impairments mainly related to the Simandou iron ore project, Energy Resources of Australia (ERA) and the Roughrider uranium project. In addition, the Group recognised legacy remediation costs of US$0.2 billion and general restructuring and headcount reduction costs of US$0.3 billion.

In 2015, the Group returned US$6.1 billion to shareholders, including the 2014 final dividend of US$2.2 billion, the 2015 interim dividend of US$1.9 billion and US$2.0 billion of share buy-backs, comprising US$0.4 billion off-market in Rio Tinto Limited and US$1.6 billion on-market in Rio Tinto plc. Rio Tinto maintained the full year dividend at 215 US cents per share.

The continued deterioration in the macro environment has generated widespread market uncertainty. The Group is embarking on a new round of pro-active measures to cut operating costs by a further US$1 billion in 2016 followed by an additional goal of US$1 billion in 2017. It is also reducing capital expenditure to US$4 billion in 2016 and US$5 billion in 2017, an overall reduction of US$3 billion compared with previous guidance.

These significant actions provide Rio Tinto with the confidence that it remains robustly positioned to both maintain balance sheet strength and deliver shareholder returns through the cycle.

	Year to 31 December	2015	2014	Change
KPI 126	Underlying earnings [1] (US$ millions)	**4,540**	9,305	-51%
	Net (loss)/earnings [1] (US$ millions)	**(866)**	6,527	n/a
KPI 109	Net cash generated from operating activities (US$ millions)	**9,383**	14,286	-34%
KPI 109	Capital expenditure [2] (US$ millions)	**4,685**	8,162	-43%
	Underlying earnings per share (US cents)	**248.8**	503.4	-51%
	Basic (loss)/earnings per share (US cents)	**(47.5)**	353.1	n/a
	Ordinary dividends per share (US cents)	**215.0**	215.0	–

	As at 31 December	2015	2014	Change
KPI 143	Net debt (US$ millions)	**13,783**	12,495	+10%
	Gearing ratio [3]	**24%**	19%	+5%

The financial results are prepared in accordance with IFRS.

(1) Underlying earnings is a key financial performance indicator which management uses internally to assess performance. It is presented here to provide greater understanding of the underlying business performance of the Group's operations. Net and underlying (loss)/earnings relate to (loss)/profit attributable to the owners of Rio Tinto. Underlying earnings is defined and reconciled to net (loss)/earnings on pages 126 and 127.

(2) Capital expenditure is presented gross, before taking into account any disposals of property, plant and equipment.

(3) Gearing ratio is defined as net debt divided by the sum of net debt and total equity at each period end.

Revenues and earnings

- Consolidated sales revenues of US$34.8 billion, US$12.8 billion lower than last year, reflecting a US$13.1 billion reduction from the sharp decline in commodity prices.
- EBITDA[1] margin of 34 per cent, compared with 39 per cent in 2014.
- Underlying earnings of US$4.5 billion, US$4.8 billion lower than 2014, with cash cost improvements, higher volumes, lower energy costs, positive currency and other movements (totalling US$2.9 billion) partly offsetting the US$7.7 billion (post-tax) impact of lower prices.
- Underlying earnings per share of 248.8 US cents compared with 503.4 US cents in 2014.

Cash flow and balance sheet

- Achieved US$1.3 billion of sustainable operating cash cost improvements[2] (including exploration and evaluation savings) in 2015, 35 per cent over target, bringing the total to US$6.2 billion compared with the 2012 base.
- Generated net cash from operating activities of US$9.4 billion in 2015, as lower taxes paid and further improvements in working capital partly offset the impact of lower prices.
- Tight management of working capital generated a further US$1.5 billion cash inflow in 2015, aided by lower commodity prices. This was in addition to the US$1.5 billion inflow in 2014.
- Reduced capital expenditure by US$3.5 billion to US$4.7 billion, including US$2.1 billion of sustaining capex, benefiting from the completion of major projects and continued capital discipline.
- Announced US$0.8 billion of agreed coal divestments in 2015 and 2016 year to date.
- Maintained a strong balance sheet with net debt of US$13.8 billion and gearing of 24 per cent, in the lower half of the targeted range. Free cash flow[3] of US$0.7 billion partly funded the US$2.0 billion share buy-back.

(1) EBITDA margin is defined as Group underlying EBITDA divided by product group total revenues as per the Financial information by business unit on page 195 where it is reconciled to profit on ordinary activities before finance items and taxation.

(2) Operating cash cost improvements represent the difference between the current and prior year full cash cost of sales per unit based on the prior year volume sold.

(3) Free cash flow is defined as net cash generated from operating activities less cash used in investing activities.

Group overview

Introduction to Rio Tinto

Rio Tinto is a leading global mining and metals group that focuses on finding, mining, processing and marketing the Earth's mineral resources.

We have been in business for more than 140 years and remain focused on a long-term horizon. Our approach is driven by an enduring and proven strategy (see page 10). It sees us invest in and operate long-life, low-cost, expandable operations in the most attractive industry sectors.

Our world-class assets are run by a company of world-class people: a 55,000-strong workforce spanning more than 40 countries. We foster a culture where our people keep their safety, and that of their workmates, at the top of their minds; where every person understands how they can create and preserve value for the business; and where diversity and innovation are embraced.

We produce a diverse suite of minerals and metals that enable the world to grow and develop. These products give us exposure to markets around the world, and across the economic development spectrum, from basic infrastructure needs, through industrial growth, and to consumer-led demand.

Supporting our four product groups are our Exploration and Technology & Innovation teams, central support functions, shared services, and headquarters-based activities.

Our contribution to sustainable development is integral to how we do business. It is a fundamental consideration in how we manage the business, seeking long-term mutually beneficial outcomes for our business and our stakeholders. Find out more on page 22.

Our approach is underpinned by our values of respect, integrity, teamwork and accountability. Combined with the strength provided by our people and our assets, they help form the foundations of our long-term success.

Aluminium product group

Building on more than a century of experience and expertise, Rio Tinto is a global leader in the aluminium industry. Our business includes high-quality bauxite mines, large-scale alumina refineries, and some of the world's lowest-cost, most technologically-advanced primary aluminium smelters.

Products

Bauxite

Bauxite is the natural ore used to make aluminium. It is refined into alumina which is smelted into aluminium metal. Our wholly and partly owned bauxite mines are located in Australia, Brazil and Guinea.

Alumina

Alumina (aluminium oxide) is extracted from bauxite via a refining process. Approximately four tonnes of bauxite are required to produce two tonnes of alumina, which in turn makes one tonne of aluminium metal. Our wholly and partly owned alumina refineries are located in Australia, Brazil and Canada.

Aluminium

Aluminium is a unique and versatile modern metal. Light, strong, flexible, corrosion-resistant and infinitely recyclable, aluminium is one of the most widely-used metals in the world. Its largest markets are transportation, machinery and construction. Our smelters are mainly concentrated in Canada. We also have plants in France, Australia, New Zealand, Iceland, the UK and Oman.

Strategic advantages

- Access to the largest and best-quality bauxite ore reserves in the industry, strategically located to serve growing Chinese bauxite demand.
- One of the lowest-cost bauxite producers.
- Outstanding hydropower position, which delivers significant cost and other advantages in an energy intensive industry and today's carbon-constrained world.
- Rio Tinto has a first-quartile average cost position for aluminium smelting, with industry- leading smelting technology.

Key production locations	Key sales destinations
– Canada	– Asia
– Australia	– Americas
– Europe	– Europe

Full operating review 32

Copper & Coal product group

Rio Tinto's Copper & Coal product group was formed in February 2015 following a corporate restructure. At the end of 2015, the product group had four copper operating assets – in the US, Mongolia, Chile and Indonesia – and six coal operations in Australia and South Africa, as well as attractive development projects.

Products

Copper

Precious metals aside, copper is the best conductor of heat and electricity, and 70 per cent of the copper the industry produces is used in conductive applications. Copper wires the world, bringing vital infrastructure and information to all corners of the globe, and helps to power economic and societal improvement and growth. Copper is also a key component of green technologies, from wind energy and solar collection to high-efficiency buildings and electric vehicles. We also produce gold, silver and molybdenum as co-products of our copper production.

Coal

Coal is a cost-effective and abundant energy source that will continue to be part of the global energy solution for years to come. Thermal coal is used for electricity generation in power stations. The thermal coal from our Hunter Valley operations is world class, featuring the low ash and sulphur content necessary for modern lower-emissions power stations. We produce high-value coking or metallurgical coal, which produces steel when mixed in furnaces with iron ore.

Gold

Gold is used as a store of value. It is also highly conductive, malleable and inert. These properties make it a key component in the electronics, chemical production, jewellery, aerospace and medical industries.

Silver

Also a precious metal, silver has the highest electrical and thermal conductivity of any metal and is used in many electronic devices. It is also used in aerospace and medical applications, to make jewellery and as an investment.

Molybdenum

Molybdenum enhances toughness, high-temperature strength and corrosion resistance when combined with other metals. It is frequently used to produce stainless steel and other metal alloys.

Strategic advantages

- A portfolio of high-quality assets in copper and coal.
- Attractive growth opportunities in copper.
- Large, low-cost, expandable copper and coal assets located close to existing infrastructure and growing Asian markets.
- Industry-leading technology and innovation.
- Strong product stewardship.

Key production locations	Key sales destinations
– Australia	– China
– Chile	– Japan
– Mongolia	– South Korea
– US	– Taiwan
	– US

Full operating review 34

Diamonds & Minerals product group

The Diamonds & Minerals product group consists of industry-leading, demand-led businesses, which include mining, refining and marketing operations across five sectors. Rio Tinto Diamonds is one of the world's leading diamond producers, and manufactures, sells and markets diamonds from its mines in Australia and Canada. Rio Tinto Minerals is a world leader in borates, with a mine in the US, processing plants, and commercial and research facilities. Rio Tinto Iron & Titanium is an industry leader in high-grade titanium dioxide feedstocks, with operations in Canada, Madagascar and South Africa. Dampier Salt, based in Australia, is one of the world's largest producers of seaborne salt and the Uranium business includes production facilities in Australia and Namibia. The product group also includes the Simandou iron ore project in Guinea, one of the largest known undeveloped high-grade iron ore resources in the world.

Products

Diamonds

Diamonds are an important component in both affordable and higher-end jewellery. We are able to service all established and emerging markets as we produce the full range of diamonds in terms of size, quality and colour distribution.

Titanium dioxide

The minerals ilmenite and rutile, together with titanium dioxide slag, can be transformed into a white titanium dioxide pigment or titanium metal. The white pigment is a key component in paints, plastics, paper, inks, textiles, food, sunscreen and cosmetics. Titanium metal is light weight, chemically inert and strong, making it ideal for use in medical applications and in the aerospace industry.

Borates

Refined borates are used in hundreds of products and processes. They are a vital ingredient of many building materials and glass applications and are essential micro-nutrients for crops. They are commonly used in glass and ceramic applications including fibreglass, television screens, floor and wall tiles, and heat-resistant glass.

Salt

Salt is one of the basic raw materials for the chemicals industry and is indispensable to a wide array of automotive, construction and electronic products, as well as for water treatment, food and healthcare.

Uranium

Uranium is one of the most powerful known natural energy sources, and is used in the production of clean, stable, base-load electricity. After uranium ore is mined, it is processed into uranium oxide. This product is sold for processing into fuel rods for use in nuclear power stations.

Other products from the Diamonds & Minerals product group include high purity iron, metal powders and zircon.

Strategic advantages

- Portfolio of industry-leading businesses operating in attractive markets.
- Demand-led, integrated operations that are responsive to the changing external environment.
- Poised to benefit from mid to late-development-cycle demand growth as consumption increases in emerging markets.

Key production locations	Key sales destinations
– North America	– North America
– Australia	– South East Asia
– Africa	– India

Full operating review 36

Iron Ore product group

Rio Tinto operates a world-class iron ore portfolio, supplying the global seaborne iron ore trade. We are well positioned to benefit from continuing demand across China and the developing world. In Australia, where the majority of our iron ore is produced, we have industry-leading margins.

Products

Iron ore

Iron ore is the key ingredient in the production of steel, one of the most fundamental and durable products for modern-day living, with uses from railways to paperclips. Our iron ore mines are located in Australia and Canada.

Strategic advantages

- Proximity of the Pilbara operations in Australia to key Asian markets.
- The lowest cost major iron ore producer in the Pilbara, with a Pilbara cash unit cost of US$14.9 in 2015.
- World-class assets, comprising a seamless supply chain with extensive optionality.
- A premium product suite, which drives strong customer relationships, supported by technical and commercial marketing expertise.

Key production locations	Key sales destinations
– Australia	– China
– Canada	– Japan
	– South Korea

Full operating review 38

Chairman's letter

Dear shareholders,

Last year I noted that in times of challenging markets, investors sought strength and reliability.

It is pleasing to report that during 2015 your company has displayed such qualities and delivered a solid performance, despite an exceptional level of economic volatility.

The continued deterioration in the macro environment has generated widespread market uncertainty. Global economic growth was subdued last year and reflected a deepening of the cyclical downturn in most commodity markets.

Even before the recent challenges, we took measures to reshape Rio Tinto – a plan that has delivered results. This is a significant achievement for Sam Walsh and his team, but of course there is more we must do.

The year ahead will be challenging for our industry and we are taking further pre-emptive action to ensure the company's ongoing strength. We will continue to run the business with the long-term interests of you, our shareholders, in mind.

Strength in turbulent times

In 2015, your company achieved underlying earnings of US$4.5 billion and operating cash flows of US$9.4 billion. Our underlying earnings were US$4.8 billion lower than in 2014 due to the significant impact of reduced commodity prices. This impact was partly offset by management's drive to significantly reduce cash costs and improve productivity at all of our businesses.

The net loss of US$0.9 billion reflects non-cash exchange rate and derivative losses of US$3.3 billion, and impairment charges of US$1.8 billion. The impairments mainly relate to the Simandou iron ore project, Energy Resources of Australia and the Roughrider uranium project.

These results reflect continued investment over many decades in long-life, low-cost, expandable operations in the most attractive industry sectors. This strategy ensures that Rio Tinto owns the best assets for delivering long-term value. At a time of significant industry change and curtailments, your company has the resilience and strength to continue to progress world-class growth projects in bauxite, copper and iron ore.

Global growth

The slowdown in emerging markets limited global growth to around three per cent in 2015. The impact on commodity demand was much stronger, led by a further deterioration in key metal-intensive sectors in China.

China's gross domestic product (GDP) growth slowed moderately to just below seven per cent, as the transition to its "New Normal" was further impacted by the industrial cycle. Consumption supported the economy but investment and exports weighed on growth. In particular, the slowing growth of China's construction and industrial sectors, as the transition to a service-based economy takes place, has negatively impacted commodity demand.

The US Federal Reserve's first interest rate hike since the financial crisis has been interpreted as a sign that the US economy continued to strengthen in 2015. Consumer demand is strong but growth momentum was dampened by the impact of lower oil prices.

Against this backdrop, prices for several commodities are at levels not seen since 2005 or only briefly at the depth of the global financial crisis.

The economic environment represented significant challenges for industry margins during the year and this is likely to persist in 2016.

Returns to shareholders

The strength of the company's performance gave the board the confidence to announce, in February 2016, a 2015 full year dividend of 215 US cents per share. In 2015, we returned US$6.1 billion to our shareholders, through a combination of dividend payments and buy-backs.

Over the last five years we have returned more than US$25 billion to our shareholders, underlining our commitment to shareholder returns.

However, with the continuing uncertain market outlook, the board has determined that maintaining the progressive dividend policy would have constrained the business and acted against shareholders' long-term interests.

We have therefore replaced the progressive dividend policy with an approach that will allow the distribution of returns to better reflect the company's position and outlook.

We recognise that this decision may disappoint some of our shareholders but we believe our new dividend policy better reflects the cyclical nature of our industry. For 2016, we intend that the full year dividend will be no less than 110 US cents per share.

Our goal is to maintain balance sheet strength and deliver shareholder returns through the cycle. We believe the quality of our assets provides a sound base for future returns.

Our public and community role

Over the past year, considerable action has taken place to reduce trade barriers, lift people from poverty and protect the environment. As a leading global company, Rio Tinto has publicly engaged in support of these efforts.

During 2015 we were an active participant in the business community advisory group to G20 leaders, providing a business perspective on drivers for economic growth and supporting public policy that advances sustainable economic development.

In October, the Trans-Pacific Partnership (TPP) was secured after seven years of negotiations among 12 countries in the growing Pacific region. The TPP promises to open markets in the region and secure the rules-based trading system upon which companies like Rio Tinto and our customers depend.

In December, during the annual Conference of Parties 21 (COP21), a global agreement was reached to address climate change. Rio Tinto signed the Paris Pledge for Action to reduce greenhouse gas emissions, which is a further example of our commitment to be part of the climate solution.

Central to this, we set quantified emissions intensity reduction goals. Over the last seven years we have achieved a reduction of more than 21 per cent in our emissions intensity, exceeding the targets we set. We have extended our GHG emissions intensity target to 2020. The new target is for a 24 per cent reduction from our 2008 baseline. For the long term, we are committed to significantly decarbonising our business by 2050 and making our businesses and projects resilient to climate change impacts. To drive this internally, we are building climate change related metrics into our planning, risk and investment decisions.

Society's expectations are increasing, both in terms of the visibility of our public promises and the transparency of our local actions. In light of the restructuring occurring across the extractive sector, some of our stakeholders may question the value of our industry and the role we play.

But when you consider that in the five years to the end of 2015, Rio Tinto's direct economic contribution[(a)] has exceeded US$265 billion, we believe the value we bring is clear. We also lead our industry in tax transparency, through the publication since 2010 of our annual Taxes paid report.

Active governance

In May 2015, Lord Kerr and Michael Fitzpatrick stepped down as non-executive directors after many years of significant service on the board. In May 2016, Richard Goodmanson will retire from the board after 11 years. I am very grateful to them all for their considerable contribution and tremendous commitment to Rio Tinto over many years.

A key role of the board is to ensure adherence to the company's strategy and plan for future growth. With this in mind the board visited two of our world-class businesses in 2015 to get a first-hand view of the company's assets and people: our modernised aluminium smelter at Kitimat in British Columbia, Canada, and our bauxite operations at Weipa in Queensland, Australia.

Moving forward with confidence

Despite the uncertain conditions that we currently face, the long-term outlook for our sector remains positive.

In the next 15 years, the world's population will increase by more than one billion people and almost half a billion people in China, India and the Association of Southeast Asian Nations (ASEAN) region will move from rural to urban environments.

These factors drive demand for the minerals and metals we produce, as essential ingredients of modern life.

I would like to congratulate our diverse team of talented employees around the world. Without their enthusiasm and commitment to integrity we would not be the strong values-driven company we are. On behalf of the board, thank you for your continued support.

Jan du Plessis
Chairman

2 March 2016

(a) Summarised on page 24.

Chief executive's statement

Dear shareholders,

The past year created significant challenges for our industry, and against this backdrop we have again delivered robust financial and operational performance.

In 2015 our focus on cash generation was relentless. We reduced our cost base by US$1.3 billion, exceeding our revised target of US$1 billion. We lowered our capital expenditure to US$4.7 billion and we ended the year with net debt at US$13.8 billion.

Our performance is important because we delivered on our targets, and because we did what we said we would do: focus on value and meet our commitments to improve the business for you, our shareholders.

Rio Tinto's proactive actions over the past three years mean we have one of the strongest balance sheets in the industry. We have reduced our costs by over US$6 billion since the start of 2013, reshaped and strengthened our portfolio, and reduced capital expenditure and working capital. As a result of these actions, we have returned over US$13 billion of cash to shareholders since 2012.

This performance is due to the hard work of our talented employees around the world, the superior quality of our Tier 1 assets and our operating and commercial excellence.

While we have achieved a great deal, we recognise the current market environment requires even more from us. This is why we have announced a new pre-emptive package of measures. Over the next two years, we aim to cut operating costs by a further US$2 billion, remove US$3 billion of capital expenditure, compared with our previous guidance, and implement a new dividend policy, as explained by our chairman in his letter on the previous page.

These significant actions provide us with the confidence that we remain well positioned to maintain balance sheet strength and deliver shareholder returns through the cycle.

Safe and reliable operations

Safe and reliable operations will always be our number one goal.

We have made real progress to reduce employee injury rates across our business. In 2015 we achieved the lowest injury frequency rate in Rio Tinto's history but we must do more to eliminate fatalities.

Tragically, four of our colleagues lost their lives at our operations in 2015 and our thoughts are with their families and friends.

In January at QIT Minerals in Madagascar, Todson Rafaralahiniriko drowned when the excavator he was operating slid down a tailings embankment into water.

In February at Zululand Anthracite Colliery in South Africa, security officer Themba Thusi died when the car he was driving rolled on a bend on a gravel road.

In May at Rio Tinto Fer et Titane in Canada, Luc Trudel died while working in a team using a high-pressure water hose to perform a cleaning task.

In August in Guinea, Mohamed Lamine Cherif drowned when a bridge on a public road to our Simandou operation collapsed and his truck became submerged.

To help us eliminate fatalities we will implement a new programme, critical risk management (CRM), across the Group. CRM involves every person identifying the risks in a given task, and verifying appropriate controls are in place before starting the activity.

World-class assets and performance

The steep fall in a range of commodity prices has been particularly challenging for our industry and has had a direct impact on our earnings. Within this environment, the company's world-class businesses remain focused on generating superior margins and cash.

In 2015 our iron ore business delivered underlying earnings of US$3.9 billion and closed the year with Pilbara FOB EBITDA margins of 60 per cent.

The focus of our iron ore business in 2015 centred on extracting full value from the investments we have made in our assets and infrastructure.

During 2016 we will celebrate 50 years of iron ore exports from Australia and our business remains the cost and quality standard by which others seek to be measured.

Rio Tinto has the world's best aluminium business with global smelting assets averaging in the first quartile of the industry cost curve and a leading position in bauxite.

The product group achieved a solid performance in 2015, with underlying earnings of US$1.1 billion despite lower prices. Integrated EBITDA margins increased year-on-year to 31 per cent.

The Copper & Coal product group, impacted by lower prices, delivered underlying earnings of US$274 million.

Rio Tinto's share of mined copper production was lower, as anticipated, principally driven by Rio Tinto Kennecott where efforts were undertaken to de-weight and de-water the east pit wall, following the slide in 2013. Coking coal production increased in 2015 versus 2014, and thermal coal production was broadly in line with 2014.

The Diamonds & Minerals product group continues to focus on cash generation. Underlying earnings of US$189 million were 30 per cent lower than 2014, primarily driven by lower sales prices and reduced volumes in response to soft market conditions. The product group continues to optimise production to align with market demand.

The Argyle diamond underground mine continued to ramp up throughout 2015.

Portfolio renewal and growth

In 2015 we announced the sale of our interest in the Bengalla thermal coal joint venture. This completed on 1 March 2016 and Rio Tinto received consideration of US$0.6 billion. In January 2016 we announced the sale of our share of the Mount Pleasant thermal coal assets in Australia. That sale is expected to close in the second half of 2016.

During the year we also sold our interest in the Murowa diamond mine in Zimbabwe and a number of Rio Tinto Aluminium's ancillary businesses in Europe.

Asset sales announced or completed since the end of 2012 have realised more than US$4.7 billion, which has been used to reduce debt, deliver returns to shareholders, or fund growth.

In 2015, we cut our capital expenditure to US$4.7 billion but not at the expense of facilitating high value growth options. The four major projects we progressed last year exemplify the diverse nature of our portfolio and commitment to quality growth: the completion of the Pilbara iron ore infrastructure; the pouring of first hot metal at the modernised Kitimat smelter; the project financing package agreed for Oyu Tolgoi underground; and the approval of the Amrun bauxite project.

Each is unique. All are world-class and ideally positioned on the cost curve to deliver value for many years.

In the Pilbara in Australia all key elements of our growth infrastructure are now largely complete and our focus has shifted to generating maximum value from our assets and installed capacity.

Kitimat in Canada is now one of the world's most modern large-scale aluminium smelters. It uses our energy efficient proprietary technology. Its ramp-up is well under way and it is expected to achieve nameplate capacity in the first half of 2016.

In December the development of the Oyu Tolgoi underground copper mine in Mongolia took an important step forward with the signing of the US$4.4 billion project financing agreement. Next steps include securing all necessary permits, finalising the feasibility study, and consideration of approval of the project by the various boards.

Chief executive's statement
continued

The planned output from the Amrun bauxite mine in Australia, due from 2019, is partly expected to replace production from the depleting East Weipa mine which has been a reliable supplier of quality bauxite for more than 50 years.

Technology and environmental leadership

Technology and innovation has been one of Rio Tinto's strengths for decades.

In 2015, at our iron ore operations in the Pilbara we deployed our 71st automated truck and we are progressing advancement of the world's first fully autonomous, heavy-haulage, long-distance rail system.

We are also trialling drones to measure stockpiles and assist with many tasks, including maintenance and environmental programmes.

Technology can also drive energy and water efficiency and reduce our environmental footprint.

As a business, we must ensure our operations are safe and well managed from an environmental perspective.

In August we further strengthened our tailings and water storage standards. Across the Group we have a provision of US$8 billion for future rehabilitation and closure costs.

We have many award-winning examples of mine rehabilitation and restoration. In March 2015, we agreed to relinquish 175,000 hectares of land on the Mitchell Plateau to help establish Australia's largest national park, covering over two million hectares across the Kimberley region of Western Australia.

Our Sustainable development section provides more details on our performance in this critical area (see page 22).

Ready for new challenges

It is a source of great pride to see Rio Tinto people in action, at work and in the community helping us build a more resilient and trusted business.

The actions of all of our people around the world sustain a vibrant and values-driven culture which is at the heart of our company.

The year ahead is expected to be particularly tough for our industry but we have taken further proactive measures from a position of strength.

In my time in the industry I have seen many cycles. Those companies, like ours, with the highest-quality assets and the financial strength to invest through the cycle are those that can deliver long-term value.

So we have set stretching but realistic ambitions and we will make best use of our strengths.

In the year ahead we will do all we can to improve our safety and business performance, continue our focus on cash, and preserve the strength of our balance sheet.

I would like to close by thanking our stakeholders for their trust, and you, our shareholders, for investing in Rio Tinto.

Sam Walsh AO
Chief executive

2 March 2016

Strategic context

Global economy

For the fourth year running, the global economy grew at a moderate rate of around three per cent in 2015, below consensus expectations at the start of the year. Global growth was held back by slowing emerging economies that faced a challenging dynamic of subdued global trade and falling commodity prices. Developed economies were on a stronger footing, but seven years on are still struggling to fully extricate themselves from the aftermath of the global financial crisis.

China's GDP growth slowed moderately to just below seven per cent, but this had a strong impact on metals and minerals demand, because most of 2015's economic weakness was concentrated in the commodity-intensive construction and industrial sectors. Some signs of stabilisation started to appear during the second half of the year, although from a weak base. In particular, policy measures introduced by the Chinese Government supported a pick-up in housing sales. While this stopped the rise in property inventories, these remain elevated, delaying growth in construction activity. China's central bank also gradually shifted exchange rate policies throughout the year.

The US Federal Reserve's first interest rate hike since the financial crisis was initially interpreted by the markets as a sign that the US economy continued to strengthen in 2015. Consumer demand is strong and was supported by improvements in the labour market. However, growth momentum was dampened by the impact of lower oil prices on US energy sector investment and by a manufacturing sector struggling with a stronger dollar. The rally in the US currency, which started in the second half of 2014, continued throughout 2015, with the trade-weighted index reaching levels last seen in 2003. Europe benefited from the currency trends, and while growth remains modest, 2015 saw the most solid performance in the eurozone since 2011. This enabled the Greek crisis, which unfolded throughout the year, to remain relatively well contained.

Growth in developed economies was not sufficient to support strong global trade. This negatively impacted emerging markets, with currencies, debt and fiscal positions of commodity exporters under further stress from low oil and minerals prices. Currencies in developed commodity-dependent economies such as Australia and Canada were under lesser pressure but still depreciated against the US dollar by 11 and 16 per cent respectively through the year.

Drivers of commodity prices

Long-term structural economic trends are important drivers of future commodity prices through their effects on commodity demand. The economic development and urbanisation of emerging countries goes through an initial investment-led growth phase, which is particularly commodity-intensive. This benefits commodities such as the steel and copper used in construction and infrastructure. As economies evolve over time, other commodities such as light metals, energy products and industrial minerals tend to take over as the main enablers of consumption-led growth models.

Combined with high capital intensity and long project lead times, the long-term nature of mining investment tends to result in cyclical investment patterns in the industry, which translates into cyclical commodity prices. Over the past couple of years, the industry has moved into the low phase of the cycle. Investments made during the previous period of high prices and margins have started to deliver new supply, into a context of decelerating demand from China. With markets for most metals and minerals moving into oversupply, the focus of the industry has shifted away from capital investment and toward strategies focused on strengthening balance sheets through productivity and cost reduction initiatives.

Commodity markets

The cyclical downturn deepened in most commodity markets in 2015. The iron ore price dipped below US$40/dry metric tonne CFR (cost and freight) towards the end of the year, representing an 80 per cent fall from the peak of the market in 2011. Given its exposure to property and investment trends, domestic finished steel consumption in China fell by between four and five per cent. China's iron ore requirement proved more stable due to a combination of record steel products exports and a declining share in scrap use. Nevertheless, this was far from sufficient to absorb the growth in low-cost seaborne supplies from the iron ore majors. Price pressures led to about 130 million tonnes in high-cost production cuts from China and marginal seaborne suppliers, in addition to the 125 million tonnes of exits in 2014.

Prices for several other commodities, such as aluminium, and thermal and metallurgical coal, are at levels preceding the start of the China boom in 2005 or only seen briefly in the depth of the global financial crisis. Strong Chinese supply and slow curtailments have exacerbated global market imbalances in each of these three commodities. As a result, prices are cutting deep into global cost curves despite significant reductions in costs, weaker currencies and lower energy input prices.

Revenues for aluminium producers also suffered from a rapid fall in regional market premia.

Bauxite and copper have not experienced prices cutting as deep into their respective global cost curves, although downward pressures have gradually been building up. Malaysia has replaced Indonesia as the main source of bauxite imports into China, meaning that stockpiles that were built up ahead of the Indonesian export ban are not being drawn down as expected. Nevertheless, with further additions of alumina refining capacity in China's coastal province of Shandong, demand for imported bauxite remained strong. In the copper market, a combination of mine disruptions, mine shutdowns and project deferrals dampened the ramp-up in new supply. Reported copper inventories drifted down through the second half of 2015 and remained at levels representative of a balanced market. This was not sufficient to stop a gradual erosion in price, with expectations of continued supply growth from expansions reaching their commissioning phase late in the year.

The absorption of excess titanium dioxide pigment and feedstocks inventories has been a drawn-out process since 2012. It continued into 2015, with producers of high-grade feedstocks curtailing more capacity.

Outlook

The macro and market environment in 2015 presented significant challenges for industry margins. High-cost marginal supply is seen exiting across most commodity markets. But this is a long process and in the absence of a turnaround in demand, it is difficult to see supply withdrawals having a strong positive impact on commodity prices in the short term.

The macroeconomic consensus points to a moderate improvement in global growth in 2016. Meanwhile, China is expected to further progress the transition towards its "New Normal", resulting in a less commodity-intensive and slower growth path.

This is a context in which producers at the lower end of the cost curve and those working hard to reduce costs and improve productivity should outperform the broader industry.

Longer-term demand prospects remain positive and we expect this will support a recovery out of the current cyclical low phase. For some commodities, especially those facing stronger mine depletions, this will be amplified by recent cutbacks in capital spend.

Key performance indicators

Our key performance indicators (KPIs) enable us to measure our financial and sustainable development performance. Their relevance to our strategy and our performance against these measures in 2015 are explained on these pages.

Some KPIs are used as a measure in the long-term incentive arrangements for the remuneration of executives. These are identified with this symbol:

See the Remuneration Report
67

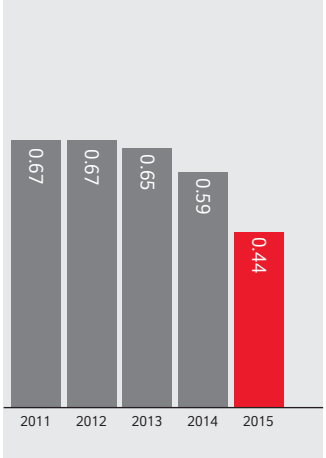
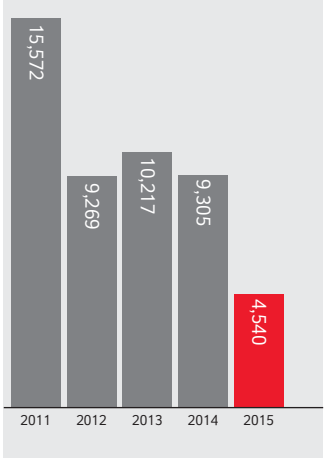
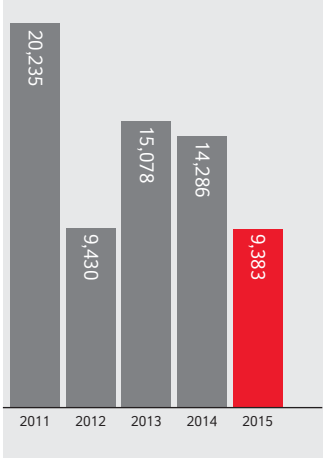
KPI trend data

The Group's performance against each KPI, and explanations of the actions taken by management to maintain and improve performance against them, are covered in more detail in later sections of this Annual report. Explanations of the actions taken by management to maintain and improve performance against each KPI support the data.

Notes:

(a) The accounting information in these charts is extracted from the financial statements.

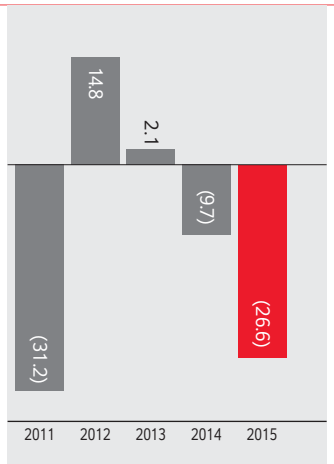
(b) Underlying earnings is a key financial performance indicator which management uses internally to assess performance. It is presented here as a measure of earnings to provide greater understanding of the underlying business performance of the Group's operations. Items excluded from net earnings to arrive at underlying earnings are explained in note 2 to the 2015 financial statements. Both net earnings and underlying earnings deal with amounts attributable to the owners of Rio Tinto. However, IFRS requires that the profit for the year reported in the income statement should also include earnings attributable to non-controlling interests in subsidiaries.

Indicator	All injury frequency rate (AIFR) $	Underlying earnings (a) (b) $	Net cash generated from operating activities (a) $
	Per 200,000 hours worked	US$ millions	US$ millions
Relevance to strategy	The safety of our people is core to everything we do. Our goal is zero harm, including, above all, the elimination of workplace fatalities. We are committed to reinforcing our strong safety culture and improving safety leadership.	This is a key financial performance indicator used across the Group. It gives insight to cost management, production growth and performance efficiency. We are focused on reducing operating costs further to help us deliver returns to shareholders through the cycle.	Net cash generated from operating activities is a complementary measure demonstrating conversion of underlying earnings to cash. It provides additional insight to how we are managing costs and increasing efficiency and productivity across the business.
Performance			
	Our AIFR has improved by 34 per cent over the last five years. We improved our AIFR by 25 per cent from 2014. However, we did not meet our goal of zero fatalities and four people died while working at Rio Tinto managed operations in 2015.	Underlying earnings of US$4.5 billion, were US$4.8 billion lower than 2014, with cash cost improvements, higher volumes, lower energy costs, positive currency and other movements (totalling US$2.9 billion) partly offsetting the US$7.7 billion (post-tax) impact of lower prices.	The Group generated net cash from operating activities of US$9.4 billion, as lower taxes paid and further improvements in working capital partly offset the impact of lower prices.
Definition	AIFR is calculated based on the number of injuries per 200,000 hours worked. This includes medical treatment cases, restricted work-day and lost-day injuries for employees and contractors.	Items excluded from net earnings to arrive at underlying earnings are explained in note 2 "Operating segments" to the 2015 financial statements.	Net cash generated from operating activities represents the cash generated by the Group's consolidated operations, after payment of interest, taxes, and dividends to non-controlling interests in subsidiaries.
More Information	24	194-195	109

Total shareholder return (TSR)

%

The aim of our strategy is to maximise shareholder value. This KPI measures performance in terms of shareholder wealth generation. We also monitor relative TSR performance against the Euromoney Global Mining Index of peers and the MSCI World Index.



Rio Tinto's TSR performance from 2011 to 2015 has been impacted by volatility in global equity markets, with particular impacts on the mining sector. Rio Tinto plc and Rio Tinto Limited share prices ended significantly lower in 2015. With a TSR of (26.6) per cent in 2015, the Group outperformed the Euromoney Global Mining Index of peers by ten percentage points but underperformed the wider market measured by the MSCI World Index which was up 2.6 per cent in 2015.

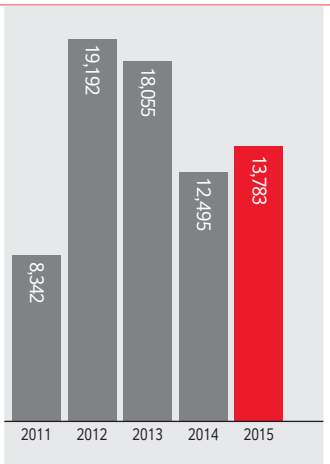
TSR combines share price appreciation and dividends paid to show the total return to the shareholder.

93

Net debt[a]

US$ millions

Net debt is a measure of how we are managing our balance sheet and capital structure. A strong balance sheet is essential for withstanding external pressures and seizing opportunities through the cycle.



Net debt increased from US$12.5 billion to US$13.8 billion, with free cash flow partly funding the US$2.0 billion share buy-backs, which were completed during 2015.

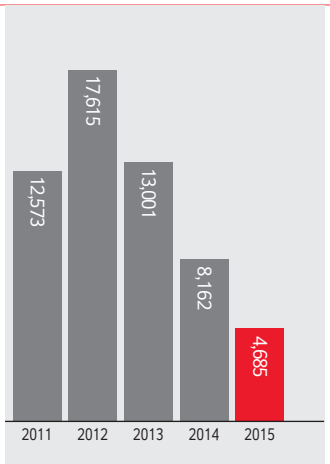
Net debt is calculated as: the net borrowings after adjusting for amounts due to equity accounted units originally funded by Rio Tinto, cash and cash equivalents, other liquid resources and derivatives related to net debt. This is further explained in note 24 "Consolidated net debt" to the 2015 financial statements.

143

Capital expenditure[a]

US$ millions

We are committed to a disciplined and rigorous investment process – investing capital only in assets that, after prudent assessment, offer attractive returns that are well above our cost of capital.



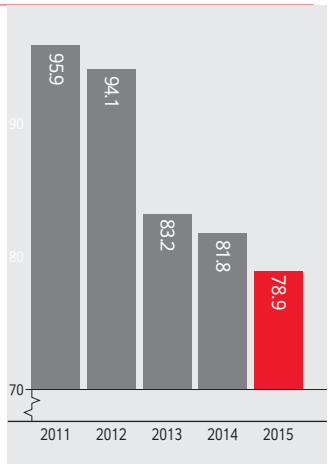
We have reduced capital expenditure by US$3.5 billion to US$4.7 billion in 2015, including US$2.1 billion of sustaining capital expenditure, benefiting from the completion of major projects and continued capital discipline.

196-197

Greenhouse gas (GHG) emissions intensity

Indexed relative to 2008 (2008 being equivalent to 100)

We are committed to reducing the energy intensity of our operations and the carbon intensity of our energy, including through the development and implementation of innovative technologies. Our GHG performance is an important indicator of this commitment and our ability to manage exposure to future climate policy and legislative costs.



We have exceeded the targeted ten per cent reduction in GHG emissions intensity from 2008. At the end of the target period we have reduced our total GHG emissions intensity by 21.1 per cent between 2008 and 2015. This is largely a result of the aluminium smelter divestments (Ningxia in 2009, Sebree and Saint Jean in 2013, Alucam in 2014); closures of the Anglesey smelter in 2009 and the Lynemouth smelter in 2012; and commencement of low-intensity operations (Kitimat smelter and the Oyu Tolgoi copper-gold mine) in 2015.

Our GHG emissions intensity measure is the change in total GHG emissions per unit of commodity production relative to a base year. Total GHG emissions are direct emissions, plus emissions from imports of electricity and steam, minus electricity and steam exports and net carbon credits purchased from, or sold to, recognised sources.

26

Group strategy

Challenging market conditions

The mining sector is facing very challenging market conditions. In response to these challenges, we have redoubled our focus on productivity, cost reductions and capital discipline across our business – squeezing the maximum possible returns from our existing businesses and ensuring only the best growth projects attract fresh capital. While others in the sector have embarked on similar paths, our early and decisive action in this area is bearing fruit. Financial strength has become a key differentiator in the sector, and our balance sheet remains strong relative to industry peers.

Looking beyond the current challenges and uncertainty, the long-term outlook for the mining sector remains positive. In the period to 2030, we expect 220 million new urban residents in China alone. In India and ASEAN, current trends indicate that around 250 million people will urbanise over that same period. GDP growth in emerging Asian economies outside China is expected to average around five to six per cent per annum over the next 15 years. These factors drive demand for the minerals and metals we produce, as essential ingredients of modern life.

Consistent strategy underpinned by six value drivers

A clear and effective strategy is critical to surviving and outperforming in today's challenging market conditions. We remain convinced that our longstanding and consistent strategy is the right one: to invest in and operate long-life, low-cost, expandable operations in the most attractive industry sectors.

Six critical drivers underpin our value proposition, and combine to create a unique platform for our ongoing success.

1. World-class portfolio

At the heart of Rio Tinto is a portfolio of world-class assets – from our Pilbara iron ore business, to our Queensland bauxite ore reserves, our hydro-powered aluminium smelters, our global suite of copper mines and our sector-leading energy, diamonds and minerals assets. We use a clear strategic framework to assess our existing assets and new opportunities – taking into account the industry attractiveness and the competitive advantage of each asset, and its capacity to deliver best-in-class returns.

In 2015, we:

- Announced increases of our Pilbara iron ore, Diavik diamond, Escondida copper and Hail Creek coal reserves.
- Achieved first production from the modernised Kitimat aluminium smelter in Canada.
- Agreed the sale of our interest in the Bengalla coal joint venture in Australia which completed on 1 March 2016.
- Announced that we supported Energy Resources of Australia's decision not to proceed with the Final Feasibility Study of the Ranger 3 Deeps project. We also determined that we did not support any further study or the future developmement of Ranger 3 Deeps due to the project's economic challenges.
- Completed the sale of our interests in Murowa Diamonds and Sengwa Colliery in Zimbabwe.

Our six value drivers

2. Quality growth

We have a high-quality pipeline of both near-term and longer-dated projects across the portfolio. By reinforcing capital discipline and reshaping our projects, we have retained significant, high-quality growth despite further reducing our capital expenditure. Our project pipeline has a compelling internal rate of return and is expected to deliver strong volume growth.

In 2015, we:

- Reduced capital expenditure from US$8.2 billion in 2014 to US$4.7 billion.
- Completed the Pilbara infrastructure project on time and with the rail and port components of this project at a capital cost below initial estimates.
- Approved US$1.9 billion capital expenditure for the Amrun bauxite project due to commence production in 2019.
- Signed a US$4.4 billion project financing agreement for the proposed Oyu Tolgoi underground expansion.

3. Operating and commercial excellence

The safety of our people is core to everything we do. A well-run operation is a safe operation.

Our commercial activities ensure we reap the maximum value from each of our businesses. Our marketing teams work hand-in-hand with our operations, so that our resource management is fully aligned to the market.

We have established a leading position in the development and use of technology and innovation – allowing us to deliver more tonnes, more cheaply and with less risk. As the industry faces increasingly complex geological, environmental and cost pressures, technology will be an increasingly important value driver.

Over the years we have leveraged our understanding of customer needs to create new markets for our products, including champagne and pink diamonds. We deploy industry-leading capabilities in supply chain optimisation and a variety of logistics solutions across the Group – and have in-house centres of excellence for value-in-use analysis, pricing and contracting strategies. Together, these activities allow us to manage risk and capture value in all market conditions.

In 2015, we:

- Reduced our all injury frequency rate to 0.44 per 200,000 hours worked at the end of the year, compared with 0.59 in 2014. Regrettably we did not meet our goal of zero fatalities.
- Achieved US$1.3 billion of sustainable operating cash cost improvements (including exploration and evaluation savings), 35 per cent above target.
- Reduced exploration and evaluation spend by a further US$0.2 billion.
- Streamlined our organisational structure by reducing from five to four product groups and reshaping a number of corporate functions.

4. Balance sheet strength

In a cyclical and capital intensive industry such as mining, a strong balance sheet is essential in order to preserve optionality and generate shareholder value through the cycle. We target a net gearing ratio of 20 to 30 per cent in order to maintain our robust balance sheet. This target positions us favourably to withstand current industry pressures and seize any opportunities these market conditions create.

At the end of 2015 our net gearing ratio was 24 per cent, in the lower half of our target range.

5. Capital allocation discipline

We adopt a consistent and disciplined approach to capital allocation. Our first allocation is to necessary sustaining capital. Next, we fund our primary contract with our shareholders – the ordinary dividend. Finally, we assess the best use of the remaining capital between alternatives of compelling growth, debt reduction and further cash returns to shareholders. At each stage, we apply stringent governance and assessment criteria to ensure that every dollar is spent in the right way.

In 2015, we adhered to our disciplined capital allocation framework, resulting in: sustaining capital of US$2.1 billion, dividends of US$4.1 billion, compelling growth capital of US$2.6 billion and a share buy-back of US$2.0 billion.

6. Free cash flow generation

Over recent years we have made ongoing improvements to our business – increasing our productivity, reducing operating and capital costs and delivering incremental volume expansions from high quality projects. Together with the quality of our asset base, these actions enhance our capacity to generate free cash flows.

In 2015, tight management of working capital generated a cash inflow of US$1.5 billion, aided by lower commodity prices.

Our 2016 strategic priorities

We will continue to focus on our critical value drivers in 2016.

As always, we will maintain our relentless focus on safety, continuing to target fatality elimination, catastrophic event prevention and injury reduction.

We will continue to build strong and lasting relationships with local and regional host communities and governments, and mitigate the impacts that our activities and products have on the environment.

Generating and conserving cash will be a key business imperative during 2016. We will continue to ensure our capital is deployed in the most efficient way, and will continue to reshape our portfolio to focus on the highest-returning assets in our preferred industry sectors.

We will further enhance our portfolio as we progress a number of key growth projects, including the Amrun bauxite project and the preparatory work for the proposed underground expansion of Oyu Tolgoi. Importantly, we will deliver measured, value-adding growth while maintaining our capital expenditure at around US$4.0 billion in 2016.

Our strong focus on costs will continue in 2016, as we target further operating, exploration and evaluation cost savings of US$1.0 billion and continue to reduce our working capital.

We will continue to leverage our strength in technology and innovation, and our leading commercial capabilities, to ensure we remain the supplier of choice to our customers and maximise the cash generated from every business.

Maintaining our balance sheet strength will remain a core priority. We aim to maintain our gearing ratio between 20 per cent and 30 per cent.

Business model

How we create value

Rio Tinto owns a global and diversified portfolio of world-class assets: the result of investment decisions made in line with our longstanding strategy (see page 10).

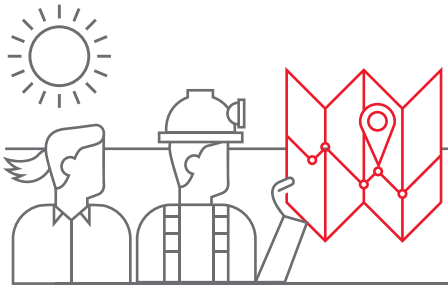
We create value through the way we find, develop and operate these assets, how we market the minerals and metals they produce, and the legacy we leave at the end of their lives.

To optimise the value of our portfolio over time, we pursue opportunities for productivity improvements, cost reductions and prudent growth. We are committed to running and growing our business in ways that are increasingly safer, smarter and more sustainable.

Our competitive advantages stem from the capabilities and behaviours of our people and the quality of our assets. Coupled with our framework for managing risk effectively, these provide strength across the cycle, and through the challenges that the external environment presents (see page 14).

Our approach is described in our business lifecycle below, along with examples showing some of the ways we differentiate ourselves.

Explore and evaluate



We look for deposits in our preferred commodities at both new, "greenfield" locations and within the orbit of our current operations. Our in-house exploration team has a multi-decade track record of discovery of Tier 1 orebodies in both greenfield and brownfield settings. To maintain our focus on targets that are important to Rio Tinto, we run most exploration programmes ourselves, but we will partner with others if it gives us access to skills or opportunities that we do not possess in-house.

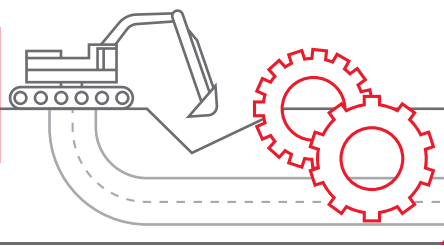
Our exploration teams are often the first contact with people we may work alongside for decades, so we explore respectfully and make sure we engage with communities from an early stage.

Using our orebody knowledge, we develop our resources and position our products in the marketplace in ways that add value and support the Group's investment decision-making. Our geological expertise gives us the confidence to keep looking for the most elusive discoveries. And we have a strong tradition of developing innovative technologies to resolve specific exploration challenges.

Differentiation in action:

Globally, we have offered to analyse rock samples from prospective joint venture partners using breakthrough mineralogical technology. By detecting and analysing "indicator minerals" in samples, this technology can identify and prioritise targets on exploration sites, potentially with great precision. This approach supports our commitment to boost exploration activity and potentially allows us to find new exploration partners.

Develop



Our approach is to develop orebodies so that they deliver value over the long term. We apply rigorous assessment and review processes that ensure we only approve investments that offer attractive returns well above our cost of capital. We assess the spectrum of risk and how we will manage it (see page 14).

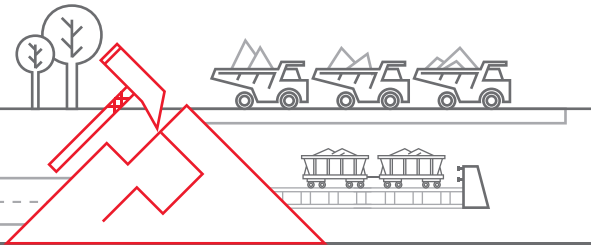
Once we have confirmed the value of a resource and received internal and external approvals to develop it, the project moves into the implementation phase and is handed to the product group to manage. The product groups work in partnership with Rio Tinto Projects – part of the Technology & Innovation group (see page 41).

As we develop an operation, we plan the most efficient configuration for mining the orebody and getting the products to market. We work closely with our customers to create demand that maximises the value of the deposit over its lifetime. We also work in partnership with host governments and communities, identifying ways in which we can deliver mutual benefits from the development of our operations.

Differentiation in action:

In December 2015 the Rio Tinto board approved investment of US$1.9 billion in the Amrun project in Australia, one of the highest quality bauxite projects in the world. Amrun involves the construction of a bauxite mine and associated processing and port facilities on the Cape York Peninsula in north Queensland. As well as being a long-life, low-cost, expandable asset, Amrun will provide jobs and strengthen the region's economy for many decades.

Mine and process



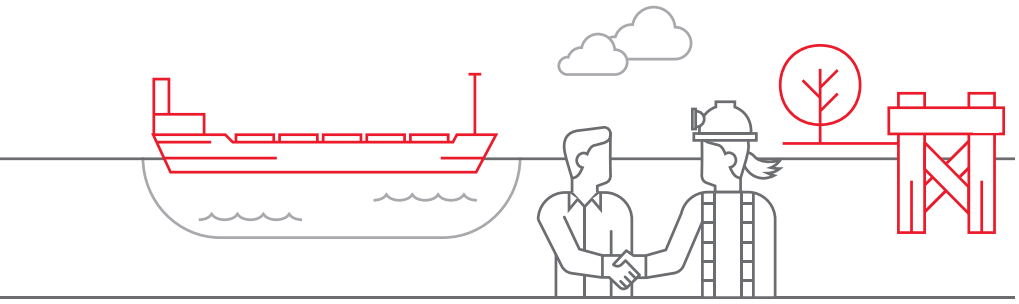
We create value by operating our assets safely and efficiently, and by building on our leadership position in low-cost operations. With a global operating model, we can apply standard processes and systems across the Group in areas such as health, safety, environment and communities, procurement, operations and maintenance. This extends the life of our equipment and optimises the extraction of ore, meaning higher production, lower costs and maximised value. Our operations bring benefit to local economies by providing employment opportunities, procurement, and the transparent payment of tax and royalties.

Our commitment to technology and innovation also sets Rio Tinto apart. It enables us to take advantage of opportunities that may not be available to others, improves our productivity and helps us tailor our products to customer needs. We can use our network of partnerships with academia, technology suppliers and other experts to tap into knowledge and technical prowess that augment our own capabilities.

Differentiation in action:

Rio Tinto's iron ore business is a leader in automated mining technologies. In the Pilbara, our fleet of 71 autonomous haulage trucks has cut load and haul operating costs by 13 per cent and increased effective utilisation by up to 14 per cent. At the West Angelas mine, fully autonomous drilling has raised productivity, cut cost, and improved safety and ore recovery.

Market and deliver



Our business is based on the supply of high-quality products that have been developed to meet our customers' needs. The minerals and metals we supply – mostly to industrial companies that process them further – are the building blocks of value-added goods. Our diverse portfolio allows us to respond to demand throughout countries' economic development cycles, including in infrastructure, transport, machinery, energy and consumer goods.

Rio Tinto's marketing teams work with our operations to align our resource management with market needs and to make sure we improve our products and services in a way that maximises value to customers. What we learn from our markets and customers helps us to refine our investment decisions. In many cases we deliver products ourselves, with logistics capabilities that include our own networks of rail, ports and ships.

Differentiation in action:

Our Diamonds & Minerals business takes a "market-to-mine" approach, working closely with customers to understand their needs, provide solutions to their problems and maximise the value we achieve for our products. A partnership between Rio Tinto Minerals and Australia's University of Wollongong is seeking to find new energy-related applications for boron – found in our borate minerals, such as in hydrogen storage and advanced batteries.

Close down and rehabilitate

Closure planning is part of every asset's life cycle, from the earliest stages of development. We aim to progressively rehabilitate as much land as possible before closure. And when a resource reaches the end of its life, we seek to minimise its financial, social and environmental impact by finding sustainable and beneficial future land uses. We identify post-closure options that take into account stakeholders' concerns and priorities.

Differentiation in action:

Working in land management and rehabilitation at the Weipa bauxite mine in Australia provides Indigenous employees with professional opportunities that align closely with their cultural connection to the land. Some of this work is done in the on-site nursery, where seedlings are nurtured before being planted out to restore the forest canopy, and benefits from our Indigenous employees' unique understanding of the geography and climate.

Delivering value for our stakeholders

Shareholders

Our primary focus is on delivering shareholder returns through the cycle. We do this by balancing disciplined investment with prudent management of our balance sheet and shareholder returns – as shown in our approach to capital allocation (see page 30).

Through our global footprint and diverse portfolio, we are also able to create value for our other stakeholders in a variety of ways.

Customers

We supply our customers with the right products at the right time, so they can add value by turning them into the end products that society needs to sustain and enhance modern life.

Communities

Our operations create jobs for local communities and can open up new markets for local suppliers. Communities often benefit from the infrastructure we put in place and once our operations are closed, we restore the sites – for instance for community use, new industry, or back to native vegetation.

Our people

We invest in our people throughout their careers, offering diverse employment prospects, opportunities for development, and competitive rewards and benefits that have a clear link to performance.

Governments

We are often a major economic contributor to the local, state and national jurisdictions in which we operate. Our tax and sovereign equity contributions enable governments to develop and maintain public works, services and institutions. We help create growth that endures far beyond the active life of our operations.

Suppliers

By seeking the right balance of global, national and local supply capability, and supporting local supplier development wherever possible, we drive value for our shareholders and deliver economic benefits for the communities in which we operate.

Risk management

Rio Tinto is exposed to a variety of risks that can have financial, operational and compliance impacts on our business performance, reputation and licence to operate. The board recognises that creating shareholder returns is the reward for taking and accepting risk. The effective management of risk is therefore critical to supporting the delivery of the Group's strategic objectives.

Risk management framework

Rio Tinto's risk management framework reflects our belief that managing risk effectively is an integral part of how the Group creates value, and fundamental to the Group's business success. The responsibility for identifying and managing risks lies with all of Rio Tinto's managers and business leaders. They operate within the Group-wide framework to manage risks within understood thresholds.

The framework includes clearly defined oversight responsibilities for the board and the Executive Committee, who are supported by the Risk Management Committee (an executive management committee chaired by the chief executive) and central support functions including Group Risk and Group Audit and Assurance, to enable effective risk identification, evaluation and management across Rio Tinto.

This approach reflects a "three lines of defence" model for the management of risks and controls:

- First line of defence: ownership of risk by the operations.
- Second line of defence: control of risk by central support functions and the Risk Management Committee.
- Third line of defence: assurance of systems of internal control by Group Audit & Assurance.

The key risk management responsibilities throughout the Group are outlined below.

Approach

The Group's approach to risk management, underpinned by the Risk policy and standard, is aimed at embedding a risk-aware culture in all decision-making, and a commitment to managing risk in a proactive and effective manner. This includes the early identification and evaluation of risks, the management and mitigation of risks before they materialise, and dealing with them effectively in the event they do materialise. Accountability for risk management is clear throughout the Group and is a key performance area of line managers.

To support risk understanding and management at all levels, the Group Risk function provides the necessary infrastructure to support the management and reporting of material risks within the Group, and escalates key issues through the management team and ultimately to the board where appropriate. Group Risk also supports the Risk Management Committee in its review of risk.

Risk management framework

Oversight	**Board**	– Determine the nature and extent of risk that is acceptable in pursuit of strategic objectives – Confirm that management's risk thresholds reflect the level of risk the board is willing to accept in pursuit of strategic objectives – Provide oversight across the risk management process
	Board committees	– The Audit Committee monitors and reviews at least annually the maturity and effectiveness of management processes and controls designed to identify, assess, monitor and manage risk – The Audit and Sustainability Committees review periodic reports from management: identifying the Group's material business risks within the committees' scope; and the risk management strategies and controls applied
Third line	**Group Audit & Assurance**	– Provide reasonable assurance that the systems of risk management, internal control and governance are adequate and effective
Second line	**Executive Committee**	– Set risk strategy and assess risks inherent in key investments and in strategic, business or annual plans
	Risk Management Committee	– Oversee the risk management framework to facilitate the identification of significant risks to Group-level objectives and ensure effective risk management processes are in place
	Group Risk	– Provide co-ordination and support of Group-level risk management activity and reporting – Embed risk management into core business processes, such as planning and capital allocation – Build risk management capability and a risk culture throughout the Group
	Other central support functions and management committees	– Provide targeted expertise and support to risk owners – Develop and maintain specific controls, including policies, standards and procedures, to support the effective management of material Group-level risk within the agreed thresholds – Assure first line of defence compliance with controls
First line	**Product groups and central functions, executive / audit forums**	– Monitor material risks and track activities to manage risk within their business activities, and escalate where appropriate – Consider risk and uncertainty in strategic and business planning and capital allocation proposals
	Product groups and business units	– Identify, assess and manage risks in operations and projects, utilising risk registers and our Group-wide risk data system: RioRisk
	Risk managers and Risk Forum	– Provide technical expertise and risk management for line leaders and the product group executive management teams – The Risk Forum (risk managers across the Group) supports alignment, consistency and continuous improvement of risk management

Risk appetite and tolerances; strategic objectives; accountability to manage, audit and assurance

Escalation as appropriate, transparency and formal reporting

The process for identifying, evaluating and managing the material business risks is designed to manage, rather than eliminate, risk and where appropriate accept risk to generate returns. Certain risks, for example natural disasters, cannot be managed using internal controls. Such major risks are transferred to third parties in the international insurance markets, to the extent considered appropriate or possible.

The Group has material investments in a number of jointly controlled entities. Where Rio Tinto does not have managerial control, it is not always able to ensure that management will comply with Rio Tinto standards.

Principal risks and uncertainties

The principal risks and uncertainties outlined in this section reflect the risks that could materially affect Rio Tinto or its ability to meet its strategic objectives, either directly or by triggering a succession of events that in aggregate become material to the Group. Rio Tinto's business units and functions assess the potential economic and non-economic consequences of their respective risks using the framework defined by the Group's Risk policy and standard. Once identified, each principal risk or uncertainty is reviewed and monitored by the relevant internal experts and by the Risk Management Committee, the relevant board committees and the board.

There may be additional risks unknown to Rio Tinto and other risks currently not believed to be material which could turn out to be material. In previous years the Group has reported risks related to climate change, community disputes, discount rates, short-term cash generation initiatives, technology and innovation, supply chain and third party exposure, industrial relations, availability of skilled resources, and closure. The Group remains exposed to these risks but does not consider them to be principal risks currently (as defined below). Therefore they are not discussed in detail in this section. A number of them are, however, referred to in the sustainable development section of this Annual report on pages 22 to 28.

The principal risks and uncertainties listed in this section may materialise individually, simultaneously or in combination and could significantly threaten the Group in the following respects:

Business model
The basis on which the Group generates or preserves value over the longer term, given its market positioning as a global diversified mining and processing business.

Future performance
The Group's ability to deliver its financial plan in the short to medium term.

Solvency
The Group's ability to maintain an appropriate capital structure and to meet its financial liabilities in full.

Liquidity
The Group's ability to meet its financial liabilities as they fall due.

Health, safety, environment and communities (HSEC)
The Group's ability to send our employees and contractors home safe and healthy every day and work with our communities and partners to achieve our sustainable development goals.

Group reputation
The Group's ability to maintain investor confidence and our social licence to operate.

Robust assessment

The board confirms that, with the assistance of management, it has carried out a robust assessment of the principal risks of the Group as detailed below (including those that would threaten the business model, future performance, solvency or liquidity) and has also tested the financial plans of the Group for each of these principal risks, and for a series of severe but plausible scenarios, made up of the concurrence or close sequence of a number of principal and material risks.

Longer-term viability statement

Current business planning processes within Rio Tinto require the preparation of detailed financial plans over a three-year time horizon. The Group's strategy is developed, and capital investment decisions are made, based on an assessment of cash flows over a multi-decade horizon, with financial investment capacity regularly tested to ensure capital commitments can be funded in line with the Group's capital allocation model. This multi-year planning approach reflects our business model of investing in, and operating, long-life mining assets, whose outputs we sell into commodity markets over which we have limited influence.

The planning process requires modelling under a series of macroeconomic scenarios and assumptions of both internal and external parameters. Key assumptions include: projections of economic growth, and thus commodity demand in major markets, primarily China; commodity prices and exchange rates, often correlated; cost and supply parameters for major inputs such as labour and fuel; and a series of assumptions around the schedule and cost of implementation of organic and inorganic growth programmes.

Reflecting the speed and degree of change possible in a number of these parameters, such as Chinese demand, commodity prices, and exchange rates, Rio Tinto has deemed a three-year period of assessment appropriate for the long-term viability statement, consistent with the Group's detailed planning horizon.

Additional robust stress-testing has been undertaken during the past year, utilising the models used for business planning, to further test and confirm the long-term viability of the Group, beyond commodity price and exchange rate movements. Production and social licence to operate related assumptions were also stressed, individually and collectively, to levels considered severe but plausible and well beyond those expected in the normal course of business.

The viability of the Group under these scenarios remained sound with the use of a suite of management actions available to redress the situation, including accessing lines of credit, changing capital allocation levers, and, if necessary, selling (down) assets.

Therefore, taking into account the Group's current position and principal risks, the directors have assessed the prospects of the Group, over the next three years, and have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over that period.

It is impossible to foresee all risks, and the combinations in which they could manifest, and there may be risks that currently or individually do not appear material that could turn out to be material, particularly if occurring in close sequence.

Principal risks and uncertainties at a glance (2015 trend)

	External	Internal	Internal and external
Increasing risk	Commodity prices China development pathway	None	None
No change in risk	Strategic partnerships Jurisdictional risk	Execution of acquisitions and divestments Capital project development HSEC Business misconduct	Liquidity Exploration and resources Business interruption
Decreasing risk	None	None	None

Principal risks and uncertainties

The principal risks and uncertainties in this section have been categorised into Financial risks (Market, Financial and Strategic); Operational risks (HSEC, Resources, Operations, Projects and People); and Compliance risks (Stakeholder, Governance).

The principal risks and uncertainties should be considered in connection with any forward-looking statements in this Annual report and the cautionary statement on the inside front cover.

Financial risks

Inherent risk and uncertainty	2015 trend	Potential impact on viability, HSEC and reputation	Potential upside impact (opportunities)
Market risks: Rio Tinto operates in global markets and accepts the impact of exchange rate movements and market-driven prices for our commodities, seeking premiums where possible.			
Commodity prices, driven by demand and supply for the Group's products, vary outside of expectations over time. Exchange rate variations and geopolitical issues may offset or exacerbate this risk. **External risk**	↑	Business model Future performance Solvency Liquidity	A rise in commodity prices, or favourable exchange rate movement, allows the Group to pursue strategic capital expansions and/or increase returns to shareholders.
China's development pathway could impact demand for the Group's products outside of expectations. **External risk**	↑	Business model Future performance	Strong growth, positive policy decisions and reforms drive demand for commodities, resulting in rising prices which enable capital expansion and increased shareholder returns in the short to medium term.
Financial risks: Rio Tinto maintains a strong blance sheet and liquidity position to preserve financial flexibility through the cycle.			
External events and internal discipline may impact Group liquidity. **External risk** **Internal risk**	–	Future performance Solvency Liquidity Group reputation	Favourable market conditions and strong internal discipline could increase Group liquidity and/or balance sheet strength and allow it to pursue investment opportunities and enhance returns to shareholders.

Potential downside impact (threats)	Mitigating actions include:
Value drivers World-class portfolio | Quality growth | Balance sheet strength | Free cash flow generation	
Falling commodity prices, or adverse exchange rate movements, reduce cash flow, limiting profitability and dividend payments. These may trigger impairments and/or impact rating agency metrics. Extended subdued prices may reflect a longer-term fall in demand for the Group's products, and consequent reduced revenue streams may limit investment opportunities.	– Pursue low cost production, allowing profitable supply throughout the commodity price cycle. – Maintain a diverse portfolio of commodities across a number of geographies. – Maintain global portfolio of customers and contracts with key customers. – Maintain a strong balance sheet. – Monitor multiple leading indicators and undertake detailed industry analysis to develop more accurate assumptions in our commodity price and exchange rate forecasting used for capital allocation and planning process. – Comply with the Group's Treasury policy and standard, which outlines the fundamental principles that govern the Group's financial risk management practices.
An economic slowdown in China, and/or a material change in policy, results in a slowdown in demand and reduced investment opportunities.	
Value drivers World-class portfolio | Quality growth | Operating and commercial excellence | Balance sheet strength | Capital allocation discipline | Free cash flow generation	
The Group's ability to raise sufficient funds for planned expenditure, such as capital growth and/or mergers and acquisitions, as well as the ability to weather a major economic downturn could be compromised by a weak balance sheet and/or inadequate access to liquidity.	– Comply with the Group's Treasury policy and standard, which outlines the fundamental principles that govern the Group's financial risk management practices. – Target a net gearing ratio of 20 to 30 per cent and other financial metrics commensurate with a strong investment-grade credit rating. – Manage the liquidity and financing structure of the Group using forecasts and sensitivity analysis tools to actively monitor, determine and enable access to the appropriate level, sources and types of financing required. – Subject funds invested by the Group to credit limits and maturity profiles based on board-approved frameworks, to promote diversification and maintain appropriate liquidity. – Embed Finance teams within the business support management and develop accurate financial reporting and tracking of our business performance. – Report financial performance monthly to senior management and the board. – Seek board approval of the financial strategy, long-term planning and case flow forecasting.

Principal risks and uncertainties
continued

Financial risks continued

Inherent risk and uncertainty	2015 trend	Potential impact on viability, HSEC and reputation	Potential upside impact (opportunities)
Strategic risks: Rio Tinto enforces disciplined capital allocation to the best returning opportunities (organic and inorganic growth projects or returns to shareholders).			
Rio Tinto's ability to secure planned value by successfully executing divestments and acquisitions may vary. **Internal risk**	–	Business model Future performance Solvency Liquidity Group reputation	Proceeds realised from divested assets are greater than planned, allowing more capital to be redeployed into higher returning or more productive uses. The Group is successful in acquiring business that provide case flow and/or future growth optionality, above that anticipated at the time of acquisition.
The Group's ability to develop new projects successfully may vary. **Internal risk**	–	Future performance Group reputation Solvency HSEC	An ability to develop projects on time and within budget enhances social licence to operate and investor confidence.

Operational risks

Inherent risk and uncertainty	2015 trend	Potential impact on viability, HSEC and reputation	Potential upside impact (opportunities)
HSEC risks: Rio Tinto's operations are inherently dangerous. We lead responsibly to preserve our social licence to operate and ensure our employees and contractors go home safe and healthy.			
Our operations and projects are inherently hazardous with the potential to cause illness or injury, damage to the environment, disruption to a community or a threat to personal security. **Internal risk**	–	Group reputation HSEC	Delivering leading health, safety, environment and communities performance is essential to our business success. Meeting our commitments in these areas contributes to sustainable development and underpins our continued access to resources, capital and a diverse workforce to sustain the organisation. Good performance in legacy management (of closed sites) and closure can enhance our reputation and enable us to maintain access to land, resources, people and capital, so we can continue to establish new projects with the support of local communities.
Resources risks: Rio Tinto invests materially to accurately identify new deposits and develop orebody knowledge, underpinning our operations and projects.			
The success of the Group's exploration activity may vary. In addition, estimates of ore reserves are based on uncertain assumptions that, if changed, could result in the need to restate ore reserves. **External risk** **Internal risk**	–	Business model Future performance Group reputation	The discovery of a new orebody can significantly improve future growth options. The volume of ore is based on the available geological and technical information which is by its nature, incomplete. As new information comes to light the economic viability of some ore reserves can change and thus the reserves can be restated upwards. As a result, projects may be more successful and of longer duration than initially anticipated.

Potential downside impact (threats)	Mitigating actions include:
Value drivers World-class portfolio | Quality growth | Operating and commercial excellence | Balance sheet strength | Capital allocation discipline | Free cash flow generation	
Divestment and acquisition activity incurs transaction costs that cannot be recouped, or result in value destruction by realising less than planned value for divestments or paying more than fair value for acquisitions. This could result in unforeseen pressure on the Group's cash position or reduce the Group's ability to expand operations. The Group may also be liable for the past acts, omissions or liabilities of assets it has acquired that were unforeseen or greater than anticipated at the time of acquisition. The Group may also face liabilities for divested entities if the buyer fails to honour commitments or the Group agrees to retain certain liabilities.	– Complete detailed, independent due diligence on all material potential divestments and acquisitions, including technical review, commercial review and functional sign offs, before consideration by the Investment Committee and board where appropriate. – Resource Business Development team appropriately, supported by external specialists as required. – Involve business unit leaders early in process to recognise integration planning and synergies, or separation threats and opportunities. – Undertake post-investment reviews on divestments and acquisitions, to identify key learnings to embed into future initiatives.
A delay or overrun in the project schedule could negatively impact the Group's profitability, cash flows, asset carrying values, growth aspirations and relationships with key stakeholders.	– Consistently approach development of large-scale capital projects, through a specialised projects division. – Follow rigorous project approval and stage-gating process, including monitoring and status evaluation, as articulated in Project evaluation standard and guidance.

Potential downside impact (threats)	Mitigating actions include:
Value drivers Operating and commercial excellence	
Failure to manage our health, safety, environment or community risks, could result in a catastrophic event or other long-term damage which could in turn harm the Group's social licence to operate. Recognised hazards include, among others, underground operations, aviation, pit slope instability, tailings facilities, vector-borne and pandemic disease, chemicals, gases, vehicles and machinery, extreme natural environments, endangered flora or fauna, areas of cultural heritage significance, water supply stress and climate change.	– Continue focus on HSEC as a core priority at all operations, and projects, overseen by the Sustainability Committee. – Clearly define and ensure compliance with Group HSEC strategy, policy and performance standards. – Regularly review and audit HSEC processes and controls to promote and improve effectiveness. – Monitor HSEC performance measurement metrics at the Group level monthly. – Report, investigate and share learnings from HSEC incidents. – Build safety targets into personal performance metrics to incentivise safe behaviour and effective risk management (see Remuneration Implementation Report). – Develop mutually beneficial partnerships with local communities and the establishment of appropriate social performance targets. – Report annually on performance on greenhouse gas emissions, water, land use and rehabilitation, among others. – Focus on fatality elimination through implementation of a programme to verify safety risk controls.
Value drivers World-class portfolio | Quality growth | Capital allocation discipline | Free cash flow generation	
A failure to discover new orebodies could undermine future growth prospects. The risk that new information comes to light or operating conditions change means that the economic viability of some ore reserves can change and thus the reserves need to be restated downwards. As a result, projects may be less successful and of shorter duration than initially anticipated, and/or the asset value may be impaired.	– Comply with the Group's resources and reserves standard. – Recruit and retain skilled and experienced personnel. – Provide stable funding for exploration activities. – Prioritise the exploration portfolio continuously. – Utilise new technologies where appropriate. – Develop and leverage third-party partnerships.

Principal risks and uncertainties
continued

Operational risks continued

Inherent risk and uncertainty	2015 trend	Potential impact on viability, HSEC and reputation	Potential upside impact (opportunities)
Operations, projects and people risks: Rio Tinto seeks to achieve operational and commercial excellence, and to attract and retain the best people in the industry.			
Commercial excellence is derived from high operational and human productivity. Productivity is driven by optimisation of the balance of people, process and systems. **External risk** **Internal risk**	–	Future performance Liquidity HSEC Group reputation	Improved productivity and innovation from new systems can decrease costs and increase output. Development and retention of talent.

Compliance risks

Inherent risk and uncertainty	2015 trend	Potential impact on viability, HSEC and reputation	Potential upside impact (opportunities)
Stakeholder risks: Rio Tinto recognises positive engagement with a range of stakeholders, and seeks to develop collaborative and mutually beneficial partnerships that underpin our social licence to operate.			
Strategic partnerships and third parties influence the Group's supply, operations and reputation. The Group's ability to control the actions of these parties varies. **External risk**	–	Business model Future performance HSEC Group reputation	Joint venture and third parties offer opportunities to increase shareholder returns, reduce political risk and reduce operational risks.
The Group's operations are located across a number of jurisdictions, which exposes the Group to a wide range of economic, political and regulatory risks. **External risk**	–	Business model Future performance	Proactive engagement with governments and other stakeholders can increase access to new resources, support stable and predictable investment frameworks and operational environments, and shape positive policies and legal/regulatory frameworks.
Governance risks: Rio Tinto employees operate in compliance with *The way we work* – our global code of business conduct, the Group delegation of authorities and all Group policies, standards and procedures.			
The Group's reputation and regulatory licences are dependent upon appropriate business conduct and are threatened by a public allegation or regulatory investigation. **External risk** **Internal risk**	–	Business model Group reputation	Rio Tinto is seen as a good corporate citizen and acknowledged to operate to a high ethical standard, thus attracting talent.

Potential downside impact (threats)	Mitigating actions include:

Value drivers
World-class portfolio | Operating and commercial excellence | Free cash flow generation

Decreased productivity or business interruption may arise from a number of circumstances, including:

- Operational difficulties such as extended industrial dispute, delayed development, bottlenecks or interruptions to infrastructure for power, water and transportation throughout the value chain.
- Operational failure such as a process safety incident, major pit slope, dump or tailings/water impoundment failure, underground incident.
- Cyber breach/incident such as accidental or malicious actions.
- Natural disasters such as earthquakes, subsidence, drought, flood, fire, storm and climate change can impact mines, smelters, refineries and infrastructure installations.

Any of these events could result in a significant HSEC incident, an interruption to operations, or the inability to deliver products and a commercial loss.

- Preserve geographically diverse portfolio limiting physical events/disruptions to a specific business, single infrastructure or logistical event.
- Dedicate resources to productivity and innovation programmes.
- Comply with slope geotechnical, tailings management, underground mining and process safety technical and safety standards, supported by subject matter experts and audit protocols, reducing the risk (likelihood and consequence) of operational failure.
- Comply with the Acceptable use of information and electronic resources standard, supported by periodic reviews of IT infrastructure and security controls by dedicated (in-house) cyber-security team.
- Operate under strong human resources and employee relations framework.
- Undertake business resilience planning and preparedness exercises for execution of plans, across all operations.

For certain risks involving higher-value losses the Group purchases insurance. Risks not transferred to the external insurance market are retained within the business.

Potential downside impact (threats)	Mitigating actions include:

Value drivers
World-class portfolio | Quality growth | Operating and commercial excellence

Joint venture partners may hinder growth by not agreeing to support investment decisions. For non-managed operations, controlling partners may take action contrary to the Group's interests or standards and policies, resulting in adverse impact to health and safety, performance, reputation or legal liability.

Adverse actions by governments and others can result in operational/project delays or loss of licence to operate. Other potential consequences can include expropriation, nationalisation, changes in taxation, as well as currency and foreign investment restrictions. Legal frameworks with respect to policies such as energy, climate change, mineral law and taxation may also change in a way that increases costs.

- Shape governance structures to ensure appropriate influence and engagement.
- Actively participate within the governance structures of joint ventures to promote, where possible, compliance with the Group's policies and alignment with strategic priorities.
- Participate in strategic partnerships or financing structures to moderate political risk.
- Monitor jurisdictional risks and take appropriate action.
- Develop long-term relationships with a range of international and national stakeholders.
- Comply with Group policies and standards which provide guidance concerning risk management, human rights, business integrity and external communications.

Value drivers
World-class portfolio | Operating and commercial excellence

Fines may be imposed against Group companies for breaching antitrust rules, anti-corruption legislation, sanctions or human rights violations or other inappropriate business conduct.

A serious allegation or formal investigation by regulatory authorities (regardless of ultimate decision) could result in a loss in share price value, and/or loss of business. Other consequences could include the criminal prosecution of individuals, imprisonment and/or personal fines, and reputational damage to the Group. There may also be considerable cost and disruption in responding to allegations or investigations and taking remedial action.

- Identify and meet our regulatory obligations and respond to emerging requirements.
- Comply with Group policies, standards and procedures which provide guidance to our businesses and drive compliance with regulatory obligations.
- Dedicate legal and compliance teams to assist Group businesses in complying with regulatory obligations and internal standards and procedures.
- Maintain appropriate oversight and reporting, supported by training and awareness, to drive compliance with regulatory obligations.

Sustainable development

Rio Tinto's vision is to be a company that is admired and respected for delivering superior business value as the industry's trusted partner. Our contribution to sustainable development is an essential part of this vision. It helps us to manage risk, build long-term value for all of our stakeholders, and maintain our licence to operate.

We face a complex mix of challenges: global and local issues that include regional development, climate change and water. Our success depends on dealing with the risks they present.

Our sites must meet performance standards for health, safety, environment, community and social performance, and closure. These standards ensure that we meet and in many cases go beyond our statutory and regulatory requirements. They are backed by systems and processes, which assist management to achieve outcomes that are socially and environmentally sustainable.

The Sustainability Committee helps ensure consistently high standards of corporate governance: further information on this committee can be found on page 60 and page 61 of the Directors' report.

We measure ourselves against other leading companies both within and outside our sector. Over many years we have played a key role in setting sustainability standards in the mining and metals sector, through organisations such as the International Council on Mining and Metals, and national bodies.

Materiality

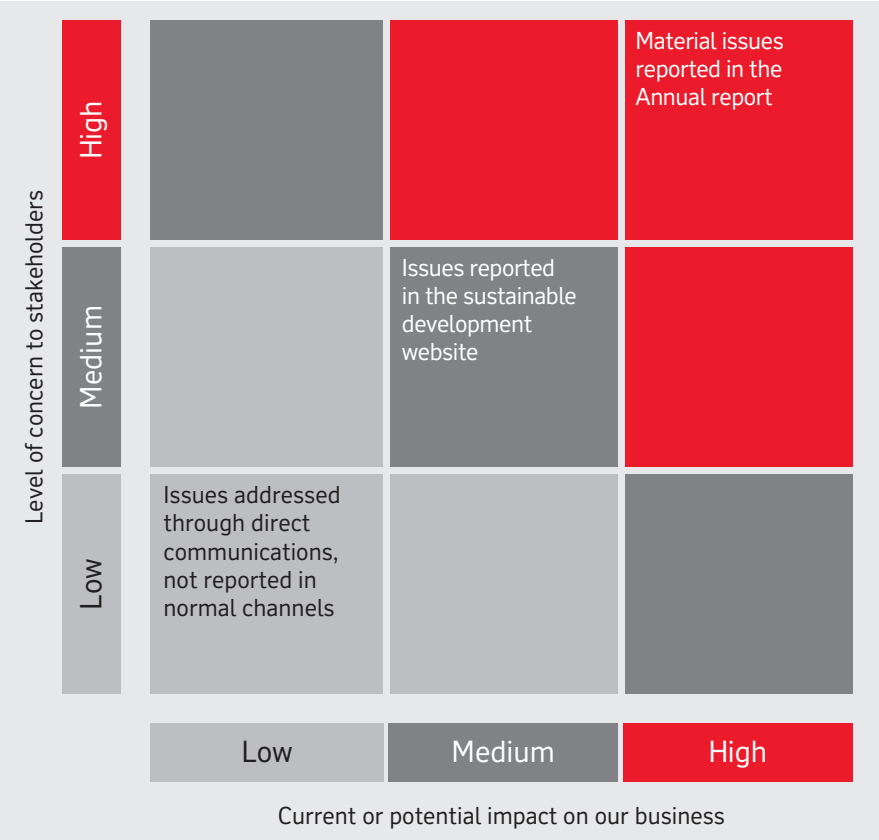
Materiality has become the guiding principle for sustainability reporting. Our annual materiality assessment focuses our report on the issues that matter the most to our stakeholders and to our business.

Our process was developed in line with the Global Reporting Initiative (GRI) guidance on materiality and completeness (globalreporting.org). This guidance specifies that sustainable development reporting should cover topics and indicators that "reflect the organisation's significant economic, environmental and social impacts" or that "substantively influence the assessments and decisions of stakeholders". It involves identifying and prioritising issues affecting our business and stakeholders over the next three years, taking internal and external perspectives into account.

In 2015 we consulted with investors, suppliers, industry groups, NGOs and peer companies, and used media reviews to assign external ratings for each issue.

We create a materiality matrix, which plots external stakeholders' level of concern against the current or potential impact on our business. Each issue is given a rating of "low", "medium" or "high", from both internal and external perspectives. An impact can be either positive or negative.

Having determined the topics for our 2015 materiality matrix, we reviewed their validity and relative importance with internal experts from each of our sustainability focus areas.



The Sustainability Committee then reviewed and approved the results of this assessment.

Issues that are highly material to both our external and internal stakeholders and at least high-to-medium are reported in this section of our Annual report. Those of medium-to-high importance are reported in the full Sustainable development report, and will continue to be published on our website.

Performance overview

Tragically, four colleagues lost their lives while working at our managed operations in 2015. The elimination of workplace fatalities is a high priority focus area for us and the work we are undertaking in this regard is covered in our safety section on page 24. It will augment the ongoing work which led to improvements during the year in reducing injuries. At 0.44, our all injury frequency rate (AIFR) this year was the lowest in our company history, as was the lost time injury rate of 0.25. These are significant achievements and illustrate the strength of our safety processes and culture.

As a result of changing our noise-induced hearing loss reporting criteria, along with an increased focus on reporting health incidents, we saw the rate of new cases of occupational illness increase by 78 per cent, missing our target of a year-on-year improvement. Although we did not meet our diversity goal for women to represent 20 per cent of senior management by 2015, at 18.1 per cent, the 2.6 percentage point improvement from 2014 gives us confidence we are heading in the right direction.

In 2015 we adopted a definition of "significant environmental incidents[(1)]". This provides an objective measurement of incidents that distinguishes those which could have a major or catastrophic actual impact from lower level incidents. In accordance with this we reported no significant environmental incidents. In 2014 we reported 12 environmental incidents. However, only one incident with a major or catastrophic actual impact would have been reported in 2014 when restated in accordance with the new definition of "significant environmental incidents".

Further information on the Group's environmental regulation, including incidents and fines, is located in the Directors' report on page 49.

(1) See riotinto.com/sd2015/glossary

Performance progress in 2015 included:

- Refreshing *The way we work,* our global code of business conduct, to ensure it is relevant to our employees, the business and the risks we face.
- A 25 per cent reduction in AIFR compared with 2014.
- A 32 per cent reduction in our lost time injury frequency rate (LTIFR) compared with 2014.
- Receiving the US National Mining Association's Sentinels of Safety Award at Rio Tinto Kennecott for their outstanding safety performance in 2014 (large metal/non-metal mill category).
- Commencing the independent epidemiological study of the workforce at Rössing Uranium Limited.
- A 21.1 per cent reduction in our greenhouse gas emissions intensity from 2008.
- Updating all our Health, Safety, Environment & Communities (HSEC) and Closure standards.
- Beating our 2015 target (40 per cent) of graduate gender diversity intake (with 43 per cent female).
- Beating our 2015 target (15 per cent) of intake to be nationals from regions where we are developing new businesses (at 33.3 per cent).
- Receiving the American Exploration and Mining Association's (AEMA) Environmental Excellence Award for our clean-up of the Holden Mine site.
- Receiving the Indonesian Government's "Caring Company Forest Reclamation" award for rehabilitation at the Kelian Mine.
- Conducting a Group level security and human rights audit review.
- Retaining and improving our listing as a leading company on the FTSE4Good and Dow Jones Sustainability Indexes, which investors use to monitor businesses' sustainability performance.

Our priorities for 2016 are to:

- Fully implement the critical risk management programme described in the safety section on page 24.
- Commence implementation of the updated Process safety standard to improve the effectiveness and rigour in the management of process safety risks.
- Implement the updated management of tailings and water storage facilities standard.
- Improve our risk-based and locally relevant management of material health risks.
- Improve performance on diversity targets and focus on creating a more inclusive workplace.
- Advance our talent pipeline to ensure a robust organisation for the future.
- Implement the new global Communities and Social Performance target.
- Implement the new greenhouse gas emissions intensity target.
- Implement the new closure controls, which include the refreshed standard and procedures.
- Continue to work with PT Freeport Indonesia on the implementation of a fatality prevention programme at the Grasberg joint venture in Indonesia.
- Further strengthen procedures to identify and manage human rights risks in our supply chain.

Goals and targets

To drive continuous improvement, we have set Group targets for a range of sustainability metrics. These help us to improve performance and manage risk. Further information on the risk framework Rio Tinto applies to identify these metrics can be found on pages 14 to 21.

Targets	Outcomes in 2015
Our goal is zero harm, including, above all, the elimination of workplace fatalities.	4 fatalities at managed operations in 2015.
Performance against this goal is measured by the number of fatalities and a year-on-year improvement in our all injury frequency rate (AIFR) per 200,000 hours worked.	25 per cent reduction in our AIFR compared with 2014.
A year-on-year improvement in the rate of new cases of occupational illness per 10,000 employees annually.	78 per cent increase in the rate of new cases of occupational illness compared with 2014, due primarily to the change in criteria for noise-induced hearing loss consistent with US Occupational Safety and Health Administration (OSHA) standards.
All managed operations will have reviewed – and increased their focus on managing – their health risks, through implementation of critical control management plans (CCMPs) to address their specific material health risks, by the end of 2015 [(a)].	96 per cent of managed operations have identified their critical health risks and implemented CCMPs with the remainder on track to do so in 2016.
Ten per cent reduction in total greenhouse gas emissions intensity between 2008 and 2015 [(a)].	We exceeded our target with 21.1 per cent reduction in our total greenhouse gas emissions intensity compared with 2008.
All managed operations with material water risk will have achieved their approved local water performance targets by 2018.	60 per cent of managed operations with a material water risk are on track to meet their approved local water performance targets.
Our diversity goal is to employ people based on job requirements that represent the diversity of our surrounding communities [(a)]. We are targeting: – Women to represent 20 per cent of our senior management by 2015. – Women to represent 40 per cent of our 2015 graduate intake. – 15 per cent of our 2015 graduate intake to be nationals from regions where we are developing new businesses.	– Women represented 18.1 per cent of our senior management in 2015. – Women represented 43 per cent of our 2015 graduate intake. – 33.3 per cent of our 2015 graduate intake were nationals from regions where we are developing new businesses.
By 2015, all operations have in place locally appropriate, publicly reported social performance indicators that demonstrate a positive contribution to the economic development of the communities and regions where we work, consistent with the Millennium Development Goals [(a)].	We met our target in 2014, ahead of schedule, and now all operations have locally appropriate, publicly reported indicators in place.

(a) The target period is complete.

Performance data 2011-2015 [a]

	2015	2014	2013	2012	2011
Social					
Fatalities at managed operations from safety incidents	**4**	2	3	2	6
Fatalities at managed operations from health incidents	**–**	–	–	1	–
All injury frequency rate (per 200,000 hours worked)	**0.44**	0.59	0.65	0.67	0.67
Number of lost time injuries	**220**	381	500	535	470
Lost time injury frequency rate (per 200,000 hours worked)	**0.25**	0.37	0.42	0.37	0.37
New cases of occupational illness (per 10,000 employees)	**30**	17*	16	15	13
Employees (number) [b]	**55,000**	60,000	66,000	71,000	68,000
Environment					
Greenhouse gas emissions intensity (indexed relative to 2008)	**78.9**	81.8*	83.2	94.1	95.9
Total energy use (petajoules)	**433**	450	484	502	516
Freshwater used (billion litres)	**456**	465	436	446	465
Land footprint – disturbed (square kilometres)	**3,629**	3,592	3,556	3,530	3,485
Land footprint – rehabilitated (square kilometres)	**533**	502	472	446	422
Direct economic contribution					
Value add (US$ million) [c][d]	**18,888**	29,178	31,818	26,195	38,193
Payments to suppliers (US$ million) [c]	**17,896**	21,370	26,054	30,271	28,444
Community contributions (US$ million)	**184**	264*	332*	291	294

* Numbers restated from those originally published to ensure comparability over time.

(a) Data reported in previous years may be modified if verification processes detect material errors, or if changes are required to ensure comparability over time. Wherever possible, data for operations acquired prior to 1 October of the reporting period are included. Divested operations are included in data collection processes up until the transfer of management control.

(b) These figures include the Group's share of joint ventures and associates (rounded to the nearest thousand).

(c) These figures include the Group's share of joint ventures and associates.

(d) Value add is the sum of labour, payments to governments and returns on capital invested in operations.

Performance data

Our sustainability performance data are reported for calendar years and, unless stated otherwise, represent 100 per cent of the parameters at each managed operation, even though Rio Tinto may have only partial ownership.

We have incorporated the requirements of the ten sustainable development principles of the International Council on Mining and Metals (ICMM) and the mandatory requirements set out in ICMM Position statements into our own policies, strategies and standards, and report in line with the GRI guidelines. This is the first year that we will report in accordance with GRI G4 guidelines.

Further information on our data definitions, our GRI G4 report and our alignment with the ICMM sustainable development principles and supporting position statements can be found at: **riotinto.com/sd2015**

Safety

We strive to develop a culture in which everyone believes all incidents are preventable. Our safety strategy focuses on three core areas: fatality elimination, catastrophic event prevention and injury reduction. By identifying and controlling critical risks, we believe we can achieve our vision of an injury and illness-free workplace where everyone goes home safe and healthy each day.

Strong and engaged leadership is essential to our approach. We expect our leaders to be visible and passionate champions for safety. They accept accountability for the safety of everyone working in their teams and consistently set high standards through their behaviour. We are building a positive safety culture, where everyone contributes to improving our safety performance and is confident to stop work if necessary to ensure it is safe.

Our focus on critical risk management (CRM) is part of a broader approach at Rio Tinto to prevent fatalities. It is based on the successful approach implemented at the Escondida copper mine, in which we are a joint venture partner. To eliminate workplace fatalities, CRM ensures that critical controls are well designed, understood, in place and working before a job starts. The process uses visual icons for easy identification, together with management processes, to verify that controls for these risks are in place and are effective. CRM is aligned with our safety standards, which were updated in 2015 to ensure they cover all critical risks and reflect current best practice. CRM is complemented by behavioural safety tools such as safety interactions, pre-start meetings, incident investigations and leadership in the field.

Our all injury frequency rate (AIFR), which includes data for employees and contractors, was 0.44 at the end of 2015. Over the last five years, we have reduced our AIFR by 34 per cent. Our lost time injury frequency rate (LTIFR), was 0.25 per 200,000 hours worked in 2015.

Despite having a good year in terms of injury frequency rate, we have not reached our target of zero fatalities. Four people lost their lives while working at Rio Tinto managed operations in 2015. Todson Rafaralahiniriko drowned when his excavator became submerged in a tailings pond due to slope failure at QIT Madagascar Minerals. Themba Thusi was killed due to a vehicle roll-over incident at Zululand Anthracite Colliery in South Africa. Luc Trudel died due to an equipment incident during maintenance activities at Rio Tinto Fer et Titane in Canada. Mohamed Lamine Cherif drowned when his vehicle became submerged due to a bridge collapse on a public road near the Simandou project in Guinea. These are tragic events that affect families, friends and colleagues. We provide support and counselling to those who have lost loved ones and ensure we identify and share the lessons to be learned from these tragic events.

During 2015, we piloted a new process for learning from incidents, based on sharing of practice with leading operators in the mining and oil and gas sectors. The revised focus on translating lessons learned into frontline application and improvement will help us avoid repeat incidents in the future.

Process safety management is a priority for Rio Tinto. During 2015, we developed a Process safety standard to further strengthen management of process safety risks. Implementation will begin in 2016.

Health

We aim to eliminate occupational illness and create workplaces that protect health and promote wellbeing. We focus on identifying key occupational health risks and put in place practices to control exposures. Employee wellbeing has a beneficial effect on safety and productivity as well as families and communities.

We are targeting a year-on-year improvement in the rate of new cases of occupational illness

per 10,000 employees. In 2015, our rate of new cases of occupational illness increased by 78 per cent from 2014. A number of factors have contributed to this increase, including the change to the US OSHA reporting criteria for noise-induced hearing loss; better awareness of surveillance and reporting requirements; and an improving health management culture. The main types of occupational illnesses recorded are related to noise-induced hearing loss (42 per cent), stress (26 per cent) and musculo-skeletal disorders (24 per cent).

Because occupational risks vary by operation, our health programmes consider local factors affecting people at work. To help our businesses focus on the right issues and mitigate significant workplace health risks, our Group target was for all managed operations to have reviewed – and increased their focus on managing – their health risks, through implementation of critical control management plans (CCMPs) that address their specific material health risks by 2015. By the end of the 2013-2015 target period, we fell just short of meeting our target for 100 per cent of our managed operations to have achieved this. Work under way in the remaining four per cent of businesses will see this target achieved in 2016. The logical extension of our focus to date is to ensure these CCMPs are effective in managing each site's health risks and are meeting targets set within individual site plans. From 2016 we will report the number of businesses achieving this.

In 2015, we updated our health standards and guidance documents to incorporate contemporary knowledge and practice for managing health risks in a consistent way.

Fatigue is a critical risk that we continue to take active steps to tackle, and we are further strengthening our mental health programme. In 2015, we created web-based workspaces to help people share best practices in both areas and, in the case of fatigue, learn from incidents.

We successfully responded to the 2014 Ebola outbreak in partnership with the Government of Guinea, World Health Organization and other international organisations. We remain committed to supporting our local employees and communities to control this deadly disease.

In 2015, we began an epidemiological study of the workforce at the Rössing uranium mine in Namibia, which is being carried out by independent experts from the University of Manchester. The final results will be published in a peer-reviewed journal and our own communication channels.

People

We accomplish more through collaboration, treating each other fairly and living our values of respect, integrity, teamwork and accountability. This is why we are building a workforce that represents the diversity of the many countries where we operate. Our global code of business conduct, *The way we work,* sets out the principles that are the foundation of our business.

In 2015, we employed 55,000 people, including the Group's share of joint ventures and associates. Of these, approximately 29,000 were located in Australasia, 15,000 in North America, 7,000 in Africa, 3,000 in Europe, and 1,000 in Central and South America. See page 196 for a breakdown of employees by business units.

We employ on the basis of job requirements and do not discriminate on grounds of age, ethnic or social origin, gender, sexual orientation, politics, religion, disability or any other status. We do not employ forced, bonded or child labour. We recognise the right of all employees to choose to belong to a union and seek to bargain collectively. We employ people with disabilities and make considerable efforts to offer suitable alternative employment and retraining to employees who become disabled and can no longer perform their regular duties.

Throughout 2015, we remained one of the largest private sector employers of Indigenous Australians, with over 1,500 full time Indigenous employees who represented approximately 7.3 per cent of our Australian workforce. In addition to our permanent Indigenous workforce, additional Indigenous contractors also worked on our Australian mine sites. Our local employment commitments are often managed through directly negotiated agreements with Traditional Owners.

Across our local and global teams, we grow and develop through diversity and inclusive practices. In 2015, women represented 43 per cent (female: 40; male: 53) of our graduate intake, 25 per cent (female: 3; male: 9) of the board, 18.1 per cent (female: 108; male: 490) of our senior management, and 18.5 per cent (female: 9,237; male: 40,818) [1] of our total workforce. 33.3 per cent of our graduate intake in 2015 comprised nationals from regions where we are developing new businesses. Our continued focus on graduates as a future talent pipeline has seen us exceed our target for 2015. Further information on inclusion and diversity can be found in the Corporate governance section on page 63.

To meet employees' expectations and keep them informed of Group updates, news and announcements we use a number of communication tools including myRioTinto, an employee portal dedicated to their employment needs.

(1) Gender distribution for our total workforce is based on managed operations (excludes non-managed operations and joint ventures) as of 31 December 2015. Less than one per cent of the workforce gender is undeclared.

Communities and regional development

We strive to build relationships with our host communities based on trust and mutual respect. We engage with them to understand the social, environmental and economic implications of our activities, to minimise negative impacts and bring shared value to the places where we work.

Our Communities and Social Performance (CSP) framework is the basis on which we build knowledge, engage with communities and develop programmes that reflect their priorities. We use it to identify and manage social risks, and build relationships that secure community support for our work. In 2015 we updated our CSP standard to reflect new Group commitments and changes in external CSP global performance practices and principles. The updated standard responds to the Group's material and strategic risks by focusing on achieving community approval and land access, increasing partnerships and minimising communities' incidents.

During 2015 we worked with the University of Queensland to compile an additional CSP guide. *Why agreements matter* covers practices related to community agreements, enabling sharing of best practices with others. It will be published in early 2016.

During 2015, our business contributed to approximately 1,800 socioeconomic programmes covering a wide range of activities such as health, education, environmental protection, housing, agricultural and business development. In 2015, we spent US$184 million on these community contribution programmes. There was a decrease in overall community contributions of 30 per cent compared with 2014. This result reflects a reduction in overall business unit expenditure in prevailing market conditions. This includes reduced agreement related payments arising from lower production and less land disturbance.

Having fully achieved our previous Communities target a year ahead of plan, we have now reset our target to better reflect local conditions and community needs. Starting from 2016, our new Group target requires all operations to report locally each year on how they are building economic capacity through local employment and procurement, and to capture, manage and reduce the number of community complaints.

In 2015, we worked with our US and Canadian operations to increase regional economic development by building strong relationships with local suppliers and strengthening our local community linkages. We also signed a communities agreement at our Oyu Tolgoi mine, where we work in partnership with the local Soum leadership and communities, and invest significantly in early education and youth programmes.

On 3 July 2015, Rio Tinto proudly announced its support for the Recognise campaign to recognise Aboriginal and Torres Strait Islander peoples in Australia's Constitution.

Environment

Climate change and energy

In 2008 we set a target of ten per cent reduction in total greenhouse gas (GHG) emissions intensity, to be achieved by 2015. We have exceeded this target and reduced our total GHG emissions intensity by 21.1 per cent compared with 2008. This represents a reduction in our total GHG emissions of 18.1 million tonnes of carbon dioxide equivalent (CO_2-e) over the same period. We have extended our GHG emission intensity target period to 2020. The new target is for a 24 per cent reduction in emissions intensity from our 2008 baseline.

Our climate change programme focuses on reducing the energy intensity of our operations, as well as the carbon intensity of our energy. Our total GHG emissions were 31.3 million tonnes of CO_2-e in 2015, 2.5 million tonnes lower than in 2014.

Our business is inherently energy intensive. The majority of our GHG emissions are generated as a result of energy use (electricity, fuel) and chemical processes (anodes and reductants) during mining, milling and smelting activities at our sites. The majority (67 per cent) of the electricity we use is from hydro, wind and solar power. In 2015 we commissioned a 1.7MW hybrid photovoltaic/diesel solar project to supply power to our mining operations at Weipa. This is the first time a remote operation has been supplied with power from solar photovoltaics on this scale.

Transportation, processing and use of our products also contribute significantly to GHG emissions. In 2015, the three most significant sources of indirect emissions associated with our products were:

- Approximately 5.6 million tonnes of CO_2-e associated with third party transport of our products and raw materials.
- An estimated 118 million tonnes of CO_2-e associated with customers using our coal in electricity generation and steel production.
- Approximately 509 million tonnes of CO_2-e associated with customers using our iron ore to produce steel (these emissions are not all in addition to the coal-use emissions above, as some customers use both our iron ore and our coal to produce steel).

Carbon policy and regulation have the potential to affect our businesses in the short and long term. We monitor both national and international climate and energy policy developments and participate in selected industry organisations to advocate for efficient and effective policy development.

We have had a long-term public position statement on climate change which can be found on our website. This describes how we manage carbon risks. When considering the long-term future of our business – including the economic viability of our existing ore reserves, the strategic focus of our exploration activity and the evaluation of new capital investment – we consider a range of scenarios for carbon regulation and carbon pricing. These correspond to a range of outcomes for atmospheric concentration of greenhouse gases and temperature rise. We factor the scenarios directly into the economics of capital investment decisions, including through projections of carbon prices in different jurisdictions. We also look at the long-term resilience of our business to carbon regulation. Information published both in this Annual report and our sustainable development report on our website describes this work in more detail.

Water

We use water at every stage of the business and acknowledge our role in using it responsibly. Each of our operations has its own set of water risks and opportunities: some operations are located in water-scarce environments, while others must manage intense periods of rainfall during tropical and subtropical wet seasons. A number of sites manage impacts from mine dewatering including aquifer drawdown and excess water disposal. Most sites must manage the quality of water we use and return to the environment, and all sites are experiencing some change in their local water regime due to changing weather patterns.

We take a risk-based approach in managing water, analysing the impact of our operations on local water resources and water-dependent ecosystems and the degree to which water supply and discharge capacity affect our ability to run our operations. We track and respond to risks arising from increasing stringency of environmental regulation.

The Group water target requires that by 2018, all managed operations with material water risk will have reviewed and improved their management of these material water risks, and will have achieved their approved local water performance targets.

A site is identified as having a material water risk where there is potential for a high or critical impact on the environment, production, community, compliance or reputation. Local water performance targets cover three areas: water supply, ecological impacts, and surplus water management. Each site has a target that is appropriate to its specific operational circumstances.

At the end of 2015, 60 per cent of managed operations with material water risks were on track to meet their approved local water performance targets by 2018. The remaining sites are progressing with action plans to address these targets.

We use our annual assessment of performance against the targets to focus attention and effort on those sites and businesses that need support to improve their water management performance.

Waste

Effective waste management practices are critical to protecting the environment and reducing liabilities and long-term risks. We characterise our waste, predict how it will behave over the long term, carry out monitoring and where waste is managed on site, close our facilities responsibly.

During our mining and processing operations, we generate both non-mineral and mineral waste. Non-mineral waste includes used oil, tyres, batteries and office waste, as well as more specialised waste streams such as spent pot liners from aluminium smelters.

Mineral wastes include waste rock, tailings and slag. Waste rock is composed of rock that has uneconomic mineral content and must be removed to access ore during mining. Tailings are finely ground rock that remains after the minerals of economic interest have been removed from ore. Slag is generated in smelting operations and is a glassy material that remains after metals have been separated during the smelting process.

Acid and metalliferous drainage (AMD) from reactive mineral waste is one of the most significant long-term environmental risks for the mining industry. It is created when rocks that contain naturally occurring sulphide or other reactive minerals are disturbed and exposed to air and water. To prevent or minimise potential AMD environmental impacts, we evaluate the risks and provide controls at all stages of the mining process.

We have mineral waste management and disposal programmes and regularly seek independent, external review of our site-level strategies and performance. We support responsible management of mineral waste at non-managed operations by participating in technical committees and sharing good practice.

In 2015, we disposed of or stored 1,740 million tonnes of mineral waste (predominantly waste rock and tailings) and 286,837 tonnes of non-mineral waste.

Management of tailings and water storage facilities

Rio Tinto operates tailings and large water storage facilities on 29 sites across the Group and has five facilities in closure. The assurance over these mineral waste storage facilities has long been a focus of Rio Tinto's Health, Safety, and Environment programme. In August 2015, Rio Tinto implemented an updated standard, "Management of tailings and water storage facilities", to further strengthen our management at these facilities beyond what was already required by the prior standards. The standard specifies risk control for planning and design, implementation and

operation, monitoring and inspection, and disaster management.

Rio Tinto will participate in the ICMM review of tailings dam management amongst its member companies, sharing our practices, protocols and assurance processes. The outcomes from this ICMM review are anticipated to be announced in the second quarter of 2016.

Closure

Careful planning throughout the life of our operations, and ongoing consultation with local stakeholders and regulators, will make a significant difference to closure outcomes. It minimises the social and economic impact on local communities and the surrounding region and helps identify possible post-operational use for the relevant sites. We establish closure objectives, including final land forms, well in advance of closure, and increase oversight of sites if they are nearing the end of mine life, with particular focus on sites that are less than ten years from closure.

We aim to progressively rehabilitate land as we operate at a mine site. We test and confirm rehabilitation methodologies, control dust and erosion, and meet regulatory requirements. In 2015, 26 per cent of our disturbed land (excluding land disturbed for hydroelectricity dams) had been rehabilitated.

We collaborate with and listen to our stakeholders to identify options for post-closure land uses. We have found that by working with local communities – including traditional landowners, governments, and employees – and through careful management, we can apply innovative solutions in some instances to transform sites into community assets.

Environmental regulation

Along with our own internal standards, we are subject to various environmental regulations and are required to disclose Group-level environmental incidents and fines. Further information on the Group's environmental regulation is included in the Directors' report on page 49.

Economic

Economic contributions

Our operations can have a substantial impact on the regions and countries in which we operate through our tax payments to local and national governments, the direct and indirect employment we generate and our community programmes. We are committed to ensuring our impact is sustainable long after mining operations have ceased.

We ensure that the benefits of mining flow through to host communities and governments. We do this by being transparent in the payments we make and by striving to provide local employment and procurement opportunities.

Globally, the Group's direct economic contribution was US$37 billion in 2015. This includes:

- US$19 billion in value add, made up of payments to employees, payments to governments and returns to capital.
- US$18 billion as payments to suppliers.

These figures presented here include the Group's share of joint ventures and associates.

Details of the payments to governments will be published in our *Taxes paid in 2015 report,* which will be made available on the Group's website.

Non-managed operations and joint ventures

Rio Tinto holds interests in companies and joint ventures that it does not manage, the two largest being the Escondida copper mine in Chile and the Grasberg copper-gold mine in Indonesia. We actively engage with our partners around sustainable development through formal governance structures and technical exchanges. In this way we endeavour to ensure that the principles in *The way we work* are respected at all times and encourage our partners to embed a strong safety and security culture in their workforces.

Escondida

Rio Tinto has a 30 per cent interest in Escondida, which is managed by BHP Billiton. Our seats on the Owners' Council enables us to provide regular input on strategic and policy matters. Sadly, there was one BHP Billiton Major Projects-related fatality in 2015 involving a vehicle collision. A bus transporting contractors from La Calera was involved in a crash with a truck on a main highway. The bus driver subsequently died from his injuries.

Construction of the Escondida Water Supply seawater desalination project progressed well in 2015. Initial start-up of the desalination plant is expected in late 2016, and when fully operational in 2017 it will significantly decrease the demand on groundwater from operations at Escondida.

Grasberg

PT Freeport Indonesia (PTFI), a subsidiary of Freeport-McMoRan Copper & Gold, Inc., owns and operates the Grasberg mine in Papua, Indonesia. We have a joint venture interest attributable to the 1995 mine expansion, which entitles Rio Tinto to a 40 per cent share of production above specified levels until the end of 2021 and 40 per cent of all production after 2021. We engage with PTFI through five forums: the Operating, Technical, Exploration and Sustainable Development committees and the Tailings Management board.

The largest of these, the multidisciplinary Technical Committee enables discussion of Joint venture activities such as environmental management, orebody knowledge, project execution, worker health and safety, communities, mine planning, processing and tailings management.

Rio Tinto is represented by a senior environmental manager on the PTFI Tailings Management board, which meets twice a year at Grasberg and includes third-party experts.

Tragically, there were two fatalities at PTFI in 2015: one at the surface mine involving a worker caught between a light vehicle and a building and one involving a worker entangled with a tail pulley on a conveyor belt. When requested, we support the PTFI leadership team in the investigations and in the post-investigation lesson implementation to help avoid a repeat of these accidents.

Governance

Business integrity

We operate within all relevant laws and regulations and are dedicated to open and transparent dealings with our stakeholders. Acting with integrity and being accountable for our actions are the foundations on which we do business. The choices we make every day reflect who we are and what we stand for.

The key principles that guide our behaviour are embodied in *The way we work,* which helps us live our company values of respect, integrity, teamwork and accountability. It helps us maintain the highest ethical standard of behaviour that earns the trust of others.

In 2015 we updated *The way we work* to make it clearer and to link it directly with our core values.

To ensure our integrity and compliance programme remains aligned with the risk-based approach included in our Business integrity standard, we improved our guidelines for assessing business integrity risks, making it easier for the business to consider these risks as part of their overall risk analysis framework. We regularly review and refresh our training material and methods of delivery to ensure they remain relevant to the risks that employees encounter in their jobs.

Speak-OUT, the Group's confidential and independently-operated whistleblowing programme, enables employees to report anonymously, subject to local law, any significant concerns about the business, or behaviour of individuals. This could include suspicion around safety violations, environmental procedures, human rights, financial reporting, or business integrity issues in general. We are committed to a culture of transparency and encourage employees to speak up about their issues and concerns, whether through their management, human resources, or through *Speak-OUT.*

In 2015, 600 *Speak-OUT* reports were made, representing an increase of approximately two per cent on last year. Given the reduction in overall headcount, this report volume represents an average incident rate of 10.7 per 1,000 employees (up from 9.7 in 2014). We believe this trend reflects both increased trust in the process and restructuring within the Group as a whole. Twenty eight per cent of cases raised were substantiated, resulting in corrective and preventative actions.

We issue information in a timely way on the Group's operational, financial and sustainable development performance through a number of channels, such as media releases and regulatory filings. We communicate views to governments and others on matters affecting our business interests.

Human rights

Our human rights approach is founded in *The way we work* and in our human rights policy. We respect and support human rights wherever we operate, consistent with the Universal Declaration of Human Rights. Our approach is consistent with the UN Guiding Principles on Business and Human Rights (UNGPs). In implementing our policies, we are subject to local laws and where our policies and procedures are more stringent, we operate to these standards.

Our Human rights policy, which reaffirms our commitment to respecting human rights was updated in 2015. This is supplemented by internal guidance documentation which supports our employees to implement the policy in practice.

In line with the human rights due diligence process in the UNGPs, we embed human rights across the business and integrate human rights considerations into existing corporate processes including supplier due diligence, social and environmental risk analysis, impact assessment and complaints handling. We also conduct standalone human rights studies and programmes in high-risk sites if necessary.

To avoid our involvement in human rights harm through a third party we work with business partners to manage human rights risks and to promote human rights. *The way we work* and our *Procurement principles* apply to suppliers and contractors working with Rio Tinto or on its behalf. The principles reiterate that we oppose and prohibit forced, bonded or child labour. They specify that suppliers should maintain human rights policies and have a process to assure compliance.

Web-based human rights training is available for all employees. Approximately 2,100 employees have completed online human rights training since its inception in 2013. We are refreshing our online training to help our employees identify and manage human rights risks.

Rio Tinto has made voluntary commitments to the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises, UN Global Compact and the Voluntary Principles on Security and Human Rights (VPSHR). We provide training for security personnel and conduct security and human rights analysis in support of our security arrangements. Our online VPSHR training is mandatory for all security personnel at high-risk sites and is strongly recommended for all other Rio Tinto businesses. In 2015 we conducted VPSHR and Use of Force training for security providers at five of our businesses in Mongolia, South Africa, Jamaica and Guinea.

In 2015, we completed a Group level review of the Security and Human rights framework. Overall findings indicate that the framework and its internal controls were operating effectively and providing support to achieve our business objectives.

Under our Communities standard, all sites must have a complaints, disputes and grievance mechanism in place, in line with the UNGPs' effectiveness criteria for such mechanisms. The Sustainability Committee reviews any human rights complaints received through *Speak-OUT*.

We respect the land connection of Indigenous communities and seek mutually beneficial agreement with affected communities in the development and performance of our operations. We strive to achieve the free, prior and informed consent of Indigenous communities as defined in the 2012 International Finance Corporation Performance Standard 7 and the 2013 ICMM Position Statement on Indigenous Peoples and Mining. We seek consent as defined in relevant jurisdictions, and ensure agreement-making processes are consistent with such definitions.

Assurance

We engaged an independent external assurance organisation, PricewaterhouseCoopers, to provide the directors of Rio Tinto with assurance on selected sustainable development subject matters, as explained on the next page.

PricewaterhouseCoopers' assurance statement satisfies the requirements of subject matters 1 to 4 of the ICMM assurance procedure.

Further information on external auditors and internal assurance is included in the Directors' report under the Corporate governance section on pages 60 and 66.

Independent limited assurance report

What we found

Based on the work described below, nothing has come to our attention that causes us to believe that the selected subject matter for the year ended 31 December 2015 has not been prepared, in all material respects, in accordance with the Reporting criteria.

To the directors of Rio Tinto plc and Rio Tinto Limited (together Rio Tinto),

What we did

Rio Tinto engaged us to perform a limited assurance engagement on the selected subject matter within the Sustainable development sections of the Rio Tinto 2015 Annual report and the Rio Tinto 2015 Strategic report for the year ended 31 December 2015.

Selected subject matter

- Rio Tinto's assertion that it has incorporated the requirements of the 10 sustainable development principles of the International Council on Mining and Metals (ICMM) and the mandatory requirements set out in ICMM Position Statements into its own policies, strategies and standards
- Rio Tinto's assertions regarding the approach that it has adopted to identify and prioritise its material sustainable development risks and opportunities
- Rio Tinto's assertions regarding the existence and status of implementation of systems and approaches used to manage the following selected sustainable development risk areas:
  - Safety
  - Greenhouse gas emissions
  - Energy use
  - Water management
- The following Rio Tinto performance data related to the selected sustainable development risk areas:
  - Number of fatalities
  - All injury frequency rate
  - Lost time injury frequency rate
  - Number of lost time injuries
  - Total greenhouse gas emissions
  - Greenhouse gas emissions intensity
  - Total energy use
  - Percentage of managed operations with material water risk that are on track to achieving their approved local water performance targets

Reporting criteria

The subject matter above has been assessed against the definitions and approaches which will be presented at: **riotinto.com/sd2015** as at 3 March 2016.

Independence and Quality Control

We have complied with relevant independence requirements and other ethical requirements of the *Code for Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

PricewaterhouseCoopers applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Responsibilities

PricewaterhouseCoopers

Our responsibility is to express a conclusion based on the work we performed.

Rio Tinto

Rio Tinto management is responsible for the preparation and presentation of the selected subject matter in accordance with the Reporting criteria.

What our work involved

We conducted our work in accordance with the International Standard on Assurance Engagements 3000 (Revised) *Assurance Engagements Other than Audits or Reviews of Historical Financial Information* and (for selected subject matter relating to greenhouse gas emissions) the International Standard on Assurance Engagements 3410 *Assurance Engagements on Greenhouse Gas Statements.* These Standards require that we comply with independence and ethical requirements and plan the engagement so that it will be performed effectively.

Main procedures performed

- Making enquiries of relevant management of Rio Tinto regarding the processes and controls for capturing, collating and reporting the performance data within the selected subject matter, and evaluating the design and effectiveness of these processes and controls
- Validating the operation of controls over the accuracy of injury classification and assessing the final injury classification applied for a sample of injuries reported during the year ended 31 December 2015
- Testing the arithmetic accuracy of a sample of calculations of performance data within the selected subject matter
- Assessing the appropriateness of the greenhouse gas emission factors applied in calculating the Total greenhouse gas emissions and Greenhouse gas emissions intensity
- Testing performance data, on a selective basis, substantively at both an operational and corporate level, which included testing at a selection of operations from across Aluminium, Energy, Iron Ore, Copper & Coal, and Diamonds & Minerals
- Undertaking analytical procedures over the performance data within the selected subject matter
- Reviewing a sample of relevant management information and documentation supporting assertions made in the selected subject matter

We believe that the information we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Liza Maimone
Partner

PricewaterhouseCoopers
Canberra

2 March 2016

Liability limited by a scheme approved under Professional Standards Legislation

Inherent limitations

Inherent limitations exist in all assurance engagements due to the selective testing of the information being examined. Therefore fraud, error or non-compliance may occur and not be detected. Additionally, non-financial data may be subject to more inherent limitations than financial data, given both its nature and the methods used for determining, calculating and sampling or estimating such data.

Restriction on use

This report has been prepared in accordance with our engagement terms to assist Rio Tinto in reporting its sustainable development performance. We do not accept or assume responsibility for the consequences of any reliance on this report for any other purpose or to any other person or organisation. Any reliance on this report by any third party is entirely at its own risk.

We consent to the inclusion of this report in the Rio Tinto 2015 Annual report and the Rio Tinto 2015 Strategic report to assist Rio Tinto's members in assessing whether the directors have discharged their responsibilities by commissioning an independent assurance report in connection with the selected subject matter.

Limited assurance

This engagement is aimed at obtaining limited assurance for our conclusions. As a limited assurance engagement is restricted primarily to enquiries and analytical procedures and the work is substantially less detailed than that undertaken for a reasonable assurance engagement, the level of assurance is lower than would be obtained in a reasonable assurance engagement.

Capital allocation

Rio Tinto has a programme of high-quality projects delivering industry-leading returns across a broad range of commodities. The Group is taking further pre-emptive action to protect shareholder value given market uncertainty. The current status of all capital projects is under review, with timing and total expenditure expected to be revised. In 2015, Rio Tinto funded its capital expenditure with net cash generated from operating activities and aims to continue funding its capital programme from internal sources, except for the proposed Oyu Tolgoi underground mine development for which there is a separate project financing arrangement.

Major capital projects (>US$1bn)

(Rio Tinto 100% owned unless otherwise stated)	Total approved capital cost (100%)	Approved capital remaining to be spent from 1 January 2016	Status/milestones
In production			
Iron ore – expansion of the Pilbara port, rail and power supply capacity to 360 Mt/a. Rio Tinto's share of total approved capex is US$3.5bn.	US$5.9bn	US$0.4bn	The phase two expansion to 360 Mt/a includes investment in the port, rail and power supply and an investment in autonomous trains.
Iron ore – investment to extend the life of the Yandicoogina mine in the Pilbara to 2021 and expand its nameplate capacity from 52 Mt/a to 56 Mt/a.	US$1.7bn	–	Approved in June 2012, first production from the wet plant took place in March 2015 and from the dry plant in April 2015. The project was completed in July 2015. The wet processing plant is expected to maintain product specification levels.
Aluminium – expansion and modernisation of Kitimat smelter in British Columbia, Canada, to increase annual capacity from 280kt to 420kt.	US$4.8bn	US$0.1bn	First production took place at the end of the first half of 2015 with full capacity expected to be reached in early 2016.
Copper – development of Organic Growth Project 1 (OGP1) a new 152kt per day capacity concentrator at Escondida (Rio Tinto 30%), Chile.	US$1.3bn (Rio Tinto share)	<US$0.1bn (Rio Tinto share)	Approved in February 2012, OGP1 achieved mechanical completion in the second quarter of 2015. The ramp-up is progressing ahead of plan and is expected to reach full capacity during 2016. The remaining spend is related to commissioning.
Ongoing and approved			
Copper – Construction of a desalination facility to ensure continued water supply and sustain operations at Escondida (Rio Tinto 30%), Chile.	US$1.0bn (Rio Tinto share)	US$0.3bn (Rio Tinto share)	Approved in July 2013, the project is designed to provide a long-term sustainable supply of water for the operations. It remains on schedule and on budget and is 76 per cent complete, with commissioning scheduled in 2017.
Aluminium – Investment in the Amrun bauxite mine on the Cape York Peninsula in north Queensland with a planned initial output of 22.8 million tonnes a year [(a)].	US$1.9bn	$1.9bn	Approved in December 2015, output includes an expected 10 million tonne increase in annual exports with production commencing in the first half of 2019.

(a) Refer to the statements related to this production target on page 32.

Acquisitions and divestments

There were no material divestments completed during 2015.

Asset	Consideration US$m	Status
Divested in 2014		
Clermont Joint Venture	1,015 [a]	Sold to GS Coal Pty Ltd.
Rio Tinto Coal Mozambique	50 [a]	Sold to International Coal Ventures Private Limited.
Søral	Undisclosed	Sold to Norsk Hydro.
Alucam	Undisclosed	Sold to the Government of Cameroon.
Divested in 2013		
Northparkes mine	820	Sold to China Molybdenum Co. Ltd.
Constellium	671	Shares sold to general public.
Palabora Mining Company Limited	373	Sold to a consortium led by Industrial Development Corporation of South Africa and Hebei Iron & Steel Group.
Eagle nickel – copper project	315	Sold to Lundin Mining Corporation.
Altynalmas Gold	235	Sold to Sumeru Gold B.V.
Inova Resources Limited	81	Sold to Shanxi Donghui Coal Coking & Chemicals Group Co.
Sebree	48	Sold to Century Aluminum Co.

(a) Before working capital and completion adjustments.

There were no material acquisitions in 2015, 2014 or 2013.

Further information on acquisitions and divestments is included in note 37 to the financial statements on page 164.

Aluminium

Financial performance

	2015 US$ million	2014 US$ million
Revenue	**10,117**	12,123
Net cash generated from operating activities	**2,413**	2,550
Underlying earnings	**1,118**	1,248
Capital expenditure	**1,682**	2,021
Net operating assets	**15,949**	18,297
EBITDA	**2,742**	2,930

Strategy and strategic priorities

Rio Tinto's Aluminium product group continues to focus on delivering industry-leading performance through the cycle. The product group has a sector-leading bauxite position, large-scale alumina refineries and a first-quartile smelter portfolio. Each of the three areas of the business – bauxite, alumina and primary metal – has its own targets and strategies, summarised below:

- In bauxite, capturing value from the expanding seaborne demand. This involves continuing to enhance performance and output at current operations while developing Tier 1 opportunities. The approval of the Amrun project was an important step in the execution of this strategy.
- In alumina, providing security of supply to the group's smelter portfolio. The focus is on aggressively driving down costs to improve the refineries' position on the industry cost curve, especially in the current challenging price environment.
- In primary metal, leveraging the group's sustainable low-cost power competitive advantage in smelting and aggressively pursuing productivity and cost reduction opportunities to further reduce its cost position and generate increased cash flow.
- Across the Aluminium group's operations, aggressive cost and productivity improvement initiatives aimed at further driving out costs, generating incremental cash and reducing working capital requirements.

The three product areas are supported by a single global commercial organisation that focuses on maximising value from mine to market, while providing customers with higher-margin, value-added products and services.

(a) Life cycle analysis approach takes into account the entire production process, electricity generation, and the product's use and end-of-life.

(b) Rio Tinto internal analysis which includes adjustments to externally reported EBITDA margins, trading, procurement and marine revenues to report performance on a comparable basis. Analysis excludes the Gove alumina refinery. Competitors included in the analysis are Rusal, Hydro, Alcoa and Chalco.

Safety

In 2015, Aluminium achieved a fatality-free year. The product group's all injury frequency rate continued its steady downward trend, ending the year at 0.48 compared with the 0.53 rate recorded at the end of 2014. The group is committed to achieving a zero harm workplace. It aims to improve its overall safety performance further with a systems-based approach, which includes critical risk management and human performance initiatives, and a strong emphasis on process safety.

Greenhouse gas emissions

Rio Tinto's Aluminium group has one of the lowest carbon footprints in the aluminium industry. Since 2008, the group has reduced greenhouse gas emissions intensity by 31 per cent. Almost 80 per cent of its total power needs are supplied by low-carbon sources, with 55 per cent coming from self-generated hydropower. This compares with a global industry average for non fossil fuel-based power of approximately 35 per cent.

As a result, the carbon footprint from the group's smelters is around half the industry average, with less than six tonnes of carbon dioxide (CO_2) equivalent per tonne of aluminium compared with an industry average of around 11 tonnes on a life cycle analysis approach[(a)]. Furthermore, ten of the group's sites are able to produce metal with a carbon footprint of around two tonnes of CO_2 equivalent per tonne of aluminium.

On top of the direct environmental benefits, this positions Rio Tinto to address increasing market demand for responsible metal produced with a low CO_2 footprint.

Review of operations

The group's position as a sector-leading business is demonstrated in its financial performance in 2015. The Aluminium group achieved underlying earnings of US$1,118 million (2014: US$1,248 million). Key to this result was the strong delivery of ongoing cash cost savings, which partially offset the 14 per cent reduction in realised pricing as market conditions deteriorated through the year. Cash cost improvements of US$326 million (pre-tax) were delivered, and further entrenched the group's integrated industry-leading EBITDA margin[(b)].

The resilience of the group's underlying EBITDA, combined with further reductions in working capital levels, resulted in net cash generated from operating activities of US$2,413 million, a decline of only five per cent year-on-year.

(c) This production target was disclosed in a release to the market on 27 November 2015. All material assumptions underpinning that target continue to apply and have not materially changed. See pages 217 and 221 for details on Weipa ore reserves and mineral resources.

The solid financial results reflected many ongoing initiatives to reduce costs through production and procurement efficiencies, and by reducing support costs. This was supplemented by the impact of the weaker Australian and Canadian dollars. In addition, productivity improvement initiatives enabled higher production levels across each of the bauxite, alumina and primary metal segments, helping to reduce unit costs further.

The average London Metal Exchange price for aluminium was US$1,661 per tonne in 2015, which compares with an average of US$1,867 per tonne in 2014. Rio Tinto's average realised price for primary metal products – including regional and product premia – was US$2,058 per tonne in 2015, compared with US$2,395 per tonne in 2014.

In 2015, record bauxite production was achieved at the Weipa mine in Australia. Global Rio Tinto bauxite production was four per cent higher in 2015 compared with 2014, while third-party exports were 14 per cent higher this year.

Alumina production increased by four per cent in 2015, reflecting continued consistent performances across Rio Tinto's refineries. Following operational and design improvements, the Yarwun refinery in Queensland, Australia achieved record annual production in 2015.

Rio Tinto's share of aluminium production for 2015 totalled 3.3 million tonnes, which was broadly in line with 2014. Nine sites achieved record annual production. The modernised and expanded Kitimat smelter, commissioned in the first half of 2015, is ramping up towards nameplate capacity of 420 thousand tonnes that is expected to be achieved in the first half of 2016.

In 2015, Rio Tinto divested two of its ancillary businesses, ECL and Alesa, and received a binding offer for Carbone Savoie.

Development projects

The Aluminium group's development pipeline focuses on its competitive advantages in energy and bauxite.

In November 2015, the Rio Tinto board approved the development of the Amrun bauxite project, south of the Embley River on Cape York, Queensland, in Australia. With mining costs projected to be in the first quartile of the industry cost curve and industry-leading returns, Amrun is a an exceptional project – long life, low cost and expandable – strategically placed to satisfy increasing demand for seaborne bauxite in China and the Middle East as well as the Aluminium group's own refineries in Australia. With an approved capital cost of US$1.9 billion, the project includes mine, port and infrastructure elements, with a planned initial output of 22.8 Mt/a beginning in 2019[(c)]. The project will partly replace the depleting East Weipa mine with lower cost production while also delivering additional volumes of around 10 Mt/a in the future. The majority of the capital expenditure is scheduled for 2017 and 2018.

The Kitimat Modernisation Project, which uses the Aluminium group's wholly-owned Kemano hydropower resource and high-efficiency AP smelting technology, increases production capacity at the smelter by more than 48 per cent, while reducing overall environmental emissions by nearly 50 per cent. Energy efficiency also increased by 33 per cent and workforce productivity by some 60 per cent. Once at full capacity, Kitimat will be one of the lowest-cost smelters in the world, strategically located to supply "responsible" metal to key markets in North America and Asia – namely Japan and South Korea.

Outlook

The long-term demand outlook for aluminium is robust. The consensus view foresees a strong and steady increase in demand, averaging four per cent per year. This translates into additional consumption of around 24 million tonnes by 2025, compared with a 2014 base of 57 million tonnes.

This outlook is driven mainly by rising utilisation intensity and more diverse end-use applications. In the automotive sector for example, manufacturers are planning to use significantly more aluminium in the future to make lighter vehicles that consume less fuel and produce fewer emissions.

Developing economies, where current consumption is low, also provide solid growth potential for aluminium. In India, consumption is less than two kilograms of aluminium per capita compared with 20 kilograms in more developed economies.

Despite this positive long-term view, 2015 was a very difficult time for the aluminium industry, with London Metal Exchange (LME) prices retreating to levels seen during the global financial crisis and physical delivery premia falling significantly from their elevated levels earlier in the year.

Looking forward, many suppliers are expected to remain under pressure both inside and outside China, with demand continuing its positive trend. This should help inventories move to a more balanced level over the next few years.

Prospects for bauxite – a sector where Rio Tinto maintains an unrivalled position – are positive. The projected growth rate, driven mostly by seaborne bauxite traded into the China market, is outpacing that of aluminium.

In 2015, Rio Tinto supplied 19 million tonnes of bauxite to China, making it the largest single seaborne bauxite supplier in the world – a position the Group aims to develop further.

Copper & Coal

Financial performance

	2015 US$ million	2014 US$ million
Revenue	**7,705**	9,957
Net cash generated from operating activities [a]	**1,775**	2,064
Underlying earnings	**274**	831
Capital expenditure [b]	**786**	1,177
Net operating assets	**12,832**	13,706
EBITDA	**1,968**	2,682

(a) Excludes operating cash flows from equity accounted units (EAUs) (mainly Escondida) but includes dividends from EAUs.

(b) Excluding EAUs.

Strategy and strategic priorities

The Copper & Coal product group was formed in late February 2015, following an organisational restructure. In 2015, the product group delivered safety improvements across its operations, improved the productivity of its existing assets, reduced costs and drove increased operating efficiency. During the year, Copper & Coal also made selective investments and divestments to deliver longer-term growth and maximise value.

The Copper & Coal product group's strategy is to deliver sustainable value by:

- driving continuous improvements in safety;
- maximising value from existing operations;
- developing brownfield growth options and new, world-class greenfield projects in low-risk jurisdictions;
- focusing on cost control, productivity gains and cash generation, to earn the right to grow; and
- developing strong leaders and an aligned, capable, engaged and collaborative workforce.

Safety

In 2015, Copper & Coal delivered a step change in safety, with an all injury frequency rate of 0.44, compared with 0.61 in 2014[a]. Kennecott's Concentrator, Tailings and Water Services teams were recently recognised with the US National Mining Association's "Sentinels of Safety" Award for outstanding performance, after achieving more than 662,000 hours during the year without an injury. Rio Tinto Coal Australia achieved a significant improvement in safety performance in 2015, ending the year with the lowest all injury frequency rate in its history.

Sadly in February 2015, there was a fatality at the Zululand Anthracite Colliery (ZAC), a managed operation in South Africa, when a vehicle rolled over, and the driver was killed. Since that time, a comprehensive programme of safety enhancements, supported by experts from across Copper & Coal, has improved ZAC's safety systems and culture.

As part of a Group-wide critical risk management programme aimed at identifying and mitigating the common dangers that can lead to fatalities, leaders in Copper & Coal completed more than 112,000 critical control verifications in 2015. Eleven per cent of these resulted in mitigation of a potentially fatal risk. Having started in the copper business, the programme is now being implemented across the group's coal assets, beginning in August 2015 with the Hail Creek Mine and Kestrel Mine operations.

Greenhouse gas emissions

The Copper & Coal group's 2015 greenhouse gas (GHG) emissions were 8.54 tonnes of carbon dioxide equivalent per tonne of copper cathode produced, compared with 8.57 tonnes in 2014. The marginal increase in efficiency resulted from better ore grades. Rio Tinto Coal Australia's (RTCA) emissions intensity increased slightly to 0.057 tonnes of carbon dioxide equivalent per tonne of coal produced, compared with 0.056 tonnes in 2014. Copper concentrate emissions intensity significantly improved to 1.8 tonnes of carbon dioxide equivalent per tonne of copper concentrate produced, compared with 2.4 tonnes in 2014. The improvement is due in part to the Oyu Tolgoi operation, where its percentage increase in copper concentrate production significantly outweighed its increase in GHG emissions.

Review of operations

Following the rationalisation of its portfolio, the integrated Copper & Coal group had four copper assets and six coal assets in production at the end of 2015.

In 2015, total mined copper decreased by 16 per cent, while total coal production increased by three per cent[b]. The product group produced 504 thousand tonnes of mined copper (Rio Tinto share), 22.3 million tonnes of semi-soft and thermal coal (Rio Tinto share) and 7.9 million tonnes of metallurgical coal (Rio Tinto share). Copper & Coal also produced 376 thousand ounces of mined gold, 3,311 thousand ounces of mined silver and 7.6 thousand tonnes of molybdenum as by-products. Rio Tinto was the world's seventh largest copper supplier based on 2015 mine production.

The Copper & Coal group's underlying earnings of US$274 million were 67 per cent lower than 2014, driven by lower commodity prices and partially offset by movements in exchange rates and cost reductions. The group has generated sustainable cost reductions of nearly US$2.0 billion since 2012. In 2015, the Copper & Coal group collectively reduced working capital by US$195 million.

In September 2015, Rio Tinto and Mitsubishi Development agreed to a change in the ownership structure of Coal & Allied. Under this agreement Rio Tinto agreed to assume 100 per cent ownership of Coal & Allied and Mitsubishi Development agreed to move from holding a 20 per cent stake in Coal & Allied to holding a direct 32 per cent stake in the Hunter Valley Operations mine. The restructure completed on 3 February 2016.

As part of ongoing work to rationalise its assets and focus on those with suitable scale, in September 2015, Rio Tinto also agreed to a sale of its 40 per cent interest (on completion of the restructure referred to above) in the Bengalla Joint Venture to New Hope Corporation. This transaction completed on 1 March 2016 and Rio Tinto received consideration of US$617 million.

In January 2016, Rio Tinto signed an agreement for the sale of its Mount Pleasant thermal coal assets to MACH Energy Australia Pty Ltd for US$224 million plus royalties. This sale is expected to close in 2016.

In February 2016, Rio Tinto signed an agreement to sell its 74 per cent interest in Zululand Anthracite Colliery (ZAC). This sale is expected to close in 2016. ZAC is an anthracite coal mine in South Africa. Rio Tinto's share of 2015 thermal coal production from ZAC was 415 thousand tonnes.

Operating assets

Copper

Rio Tinto Kennecott
(Rio Tinto: 100 per cent)

Kennecott supplies approximately seven per cent of US refined copper requirements. In 2015, Kennecott produced 115 thousand tonnes of refined copper, 179 thousand ounces of refined gold, and 7.6 thousand tonnes of molybdenum.

Production in 2015 was impacted by ongoing recovery from the 130 million-tonne landslide on the north east wall of the Bingham Canyon Mine that occurred in April 2013. The operation continued work to stabilise the east wall in 2015, and expects volumes to recover as this work is completed in 2016 and 2017. Kennecott maximised smelter utilisation by receiving 414 thousand tonnes of third-party concentrate for processing in 2015.

Oyu Tolgoi
(Rio Tinto: 50.8 per cent interest in Turquoise Hill Resources)

Located in Mongolia's South Gobi Desert, Oyu Tolgoi is one of the world's largest copper-gold development projects. Oyu Tolgoi's open-pit mine is now fully operational and, in 2015, it produced 202 thousand tonnes of copper and 653 thousand ounces of mined gold (100 per cent basis). In September 2015, the operation delivered its 1.5 millionth tonne of concentrate.

(a) Excludes Rio Tinto Coal Mozambique, the sale of which completed in October 2014

(b) Year-on-year comparison excludes production from Clermont mine, which was divested during 2014.

Escondida
(Rio Tinto: 30 per cent interest)
Located in Chile's Atacama Desert, Escondida is the world's largest copper-producing mine. In 2015, Escondida produced 1,148.8 thousand tonnes of mined copper (100 per cent basis). Production in 2015 was comparable with 2014, as higher throughput and recoveries from leaching more than offset lower grades.

Grasberg
Through a joint venture with Freeport-McMoRan Inc. (Freeport), Rio Tinto is entitled to 40 per cent of material mined above an agreed threshold as a consequence of expansions and developments of the Grasberg facilities in Indonesia since 1998. Production in 2015 did not exceed the metal attributable to Rio Tinto and, accordingly, Rio Tinto's share of joint venture production was zero.

Rio Tinto expects to receive a metal share in 2016, which is included in its 2016 production guidance[c].

Coal

Rio Tinto Coal Australia
(Rio Tinto: 100 per cent)
In Queensland, RTCA manages the Hail Creek (Rio Tinto: 82 per cent) and Kestrel (Rio Tinto: 80 per cent) coal mines. In New South Wales, RTCA manages Coal & Allied's coal mines which include, as of 31 December 2015, Hunter Valley Operations (Rio Tinto: 80 per cent), Mount Thorley (Rio Tinto: 64 per cent) and Warkworth (Rio Tinto: 44.5 per cent) and Bengalla (Rio Tinto: 32 per cent).

RTCA saw improved coal production rates in 2015 as a result of the longwall ramp-up at Kestrel, increased semi-soft production at Hunter Valley and higher thermal coal production at Hail Creek.

For the full year, these operations produced 22.3 million tonnes of semi-soft and thermal coal (Rio Tinto share), and 7.9 million tonnes of metallurgical coal (Rio Tinto share), an 11 per cent increase from 2014. Despite ongoing price challenges, all RTCA mines remained cash flow positive in 2015 with a minimal working capital balance, as well as implementing a programme of cost and productivity improvements.

RTCA declared a significant increase in its managed resources and reserves in Queensland and New South Wales, Australia, most notably at Hail Creek and Hunter Valley Operations. Run of mine (ROM) reserves increased from 2,106 million to 2,504 million tonnes. Total mineral resources, exclusive of ROM reserves increased from 5,429 million to 6,804 million tonnes.

Development projects

Productivity and mine life extension

Rio Tinto Kennecott
Kennecott is at the early stages of its South Pushback project, which is expected to extend the life of Bingham Canyon by accessing additional copper units from approximately 510 million tonnes of ore reserves[d].

Grasberg
Work to develop the large-scale, high-grade underground orebodies located beneath and nearby the Grasberg open pit continues. The underground orebodies are expected to ramp up over several years to approximately 240,000 tonnes of ore per day following the anticipated transition from the Grasberg open pit in early 2018.

Oyu Tolgoi
In May 2015, Rio Tinto signed an agreement with the Government of Mongolia to enable development of Oyu Tolgoi's underground mine to move forward. In December 2015, Oyu Tolgoi signed a US$4.4 billion agreement to finance the project. Oyu Tolgoi is working to complete permitting and seek final project approvals from the boards of Rio Tinto, Turquoise Hill Resources and Oyu Tolgoi LLC.

Mount Thorley Warkworth
In November 2015, after more than six years planning the Mount Thorley Warkworth Mine received approval from the NSW Planning Assessment Commission (PAC) to continue to mine. This consent supports an additional 21 years of operation, providing certainty for the mine's 1,300 employees and community stakeholders for the operation's future. A challenge to the consent was filed by the Bulga Milbrodale Progress Association Inc on 26 February 2016 and will be defended by RTCA.

Greenfield projects

La Granja
(Rio Tinto: 100 per cent)
Located in northern Peru, the La Granja project is one of the world's largest undeveloped copper resources. In 2015, the Government of Peru granted an eight-year extension of the Transfer Agreement that allows Rio Tinto to continue to study and explore the La Granja resource.

Resolution Copper
(Rio Tinto: 55 per cent)
The Resolution Copper project, located in Arizona, US, is one of the world's largest undeveloped copper deposits. Drilling, underground development and engineering studies continue and the company expects a comprehensive environmental review required by National Environmental Policy Act (NEPA) to begin in 2016.

Innovation

The Copper & Coal group is testing and evaluating technologies to drive safety, sustainability and productivity at its current mines and expansions. The innovation portfolio is being prioritised to ensure that the best projects are being pursued, and that there is a balance between short and long-term initiatives.

In copper, innovation efforts focus on four key areas – primary sulphide leaching, large-scale underground mining, energy and water efficiency, and the application of automation and information technologies.

In coal, the product group is implementing projects to increase coal production and better tailor its products to meet customer specifications using existing infrastructure. These include an integrated operations centre in the Hunter Valley that opened in March 2015 and greater coal recovery through improving wash plant performance.

Outlook

Copper

Rio Tinto continues to expect near-term volatility in the copper market before a supply gap begins to emerge towards the latter part of this decade. While near-term demand has slowed, Rio Tinto expects China to continue to be a key driver of commodity markets in the next decade, after which demand from emerging markets including India, South East Asia, Middle East, Latin America and Africa will make a growing contribution to overall demand. Green technologies are also expected to further support demand into the medium term while the market is also likely to see pressure from potential substitute materials in some segments.

Coal

In 2015, thermal and metallurgical coal prices have continued along the declining trend they followed through most of the previous year. Global seaborne coal trade is reducing in response to lower pricing and strong domestic production growth in India. In both thermal and metallurgical coal, the influence of lower Chinese demand has resulted in reduced net import levels. Rio Tinto expects the difficult price environment for coal to continue in the medium term.

(c) See sales guidance in Freeport McMoran's fourth quarter 2015 earnings conference call presentation, dated 26 January, and Rio Tinto's Chartbook (available on riotinto.com) for current guidance on metal strip thresholds.

(d) This is only a portion of Rio Tinto Kennecott's current ore reserves. See Ore reserves section of this report for Rio Tinto Kennecott's ore reserves including breakout of all metals and classifications.

Diamonds & Minerals

Financial performance

	2015 US$ million	2014 US$ million
Revenue	**3,674**	4,783
Net cash generated from operating activities	**1,010**	1,184
Underlying earnings	**189**	269
Underlying earnings excluding Simandou	**230**	324
Capital expenditure	**446**	562
Net operating assets	**5,189**	7,977
EBITDA	**833**	1,045

Strategy and strategic priorities

The Diamonds & Minerals product group has an attractive portfolio of businesses that connect customers and consumers all around the world with products that enhance their quality of life. Demand growth for diamonds and industrial minerals typically comes mid-to-late in the economic development cycle, following peak requirements for commodities such as iron ore and copper.

The product group's strategy is focused on operating low-cost, demand-led businesses. Through its integrated marketing strategies and insight, the product group creates and grows global markets for its products to deliver value for Rio Tinto and its shareholders.

The product group's strategy is focused on:

- Operating demand-led, integrated operations that can respond quickly to the changing external environment.
- Creating and growing global markets through technical research and development and market insight.
- Improving operating performance by reducing costs, driving productivity and streamlining the organisation.
- Strengthening its position in traditional segments and entering attractive new markets.

Safety

In its pursuit of zero harm, the Diamonds & Minerals product group continues to focus on fostering a culture of accountability and awareness among employees and improving contractor safety. The product group's all injury frequency rate (AIFR) fell to 0.42 in 2015 from 0.53 in 2014. However despite this improvement, there were three fatalities in the product group during the year: at QIT Madagascar Minerals (QMM), at Rio Tinto Fer et Titane (RTFT) and at the Simandou project in Guinea. The group is redoubling its efforts to eliminate fatalities by placing an emphasis on critical controls and robust process safety, including rolling out a critical risk management programme across the business.

With a workforce spanning multiple geographies, languages and cultures, the group faces unique health and safety challenges. Managers use innovative strategies and visible safety leadership to address these and to train the workforce.

The Ebola outbreak in Guinea, which the World Health Organization has now declared ended, was a critical issue for the product group during the year. The priority for Diamonds & Minerals has been to ensure the health and safety of employees, contractors and their families while supporting the wider response to this epidemic.

Greenhouse gas emissions

Overall greenhouse gas (GHG) emissions intensity across the product group improved slightly in 2015 compared with 2014. Emissions intensity for Rio Tinto Iron & Titanium and Rio Tinto Diamonds improved compared with 2014, while GHG emissions per tonne of product were marginally higher at Rio Tinto Minerals. The product group continues to invest in the implementation of more efficient equipment and technology, such as the wind farm at Diavik.

Review of operations

The Diamonds & Minerals product group's underlying earnings of US$189 million were 30 per cent lower than 2014. This reflected lower sales prices and reduced volumes in response to soft market conditions, partly offset by weaker exchange rates. In absolute terms, cash operating costs were US$832 million lower than 2014 (including a US$342 million benefit from exchange rate movements), although the earnings impact was partly offset by the unit cost impact of lower production. Net cash generated from operating activities of US$1,010 million was 15 per cent lower than in 2014, due to lower prices and sales volumes, partly mitigated by further reductions in working capital. Capital expenditure of US$446 million was 21 per cent lower than in 2014.

Rio Tinto Diamonds (RTD)

RTD is a leading producer of rough diamonds, with a product portfolio that provides a presence in all major markets and market segments. Rio Tinto's diamonds assets comprise the Argyle Diamond Mine in Australia (Rio Tinto: 100 per cent), the Diavik Diamond Mine in Canada (Rio Tinto: 60 per cent) and the Bunder diamond project in India (Rio Tinto: 100 per cent). During 2015, Rio Tinto sold its 78 per cent interest in Murowa Diamonds in Zimbabwe. RTD markets its share of rough diamond production through a centralised sales and marketing office.

It also has a high-end branded business based in Perth, Australia, which polishes, markets and sells its very rare Argyle pink diamonds.

RTD produced 17.4 million carats of rough diamonds in 2015, 25 per cent higher than 2014. At Argyle, the ramp-up of production from the underground mine delivered a 47 per cent increase in carats produced compared with 2014. At Diavik, carats recovered were 11 per cent lower than in 2014, attributable to processing plant pauses in the fourth quarter and the absence of stockpiled ore processed in 2014. Both Diavik and Argyle now operate as fully underground mines.

Revenue in 2015 was 23 per cent lower than in 2014, reflecting the impact of lower prices and the disposal of Murowa, partially offset by higher sales volumes from Argyle. At US$79 million, 2015 earnings were US$25 million lower than in 2014.

Rio Tinto Iron & Titanium (RTIT)

RTIT is the world's largest producer of high-grade titanium dioxide feedstocks. It mines ilmenite at its wholly-owned RTFT operation in Canada, its managed operation Richards Bay Minerals (RBM) in South Africa (Rio Tinto: 74 per cent), and its QMM operation in Madagascar (Rio Tinto: 80 per cent). RTIT produces high-grade titanium dioxide feedstocks at its world-class metallurgical complexes at RTFT and RBM as well as valuable co-products including high purity iron, steel, metal powders and zircon.

Titanium dioxide slag production was 25 per cent lower in 2015 than in 2014 at 1.1 million tonnes as RTIT continues to optimise production to reflect weaker demand. Two of nine furnaces at RTFT and one of four furnaces at RBM are currently idled, reflecting lower demand for high-grade feedstocks. RTIT's revenues fell by 28 per cent due to lower sales volumes and lower prices for titanium dioxide feedstocks, metallic products and zircon. Earnings fell by 53 per cent to US$116 million.

Rio Tinto Minerals (RTM)

RTM (Rio Tinto: 100 per cent) supplies over 30 per cent of the world's refined borates from its world-class deposit in Boron, California. RTM also has borates refineries and/or shipping facilities in China, France, Malaysia, the Netherlands, Spain and the US together with the Jadar lithium-borate project (Rio Tinto: 100 per cent) in Serbia.

Borates production of 476,000 tonnes boric oxide equivalent was six per cent lower than in 2014, driven primarily by lower market demand. Revenue was eight per cent lower than in 2014, and earnings of US$103 million were 15 per cent lower. During the year, Rio Tinto Minerals successfully commissioned the modified direct dissolving of kernite (MDDK) facility, which allows for more efficient orebody utilisation.

Dampier Salt (DSL)

DSL (Rio Tinto: 68 per cent), the world's largest solar salt exporter, produces industrial salt by solar evaporation of seawater at Dampier and Port Hedland, and from underground brine at Lake MacLeod, all in Western Australia. Salt is sold principally to base chemical industry markets in Asia.

Salt production of 5.5 million tonnes (Rio Tinto share) was 18 per cent lower than 2014 as a result of weaker demand. Earnings increased 33 per cent to US$24 million.

Uranium

The Uranium business comprises Energy Resources of Australia Ltd (ERA, Rio Tinto: 68.4 per cent), which operates the Ranger Mine in the Northern Territory of Australia and Rössing Uranium Limited (Rio Tinto: 68.6 per cent) in Namibia, together with the Roughrider project (Rio Tinto: 100 per cent) in Canada's Athabasca Basin. The Uranium business became part of the Diamonds & Minerals product group during 2015.

Uranium production of five million pounds (Rio Tinto share) was 20 per cent higher than in 2014, with lower grades and recoveries more than offset by a full year of production at ERA. ERA continues to process existing stockpiles. Revenues fell 25 per cent due to lower sales volumes, however losses of US$42 million were 64 per cent lower than in 2014, including the effect of cash cost savings and favourable exchange rates.

On 11 June 2015, Rio Tinto announced that it supported ERA's decision not to proceed with the Final Feasibility Study of the Ranger 3 Deeps project. Rio Tinto also determined that it did not support any further study or the future development of Ranger 3 Deeps due to the project's economic challenges. The group recognised an impairment charge of US$262 million (net of non-controlling interests and tax) relating to its shareholding in ERA at the half year.

Development projects

The development of the A21 kimberlite pipe at Diavik is advancing as planned and will provide an important source of incremental production to maintain current volumes up to the end of mine life. A21 is estimated to cost US$350 million (Rio Tinto share US$210 million), with first production expected in 2018.

Work continued on the feasibility study for the Zulti South mine expansion at RBM, which will maintain low-cost RBM smelting capacity. The mineral sands exploration programme in Mozambique and other brownfield studies at the group's operations also continued throughout the year.

The Simandou iron ore project in Guinea is one of the largest-known undeveloped high-grade iron ore orebodies in the world. On 26 May 2014, Rio Tinto and its Simandou project partners signed an Investment Framework with the Government of Guinea which provided the legal and commercial foundation for the project and formally separated the infrastructure and mine development plan. The Simandou project partners are currently finalising an integrated Bankable Feasibility Study (BFS) for the mine, port and infrastructure elements of the project, which is scheduled to be submitted to the Government of Guinea in May 2016. Given the uncertainties associated with funding the infrastructure, coupled with the volatility of the current and near-term outlook for commodity prices, the Group has undertaken a review of the carrying value of the asset and determined an impairment charge of US$1,118 million (net of non-controlling interests and tax). In finalising the integrated BFS, Rio Tinto will maintain a dialogue with potential infrastructure investors, in order to preserve the potential of this world-class orebody.

The Bunder diamond project is progressing its prefeasibility studies, which began in July 2010. The project is seeking environmental and forestry approvals before commencing the next stage of the study.

The Jadar project in Serbia is a potentially world-class lithium-borate deposit discovered by Rio Tinto in 2004. If developed, it could supply a significant proportion of global demand for lithium and borates. Findings so far are encouraging and prefeasibility assessments are ongoing to confirm the economic business case and advance the environmental and social-economic impact assessments for the project.

The Roughrider project is a uranium exploration site located in Canada's Athabasca Basin in north-east Saskatchewan. The basin supplies approximately 20 per cent of the world's uranium. In late 2015, Rio Tinto completed an Order of Magnitude study on the project. This led to the Group recognising a post-tax impairment charge of US$199 million relating to goodwill and intangible assets. Technical oversight of the Roughrider project has transitioned to Exploration.

In 2011, Diamonds & Minerals re-entered the potash business through an exploration joint venture with North Atlantic Potash Inc. (NAPI), a subsidiary of JSC Acron. Acron is a world leader in fertiliser production and holds multiple potash exploration permits in Saskatchewan, Canada. Rio Tinto remains in discussions with NAPI and Acron regarding the optimum development pathway for the joint venture.

Outlook

Since 2013, demand softened in Diamonds & Minerals' markets in response to broader economic trends. Markets are still challenging, with the pace of recovery expected to be slower than previously anticipated. However, the medium- to long-term outlook continues to be positive across all products as urbanisation and rising standards of living, particularly in China, drive higher levels of demand.

Demand for borates is expected to remain relatively stable in the near term, with strong demand growth in some end-use sectors being partially offset by excess inventory build in the value chains of others. The long-term industry fundamentals remain attractive. RTM will focus on increasing refined borates capacity to meet higher-than-GDP demand growth while achieving world-class safety performance and improving its cost position.

Titanium dioxide pigment and feedstock inventories across the supply chain remain elevated. In response to weak demand and in order to reduce operating costs and inventory, RTIT has taken action at a number of its operations, including temporary closures of mining and processing facilities across the business. Whilst the short-term market conditions remain challenging, demand for titanium dioxide feedstock is expected to continue to grow in the medium- to long-term, in line with improving global economic conditions, urbanisation and demand growth in emerging markets supported by rising per capita incomes.

Rough and polished diamond inventories remain high throughout the pipeline. Combined with subdued demand from India and China, this has led to lower prices in the short term. Despite this downturn, the medium to long-term fundamentals for the diamond industry remain positive and are expected to support sustainable future price growth as inventories deplete and markets recover. The global mineral resource base is steadily declining, exacerbated by limited exploration investment and success, and reductions in supply over the medium to longer term. Demand in India and China is estimated to pick up as conditions improve. Demand in mature markets is expected to continue to grow in line with GDP.

The uranium market remains challenged due to the lingering effects of the Fukushima accident and delays in new reactor projects around the world. However, some Japanese reactors resumed operation in 2015, and China's new-build programme is gathering momentum. Furthermore, increased global attention to climate change and carbon emissions will benefit the longer-term growth of nuclear power around the world.

Iron Ore

Financial performance

	2015 US$ million	2014 US$ million
Revenue	**15,305**	23,281
Net cash generated from operating activities	**6,061**	10,274
Underlying earnings	**3,952**	8,107
Capital expenditure	**1,726**	4,211
Net operating assets	**18,005**	20,987
EBITDA	**7,872**	14,244

Strategy and strategic priorities

The Iron Ore product group focuses on three strategic goals to maintain its position as the best iron ore business in the world:

- Production at the right cost, with a total focus on safety.
- Value-driven growth from disciplined phasing and low-cost growth options.
- Maximising portfolio value through specialist sales and marketing expertise.

Safety

In 2015, Iron Ore achieved a fatality-free year. The all injury frequency rate across the group was 0.49 compared with 0.73 in 2014, a 32.9 per cent improvement. This improvement is attributable to a number of ongoing programmes that have strengthened safety interactions and focus in the field.

Further engagement and visibility from leadership teams continues positively influencing safety culture, driving better safety performance year-on-year across the product group.

Iron Ore has also adopted critical risk management as part of a fatality elimination strategy aimed at embedding critical controls across Rio Tinto's managed operations. This programme was introduced to supervisors in 2015 and will continue in 2016.

In Western Australia, Iron Ore launched a wellbeing strategy across the business. Key activities included a peer support programme and a leader education programme focusing on mental health awareness, managing stress and building resilience. During 2015, Rio Tinto Marine improved the safety culture aboard its vessels, with training and welfare programmes and critical risk controls, inspections and safety performance reviews that will continue in 2016. In a challenging year, Iron Ore Company of Canada's (IOC) (Rio Tinto share 58.7 per cent) all injury frequency rate was 0.74 compared with 0.66 last year. The continued roll-out of critical risk management will ensure the focus is on achieving the goal of zero harm.

The Pilbara Utilities team was named the winner of the Chief Executive Safety Award in 2015 for the second year running. The award recognises sites and teams with the best annual safety performance, culture and leadership.

Greenhouse gas emissions

Throughout 2015, Iron Ore continued to reduce greenhouse gas emissions across mine, rail and port operations.

Productivity projects in the Pilbara have also focused on improving energy efficiency. For example, fuel saving software has improved fuel burn in excavators and trucks across the operations.

Greenhouse gas intensity of saleable production at IOC improved by 18 per cent compared with the 2008 baseline. This was due to an increase in the ratio of concentrate sales, combined with operational efficiencies.

In total, the product group's greenhouse gas emissions intensity has improved by 7.6 per cent on the baseline target set in 2008.

Review of operations

Rio Tinto operates a world-class iron ore portfolio, with major operations and projects spanning four continents. This includes operations in the Pilbara region of Western Australia and in Canada, and projects in Guinea (see page 37) and India.

In the Pilbara region of Western Australia, Rio Tinto operates the world's largest integrated portfolio of iron ore assets. This system comprises 15 mines, four independent port terminals, over 1,700km of the largest privately-owned heavy freight railway in Australia, and supporting infrastructure, all linked by the Operations Centre in Perth.

IOC operates a mine, concentrator and pelletising plant in the Canadian province of Newfoundland and Labrador, together with port facilities in Sept-Îles, Quebec.

Rio Tinto Marine delivers shipping services to the wider Rio Tinto Group, including Iron Ore.

In 2015 Iron Ore achieved underlying earnings of US$3,952 million. Despite record sales volumes and continued cash cost savings, weaker iron ore prices, down 43 per cent on average year-on-year, reduced earnings by US$5,541 million on 2014.

Iron Ore shipments for 2015 were 336.6 million tonnes globally (Rio Tinto share: 270.9 million tonnes) an increase of 11.2 per cent on 2014. This included IOC's delivery of 9.6 million tonnes of pellets and 8.4 million tonnes of concentrate for sale in 2015.

Iron ore production was 327.6 million tonnes globally (Rio Tinto share: 263 million tonnes). Sales exceeded production in 2015 due to the drawdown of stockpiled iron ore inventory, which is now largely depleted.

Strong quarterly production and sales were achieved throughout the year as expanded Pilbara infrastructure continued to integrate with operations. Increased asset reliability and performance also resulted in a record year for IOC.

The Pilbara performance remained strong despite interruptions throughout the year, including a train derailment temporarily blocking the rail access to the Dampier port, and tropical cyclones Olwyn and Quang interrupting coastal operations in the second quarter. Inland Pilbara mines were also impacted by unseasonal wet weather during the second quarter and bush fires caused by lightning strikes in the fourth quarter.

Contestable iron ore demand in 2015 decreased marginally to 1.72 billion tonnes. During the year around 110 Mt of additional iron ore supply entered the market with approximately 130 Mt exiting. Chinese domestic supply continues to struggle with high operating costs due to the nature and location of its iron ore reserves, which require more processing than most seaborne supply. Non-traditional supply (Iran, Russia, Ukraine, Kazakhstan, Mexico, Indonesia and others), which peaked in 2013, has also declined significantly due to sustained low prices.

In 2015, the iron ore price averaged around US$50 per dry metric tonne (Platts 62 per cent Fe FOB), down from an average of around US$88 per dry metric tonne in 2014.

Rio Tinto Marine shipped 265 Mt of dry bulk cargo on behalf of the entire Rio Tinto Group, an increase of 11 per cent on 2014. By volume, Rio Tinto is the largest dry bulk shipping business in the world, operating 17 vessels of its own and contracting a fleet of around 200 vessels at any given time. Average freight rates in 2015 tracked below 2014 and forward voyage rate curves are flat, reflecting ongoing vessel oversupply and low bunker fuel prices.

The construction and commissioning of the Pilbara port and rail infrastructure expansion were completed in mid-2015. Iron Ore continues to ramp up this integrated system to full capacity to generate maximum value.

A range of initiatives undertaken throughout 2015 resulted in pre-tax cash cost reductions of US$428 million and have now delivered US$1.1 billion of cumulative savings compared with the 2012 base, making a significant contribution to the wider Rio Tinto Group pre-tax savings. Further efficiency improvements reduced the Pilbara cash unit costs to US$14.9 per tonne in 2015, compared with US$19.5 per tonne in 2014. At the same time, working capital levels across Iron Ore were reduced by 83 per cent year on year compared with 2014. These savings have been achieved while increasing production by more than ten per cent and improving safety performance in 2015.

Initiatives included inventory reduction measures that have reduced warehouse-managed inventory by A$129 million (US$94 million) for the year. Savings were also achieved through supplier negotiations, and by reducing 400,000 hours of maintenance time with new "failure mode"-based tactics aimed at improving asset reliability and removing all

low-value tasks from sites. Other initiatives have improved train cycle time, increased plant utilisation, and extended the life of heavy mobile equipment across the Pilbara fleet.

Iron Ore continues to be the world's largest autonomous truck operator and a proud leader in automated mining technologies. The Pilbara fleet of autonomous haulage trucks and autonomous drills continued to improve performance in 2015.

The autonomous haulage system (AHS) truck fleet is deployed across three sites in the Pilbara, decreasing load and haul operating costs by up to 13 per cent, and increasing effective utilisation by up to 14 per cent compared with a manned fleet. Software upgrades during the year also improved reliability. The AHS fleet currently comprises 71 trucks with 19 Komatsu 830E AHS trucks at Hope Downs 4, 30 Komatsu 930E AHS trucks at Nammuldi and 22 Komatsu 930E AHS trucks at Yandicoogina.

This year, Iron Ore expanded the number of fully autonomous drills operating at the West Angelas mine in the Pilbara to seven and successfully trialled their remote operation from the Operations Centre in Perth.

Once implemented, AutoHaul® will be the world's first fully autonomous, heavy-haulage, long-distance rail system. In 2015, the physical installation work neared completion and trains are being operated under controlled conditions to demonstrate the safety and performance of the system. As at the end of 2015, more than 70,000km of mainline train trials have been completed. AutoHaul® development will continue, including submission of regulatory approvals, completion of full system functionality and, improvement of system performance and reliability.

Iron Ore maintained its focus on supporting local communities, Aboriginal Traditional Owners, businesses and people located within its operational footprint. The product group continued actively implementing participation agreements with Traditional Owners in the Pilbara, which secure land access for the life of mining operations. These agreements incorporate mutual obligations to deliver outcomes in employment, financial compensation, education and training, heritage surveys and practices, environmental care and land use.

Iron Ore also supported Pilbara Aboriginal businesses to secure contracts in the Pilbara and remains one of the largest private-sector employers of Indigenous people in Australia, with approximately 1,000 Indigenous employees, including more than 350 Pilbara Aboriginal people. Rio Tinto joined the Australian campaign for constitutional recognition of Aboriginal and Torres Strait Islander people by formally supporting the Recognise campaign in June 2015.

Iron Ore continues to support programmes and initiatives across the Pilbara, our "fly in, fly out" (FIFO) source communities in regional Western Australia and Perth. Two keystone partnerships include the Community Infrastructure and Services Partnerships with the City of Karratha and the Shire of Ashburton. These focus on working together to make the Pilbara region a better place to live and work through a shared vision of improving town amenities and revitalising communities.

IOC continued as a supplier of high-quality, premium pellets and high-quality, low-contaminant concentrate. The company remains focused on increasing production to nameplate capacity following completion of the Concentrate Expansion Project in 2014 and further reducing costs. Through effective employee engagement, highly visible leadership and improved asset management, IOC shipped 26.2 per cent more tonnes in 2015 versus 2014. A C$45.3 concentrate operating unit cost was achieved following a 19 per cent reduction from 2014.

IOC continued to focus on building and maintaining strong relationships with Aboriginal groups through engagement, consultation and collaboration. The company is actively implementing two Aboriginal agreements in Labrador to promote access to Aboriginal business development and employment opportunities. IOC also provided support to Group-wide initiatives and partnerships across Canada to encourage opportunities for Aboriginal youth, including support to undertake education and training.

Development projects

The Pilbara infrastructure expansions were completed in mid-2015, delivering expanded port and shipping capacity at Cape Lambert, increased rail network capacity, improved power and fuel supply and distribution, as well as expanded and improved accommodation and town facilities in the Pilbara.

A number of mine developments were also completed throughout 2015 to sustain existing operations and as part of the growth programme. The West Angelas Deposit B project achieved full production rates, allowing the West Angelas operation to achieve 35 Mt/a in the first quarter of the year, and the Nammuldi Below Water Table project was fully commissioned, achieving nameplate capacity. The Yandicoogina project delivered first ore, which will sustain the existing Yandicoogina operation and increase capacity to 60 Mt/a. At Western Turner Syncline 2, a road train operation that began in May 2015 delivered an additional 7 Mt/a at Tom Price.

The brownfield mine growth is being achieved at an average mine production capital intensity of approximately US$9 per tonne. It is expected that the full infrastructure expansion will be delivered at an industry-leading capital intensity of US$100-110 per tonne.

Pilbara mine production capacity increased through a series of low-cost brownfield expansions and operational improvements which were undertaken during 2015.

Following completion of the Pilbara infrastructure and brownfield expansions in the first half of 2015, the focus has shifted to the Nammuldi Incremental Tonnes (NIT) project, which delivers high-grade, low-phosphorous ore into the Pilbara Blend. The initial phase, with a five million tonne per annum capacity, started production in the fourth quarter of 2015. Construction has begun on the second phase, which will take annual capacity from the NIT project up from five to ten million tonnes and is due to come into production in the fourth quarter of 2016.

The Wickham town upgrade project was completed in September 2015. This US$300 million project supports the Cape Lambert port and rail operations workforce and included the construction of more than 240 houses, the Wickham Lodge FIFO accommodation and the Julutharndu Maya Central Facilities building as well as new parks, roads and other community infrastructure.

Construction of the A$18 million Dampier Community hub began in the second quarter of 2015, followed by the announcement in the fourth quarter of an A$8 million contribution for construction and operation of the Wickham community hub. These projects at the coastal operations will improve community amenity by providing childcare and after-school services, youth services, library services and facilities for other community groups and activities.

During 2015, engagement continued with our partners (Orissa Mining Corporation (44 per cent) and the National Mineral Development Corporation (5 per cent) on the Odisha iron ore project in India. The current focus is on progressing joint venture arrangements with project partners and the Odisha state government.

Outlook

Continuing low prices will challenge many iron ore suppliers. However seaborne supply is expected to continue to outpace demand growth in the near term.

Contestable iron ore demand is likely to remain flat in 2016 with new iron ore supply entering the market likely to be offset by the continued exits of marginal production. Over the medium term we expect contestable iron ore demand to grow by around 1.3 per cent CAGR until 2030. This equates to approximately 370 Mt of incremental demand, with around 20 per cent expected to be driven by China.

Exploration

Rio Tinto has had a sustained commitment to exploration since 1946, with an exceptional track record in mineral discovery. Mature operations such as Weipa and the Pilbara were Tier 1 greenfield discoveries by Rio Tinto Exploration where value is still being realised after more than 50 years of production.

Strategy and strategic priorities

Exploration creates value for Rio Tinto by discovering or acquiring well-located, high-grade Tier 1 resources. Its work spans greenfield and brownfield exploration programmes as well as research and development that supports exploration. Greenfield exploration aims to establish completely new operating business units, including diversifying into new commodities or geographic areas. Brownfield exploration looks to sustain or grow existing Group businesses in the orbit of existing operations.

The Exploration group also supports a range of projects across the business, providing orebody knowledge, helping evaluate merger and acquisition opportunities and providing resource insights to support supply forecasts. During 2015, Exploration reviewed the orebody knowledge content for all projects that were progressed to the Investment Committee. Community, sustainability and investment requirements mean it can take over 20 years to progress from initial exploration through to discovery and on to a final development decision. Rio Tinto's core exploration capability and rigorous global prioritisation process has consistently delivered Tier 1 discoveries, which in the last ten years include:

Year	Discovery	Commodity	Location
2008	Sulawesi	Nickel	Indonesia
2008	Mutamba	Titanium	Mozambique
2009	Jadar	Lithium/ borates	Serbia
2011	Amargosa	Bauxite	Brazil
2013	KP405	Potash	Canada
2014	Yandi Braid	Iron ore	Australia
2015	Mount Thorley Warkworth/ Hunter Valley	Coking coal	Australia

At the end of 2015, the Exploration group was active in 18 countries and assessing opportunities in other countries across a range of commodities including copper, nickel, iron ore, bauxite, coking coal, uranium, diamonds and mineral sands. Exploration activities in China were conducted through CRTX, the joint venture between Chinalco (51 per cent) and Rio Tinto (49 per cent). The Exploration group is organised into regional multi-commodity teams based in Melbourne, London, Salt Lake City, Perth, Brisbane and Beijing, which are supported by a team of technical and commodity professionals. This structure provides a global reach with a local presence that allows for effective community engagement and development of the Group's social licence to operate.

Safety

In 2015, Exploration achieved a fatality-free year. At the end of 2015 the Exploration group's all injury frequency rate was 0.43, sustaining the improvement from the 0.47 rate at the end of 2014. A multi-year change programme across the Exploration group has helped to sustain the significant safety improvement gained in 2013. During 2015, Exploration undertook a review of past incidents that had resulted in fatalities on exploration projects. The aim was to understand how and why those fatal events occurred and try to ensure that they do not happen again. The findings were compiled as a series of case studies for the group to learn from. This increased focus on fatality prevention across the Exploration group continued, with planning for a number of pilot projects under way to trial the roll-out of the Rio Tinto critical risk management programme.

Performance

During 2015, with the support of a more visible communication strategy, commercial activities increased, providing access to new projects and supporting the progression of projects through the Exploration project pipeline. Exploration joint ventures were established in the US, Chile, Serbia and Australia. Divestment activities continue for projects not of interest to Rio Tinto.

At the Roughrider uranium project in Saskatchewan, orebody knowledge progressed with geological and structural interpretation and resource modelling. At the Sanxai bauxite project in Laos, ongoing exploration provided greater certainty around resource quality, while infrastructure studies targeted a range of options for transporting the ore to a suitable port location. The Amargosa bauxite project in Brazil has progressed, with drilling and mapping advancing a number of brownfield areas in the Amargosa orbit as well as adding new prospects in the region. Brownfield projects generated good drilling results at iron ore projects in the Pilbara, coking coal projects in the Hunter Valley and Bowen Basin, and for bauxite in the Weipa orbit in Australia. In the Bingham orbit in the US, drilling continued to extend the mineralisation envelope.

Exploration activities are underpinned by data and information management. Targeted capture of publicly available data and a focus on data accuracy and availability has continued to drive efficiency improvements. Research and development projects have progressed in 2015. New analytical techniques for mineral geochemistry that support exploration targeting were applied across a number of regions and are proving attractive to potential exploration joint venture partners. Progress continued on the development of the VK1 airborne gravity gradiometer, with a continuing improvement in detection levels achieved in 2015.

In addition to Exploration's projects, the Group's major evaluation projects in 2015 were:

Project	Commodity	Country
La Granja	Copper	Peru
Resolution	Copper	US
Pilbara	Iron ore	Australia
Bowen Basin	Coking coal	Australia
Hunter Valley	Thermal coal	Australia
Zulti South	Mineral sands	South Africa
Jadar	Lithium/borates	Serbia
Simandou	Iron ore	Guinea
Weipa	Bauxite	Australia

In 2015, the Group reduced its exploration and evaluation expenditure to US$576 million[(a)]. This represented a 23 per cent decrease compared with 2014 expenditure of US$747 million. Of the 2015 spend, US$141 million relates to centrally-controlled exploration and evaluation activity. In total, Rio Tinto's 2015 exploration and evaluation activity covered eight commodities across a range of greenfield and brownfield environments.

Outlook

In 2016 the Exploration group will continue to work on a prioritised portfolio of greenfield and brownfield projects. The continued downturn in commodity prices is expected to produce further cost-effective commercial opportunities to gain access to high-quality exploration properties. However, challenges are expected to continue around timeframes to access ground, the need to increasingly explore for orebodies beneath cover rocks, and the decreasing grade and quality of potential orebodies. The Exploration group will focus on project generation in a number of key geographies, as well as testing of targets within the portfolio. For 2016, exploration projects at a more advanced stage are listed in the table below:

Project	Commodity	Country	Type	Stage
Tamarack	Nickel	US	Greenfield	Project of Merit
Roughrider[(b)]	Uranium	Canada	Greenfield	Order of Magnitude
Sanxai	Bauxite	Laos	Greenfield	Project of Merit
Amargosa orbit	Bauxite	Brazil	Greenfield	Order of Magnitude
Bowen Basin	Coking coal	Australia	Brownfield	Project of Merit
Pilbara	Iron ore	Australia	Brownfield	Project of Merit

(a) An additional US$8 million gain on disposal of undeveloped evaluation projects was recorded separately in profit/(loss) relating to interest in undeveloped projects in the income statement.
(b) As noted on page 37, an impairment charge has been recognised on this project.

Technology & Innovation

In close partnership with our product groups, Technology & Innovation (T&I) provides leadership in the fields of technical excellence, productivity, major capital projects, technical assurance and strategic planning. It has a track record of creating value and implementing step-change initiatives that help maintain the Group's competitive advantage. Gross costs in 2015 were US$204 million compared with US$340 million in 2014 and US$370 million in 2013.

Strategy and strategic priorities

T&I's strategic priorities are to deliver world-class projects and drive operating excellence. In 2015 the productivity team was restructured to focus on selected Group-wide, high-value projects.

Safety

In 2015, T&I achieved a fatality-free year. T&I is committed to the safety of our employees. The all injury frequency rate for T&I was 0.44 in 2015 compared with 0.57 in 2014. This improvement is a result of a leadership focus on zero harm, particularly areas of risk that have the potential for fatal injury. This year, Rio Tinto Projects, the team that is responsible for major project delivery in the Group, focused on five areas of improvement: incorporating health, safety, environment and communities (HSEC) aspects in project design; leadership and engagement to build a safety culture; critical risk management; learning from incidents; and being work-ready.

Performance

Projects

In 2015, T&I successfully completed construction of the Kitimat Modernisation Project in Canada in accordance with the revised schedule and budget. In the Pilbara, T&I completed the infrastructure components of the Iron Ore Pilbara expansion. This included the expansion of port and shipping capacity at Cape Lambert, laying additional track and rail infrastructure, fuel facilities and the expansion of accommodation and town facilities. It has been delivered on time and more than US$800 million below budget. During the year, T&I completed the following mine expansions in the Pilbara:

- 21 Mt/a Nammuldi below-water-table project
- West Angelas Deposit B project, increasing capacity to 35 Mt/a
- Yandicoogina sustaining project, increasing capacity to 60 Mt/a
- Western Turner Syncline 2 road train operation

T&I continued execution of the Holden Environmental Remediation project, US; East Waste Rock Extension project, Rio Tinto Kennecott; and AutoHaul® project, Pilbara. It commenced project execution of the US$1.9 billion Amrun bauxite project. T&I also provided execution planning and preparation work into the following studies:

- Oyu Tolgoi underground copper project, Mongolia
- Hail Creek coal project, Australia
- Zulti South, mineral sands, South Africa
- Jadar lithium-borate deposit, Serbia
- Simandou iron ore project, Guinea
- Silvergrass and Koodaideri iron ore mines, Pilbara, Australia

T&I's capital effectiveness programme applies capital intensity tools to focus on cost reduction and has already delivered strong results at the Amrun and Silvergrass projects.

The Technical Assurance team independently assesses investment decisions for the Rio Tinto Investment Committee and board. Its work has helped ensure the right projects are supported and prioritised in line with the capital expenditure plan for the year. In 2015, the post-investment review programme, which extracts the lessons from past investments in order to improve future projects, continued to help improve the assurance process for investments.

Productivity

The Productivity programme, which aims to generate more out of every dollar invested in Rio Tinto's business, made significant progress during 2015. This included establishing:

- Technical Discipline Leadership group to identify and embed world-class practices that will improve Group productivity, manage technical risk and improve discipline health across the Group.
- World-Class Asset Management productivity programme to improve Group-wide asset performance through optimising asset servicing, standardised maintenance and predictive asset health.
- Energy Productivity programme to increase performance in energy sourcing, consumption and productivity of the Group's energy-intensive assets through transparent energy measurement, power optimisation, diesel efficiency initiatives and alternative energy sources.

The programme also implemented T&I's smart-data architecture, metrics and analytics strategy, enhancing the Group's ability to predict performance and increase productivity gains.

Innovation

The Mine of the Future™ programme continued to progress and deliver value to Rio Tinto in the areas of productivity and HSEC improvement:

- Autonomous Haulage System: 71 autonomous trucks in operation across three sites in the Pilbara at year end.
- Testing and verification of the AutoHaul® autonomous rail system continued, with 70,000km of mainline trials completed by end of 2015.
- Expansion of the autonomous drill fleet at the West Angelas mine, the world's first fully autonomous drill mine, has contributed to more than 2.5 million metres of drilling in autonomous mode.
- Automated train load-out systems were installed, helping Iron Ore deliver approximately 1.6 Mt of extra rail capacity.
- Remote Draft Survey technology is being deployed to make ship loading safer by calculating the air and water draft around a bulk carrier. A functional enhancement is being developed to improve loading times and volumes.
- Resistate Indicator Minerals technology was applied to improve the productivity of copper and diamonds exploration.
- RTVis™: Extension of this visualisation software to all sites in the Pilbara enabled an increase in the recovery of high-grade ore and savings in explosives costs.

Outlook

In 2016, T&I's focus will be on three strategic capabilities:

- delivery of major projects;
- technical excellence; and
- improving performance through innovation and analytics.

Financial overview

The key metrics for Group financial management and planning are summarised below:

	2015 US$m	2014 US$m	2013 US$m
Underlying earnings [(a)]	**4,540**	9,305	10,217
Net (loss)/ earnings [(a)]	**(866)**	6,527	3,665
Net cash generated from operating activities	**9,383**	14,286	15,078
Net debt	**13,783**	12,495	18,055
Total capital [(b)]	**57,911**	67,089	71,557

(a) Underlying earnings is a key financial performance indicator which management uses internally to assess performance. It is presented here as a measure of earnings to provide greater understanding of the underlying business performance of the Group. Items excluded from net (loss)/earnings to arrive at underlying earnings are explained in note 2 to the financial statements. Both net (loss)/earnings and underlying earnings deal with amounts attributable to the owners of Rio Tinto. However, IFRS requires that the profit for the year reported in the income statement should also include earnings attributable to non-controlling interests in subsidiaries.

(b) Total capital is defined as equity attributable to owners of Rio Tinto plus equity attributable to non-controlling interests plus net debt.

Underlying earnings of US$4.5 billion was US$4.8 billion lower than 2014. Cash cost improvements, higher volumes, lower energy costs, positive currency and other movements (totalling US$2.9 billion post-tax) partly offset the US$7.7 billion (post-tax) impact of lower commodity prices.

The main items excluded from underlying earnings which resulted in the net loss of US$0.9 billion were non-cash exchange losses of US$3.3 billion (post-tax), impairment charges of US$1.8 billion (post-tax) and US$0.3 billion (post-tax) in restructuring costs, including global headcount reductions.

Net cash generated from operating activities, which include dividends from equity accounted units, reflect the negative impact of lower commodity prices partially offset by lower taxes paid and further improvements in working capital.

Net debt increased from US$12.5 billion at 31 December 2014 to US$13.8 billion at 31 December 2015 as free cash flow only partially funded the US$2.0 billion share buy-back.

Net debt to total capital (gearing ratio) increased from 19 per cent at 31 December 2014 to 24 per cent at 31 December 2015. Interest cover was seven times down from 13 times coverage in 2014. Much of the increase in the gearing ratio was driven by the US$10.5 billion decline in shareholders' equity from 31 December 2014 to 31 December 2015, mainly attributable to weaker Australian and Canadian currencies along with the share buy-back and dividend payments.

In addition to the information provided on the product groups on pages 32 to 39, further information on their financial performance can be found in note 2 and 3 to the financial statements on pages 125 to 128 and the financial information by business unit on pages 194 to 197.

Five year review

Selected financial data

The selected consolidated financial information below has been derived from the historical audited consolidated financial statements of the Rio Tinto Group. The selected consolidated financial data should be read in conjunction with, and qualified in their entirety by reference to, the 2015 financial statements and notes thereto. The primary financial statements and notes as included on pages 107 to 189 have been prepared in accordance with IFRS as defined in note 1.

Rio Tinto Group

Income statement data extracts

For the years ended 31 December Amounts in accordance with IFRS	**2015 US$m**	2014 US$m	2013 US$m	2012 US$m	2011 US$m
Consolidated sales revenue	**34,829**	47,664	51,171	50,942	60,529
Group operating profit/(loss) [a]	**3,615**	11,346	7,430	(1,925)	14,037
(Loss)/profit for the year from continuing operations	**(1,719)**	6,499	1,079	(3,020)	6,800
Loss after tax from discontinued operations	**–**	–	–	(7)	(10)
(Loss)/profit for the year	**(1,719)**	6,499	1,079	(3,027)	6,790
Basic (losses)/earnings per share [b]					
– From continuing operations (US cents)	**(47.5)**	353.1	198.4	(163.4)	303.9
– From discontinued operations (US cents)	**–**	–	–	(0.4)	(0.5)
Basic (loss)/profit for the year per share (US cents)	**(47.5)**	353.1	198.4	(163.8)	303.4
Diluted (losses)/earnings per share [b]					
– (Loss)/profit from continuing operations (US cents)	**(47.5)**	351.2	197.3	(163.4)	302.0
– Loss after tax from discontinued operations (US cents)	**–**	–	–	(0.4)	(0.5)
Diluted (loss)/profit for the year per share (US cents)	**(47.5)**	351.2	197.3	(163.8)	301.5

Dividends per share	**2015**	2014	2013	2012	2011
Dividends declared in respect of the year					
US cents					
– interim	**107.5**	96.0	83.5	72.5	54.0
– final	**107.5**	119.0	108.5	94.5	91.0
UK pence					
– interim	**68.92**	56.9	54.3	46.4	33.1
– final	**74.21**	78.0	65.8	60.3	57.3
Australian cents					
– interim	**144.91**	103.1	93.0	68.5	49.8
– final	**151.89**	153.0	120.14	91. 7	84.2
Dividends paid during the year (US cents)					
– ordinary	**226.5**	204.5	178.0	163.5	117.0
Weighted average number of shares – basic (millions)	**1824.7**	1,848.4	1,847.3	1,849.1	1,923.1
Weighted average number of shares – diluted (millions) [b]	**1824.7**	1,858.7	1,857.7	1,849.1	1,935.5

Balance sheet data extracts

at 31 December Amounts in accordance with IFRS	**2015 US$m**	2014 US$m	2013 US$m	2012 US$m	2011 US$m
Total assets	**91,564**	107,827	111,025	118,437	120,152
Share capital/premium	**8,474**	9,053	9,410	10,189	10,024
Total equity/net assets	**44,128**	54,594	53,502	57,740	58,884
Equity attributable to owners of Rio Tinto	**37,349**	46,285	45,886	46,553	52,199

(a) Group operating profit or loss includes the effects of charges and reversals resulting from impairments (other than impairments of equity accounted units) and profit and loss on disposals of interests in businesses. Group operating profit or loss amounts shown above excludes equity accounted operations, finance items, tax and discontinued operations.

(b) The effects of dilutive securities have not been taken into account when calculating diluted loss per share for the years ended 31 December 2015 and 2012, in accordance with IAS 33 "Earnings Per Share".

Directors' approval statement

This Strategic report is delivered in accordance with a resolution of the board, and has been signed on behalf of the board by:

Jan du Plessis
Chairman

2 March 2016

Contents

Directors' report

Dual listed structure and constitutional documents	46
Operating and financial review	46
Risk identification, assessment and management	47
Share capital	47
Purchases	48
Substantial shareholders	49
Dividends	49
Directors	49
Secretaries	49
Corporate governance	49
Indemnities and insurance	49
Employment policies and communication	49
Political donations	49
Government regulations	49
Environmental regulations	49
Greenhouse gas emissions	50
Exploration, research and development	50
Auditors	50
Fees for audit and non-audit services	50
Financial instruments	50
Board of directors	51
Executive Committee	54
Corporate governance	55
Remuneration Report	67

Directors' report

The directors present their report and audited consolidated financial statements for the year ended 31 December 2015.

Dual listed structure and constitutional documents

An explanation of the dual listed companies (DLC) structure of Rio Tinto plc and Rio Tinto Limited, and aspects of the Companies' constitutional provisions can be found on pages 236 to 242. That section provides a description of voting arrangements, including restrictions which may apply in respect of the shares of either Company under specified circumstances.

Operating and financial review

The Strategic report set out on pages 1 to 43 provides a comprehensive review of Rio Tinto's operations, its financial position and its business strategies and prospects, and is incorporated by reference into, and forms part of, this directors' report.

Rio Tinto's principal activities during 2015 were minerals and metals exploration, development, production and processing.

Pages 42 to 43 of the Strategic report provide a comprehensive review of the performance of Rio Tinto's operations for the year ended 31 December 2015 and the outlook for those operations.

The subsidiary and associated undertakings principally affecting the profits or net assets of the Group in the year are listed in notes 33 to 36 to the financial statements.

Significant changes and events affecting the Group during 2015 and until the date of this report have been:

- On 12 February 2015, the Group announced a proposed US$2 billion capital return programme, comprising the repurchase of a targeted A$500 million of Rio Tinto Limited shares by way of an off-market buy-back tender, and the balance of approximately US$1.6 billion by way of an on-market buy-back of Rio Tinto plc shares.
- On 27 February 2015, the Group announced that it would streamline its product groups and corporate functions as part of the continued focus on efficiency and costs. Under the revised arrangements, Rio Tinto's world-class portfolio of assets was condensed into four product groups: Aluminium, Copper & Coal, Diamonds & Minerals, and Iron Ore.
- On 24 March 2015, Rio Tinto and joint venture partner Alcoa agreed to terminate a historic State Agreement Act intended to facilitate the mining of bauxite and the development of an alumina refinery in the north Kimberley region, clearing the way for the area to be included in the Kimberley National Park.
- On 7 April 2015, Rio Tinto successfully completed the off-market buy-back tender of Rio Tinto Limited shares. That buy-back was increased to A$560 million from the indicative A$500 million announced, due to strong demand. The buy-back price was A$48.44 per share which represented a discount of 14 per cent to the market price for Rio Tinto Limited shares. Rio Tinto Limited bought back around 11.6 million shares, at an aggregate cost of approximately A$0.6 billion (US$0.4 billion). This represented 2.65 per cent of Rio Tinto Limited's issued capital (0.63 per cent of the Rio Tinto Group's issued capital) at the time.
- On 18 May 2015, the Government of Mongolia, Turquoise Hill Resources and Rio Tinto signed the Underground Mine Development and Financing Plan (UDP) which provides a pathway forward in addressing shareholder matters to restart underground development. Next steps included approval of the underground feasibility study, as well as securing all necessary permits for operating the underground mine.
- On 11 June 2015, Rio Tinto acknowledged Energy Resources of Australia Ltd's (ERA) release to the Australian Securities Exchange in which ERA announced it had decided it would not proceed with the Final Feasibility Study of the Ranger 3 Deeps project in the current operating environment. Rio Tinto agreed with the decision not to progress the study. After careful consideration, Rio Tinto determined that it did not support any further study or the future development of Ranger 3 Deeps due to the project's economic challenges. Rio Tinto recognised the importance of ongoing rehabilitation work at the Ranger mine site, which is surrounded by the Kakadu National Park. Rio Tinto is engaged with ERA on a conditional credit facility to assist ERA to fund its rehabilitation programme, should additional funding be required beyond ERA's existing cash reserves and the future earnings from processing ore stockpiles.
- On 12 June 2015, Rio Tinto announced that it had priced US$1.2 billion of 10-year fixed rate SEC-registered debt securities. The bonds were issued by Rio Tinto Finance (USA) Limited and are fully and unconditionally guaranteed by Rio Tinto plc and Rio Tinto Limited. The notes will pay a coupon of 3.75 per cent and will mature on 15 June 2025.
- On 26 June 2015, Rio Tinto announced that it had completed the sale of its 78 per cent interest in Murowa Diamonds and 50 per cent interest in Sengwa Colliery Ltd (Sengwa) to RZ Murowa Holdings Limited. RioZim Limited, an independent Zimbabwean mining company listed on the Zimbabwean Stock Exchange, already held a 22 per cent interest in Murowa Diamonds and a 50 per cent interest in Sengwa and has assumed the overall management of both entities.
- On 7 July 2015, Rio Tinto announced it was planning its first shipments of metal from its world-class Kitimat aluminium smelter in Canada following an extensive modernisation and expansion of the facility.
- On 30 September 2015, Rio Tinto announced that it had reached a binding agreement for the sale of its 40 per cent interest (on completion of the restructure outlined below) in the Bengalla coal Joint Venture in Australia to New Hope Corporation Limited for US$606 million. Rio Tinto also announced that it and Mitsubishi Development had agreed a change to the ownership structure of Coal & Allied. Under that agreement, Rio Tinto agreed to assume 100 per cent ownership of Coal & Allied and Mitsubishi Development agreed to move from holding a 20 per cent stake in Coal & Allied to holding a direct 32.4 per cent stake in the Hunter Valley Operations mine.
- On 27 November 2015, Rio Tinto announced that it will expand output from one of the world's premier bauxite deposits following approval of the US$1.9 billion Amrun project.
- On 15 December 2015, Rio Tinto announced that Oyu Tolgoi in Mongolia had secured project finance for the underground mine development with commitments by international financial institutions and export credit agencies representing the governments of the United States, Canada and Australia, along with 15 commercial banks.
- On 18 December 2015, Rio Tinto successfully completed the US$2 billion share buy-back programme of which US$1.6 billion approximately was completed through the on-market purchase of Rio Tinto plc shares.
- On 27 January 2016, Rio Tinto announced that it had reached a binding agreement for the sale of its Mount Pleasant thermal coal assets to MACH Energy Australia Pty Ltd for US$224 million plus royalties.

Details of events after the balance sheet date are further described in note 43 to the financial statements.

Risk identification, assessment and management

The Group's principal risks and uncertainties are set out on pages 14 to 21. The Group's approach to risk management is discussed on page 14.

Share capital

Details of the Group's share capital as at 31 December 2015 can be found at notes 27 and 28 to the financial statements. Details of the rights and obligations attached to each class of shares can be found on pages 240 to 241 under the heading "Voting".

Where under an employee share plan operated by the Company, participants are the beneficial owners of the shares, but not the registered owners, the voting rights are normally exercised by the registered owner at the direction of the participant.

Details of certain restrictions on holding shares in Rio Tinto and certain consequences triggered on a change of control are described on page 237 under the heading "Limitations on ownership of shares and merger obligations". There are no other restrictions on the transfer of ordinary Rio Tinto shares save for:

- restrictions that may from time-to-time be imposed by laws, regulations or Rio Tinto policy (for example, those relating to market abuse or insider dealing or share trading or those relating to Australian foreign investment);
- restrictions on the transfer of shares that may be imposed following a failure to supply information required to be disclosed, or in relation to unmarketable parcels of shares;
- restrictions on the transfer of shares held under certain employee share plans while they remain subject to the plan.

At the annual general meetings held in 2015, shareholders authorised:

- the on-market purchase by Rio Tinto plc or Rio Tinto Limited or its subsidiaries, of up to 141,381,390 Rio Tinto plc shares (representing approximately ten per cent of Rio Tinto plc's issued share capital, excluding Rio Tinto plc shares held in Treasury, at that time);
- the off-market purchase by Rio Tinto plc of up to 141,381,390 Rio Tinto plc shares acquired by Rio Tinto Limited or its subsidiaries under the above authority; and
- the off-market and/or on-market buy-back by Rio Tinto Limited of up to 43.5 million Rio Tinto Limited shares (representing approximately ten per cent of Rio Tinto Limited's issued share capital at the time).

Purchases

Rio Tinto plc shares of 10p each and Rio Tinto plc ADRs [m]

	Total number [a] of shares purchased	Average price [b] paid per share US$	Total number of shares purchased to satisfy company dividend reinvestment plans	Total number of shares purchased to satisfy employee share plans	Total number [c] of shares purchased as part of publicly announced plans or programmes	Maximum number of shares that may be purchased under plans or programmes [d]
2015						
1 to 31 Jan	–	–	–	–	–	141,340,869 [f]
1 to 28 Feb	872,900	49.33	–	–	872,900	140,467,969 [f]
1 to 31 Mar	3,284,549	44.14	–	–	3,284,549	137,183,420 [f]
1 to 30 Apr	3,097,730	43.01	704,316	67,250	2,326,164	140,201,426 [g]
1 to 31 May	2,898,800	45.56	–	–	2,898,800	137,302,626 [g]
1 to 30 Jun	3,335,900	43.75	–	–	3,335,900	133,966,726 [g]
1 to 31 Jul	4,594,612	39.65	–	–	4,594,612	129,372,114 [g]
1 to 31 Aug	4,385,676	37.94	–	44,576	4,341,100	125,031,014 [g]
1 to 30 Sep	6,307,627	35.59	1,108,716	81,667	5,117,244	119,913,770 [g]
1 to 31 Oct	4,181,712	36.89	–		4,181,712	115,732,058 [g]
1 to 30 Nov	6,030,000	34.86	–	760,000	5,270,000	110,462,058 [g]
1 to 31 Dec	4,689,900	30.27	–	–	4,689,900	105,772,158 [g]
Total	43,679,406 [e]	38.44	1,813,032	953,493	40,912,881	–
2016						
1 to 31 Jan	–	–	–	–	–	105,722,158 [g]
1 to 15 Feb	–	–	–	–	–	105,722,158 [g]

Rio Tinto Limited shares

	Total number [a] of shares purchased	Average price [b] paid per share US$	Total number of shares purchased to satisfy company dividend reinvestment plans	Total number of shares purchased to satisfy employee share plans	Total number [c] of shares purchased as part of publicly announced plans or programmes	Maximum number of shares that may be purchased under plans or programmes [d]
2015						
1 to 31 Jan	–	–	–	–	–	43,500,000 [i]
1 to 28 Feb	–	–	–	–	–	43,500,000 [i]
1 to 31 Mar	–	–	–	–	–	43,500,000 [i]
1 to 30 Apr	12,654,874	37.60 [j]	1,060,925	27,641	1,566,308 [k]	31,933,692 [i]
1 to 31 May	–	–	–	–	–	43,500,000 [l]
1 to 30 Jun	5,000	43.44	–	5,000	–	43,500,000 [l]
1 to 31 Jul	5,000	39.49	–	5,000	–	43,500,000 [l]
1 to 31 Aug	9,161	37.62	–	9,161	–	43,500,000 [l]
1 to 30 Sep	1,196,925	37.11	1,160,344	36,581	–	43,500,000 [l]
1 to 31 Oct	–	–	–	–	–	43,500,000 [l]
1 to 30 Nov	695,000	34.38	–	695,000	–	43,500,000 [l]
1 to 31 Dec	304,968	32.15	–	304,968	–	43,500,000 [l]
Total	14,870,928	37.30 [j]	2,221,269	1,083,351 [h]	11,566,308	–
2016						
1 to 31 Jan	–	–	–	–	–	43,500,000 [l]
1 to 15 Feb	–	–	–	–	–	43,500,000 [l]

(a) Monthly totals of purchases are based on settlement date.

(b) The shares were purchased in the currency of the stock exchange on which the purchases took place and the sale price has been converted into US dollars at the exchange rate on the day of settlement.

(c) Shares purchased in connection with the dividend reinvestment plans and employee share plans are not deemed to form part of any publicly announced plan or programme.

(d) On 12 February 2015, Rio Tinto announced a US$2.0 billion buy-back programme comprising a targeted A$500 million (c. US$425 million) off-market share buy-back tender of Rio Tinto Limited shares and the balance of approximately US$1.6 billion for an on-market buy-back of Rio Tinto plc shares.

(e) This figure represents 3.15 per cent of Rio Tinto plc issued share capital at 31 December 2015.

(f) At the Rio Tinto plc annual general meeting held in 2014, shareholders authorised the on-market purchase by Rio Tinto plc, Rio Tinto Limited, and its subsidiaries of up to 141,340,869 Rio Tinto plc shares.

(g) At the Rio Tinto plc annual general meeting held in 2015, shareholders authorised the on-market purchase by Rio Tinto plc, Rio Tinto Limited, and its subsidiaries of up to 141,381,390 Rio Tinto plc shares.

(h) The average price of shares purchased on-market by the trustee of Rio Tinto Limited's employee share trusts during 2015 was US$34.19.

(i) At the Rio Tinto Limited annual general meeting held in 2014 shareholders authorised off-market or on-market buy-back of up to 43.5 million Rio Tinto Limited shares.

(j) The 'Average price paid per share' includes the off-market share buy-back by Rio Tinto Limited.

(k) The shares were puchased at A$48.44 per share under the Rio Tinto Limited off-market share buy-back, representing a 14 per cent discount to the relevant market price.

(l) At the Rio Tinto Limited annual general meeting held in 2015 shareholders authorised off-market and/or on-market buy-back of up to 43.5 million Rio Tinto Limited shares.

(m) The table does not include 5,743 units repurchased pursuant to a Rio Tinto rescission offer in March 2015. That offer related to the purchase of ordinary shares of Rio Tinto plc in the form of ADSs included in 93,043 units in the Company Stock Fund by persons who acquired such units from 9 September 2013 to 8 September 2014 through the following US employee share plans: Rio Tinto America Inc. 401(k) Savings Plan and Investment Partnership Plan for Represented Employees and the U.S. Borax Inc. 401(k) Savings and Retirement Contribution Plan for Represented Employees. The average price per unit purchased was US$58.29.

Substantial shareholders

Details of substantial shareholders can be found on page 238.

Dividends

Details of dividends paid and the Company's dividend policy can be found on page 240.

Directors

The names of the directors who served during the year, together with their biographical details and other information, are shown on pages 51 to 53.

All directors, save for Richard Goodmanson, will stand for re-election at the 2016 annual general meetings.

A table of directors' attendance at board and committee meetings during 2015 is on page 57.

Secretaries

Eleanor Evans is the Group company secretary. She is company secretary of Rio Tinto plc and joint company secretary, along with Tim Paine, of Rio Tinto Limited. Their qualifications and experience are set out on page 53.

Corporate governance

A full report on corporate governance can be found on pages 55 to 66 and forms part of this Directors' report.

Indemnities and insurance

The Articles of Association and Constitution of the Companies provide for them to indemnify, to the extent permitted by law, directors and officers of the Companies, including officers of certain subsidiaries, against liabilities arising from the conduct of the Group's business. The directors of the Companies, the Group company secretary and the joint company secretary of Rio Tinto Limited, and certain employees serving as directors of certain eligible subsidiaries at the Group's request have also received direct indemnities consistent with these provisions. No amount has been paid under any of these indemnities during the year. The Group has purchased directors' and officers' insurance during the year. In broad terms, the insurance cover indemnifies individual directors and officers against certain personal legal liability and legal defence costs for claims arising out of actions taken in connection with Group business. It is a condition of the insurance policy that detailed terms and premiums paid cannot be disclosed.

Employment policies and communication

Information about the Group's employment policies and our employees is available on page 25.

Political donations

No donations were made during 2015 for political purposes in the EU, Australia or elsewhere, as defined by the UK Companies Act 2006.

Government regulations

Our operations in over 40 countries are subject to extensive laws and regulations imposed by local, state, provincial and federal governments. These regulations govern many aspects of our operations – how we explore, mine and process ore, conditions of land tenure and use, health, safety and environmental requirements, how we operate as a company including laws regarding securities, taxation, intellectual property, competition and foreign investment, provisions to protect data privacy, conditions of trade and export and infrastructure access. In addition to these laws, several operations are also governed by the provisions of specific agreements which have been made with governments. Some of these agreements are enshrined in legislation.

The geographic and product diversity of our operations reduces the likelihood of any single law or government regulation having a material effect on the Group's business as a whole.

Environmental regulations

Rio Tinto is subject to various environmental laws and regulations in the countries where it has operations. Rio Tinto measures its performance against environmental regulation by tracking and rating incidents according to their actual environmental and compliance impacts using five severity categories (minor, medium, serious, major, or catastrophic). Incidents with a consequence rating of major or catastrophic are of a severity that require notification to the relevant product group chief executive and the Rio Tinto chief executive immediately after the incident occurring.

In 2015, there were no environmental incidents at managed operations with a major or catastrophic impact.

During 2015, five operations incurred fines amounting to US$130,371 (2014: US$319,513). Details of these fines are reported in the performance section of the sustainable development report at: riotinto. com/sd2015.

Australian corporations that exceed specific greenhouse gas emissions or energy use thresholds have obligations under the Australian National Greenhouse and Energy Reporting Act 2007 (NGER). All Rio Tinto entities covered under this Act have submitted their annual NGER reports by the required 31 October 2015 deadline.

Further information on the Group's environmental performance is included in the sustainable development section of this Annual report, on pages 22 to 28, and on the website.

Greenhouse gas emissions

Greenhouse gas emissions (in million tCO_2-e)[a][b]

	2015	2014
Scope 1 [c]	**19.8**	21.9
Scope 2 [d]	**12.0**	12.4[g]
Total emissions [e]	**31.3**	33.8[g]
Ratios		
GH intensity index [f]	**78.9**	81.8[g]
GH intensity (tCO_2-e/t of product)	**0.070**	0.081[g]

(a) Rio Tinto's greenhouse gas emissions for managed operations are reported in accordance with requirements under Part 7 of The UK Companies Act 2006 (Strategic Report and Directors' Report) Regulations 2013. Our approach and methodology used for the determination of these emissions are available at: riotinto. com/sd2015/climate_change and riotinto. com/sd2015/glossary.

(b) Rio Tinto's greenhouse gas emission inventory is based on definitions provided by The World Resource Institute/ World Business Council for Sustainable Development Greenhouse Gas Protocol: A Carbon Reporting and Accounting Standard, March 2004.

(c) Scope 1 emissions include "emissions from combustion of fuel and operation of managed facilities". It includes emissions from land management and livestock management at those facilities.

(d) Scope 2 emissions include "emissions from the purchase of electricity, heat, steam or cooling".

(e) Total emissions is the sum of scope 1 and scope 2 emissions minus emissions that are associated with the generation of electricity, heat, steam or cooling supplied to others. These emissions exclude indirect emissions associated with transportation and use of our products reported on page 26.

(f) Rio Tinto greenhouse gas intensity index is the weighted emissions intensity for each of Rio Tinto's main commodities relative to the commodity intensities in the 2008 base year (set to 100). This index incorporates approximately 98 per cent of Rio Tinto's emissions from managed operations.

(g) Number restated to ensure comparability over time. Amendment due to changes in measurement and calculation methodologies or immaterial updates to data.

Exploration, research and development

The Group carries out exploration as well as research and development in support of its activities as described more fully under Exploration and Technology & Innovation on pages 40 and 41. Amounts charged for the year, net of any gains on disposal, generated a net loss before tax for exploration and evaluation of US$568 million (2014: US$783 million). Research and development costs were US$104 million (2014: US$112million).

Auditors

PricewaterhouseCoopers LLP and PricewaterhouseCoopers (together, PwC) are the auditors of Rio Tinto plc and Rio Tinto Limited respectively. PricewaterhouseCoopers LLP have indicated their willingness to continue in office as auditors of Rio Tinto plc and a resolution to reappoint them as auditors of Rio Tinto plc will be proposed at the 2016 annual general meetings. A separate resolution will seek authority for the Audit Committee to determine the remuneration of PwC. PricewaterhouseCoopers will continue in office as auditors of Rio Tinto Limited.

A copy of the declaration given by PricewaterhouseCoopers, as the Group's external auditors, to the directors in relation to the auditors' compliance with the independence requirements of the Australian Corporations Act 2001 and the professional code of conduct for external auditors is set out on page 201 in the financial statements.

No person who was an officer of Rio Tinto during 2015 was a director or partner of PwC at a time when they conducted an audit of the Group.

Each person who held the office of director at the date the board resolved to approve this report makes the following statements:

- so far as the directors are aware, there is no relevant audit information of which the auditors are unaware; and
- each director has taken all steps that he or she ought to have taken as a director to make him or herself aware of any relevant audit information and to establish that the auditors are aware of that information.

Fees for audit and non-audit services

The amounts payable to the Group's auditors, PwC, were:

	2015 US$m	2014 US$m
Audit fees [a]	**14.4**	14.7
Assurance services [b]	**1.8**	2.1
Taxation services	**0.9**	0.9
All other fees [c]	**1.3**	0.4
	18.4	18.1

(a) Audit fees relating to statutory audits.

(b) Assurance services in 2015 were mainly related to half year review procedures, sustainability assurance and other project related assurance services.

(c) All other fees include services in connection with other corporate projects.

Further information on audit and non-audit fees is set out in note 39 to the financial statements.

During the year, the Audit Committee reviewed the effectiveness of PwC for Group audit and local, statutory audit work. The evaluation took the form of a survey comprising a range of questions covering objectivity, quality and efficiency and was completed by individual Rio Tinto business units. The results of this survey and review were presented to the Audit Committee which concluded that PwC continued to provide a high-quality audit and an effective and independent challenge to management. The Audit Committee was satisfied with the external audit process and the independence of the external auditors.

PwC have been the external auditors since before the formation of the dual listed companies structure in 1995. For the reasons noted on page 60 the Audit Committee does not consider it necessary at the present time to undertake a tender process for the Group's external audit. Since 2002, PwC have followed the requirements of the Sarbanes-Oxley Act 2002 and APB Ethical Standards and rotated both the lead UK and Australian audit partners at least every five years. In the UK, the audit engagement partner was appointed in 2011, and in Australia the audit engagement partner was appointed in 2012. They are due to rotate after 2015 and 2016 respectively. This continued refreshing of the team brings new perspectives to the audit and promotes healthy debate between auditors and management as well as the Audit Committee.

Based on advice provided by the Audit Committee as set out in the report of the Audit Committee on pages 58 to 60, the directors are satisfied that the provision of non-audit services by PwC is compatible with the general standard of independence for auditors and the standards imposed by Australian, UK and US legislation.

Financial instruments

Details of the Group's financial risk management objectives and policies and exposure to risk are described in note 30 to the 2015 financial statements.

Board of directors

Key for committee memberships:

(A) Audit Committee

(R) Remuneration Committee

(N) Nominations Committee

(S) Sustainability Committee

(C) Chairman's Committee

(I) Independent

Jan du Plessis (R, N and C)
Chairman, BCom, LLB, CA (SA), age 62

Appointment: Director of Rio Tinto since 2008. Jan was appointed chairman in 2009. He is the chairman of the Nominations Committee.

Skills and experience: Jan, a South African and British citizen, became group finance director of Compagnie Financière Richemont, the Swiss luxury goods group, in 1988. In 2004, he was appointed chairman of British American Tobacco plc, a position which he held until 2009. Non-executive director and senior independent Non-executive director of Marks and Spencer Group plc from 2008 and 2012 respectively until March 2015.

External appointments (current and recent): Non-executive director and chairman of SABMiller plc since 2014 and July 2015 respectively.

Sam Walsh AO (C)
Chief executive, BCom (Melbourne), age 66

Appointment: Director of Rio Tinto since 2009. He was appointed chief executive in 2013.

Skills and experience: Sam, an Australian citizen, joined Rio Tinto in 1991, following 20 years in the automotive industry at General Motors and Nissan Australia. He has held a number of management positions during his career at Rio Tinto, including chief executive of the Aluminium group from 2001 to 2004, chief executive of the Iron Ore group from 2004 to 2009 and chief executive, Iron Ore and Australia from 2009 to 2013. Sam is a Fellow of the Australian Institute of Management, the Australasian Institute of Mining and Metallurgy, the Chartered Institute of Purchasing and Supply Management, the Australian Institute of Company Directors and the Australian Academy of Technical Science and Engineering. In 2010, he was appointed an Officer in the General Division of the Order of Australia.

External appointments (current and recent): Trustee of the Royal Opera House since 2014, Member of the Council of the International Council on Mining & Metals and a director of The International Council on Mining and Metals (UK) Limited since 2013, non-executive director of Seven West Media Limited from 2008 until 2013.

Chris Lynch (C)
Chief financial officer, BCom, MBA, age 62

Appointment: Director of Rio Tinto since 2011 (non-executive) and chief financial officer since 2013.

Skills and experience: Chris, an Australian citizen, has nearly 30 years' experience in the mining and metals industry. He was chief executive officer of the Transurban Group, an international toll road developer and manager with interests in Australia and North America, until 2012. His career has included seven years at BHP Billiton, where he was chief financial officer and then executive director and group president – Carbon Steel Materials. Prior to this, Chris spent 20 years with Alcoa Inc. where he was vice president and chief information officer based in Pittsburgh, and chief financial officer Alcoa Europe in Switzerland. He was also managing director of KAAL Australia Limited, a joint venture company formed by Alcoa and Kobe Steel.

External appointments (current and recent): Chief executive officer of the Transurban Group Limited from 2008 until 2012, commissioner of the Australian Football League from 2008 until 2014.

Robert Brown (A, N and I)
Non-executive director, BSc, age 71

Appointment: Director of Rio Tinto since 2010.

Skills and experience: Bob is a Canadian citizen and contributes his considerable experience in large, high-profile Canadian companies. He is chairman of Aimia Inc., a customer loyalty management provider, and serves on the board of BCE Inc. (Bell Canada Enterprises), Canada's largest communications company. He was previously president and chief executive officer of CAE Inc., a world leader in flight simulation and training. Before that he spent 16 years at Bombardier Inc., the aerospace and transportation company, where he was firstly head of the Aerospace Group and then president and chief executive officer. He has also served as chairman of Air Canada and of the Aerospace Industries Association of Canada. Bob was inducted to the Order of Canada as well as l'Ordre National du Québec. He has been awarded honorary doctorates from five Canadian universities.

External appointments (current and recent): Non-executive director of BCE Inc. and Bell Canada since 2009, non-executive director and chairman of Aimia Inc. since 2005 and 2008 respectively, non-executive director of Fier CPVC-Montreal L.P. from 2005 until 2014.

Megan Clark AC (S, N and I)
Non-executive director, BSc, PhD, age 57

Appointment: Director of Rio Tinto since 2014.

Skills and experience: Megan, an Australian citizen, was chief executive of the Commonwealth Scientific and Industrial Research Organisation (CSIRO) from 2009 until 2014. Prior to CSIRO, Megan held various mineral exploration, mine geology and strategy roles with Western Mining Corporation, was a director at NM Rothschild and Sons (Australia) and was vice president, Technology and subsequently vice president, Health, Safety, Environment, Community and Sustainability with BHP Billiton from 2003 to 2008. She holds a PhD in economic geology from Queen's University, Canada and is a Fellow of the Australian Academy of Technological Sciences and Engineering, the Australian Institute of Mining and Metallurgy and the Australian Institute of Company Directors. In 2014 she was appointed a Companion of the Order of Australia.

External appointments (current and recent): Member of the Monash University Council since 2014, non-executive director of CSL Limited since February 2016, member of the Australian advisory board of Bank of America Merrill Lynch since 2010, member of the Global Foundation board from 2014 until March 2015, member of the advisory board of the World Economic Forum's 2015 Global Risk Report from 2014 until February 2015, chief executive and director of CSIRO from 2009 to 2014, member of the Prime Minister's Science, Industry and Engineering Council from 2009 to 2014.

Ann Godbehere (A, N and I)
Non-executive director, FCPA, FCGA, age 60

Appointment: Director of Rio Tinto and chairman of the Audit Committee since 2010.

Skills and experience: Ann, a Canadian and British citizen, has more than 25 years' experience in the financial services industry. She spent ten years at Swiss Re, a global reinsurer, latterly as chief financial officer from 2003 until 2007. She was interim chief financial officer and executive director of Northern Rock bank after its nationalisation. Ann is a qualified accountant.

External appointments (current and recent): Non-executive director of UBS Group AG since 2014 and non-executive director of UBS AG since 2009, non-executive director of British American Tobacco plc since 2011, non-executive director and chairman of the audit committee of Prudential Public Limited Company since 2007 and 2009 respectively, non-executive director of Atrium Underwriting Group Limited from 2007 until 2014, non-executive director of Arden Holdings Ltd from 2007 until 2014.

Board of directors
continued

Richard Goodmanson (R, S, N and I)
Non-executive director, B. Econ, BCom, MBA, MCE, age 68

Appointment: Director of Rio Tinto since 2004 and chairman of the Sustainability Committee.

Skills and experience: Richard, a US citizen, was executive vice president and chief operating officer of DuPont until 2009. Prior to this he was president and chief executive officer of America West Airlines and senior vice president of operations for Frito-Lay, Inc., a subsidiary of PepsiCo. Richard has worked at senior levels for McKinsey & Co, where he led client service teams on major programmes of strategy development. He spent ten years in heavy civil engineering project management, principally in South East Asia, including the construction of the Hong Kong Subway System.

External appointments (current and recent): Non-executive director of Qantas Airways Limited since 2008.

Anne Lauvergeon (S, N and I)
Non-executive director, PhD, age 56

Appointment: Director of Rio Tinto since 2014.

Skills and experience: Anne, a French citizen, started her professional career in 1983 in the steel industry and in 1990 was named Adviser for Economic International Affairs at the French Presidency and Deputy Chief of its Staff in 1991. In 1995 she became a Partner of Lazard Frères & Cie, subsequently joining Alcatel Telecom as Senior Executive Vice President in 1997, where she was responsible for international activities and the Group's industrial shareholdings in the energy and securities sectors. She served as chairman and chief executive officer of COGEMA from 1999 until 2011 and chief executive officer of AREVA Group from 2001 until 2011.

External appointments (current and recent): Chairman of SIGFOX since 2014, non-executive director of American Express Company since 2013, non-executive director of Airbus Group NV since 2013, chairman and chief executive officer of French advisory company, A.L.P. SAS, non-executive director of Total SA from 2000 until May 2015, non-executive director of GDF SUEZ from 2001 until 2012, chief executive officer of AREVA Group from 2001 until 2011, and non-executive director of Vodafone plc from 2005 until 2014.

Michael L'Estrange AO (S, N and I)
Non-executive director, BA, MA (Oxon), age 63

Appointment: Director of Rio Tinto since 2014.

Skills and experience: Michael, an Australian citizen, joined the Australian Government's Department of Prime Minister and Cabinet in 1981. From 1989 to 1994, he worked in a range of policy advisory positions before he was appointed the inaugural executive director of the Menzies Research Centre in Canberra in 1995. In 1996, he was appointed by the prime minister as secretary to cabinet and head of the Cabinet Policy Unit. He served in that role until 2000 when he became Australia's high commissioner to the United Kingdom. He returned to Australia as secretary of the Department of Foreign Affairs and Trade from 2005 to 2009. In 2007, he was appointed as an Officer in the Order of Australia. Michael served as head of college of the National Security College at the Australian National University from 2009 until 2014 and he is a professor at the college.

External Appointments (current and recent): Director of the University of Notre Dame, Australia since 2014, and head of college of the National Security College at the Australian National University in Canberra from 2009 until 2014.

Hon. Paul Tellier (A, R, N and I)
Non-executive director, LLL, BLitt (Oxon), LL.D, C.C. age 76

Appointment: Director of Rio Tinto since 2007.

Skills and experience: Paul, a Canadian citizen, entered the civil service in the 1970s. He was clerk of the Privy Council Office and secretary to the Cabinet of the Government of Canada from 1985 to 1992. He became president and chief executive officer of the Canadian National Railway Company from 1992 to 2002. From 2002 until 2004, he was president and chief executive officer of Bombardier Inc., the aerospace and transportation company.

External appointments (current and recent): Member of the advisory board of General Motors of Canada since 2005, Chairman of Global Container Terminals Inc. from 2007 until December 2015, trustee of the International Accounting Standards Foundation from 2007 until 2012, co-chair of the Prime Minister of Canada's Advisory Committee on the Renewal of the Public Service from 2006 until 2014, strategic adviser to Société Générale (Canada) from 2005 until 2013, director of BCE Inc. (Bell Canada Enterprises) from 1999 until 2010, director of Bell Canada from 1996 until 2010, director of McCain Foods Limited from 1996 until 2014.

Simon Thompson (S, N and I)
Non-executive director, MA (Oxon), age 56

Appointment: Director of Rio Tinto since 2014.

Skills and experience: Simon, a British citizen, was an executive director of Anglo American plc, chairman and chief executive of the Base Metals Division, chairman of the Exploration Division and chairman of Tarmac. Prior to his career with Anglo American he held investment banking positions at S. G. Warburg and N M Rothschild.

External appointments (current and recent): Non-executive director and chairman of 3i Group plc since April and June 2015 respectively, chairman of Tullow Oil plc since 2012, non-executive director and senior independent director of AMEC Foster Wheeler plc from 2009 and 2014 respectively until May 2015, non-executive director of Sandvik AB from 2008 until May 2015, and non-executive director of Newmont Mining Corporation from 2008 until 2014.

John Varley (A, R, N and I)
Non-executive director, BA, MA (Oxon), age 59

Appointment: Director of Rio Tinto and chairman of the Remuneration Committee since 2011 and senior independent director since 2012.

Skills and experience: John, a British citizen, joined Barclays PLC in 1982 after working as a solicitor. He was chief executive of Barclays from 2004 until 2010. During a 28-year career with the bank he held several senior positions, including chairman of the Asset Management division, group finance director and deputy chief executive.

External appointments (current and recent): Non-executive director of BlackRock Inc. since 2009, director of Barclays PLC and Barclays Bank PLC from 1998 until 2010, non-executive director and senior independent director of AstraZeneca plc from 2006 and 2012 respectively until April 2015, chairman of Marie Curie Cancer Care since 2011 and chairman of Business Action on Homelessness since 2006.

Directors who left the board

Michael Fitzpatrick

Non-executive director, BEng, BA (Oxon), age 63

Appointment: Director of Rio Tinto from 2006 until May 2015.

Skills and experience: Michael is chairman of Treasury Group Limited, a Sydney-based incubator of fund management companies, chairman of the Australian Football League and a former chairman of the Australian Sports Commission. After leaving professional football in 1983 and working for the Treasury of the State of Victoria and with investment banks in New York, Michael founded the pioneering infrastructure asset management company Hastings Funds Management Limited in 1994. He was a Rhodes Scholar in 1975.

External appointments (current and recent): Non-executive director of LatAm Autos Limited since November 2014, non-executive director of Carnegie Wave Energy Limited since 2012, non-executive director and chairman of Infrastructure Capital Group Limited since 2009, chairman of the Treasury Group Limited since 2005, commissioner and chairman of the Australian Football League since 2003 and 2007 respectively, director of the Walter & Eliza Hall Institute of Medical Research since 2001.

Lord Kerr of Kinlochard (S, N and I)

Non-executive director, GCMG, MA (Oxon), age 74

Appointment: Director of Rio Tinto from 2003 until May 2015.

Skills and experience: John, a British citizen, was a member of the UK Diplomatic Service for 36 years and headed it from 1997 to 2002 as permanent undersecretary at the Foreign Office. He previously served in HM Treasury and in the former Soviet Union and Pakistan, and was ambassador to the European Union and the US. He has been an Independent member of the House of Lords since 2004.

External appointments (current and recent): Advisory board member of Edinburgh Partners Limited since 2012, director and vice chairman of Scottish Power Limited since 2009 and 2012 respectively, chairman of the Centre for European Reform (London) since 2008, vice president of the European Policy Centre (Brussels) since 2007, trustee of the Carnegie Trust for the Universities of Scotland since 2005, director of The Scottish American Investment Company plc since 2002, deputy chairman of Royal Dutch Shell plc from 2005 until 2012, chairman of the Court and Council of Imperial College London from 2005 until 2011, advisory board member of BAE Systems from 2008 until 2011, trustee of the National Gallery in London from 2002 until 2010, trustee of the Rhodes Trust from 1997 until 2010.

Company secretaries

Eleanor Evans

LLB (Lond), Solicitor, age 49

Appointment: Group company secretary of Rio Tinto since 2013.

Skills and experience: Eleanor joined the Group as Group company secretary in 2013. She is company secretary of Rio Tinto plc and joint company secretary of Rio Tinto Limited. She is a member of the Disclosure Committee and the Ore Reserves Steering Committee, and secretary to the Investment Committee.

Prior to joining Rio Tinto, Eleanor was general counsel and company secretary at Amec Foster Wheeler plc and chief legal officer and company secretary at Cobham plc. In both roles Eleanor was responsible for legal, compliance and secretariat matters globally, was a member of the executive committee and the risk committee, and was secretary to the board of directors and their principal committees. Eleanor commenced her career as a solicitor specialising in corporate and financial law with Norton Rose Fulbright and in her earlier career held senior legal roles at The BOC Group plc and Corus Group plc.

External appointments (current and recent): Eleanor is a member of the executive committee of GC100, the Association of General Counsel and Company Secretaries of the FTSE 100, and a trustee of the StepChange Foundation UK, a charity.

Tim Paine

BEc, LLB, FGIA, FCIS, age 52

Skills and experience: Tim joined the Group as joint company secretary of Rio Tinto Limited in 2012. He has over 20 years' experience in corporate counsel and company secretary roles, including at ANZ Bank, Mayne Group, Symbion Health and Skilled Group. Tim commenced his career as a solicitor in private practice and has also managed his own consulting company.

External appointments (current and recent): He has no external appointments.

Executive Committee

Hugo Bague
MA (Linguistics), age 55

Hugo Bague was appointed Group executive, Organisational Resources in 2013 after joining Rio Tinto as global head of Human Resources in 2007. Previously he worked for Hewlett-Packard where he was the global vice president, Human Resources for the Technology Solutions Group, based in the US. Prior to this he worked for Compaq Computers, Nortel Networks and Abbott Laboratories based in Switzerland, France and Germany.

He has been a non-executive director and member of the nominating and governance and compensation committees of Jones Lang LaSalle Incorporated, a global real estate services firm, since 2011.

Alfredo Barrios
PhD (Energy Economics), BSc (Physics), MSc (Management), age 50

Alfredo was appointed chief executive, Aluminium in 2014. He joined Rio Tinto after a wide-ranging career in leadership positions with BP plc. His most recent role was executive director and executive vice president Downstream at TNK-BP, based in Moscow, where he was directly responsible for the refining, trading, supply, logistics, and marketing businesses.

Alfredo has held board positions in a number of companies, including CLH (Spain) from 2007 to 2011 where he was chairman of the Audit Committee, and OAO NGK Slavneft (Russia) from 2012 until 2013. He was president of the Spanish National Oil Industry Association (AOP) from 2009 until 2011.

Alan Davies
BBus (Acctcy) LLB, LLM, FCA, age 45

Alan was appointed chief executive, Diamonds & Minerals in 2012. He joined the Group in 1997 and has held management positions in Australia, London and the US for the Iron Ore and Energy businesses. Prior to his current role, Alan was president, international operations for Rio Tinto's Iron Ore business with global accountability for operations and projects in Canada, India and Guinea, and was also previously chief financial officer of the Iron Ore business. Alan assumed responsibility for the Uranium business in February 2015. Alan is a Fellow of the Institute of Chartered Accountants in Australia.

He was a director of the Art Gallery of Western Australia from 2010 to 2012. In 2015, Alan was appointed to the Rolls Royce Holdings plc board of directors as an independent, non-executive director, and a member of the audit and nominations and governance committees.

Andrew Harding
BEng (Mining Engineering), MBA, age 49

Andrew Harding was appointed chief executive, Iron Ore in 2013. Prior to his current role, Andrew spent three years as chief executive, Copper, where he was responsible for a range of mines and projects including the development of the world-class Oyu Tolgoi copper-gold mine in Mongolia. Andrew joined Rio Tinto in 1992 and spent seven years in Iron Ore. He has also held a range of positions in Technology & Innovation, Energy and Aluminium and was president and chief executive officer of Kennecott Utah Copper.

He was a director of Turquoise Hill Resources Ltd between 2009 and 2010 and between 2011 and 2013.

Jean-Sébastien Jacques
MSc, age 44

Jean-Sébastien Jacques was appointed chief executive officer of Rio Tinto's Copper group in January 2013 and chief executive of the Copper & Coal group in February 2015. Jean-Sébastien joined Rio Tinto in October 2011 as the president, International Operations in the Copper group. Prior to joining Rio Tinto, Jean-Sébastien spent more than 15 years working globally across Europe, South East Asia, India and the US in a wide range of operational and functional positions in the aluminum, bauxite and steel industries. He served as group director, Strategy for Tata Steel Group from 2007 to 2011. Jean-Sébastien holds a Master of Science from École Centrale Paris. He is currently serving as chairman of the International Copper Association.

Greg Lilleyman
BEng (Construction), age 49

Greg was appointed Group executive, Technology & Innovation in January 2014. He joined the Group in 1990 and held a number of operational roles across the Pilbara, Hunter Valley and Canada with both the Iron Ore and Energy businesses. In 2011 Greg was appointed president, Pilbara Operations for Rio Tinto Iron Ore and in 2013 assumed the role of head of Productivity Improvement with Technology & Innovation.

Greg was a board member of the Australian Institute of Management of Western Australia from 2012 until 2013, a board member of the Energy & Minerals Institute from 2011 until 2013, and a director of the Chamber of Minerals and Energy of Western Australia from 2008 until 2013, holding the position of president from 2011 until 2013 and a board member of the Curtin University Foundation from 2012 until 2015.

Debra Valentine
BA (History), JD, age 62

Debra was appointed Group executive, Legal & Regulatory Affairs in 2009 having joined Rio Tinto as global head of Legal in 2008. She previously worked at United Technologies Corporation in the US where she was vice president, deputy general counsel and corporate secretary. Before then, she was a partner with the law firm O'Melveny & Myers, in Washington DC. Debra served as general counsel at the US Federal Trade Commission from 1997 to 2001.

She was appointed non-executive director of Lamprell plc in 2015 and a member of the remuneration and nominations and governance committees. She has been a member of the North American Advisory Council at Chatham House since 2013, the UK-Japan 21st Century Group since 2014 and the "Your Life" Corporate Advisory Council Board since 2014.

Executive director members
Sam Walsh and Chris Lynch were also members of the Executive Committee in 2015 through their positions as chief executive and chief financial officer respectively. Their biographies are shown on page 51.

Corporate governance

Rio Tinto takes a unified approach to corporate governance to comply with the regulatory obligations associated with its three principal stock exchange listings in the UK, Australia and the US.

Statement of compliance with governance codes and standards in 2015

In compiling this report, the directors have referred to the September 2014 edition of the UK Corporate Governance Code (the Code), the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations (3RD edition) (the ASX Principles), and the New York Stock Exchange (NYSE) Corporate Governance Standards (the NYSE Standards).

Throughout 2015, and at the date of this report, the Group applied the principles of, and was compliant with the provisions of, the ASX Principles and, except in the one instance noted below, with the Code.

The Group has not, as required by Code provision C.3.7, put its external audit contract out to tender within the last ten years. A discussion of the Group's position on the timing of the audit tender and the reason for the delay is set out on page 60 of this report.

Rio Tinto plc, as a foreign issuer with American Depositary Shares listed on the NYSE, is obliged by the NYSE Standards to disclose any significant ways in which its practices of corporate governance differ from the NYSE Standards.

The Company has reviewed the NYSE Standards and believes that its practices are broadly consistent with them, with the following exceptions where the literal requirements of the NYSE Standards are not met due to differences in corporate governance between the US and UK/Australia.

The NYSE Standards state that companies must have a nominating/corporate governance committee composed entirely of independent directors which, in addition to identifying individuals qualified to become board members, develops and recommends to the board a set of corporate governance principles applicable to the company. Rio Tinto has a Nominations Committee comprising the chairman and independent non-executive directors, information about which is set out on page 61. That committee does not develop corporate governance principles for the board's approval. The board itself develops such principles.

Under US securities law and the NYSE Standards, the company is required to have an audit committee that is directly responsible for the appointment, compensation, retention and oversight of the work of external auditors. While the Rio Tinto Audit Committee makes recommendations to the board on these matters, and subject to legal and regulatory requirements on oversight of audit tenders, the ultimate responsibility for the compensation of the external auditors and the appointment of the external auditors of Rio Tinto plc rests with the shareholders.

Further information about the corporate governance framework is available in the "Corporate governance" section of Rio Tinto's website.

The board

Rio Tinto plc and Rio Tinto Limited have a common board of directors. The directors are responsible for the success of the Group and, through the independent oversight of management, are accountable to shareholders for the performance of the business.

Role and responsibilities

The principal role of the board is to set the Group's strategy and to review regularly its strategic direction. In doing this, the board also has responsibility for corporate governance.

A formal schedule of matters reserved by the board has been established by the directors. This covers areas such as the Group's strategy, major investments, acquisitions and divestments and oversight of risk. It is available on the website.

Responsibility for day-to-day management of the business is delegated to the chief executive and other members of the Executive Committee under a Group delegation of authorities. A number of management committees support the chief executive and the Executive Committee in the performance of their duties.

As part of the annual financial planning process, the board sets annual performance targets, which include personal and business performance measures, under the Group's short-term incentive plan (detailed on page 80) for the chief executive. These performance targets are determined by the Remuneration Committee on behalf of the board. The chief executive establishes targets for the Executive Committee. Those objectives are cascaded throughout management teams.

Details of the terms of appointment of the directors and members of the Executive Committee are discussed in the Remuneration Policy section of the Remuneration Report on pages 75 and 77. Details of the performance of the executive directors and other members of the Executive Committee are discussed in the Implementation Report section of the Remuneration Report on pages 79, 81 to 85 and pages 86 to 88 respectively.

Board balance and independence

Board composition

The names, skills and experience of each director together with their terms in office are shown in the biographical details on pages 51 to 53. Details of changes to the board during 2015 and in the year to date are set out in the Directors' report on page 53.

Director independence

The tests of independence of a non-executive director vary between the jurisdictions where Rio Tinto has listings. The Nominations Committee has adopted a formal policy for the determination of the independence of the non-executive directors.

Among the key criteria of the independence policy are independence from management and the absence of any business relationship which could materially interfere with the director's independence of judgement and ability to provide a strong, valuable contribution to the board's deliberations, or which could interfere with the director's ability to act in the best interests of the Group. Where contracts in the ordinary course of business exist between Rio Tinto and a company in which a director has declared an interest, these are reviewed for materiality both to the Group, and the other party to the contract. "Material" is defined in the policy as being where the relationship accounts for more than two per cent of either party's consolidated gross revenue per annum, although the test also takes other circumstances into account. The Code includes criteria to assess independence where a director has served on the board for more than nine years from the date of their first election by shareholders.

The chairman was considered independent upon his appointment under the Code, and in the board's view he continues to satisfy the tests for independence under the ASX Principles and the NYSE Standards.

After rigorously applying the criteria of the independence policy, the board is satisfied that all of its non-executive directors are and remain independent. Richard Goodmanson, who was elected by shareholders in 2005, is not standing for re-election in 2016 and will retire at the end of the annual general meeting of Rio Tinto Limited in May 2016.

Executive directors' other directorships

Executive directors may be invited to become non-executive directors of other companies. The Nominations Committee, on behalf of the board, operates a procedure under which approval may be given to accept such invitations, recognising the benefit to be derived to the individual and to Rio Tinto from such appointments. Details of the chief executive's external appointments are set out on page 51.

Election and re-election

The directors may appoint additional members to join the board during the year. Directors appointed in this way will be subject to election by shareholders at the first annual general meetings after their appointment. In subsequent years, the directors are expected to submit themselves for re-election at the annual general meetings each year.

Non-executive directors are normally expected to serve at least six years and would not typically serve more than nine years. Non-executive directors serving more than nine years are subject to rigorous independence review by the Nominations Committee.

All directors apart from Richard Goodmanson will offer themselves for re-election at the annual general meetings in 2016 and further details about each of them are set out on pages 51 to 53 and in the notices of the annual general meetings.

Governance processes

In 2015, there were nine scheduled board meetings. Details of the directors' attendance at all of the board and committee meetings held in 2015 are set out on the following page.

The board has regular discussions with senior management on the Group's strategy. These discussions typically include presentations given by senior management during the year. The board attends an annual two-day strategy meeting with the Executive Committee, which includes broader, detailed review sessions on the Group's strategic direction. The outputs from this event help underpin the board's annual financial planning exercise and provide strategic direction and focus to the Executive Committee.

Directors receive timely, regular and appropriate information to enable them to fulfil their duties. They also have direct access to the advice and services of the Group company secretary, who is accountable to the board and advises the chairman, and, through the chairman, the board on all governance matters. The directors are also able to obtain, through the Group company secretary, independent professional advice at the Group's expense.

The chairman and non-executive directors meet, typically at the start of each board meeting, without the executive directors present, to create an opportunity for non-executive directors to raise any issues in private session.

In addition, the directors are in regular informal communication with members of the Executive Committee and other members of senior management. This helps to foster an open and regular exchange of knowledge and experience.

All new non-executive directors undertake a full, formal and tailored induction on joining the board. The board is provided with training and development opportunities during the year. The directors regularly attend site visits to the Group's operations around the world and to meet with employees and, from time to time, shareholders and other key stakeholders. In 2015, new members of the board visited our iron ore mines, rail and port facilities in the Pilbara, Western Australia, and the full board visited our recently modernised aluminium smelting operations in Kitimat, Canada as well as our bauxite mining operations in Weipa, Australia. These visits are designed to ensure directors have appropriate knowledge of the company and access to its operations and staff.

Progress against our priorities

Progress made towards achieving the priorities set by the board during 2015 is set out on pages 10 and 11.

Performance evaluation

An exercise is undertaken periodically to evaluate the effectiveness of the board, board committees and individual directors.

In February 2015 the board reviewed the outcome of the 2014 evaluation of its performance. The Chairman's Committee reviewed progress against the recommended actions from that evaluation in July 2015, and reported its findings to the board in August 2015.

The board decided to adjust the timetable for the 2015 evaluation to better suit its annual schedule. In the fourth quarter of 2015, the board engaged Lintstock Limited, a specialist corporate governance consultancy with no other connections to the company, to undertake an independent evaluation of the board and its committees.

The first stage of the process involved agreeing questions with the chairman and the committee chairmen for discussion with directors and the Group company secretary in interviews to be conducted by Lintstock during the first half of 2016.

The findings from these questionnaires and interviews will form the basis of evaluation reports for the board and its committees.

These will contain recommended actions which will be discussed with the chairman and the chairmen of the committees ahead of a full review at meetings of the board and its committees expected to occur in mid-2016.

The non-executive directors, led by the senior independent director, are responsible for the performance evaluation of the chairman. Lintstock will also facilitate this review through a questionnaire and interviews and report to the senior independent director. Non-executive directors will meet to give their views and the senior independent director will also seek the views of the executive directors. The senior independent director will give feedback on the chairman's performance to him at the conclusion of this process.

The chairman continues to be responsible for the assessment of each individual director's performance and contribution.

Directors' attendance at board and committee meetings during 2015

	Board scheduled [c]	Audit Committee [c]	Remuneration Committee [c]	Sustainability Committee [c]	Nominations Committee [c]	Chairman's Committee [c] [d]
Jan du Plessis	9/9	–	7/7	–	4/4	13/13
Chris Lynch	9/9	–	–	–	–	11/13
Sam Walsh	9/9	–	–	–	–	12/13
Robert Brown	9/9	6/6	–	–	4/4	–
Megan Clark	9/9	–	–	5/5	–	–
Michael Fitzpatrick[a]	4/4	2/2	4/4	–	2/2	–
Ann Godbehere	9/9	6/6	–	–	4/4	–
Richard Goodmanson	9/9	–	7/7	5/5	4/4	–
Lord Kerr[b]	4/4	–	–	2/2	2/2	–
Anne Lauvergeon	9/9	–	–	5/5	4/4	–
Michael L'Estrange	9/9	–	–	5/5	4/4	–
Paul Tellier	9/9	6/6	7/7	–	4/4	–
Simon Thompson	9/9	–	–	5/5	4/4	–
John Varley	9/9	6/6	7/7	–	4/4	–

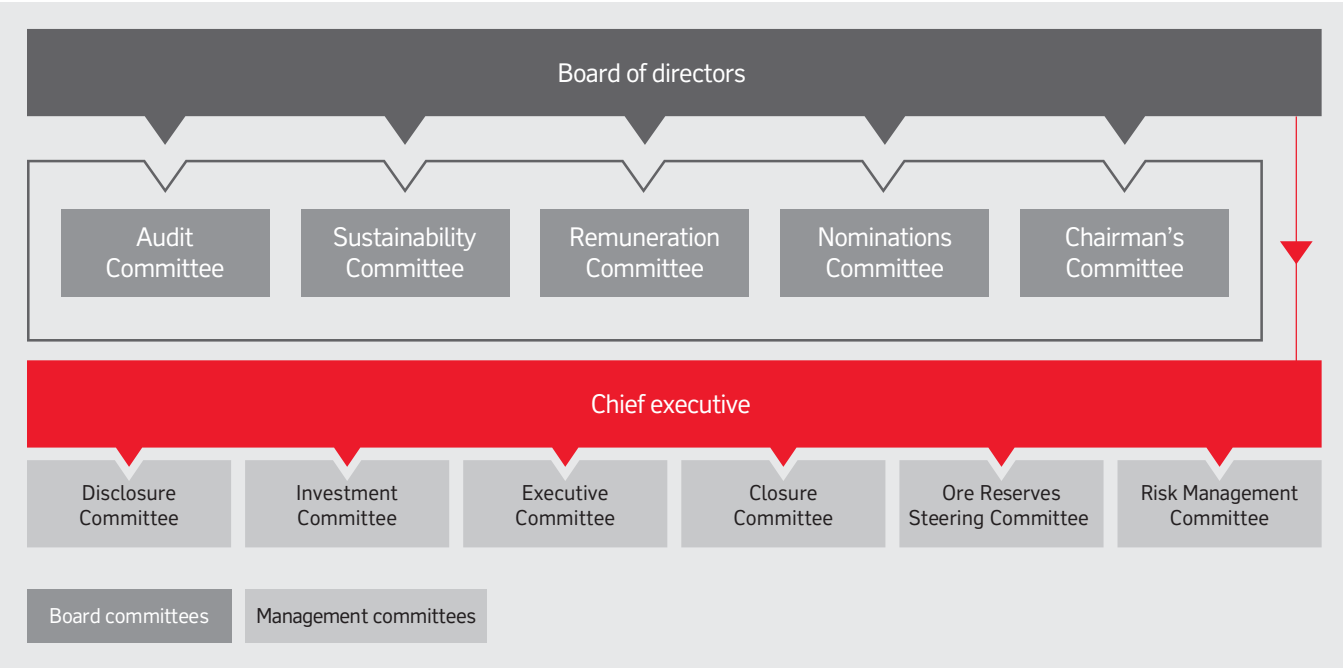
(a) Stood down from the board on 7 May 2015.
(b) Stood down from the board on 7 May 2015.
(c) The number of meetings attended/maximum number the director could have attended.
(d) This included two meetings during which Mr Lynch was in transit to Australia to present the full and half year results. In both cases, Mr Lynch attended a sub-committee meeting with the Group company secretary to finalise the results announcements.

Governance structure

The board has established committees which are responsible for audit, remuneration, sustainability and nominations issues. In addition, a Chairman's Committee operates under delegated authority between scheduled board meetings. These committees support the board in ensuring that high standards of corporate governance are maintained across the Group.

The committees are governed by terms of reference, set and approved by the board, which are reviewed annually. The terms of reference of the Audit, Nominations, Remuneration and Sustainability Committees may be viewed in the "Corporate governance" section of the website.

The chief executive is assisted by the key management committees noted below in monitoring performance and delivering Rio Tinto's strategy.



Board committees

Audit Committee report
Chairman's introduction

Dear shareholders

The Audit Committee fulfils an important oversight role on behalf of the board and is focused on the quality of the Group's financial reporting and the effectiveness both of the Group's systems of internal control and its risk management processes. In 2015 our activities included:

- Reviewing asset carrying values, cash generating units, pension valuations and other material accounting matters.
- Reviewing Group Audit & Assurance findings and approving the Internal Audit Plan and budget and the associated resources.
- Reviewing internal controls over financial reporting (SOx) testing results.
- Monitoring the effectiveness of the Group's internal controls systems.
- Reviewing reports from the head of Group Compliance.
- Monitoring the effectiveness of the Group's risk management systems.
- Monitoring legal and tax matters and reviewing associated accounting provisions.
- Considering the requirement for the Annual report and accounts, taken as a whole, to be fair, balanced and understandable.
- Assessing management's projections under different scenarios to allow the board to make its assessment of the longer-term viability of the company.

We have also focused on ensuring the independence and effectiveness of the external audit processes, having regard to the legal and regulatory requirement to tender the external audit by 2020. This included:

- Holding discussions between the Committee and the external auditor regarding the rotation of the UK audit engagement partner after the 2015 year end and the introduction to the Committee from November 2015 of PwC's agreed replacement, Mr Paul Barkus. The Committee also agreed the replacement of the Australian audit engagement partner after the 2016 year end.
- Conducting ongoing monitoring of all non-audit activities performed by the Group's external auditors and approval of their audit engagement contracts and compensation.
- Reviewing management's evaluation of the effectiveness of PwC for Group audit and local statutory audit work, discussed in more detail below, as well as the outcomes of the Audit Quality Review of PwC by the Financial Reporting Council in the UK and the Quality Assurance Department of the Institute of Chartered Accountants in England and Wales.

The Committee's additional work during 2015 included undertaking training and development on relevant accounting topics, considering the findings from the 2014 evaluation of the Committee's performance, and reviewing the impact of the EU Statutory Audit Amending Directive both on the regulatory environment in which the Group operates and on the way that the Committee will discharge our terms of reference in 2016.

In early 2016, the Committee considered, at the request of the board, the draft 2015 Annual report and accounts, to assess whether it is, taken as a whole, fair, balanced and understandable.

During the remainder of 2016 the Committee will follow our annual schedule of meetings and topics for discussion and approval and we will report on the same in 2017.

Ann Godbehere
Audit Committee chairman

2 March 2016

Membership

Members of the Committee are Ann Godbehere (chairman), Robert Brown, Paul Tellier and John Varley. Michael Fitzpatrick stepped down from the Committee with effect from 7 May 2015 upon his retirement from the board.

Key responsibilities

The objective of the Audit Committee is to assist the board in monitoring decisions and processes designed to ensure the integrity of financial reporting, sound systems of internal control and risk management.

The Committee's terms of reference set out its main responsibilities, and are available to view on the website. The Committee is responsible for:

- financial reporting;
- internal control, including internal control over financial reporting;
- internal audit and assurance;
- the external auditors (appointment and relationship);
- the effectiveness of the risk management framework; and
- the integrity and compliance programme including the Group's *Speak-OUT* whistleblowing programme.

In carrying out its responsibilities, the Committee has full authority to investigate all matters that fall within its terms of reference. Accordingly, the Committee may:

- obtain, through the Group company secretary, independent professional advice in the satisfaction of its duties at the cost of the Group; and
- have direct access to the resources of the Group as it may reasonably require including the external and internal auditors.

Significant issues relating to the financial statements

The significant issues considered by the Committee in relation to the financial statements are set out in the table below, together with a summary of how the issue was addressed by the Committee. In addition, the Committee and the external auditors have discussed the significant issues addressed by the Committee during the year and the areas of particular audit focus, as described in the Independent Auditors' Report on pages 202 to 208.

Significant issues considered by the Committee in relation to the financial statements	How the issue was addressed by the Committee
Review of carrying value of cash-generating units and impairment charges	The Committee assessed management's determination of cash-generating units, review of impairment triggers and consideration of potential impairment charges and reversals over the course of the year. For cash-generating units dependent upon major capital spend (Oyu Tolgoi and Simandou) and for commodities with weak demand outlook (eg uranium) the Committee considered the key judgments made by management in relation to discount rate, forecast commodity prices and actions being taken to recover value. The Committee reviewed disclosures related to the sensitivity of recoverable amounts in note 6 on page 130 and the impairment charge of US$2.8 billion recorded in 2015.
Estimate of provision for closure, restoration and environmental obligations	The Committee reviewed the significant changes in the estimated provision for closure, restoration and environmental obligations by product group and legacy management. It considered management's proposed accounting for such changes in this complex area including, where appropriate, the treatment of long-dated monitoring and maintenance costs. At 31 December 2015, the Group's balance sheet included provision for close-down, restoration and environmental obligations of US$8.4 billion as described in note 26 on page 144.
Policy for items excluded from underlying earnings	The Committee approved the Group's policy for exclusion of certain items from underlying earnings and confirmed consistent application of this policy year on year. The Committee reviewed action taken by management in late 2015 to reduce the foreign currency retranslation volatility arising from currency exchange gains and losses on US dollar net debt and intragroup balances by converting US dollar debt to local currency in Canada and Australia. The items excluded from underlying earnings amounted to US$5.4 billion and are described in note 2 on page 125.
The Group's tax exposures	The Committee considered management's assessment of the Group's tax exposures including the recoverability of deferred tax assets and the appropriateness of provisions for uncertain tax positions. At 31 December 2015, the Group's balance sheet included a net tax payable liability of US$234 million.
Defined benefit pension plan surpluses and deficits	During 2015 the Committee received a comprehensive update on the status of funding, investment and governance of pensions and other retirement benefits provided to current and former employees of the Group.
Going concern basis for the preparation of the financial statements	The Committee critically assessed the projections of future cash flows under different scenarios and compared these with cash balances and committed facilities available to the Group. The Committee satisfied itself that it was appropriate to recommend to the board the adoption by the Group of the going concern basis of preparation.
Finance transformation	The Committee reviewed the progress of the Group's finance transformation programme which includes the centralisation and outsourcing of certain finance activities (excluding key controls) to a third-party provider. Group Audit & Assurance has performed a series of point-in-time reviews of the effectiveness of the finance transformation governance structure and the transition of certain processes to the outsourcing provider and reported on the findings from these reviews to the Committee.

Governance processes

The Committee met six times in 2015. The chairman of the board, chief financial officer, other senior management and external and internal auditors regularly attended the Committee's meetings. The Committee carries out its business following an agreed annual cycle of meetings and topics for consideration.

The members of the Committee are independent and free of any relationship that would affect their impartiality in carrying out their responsibilities. The members meet the independence requirements of the Code, the ASX Principles and the NYSE Standards. The Committee meets the composition, operation and responsibility requirements of the ASX Principles.

The Committee is also bound by SEC requirements for audit committees' financial experts and the requirements of the Code and ASX Principles that at least one committee member should have recent and relevant financial qualifications and experience. Ann Godbehere, chairman of the Committee, is considered by the board to have recent and relevant financial experience, and financial qualifications, and has been designated the Committee's financial expert. All other members of the Committee are, in the opinion of the board, deemed to be financially literate by virtue of their business experience.

The Committee considered reports from management in order to assess the quality and effectiveness of the Group's internal control systems, including the effectiveness of the Group's internal controls over financial reporting and the Group's disclosure controls and procedures in accordance with sections 404 and 302 of the Sarbanes-Oxley Act 2002. The Committee separately received objective reports from PwC and Group Audit & Assurance on the activities undertaken in reviewing and auditing the control environment.

The Committee meets privately with the heads of Group Audit & Assurance and Compliance from time to time without management present and the chairman of the Committee has regular discussions with them.

The Committee maintains a clearly defined policy for the pre-approval of permitted services provided by the Group's external auditors, PwC. For non-audit services, because of their knowledge, experience and/or for reasons of confidentiality, it can be more efficient or necessary to engage the external auditor rather than another party.

At half year and year end, the chief financial officer and the external auditors submit to the Committee a schedule of the services that were performed by PwC during the period. The Audit Committee may impose a financial limit on the total value of other permitted services that can be provided. Any non-audit service provided by the external auditors, where the expected fee exceeds a pre-determined level, must be subject to the Group's normal tender procedures.

In exceptional circumstances, the chief financial officer is authorised to engage the external auditors to provide such services without going to tender, but if the fees are expected to exceed certain pre-determined limits the chairman of the Committee must give prior approval of the engagement. All of the engagements for services provided by PwC were either within the pre-approval policies or separately approved by the Committee. The Committee members are satisfied that the provision of non-audit services by PwC in accordance with this procedure is compatible with the general standard of independence for auditors imposed by relevant regulations. A breakdown of the categories of permitted non-audit services and the fees paid to PwC for such services is shown in note 39 on page 166.

The external auditors attended all six Committee meetings during the year. In advance of the Committee meetings, the audit partners brief the chairman of the Committee on key matters. Private discussion sessions were held between PwC and the Committee without management present to discuss the status of the audit and the nature of interactions with management.

During the year, the Committee reviewed the effectiveness of PwC for Group audit and local statutory audit work. The evaluation, managed by the Group's financial controllers, took the form of a survey comprising a range of questions covering objectivity, quality and efficiency, and was completed by individual Rio Tinto business units. The results of this survey and review were assessed by the Committee which concluded that PwC continued to provide a high-quality audit and effective and independent challenge to management. The Committee was satisfied with the external audit process and that the independence of the external auditors was in no way compromised.

PwC have been the external auditors since before the formation of the DLC structure in 1995, and their reappointment has not been subject to a tender during that time. In the UK, the audit engagement partner Richard Hughes was appointed in 2011 and will rotate off the account after the 2015 year-end audit process. As noted above his role will be assumed by Paul Barkus. In Australia the audit engagement partner Paul Bendall was appointed in 2012 and is due to transition off the account after the December 2016 year-end audit process. His role will be assumed by Debbie Smith.

The Committee considers its recommendations to the board on the appointment and reappointment of auditors annually, and specifically has responsibility for establishing formal and transparent arrangements with PwC. The Committee has reviewed the timetable for tendering, taking into account all relevant regulation and guidance. In light of this, the Committee proposes to tender the audit in 2018 with the new auditors appointed no later than for the 2020 financial year.

The Committee continues to believe that the requirements of good governance and the needs of Rio Tinto are best served by tendering in the above timeframe for the following reasons:

- The Group continues to undergo significant business process change through the cost saving programme, which includes outsourcing of certain activities (including the finance transformation programme). A measured rotation timetable maintains stability in the independent oversight provided by the external auditors while the business fully implements the changes to maximise efficiency and effectiveness.
- Rio Tinto draws on expertise from other accounting firms and therefore a rotation of external audit services will require careful planning of transition periods to ensure that all services are fully contracted throughout the rotation process.

Rio Tinto ensures independence through other means, including detailed review, challenge and reporting of all work performed by accounting firms. A summary is presented annually to the Audit Committee of the fees incurred and nature of work performed. Further information on fees paid to PwC in 2015 for audit and non-audit services are set out on page 50 of the Directors' report.

However, the Committee keeps the external audit arrangements under regular review and if it deemed it appropriate may accelerate the planned appointment of new auditors at any time.

The Company confirms that it complied with the provisions of the Competition and Markets Authority's Order for the financial year under review.

Sustainability Committee report

Members of the Committee are Richard Goodmanson (chairman), Anne Lauvergeon, Michael L'Estrange, Simon Thompson and Megan Clark. Lord Kerr stood down from the Committee with effect from 7 May 2015 upon his retirement from the board. Megan Clark will assume chairmanship of the Committee upon Richard Goodmanson's retirement from the board in May 2016.

Key responsibilities

The Committee assists the board with overseeing strategies designed to manage social and environmental risks, overseeing management processes and standards, and achieving compliance with social and environmental responsibilities and commitments. The Committee reviews the effectiveness of management policies and procedures relating to safety, health, employment practices, relationships with neighbouring communities, environment, human rights, land access, political involvement and sustainable development. The Committee's terms of reference set out its main responsibilities, and are available to view on the website.

Governance processes

In 2015, the Committee met five times. The chairman of the board, chief executive, and other senior management regularly attend its meetings. The Committee carries out its business following an agreed annual cycle of meetings and topics for consideration.

The members of the Committee are all independent in accordance with the independence policy adopted by the Nominations Committee.

2015 activities

In 2015 the Committee:

- Reviewed key risks associated with process safety and communities and social performance, and management's plans for tackling them.
- Reviewed work plans formulated for health, safety, environment, communities and employment practices, and assurance over selected areas within the Committee's terms of reference.
- Undertook reviews around major risk areas, including geotechnical risk and water management, as well as a review of the framework in place to manage the Group's material risks for which the Committee has oversight.
- Received updates on findings following the fatalities at IOC (in late 2014), QIT Madagascar Minerals, Zululand Anthracite Colliery, Sorel-Tracey and Guinea.
- Considered the findings from the 2014 evaluation of the Committee's performance.

We draw to your attention the Sustainable development report on pages 22 to 28 of this report. In 2016 the Committee will conduct its agreed annual cycle of meetings and topics for consideration including the outcome of the 2015 evaluation of the Committee.

Chairman's Committee report

Members of the Committee are Jan du Plessis (chairman), Sam Walsh and Chris Lynch.

Key responsibilities

The Committee acts on behalf of the board between scheduled board meetings either in accordance with authority delegated by the board or as specifically set out within its terms of reference. It supports the functioning of the board and ensures that the business of the board and its committees is properly planned and aligned with management. When mandated by the board, the Chairman's Committee will consider urgent matters between board meetings. Other than for the chairman of the board whose remuneration is set by the Remuneration Committee, the Committee performs the annual review of non-executive directors' fees and makes a recommendation to the board.

Nominations Committee report

Members of the Committee comprise Jan du Plessis (chairman) and all non-executive directors.

Key responsibilities

The Committee is responsible, on behalf of the board, for regularly assessing the balance of executive and non-executive directors and the composition of the board in terms of the skills, experience, diversity and capacity required to oversee the delivery of Rio Tinto's strategy.

The Committee develops and agrees in advance the desired profiles of potential candidates for board membership. It oversees the recruitment process and engages external search consultants to manage searches on its behalf, including constructing shortlists comprising candidates from diverse backgrounds and conducting appropriate background and reference checks on shortlisted candidates. Following a final review of shortlisted candidates, the Committee makes recommendations for new board members to the board for approval.

The Committee engages Egon Zehnder from time to time. Egon Zehnder conducts searches and executive evaluations for a number of Rio Tinto positions and not only at board and Executive Committee level. Egon Zehnder has no other connection with the company.

On behalf of the board, the Committee also reviews proposals for appointments to the Executive Committee and monitors executive succession planning.

The Committee's terms of reference set out its main responsibilities, and are available to view on the website.

Governance processes

The Committee meets as required and in 2015, met four times. The members of the Committee are independent in accordance with the independence policy adopted by the Nominations Committee.

The Committee in its proceedings takes account of the Group's Inclusion and diversity policy, and progress in the inclusion and diversity arena, discussed further below.

In 2015, the Committee:

- Continued regular executive and non-executive succession planning reviews.
- Considered the findings from the 2014 evaluation of the Committee's performance.
- Reviewed the mix of skills and experience required for non-executive directors and briefed the search firm accordingly.
- Received and considered leadership assessments and development reports on senior management from Egon Zehnder, and discussed the same with them.

In 2016, the Committee will continue its regular executive and non-executive succession planning reviews and consider the outcome of the 2015 evaluation of the Committee.

Remuneration Committee

The report of the Remuneration Committee is set out on pages 67 to 104. It has been recommended by the Committee for approval by the board, and was approved by the board on 2 March 2016. On page 79 we have included sections dealing with the responsibilities of the Remuneration Committee and how it spent its time in 2015.

Members of the Committee are John Varley (chairman), Jan du Plessis, Richard Goodmanson and Paul Tellier. Michael Fitzpatrick stood down from the Committee with effect from 7 May 2015 upon his retirement from the board.

Richard Goodmanson will retire from the Committee when he retires from the board on 5 May 2016. Megan Clark will join the Committee with effect from 1 May 2016.

Key responsibilities

The Remuneration Committee assists the board with fulfilling its oversight responsibility to shareholders. In particular, the Committee seeks to spend compensation resource fairly and responsibly to ensure that remuneration policy and practices are properly linked to corporate and individual performance and to the delivery of the Group's strategy on behalf of our owners. The Committee's terms of reference set out its main responsibilities, and are available to view on the Group's website.

Governance processes

The Committee met seven times in 2015. The Committee carries out its business following an agreed annual cycle of meetings and topics for consideration.

In addition to the matters noted on page 79, the Committee considered the findings from the 2014 evaluation of the Committee's performance. In 2016 the Committee will consider the outcome of the 2015 evaluation of the Committee.

As set out in the Committee chairman's annual statement on pages 67 to 69, we are committed to a continuing dialogue with our owners.

Board skills, experience and diversity

More information about the board's process for the selection, appointment and election of directors is available in the "Corporate governance" section of the Group's website.

In leading a large global mining and metals company, the board aims to evolve its membership by seeking non-executive directors with diverse and complementary skills and experience. The board recognises that the evolution of the mix of skills and diversity (gender and nationality) is a long-term process and it weighs the various factors relevant to board balance and diversity when vacancies arise. The key attributes relevant for our board are set out below.

Capital projects	Experience working in an industry with projects involving large-scale capital outlays and long-term investment horizons.
Executive leadership	Sustainable success in business at a senior executive level.
Financial	Proficiency in financial accounting and reporting, corporate finance and internal financial controls, corporate funding, and the associated risks.
Global	Experience in multiple global locations, exposed to a range of political, cultural, regulatory and business environments.
Governance	Commitment to the highest standard of governance, including experience with a major organisation that demonstrates rigorous governance standards.
Government relations/geopolitical	Interaction with government and regulators and involvement in public policy decisions.
Health, safety and environment	Familiarity with issues associated with workplace health and safety, environment and social responsibility, and communities.
Marketing	Senior executive experience in marketing, and development of product and/or customer management strategies.
Mining	Senior executive experience in a large mining organisation involved in the discovery, acquisition, development and marketing of natural resources.
Remuneration	Understanding of the link between strategy, performance and remuneration outcomes.
Risk management	Experience in developing an asset or business portfolio over the long term that remains resilient to systemic risk, and establishing risk management frameworks, setting risk appetite and overseeing organisational risk culture.
Strategy	Proven ability in developing and implementing successful strategies, including appropriately probing and challenging management on the delivery of agreed strategic objectives.
Technology	A strong understanding of technology and innovation, and the development and implementation of initiatives to enhance production.

Inclusion and diversity

Our commitment to inclusion and diversity

We are a global company and, wherever we operate and across every part of our business, we strive to create an inclusive culture in which difference is recognised and valued. By bringing together men and women from diverse backgrounds and giving each person the opportunity to contribute their skills, experience and perspectives, we believe that we are able to develop the best solutions to challenges and deliver value for Rio Tinto and its stakeholders.

What inclusion and diversity mean for Rio Tinto

- Embracing workforce diversity – age, gender, race, national or ethnic origin, religion, language, political beliefs, sexual orientation and physical ability.
- Valuing diversity of perspective – leveraging the diverse thinking, skills, experience and working styles of our employees and other stakeholders.
- Building a flexible organisation – providing opportunities for work arrangements that accommodate the diverse needs of individuals at different career and life stages.
- Respecting stakeholder diversity – developing strong and sustainable relationships with diverse shareholders, communities, employees, governments, customers and suppliers.

How we support inclusion and diversity

We use the following to drive action and build awareness about inclusion and diversity:

- Governance models
- Policies, practices and targets
- Leadership and cultural competence
- Stakeholder relationships
- Education and communication

We prioritise long and short-term programmes based on need and impact. Read a summary of our Inclusion and diversity policy in the "Corporate governance" section of our website.

Our current focus

Our goal is to have a workforce that is representative of the countries and communities in which we operate. Currently, our focus is to improve the representation of women and of people from nationalities which are under-represented in our workforce, and to continue to build an inclusive culture in which all talent can thrive.

Some of the activities and initiatives relating to diversity during the year are:

- Sam Walsh took over as the executive champion for inclusion and diversity in January 2015.
- A Group-wide inclusion and diversity steering committee was formed, chaired by the chief executive and including a number of senior executives.
- Inclusion and diversity discussions were on the agenda at Rio Tinto's senior leader conference, as part of engaging the entire leadership group on the topic.
- Inclusion and diversity progress focused on four key levers – leadership, inclusion, integration and business rationale.
- Accountability for inclusion and diversity was placed more clearly with the leaders of the product groups and functions. Progress was linked to incentive plans.
- Inclusion was made a central part of the initiatives, to ensure that progress is sustainable over the long term and that the organisation can make the most of the diversity we have.
- Significant time was invested in integrating inclusion and diversity into the core practices and competencies of the business in order to ensure that we can deliver an irreversible change.

Inclusion and diversity action groups have been working within product groups and functions to assess issues and help leaders develop focused plans.

- Active involvement with Women in Mining groups, professional women's associations and other targeted recruiting efforts to raise awareness about Rio Tinto and to increase the attraction, development and retention of talented women wherever we operate.
- The expansion of training programmes aimed at countering unconscious bias. These have targeted senior leaders, hiring managers and recruiters to help minimise the impact of bias in recruitment and development practices, as well as to improve the cross-cultural interactions and relationship-building needed to globalise our business.
- The continuation of a three-year commitment by the chairman to mentoring high-potential female board candidates through the FTSE100 Cross-company Mentoring Programme.

Proportion of women employees and board members

In 2015, the proportion of women on the board was 25 per cent (ie three out of 12), in senior management 18.1 per cent and in the overall workforce 18.5 per cent.

"Senior management" includes the business unit or functional unit leaders who are direct reports of Executive Committee members, and those at general manager, Group adviser and chief adviser levels.

Measurable objectives and progress

The board established the following five-year measurable objectives for workforce diversity at the start of 2011:

Measurable objective	Progress during 2015
Women to represent 20 per cent of our senior management by 2015.	Women represented 18.1 per cent of our senior management in 2015.
Women to represent 40 per cent of our 2015 graduate intake.	Women represented 43 per cent of our 2015 graduate intake.
15 per cent of our 2015 graduate intake to be nationals from regions where we are developing new businesses.	33.3 per cent of our 2015 graduate intake were nationals from regions where we are developing new businesses.

We will continue to report against these objectives yearly going forward.

Subsidiary board diversity

Women represented 10.1 per cent of the directors of our principal controlled subsidiary undertakings during 2015 (14 female; 125 male).

Other disclosures

Policies and standards

Rio Tinto's commitment to integrity and compliance is set out in *The way we work*, our global code of conduct, which is available on our website. It contains universal principles that guide our behaviour, and inspires us to commit to our company values of respect, integrity, teamwork and accountability. It is supported by a number of Group policies and standards. These are adopted after wide consultation and, once adopted, are communicated globally, to all our business units, together with related procedures, guidelines and resources to support implementation. Management is required to adhere to these policies and standards and any mandated procedures and to monitor their effectiveness.

Rio Tinto policies and standards address a variety of important topics which apply to all our managed businesses. Where the Group does not have operating responsibility for a business, Rio Tinto's policies and standards are communicated to our business partners. We make every effort to ensure that the standards we espouse are respected at all times and to encourage non-managed businesses to adopt similar policies and standards of their own.

Rio Tinto employees are required to undertake training on the requirements of The way we work and various policies and standards.

"Whistleblowing" programme

Speak-OUT is the Group's confidential and independently operated whistleblowing programme. It offers an avenue through which employees, contractors, suppliers and

customers of Rio Tinto managed sites can report concerns, anonymously if they so choose, subject to local law. This can include any significant concerns about the business, or the behaviour of individuals, including suspicion of violations of financial reporting, safety or environmental procedures or business integrity issues in general. The programme features telephone and web submissions, a case management tool to manage cases, and a reporting tool to allow for improved analysis of case statistics and reporting. Rio Tinto continuously considers ways to promote positive awareness of *Speak-OUT*. The Audit Committee receives a report twice annually on *Speak-OUT* activity, with the Sustainability Committee receiving an annual report on *Speak-OUT* relating to sustainable development issues.

Dealing in Rio Tinto securities

Rio Tinto operates rules which restrict the dealing in Rio Tinto securities by directors and employees with access to "inside information". These rules require those people to seek clearance before any proposed dealing and place restrictions on when some people can deal.

These rules also prohibit persons discharging managerial responsibility from engaging in hedging or other arrangements which limit the economic risk in connection with Rio Tinto securities issued, or otherwise allocated as remuneration that are either unvested, or that have vested, but remain subject to a holding period. There are also restrictions applying to a broader group of employees requiring them to seek clearance before engaging in similar arrangements over any Rio Tinto securities.

Communication with stakeholders

Rio Tinto recognises the importance of effective and timely communication with shareholders and the wider investment community.

To ensure that trading in its securities takes place in an informed marketplace, Rio Tinto has adopted procedures to ensure Rio Tinto's compliance with its continuous disclosure obligations.

The Disclosure Committee is responsible for determining whether information relating to Rio Tinto may require disclosure to the markets under the continuous disclosure requirements in the jurisdictions in which Rio Tinto is listed. The specific focus of the Disclosure Committee is to consider and determine on a timely basis whether information would, to the extent that the information is not public and relates directly or indirectly to Rio Tinto, be likely to have a material impact on the price of Rio Tinto Securities if that information was generally available.

The members of the Committee are the chief executive, chief financial officer, Group company secretary, Group executive Legal & Regulatory Affairs, the head of Investor Relations and the head of External Affairs & Communications.

Rio Tinto makes immediate disclosure (unless an exemption applies allowing a delay) to the relevant listing authorities in accordance with their rules of any information that a reasonable person would expect to have a material effect on its share price. All information released to the markets is posted on the Media section of our website.

In addition to statutory documents, Rio Tinto's website features information on corporate governance, and general investor information. Annual and half year results, as well as any major presentations, are webcast and the materials are available on our website. Presentation material from investor seminars is also made available on our website.

The annual general meetings present an opportunity to provide a summary business presentation, to inform shareholders of recent developments and to give them the opportunity to ask questions. Generally, the chairs of all board committees will be available to answer questions raised by shareholders and all directors are expected to attend where possible. In 2015 all of the directors attended the annual general meetings, save for Ann Godbehere who was unable to attend the Rio Tinto Limited annual general meeting due to her attendance at the UBS AG annual general meeting. Rio Tinto's external auditors, PwC, attend the annual general meetings and are available to answer questions about the conduct of the external audit and the preparation and content of the Independent auditors' report. Any such questions received and answers provided ahead of the annual general meetings are made available to shareholders, who also have the opportunity to meet informally with directors after the meetings.

Rio Tinto provides shareholders with the option to receive communications from, and send communications to, the Companies and the share registrars electronically. The contact details for the registrars are available on page 244 and on our website.

The main channels of communication with the investment community are through the chairman, chief executive and chief financial officer, who have regular meetings with the Companies' major shareholders. The senior independent director has a specific responsibility to be available to shareholders who have concerns, and where contact with the chairman, chief executive or chief financial officer has failed to resolve their concerns, or for whom such contact is inappropriate. In his capacity as Remuneration Committee chairman, the senior independent director meets shareholders to discuss remuneration issues.

During 2015, meetings with the investment community focused on the issues of strategy, board succession, corporate governance, executive remuneration, and the operational and financial performance of the Group. Regular investor seminars provide a two-way communication opportunity with investors and analysts. On 17 March 2015, a corporate governance forum was hosted in London to provide investors with an opportunity to engage with the chairman and the chairs of the board committees, a similar seminar having been held in Sydney in November 2014. Feedback from such engagement is routinely communicated to the board. Surveys of major shareholders' opinions are presented to the board by the Group's investor relations advisers on a regular basis.

Risk management

A description of the principal risks and uncertainties that could affect Rio Tinto and the Group's framework of risk governance and reporting and the mitigation strategies relating to them may be found on pages 14 to 21. On an annual basis, the board conducts a robust assessment of those principal risks, with the support of management.

The Audit Committee has completed the annual review of the Group's risk management system for 2015 and concluded that the system remains effective.

Internal controls

The directors are responsible for the Group's system of internal controls and for reviewing annually the effectiveness of the internal control system. The Audit Committee supports the board in this regard. This includes reviewing material financial, operational and compliance controls. The Audit Committee has completed the annual review and assessment for 2015 and concluded that the system remains effective.

Two of the Group's management committees, the Executive Committee and the Disclosure Committee, regularly review reports related to the Group's control framework in order to satisfy the internal control requirements of the Code, the ASX Principles, the NYSE Standards and section 404 of the Sarbanes-Oxley Act 2002. The Group Audit & Assurance function performs reviews of the integrity and effectiveness of control activities and provides regular reports to the Audit Committee, Sustainability Committee and other management committees.

Each year, the leaders of the Group's businesses and functions complete a representation letter confirming that adequate internal controls are in place, are operating effectively and are designed to capture and evaluate failings and weaknesses, if any exist, and that action is taken promptly, as appropriate.

The following chart represents, at a high level, the Group's internal control framework.

Lines of defence	Organisational structures and internal controls	Financial risk	Operational risk					Compliance risk
			Resource	Operations and projects	Services	People	HSEC and security	
	Oversight	**Board and its committees**						
Third	**Internal audit**	Group Audit & Assurance						
Second	**Framework documents**	*The way we work,* operating model, delegation of authorities						
		Chief executive						
	Management committees	Executive Committee						
		Risk Management Committee						
		Plan Review Committee Investment Committee	Ore Reserves Steering Committee			Global Benefits Committee	Closure Committee	Disclosure Committee
	HQ and central support	Finance	Technology & Innovation	Technology & Innovation	Organisational Resources	Organisational Resources	Organisational Resources	Legal & Regulatory Affairs
		Speak-OUT						
		Annual reporting suite certifications (Executive Committee and managing directors)						
	Management assurance, reporting, monitoring and certifications	Internal Control over Financial Reporting Programme Local statutory accounts	Managing director & Competent Person reporting Ore Reserves & Mineral Resources reporting	Insurance critical risk assessments			Regulatory energy & greenhouse gas reporting Regulatory HSE reporting HSEC assurance	Subsidiary entity boards Annual integrity certificates Mandatory compliance training Compliance reports and certification
	Group policies and standards	Group Treasury Group Tax Project *evaluation*	Resources & reserves	Asset management	Acceptable use of information & electronic resources Procurement	Employment Inclusion and diversity	HSEC HSE management system Closure Security Technical safety (eg process safety and underground)	Governance Risk management Human rights Business integrity Data privacy Antitrust External communications
First	**Line management**	Product groups: Aluminium, Copper & Coal, Diamonds & Minerals, Iron Ore						
		Group functions						

Internal assurance

Group Audit & Assurance

Group Audit & Assurance is an internal function which provides independent and objective assurance on the adequacy and effectiveness of the Group's systems for risk management, internal control and governance together with recommendations to improve the effectiveness of the relevant systems and processes. The function has an internal audit methodology which is aligned with international auditing standards set by the Institute of Internal Auditors (IIA).

The function operates independently of management, under a mandate approved by the Audit Committee, and has full access to all functions, records, property and personnel of the Group. The head of Group Audit & Assurance administratively reports to the chief executive and has direct communication lines with the chairs of both the Audit Committee and Sustainability Committee and regularly attends their meetings.

A risk-based approach is used to focus assurance activities on high-risk areas and audit plans are presented annually to the Audit Committee and Sustainability Committee for approval.

In support of its internal audit function, Rio Tinto utilises the services of external service providers. The function has a policy which addresses conflicts of interest in relation to engagements of the service provider that are requested by management. The policy complies with the IIA's standards on independence. Certain services are pre-approved under the policy as they are not in conflict with the internal auditor's role. There is a list of prohibited services which may not be undertaken without approval of the head of Group Audit & Assurance, and guidance on the consideration of services which may give rise to a conflict of interest.

Financial reporting

Financial statements

The directors are required to prepare financial statements for each financial period which give a true and fair view of the state of affairs of the Group as at the end of the financial period, and the profit or loss and cash flows for that period. This includes preparing financial statements in accordance with UK company law which give a true and fair view of the state of the Company's affairs, and preparing a Remuneration report which includes the information required by Regulation 11, Schedule 8 of the Large and Medium Sized Companies and Groups (Accounts and Reports) Regulations 2008 as amended and the Australian Corporations Act 2001.

In addition, the Code requires that the board provides a fair, balanced and understandable assessment of the Company's position and prospects in its external reporting. Management conducts extensive review and challenge in support of the board's obligations in this regard, seeking to ensure balance between positive and negative statement and good linkages throughout the Annual report. The directors were responsible for the preparation and approval of the Annual report for the year ended 31 December 2015. They consider the Annual report, taken as a whole, to be fair, balanced and understandable, and that it provides the information necessary for shareholders to assess the Company's position and performance, business model and strategy.

The directors are responsible for maintaining proper accounting records, in accordance with UK and Australian legislation. They have a general responsibility for taking such steps as are reasonably open to them to safeguard the assets of the Group, and to prevent and detect fraud and other irregularities. The directors are also responsible for ensuring that appropriate systems are in place to maintain and preserve the integrity of the Group's website. Legislation in the UK governing the preparation and dissemination of financial statements may differ from current and future legislation in other jurisdictions. The work carried out by the auditors does not involve consideration of such developments and, accordingly, the external auditors accept no responsibility for any changes, should any be made, to the financial statements after they are made available on the Group's website.

The directors, senior executives, senior financial managers and other members of staff who are required to exercise judgment in the course of the preparation of the financial statements are required to conduct themselves with integrity and honesty and in accordance with the ethical standards of their profession and the business.

The directors consider that the 2015 Annual report presents a true and fair view and has been prepared in accordance with applicable accounting standards, using the most appropriate accounting policies for Rio Tinto's business, and supported by reasonable judgments and estimates. The accounting policies have been consistently applied. The directors have received a written statement from the chief executive and the chief financial officer to this effect. In accordance with the internal control requirements of the Code and the ASX Principles Recommendation 4.2, this written statement confirms that the declarations in the statement are founded on a sound system of risk management and internal controls, and that the system is operating effectively in all material respects in relation to financial reporting risks.

Disclosure controls and procedures

The Group maintains disclosure controls and procedures as such term is defined in US Exchange Act Rule 13a-15(e). Management, with the participation of the chief executive and chief financial officer, has evaluated the effectiveness of the design and operation of the Group's disclosure controls and procedures pursuant to Exchange Act Rule 13a-15(b) as of the end of the period covered by this report and has concluded that these disclosure controls and procedures were effective at a reasonable assurance level.

Management's report on internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting. The Companies' internal control over financial reporting is a process designed under the supervision of the chief executive and chief financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of the Group's published financial statements for external reporting purposes in accordance with International Financial Reporting Standards as adopted by the European Union (IFRS).

The Group's internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail:

- accurately and fairly reflect transactions and dispositions of assets;
- provide reasonable assurances that transactions are recorded as necessary to permit preparation of financial statements in accordance with IFRS, and that receipts and expenditures are being made only in accordance with authorisations of management and directors of each of the Companies; and
- provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use or disposition of the Group's assets that could have a material effect on its financial statements.

Due to inherent limitations, internal control over financial reporting cannot provide absolute assurance, and may not prevent or detect all misstatements whether caused by error or fraud, if any, within each of Rio Tinto plc and Rio Tinto Limited.

Management conducted an assessment of the effectiveness of internal control over financial reporting as of 31 December 2015, based on the Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) issued in 2013, and concluded that it was effective.

There were no changes in the internal controls over financial reporting that occurred during the period that have materially affected, or are reasonably likely to materially affect, the internal controls over financial reporting of each of Rio Tinto plc and Rio Tinto Limited.

Remuneration Report: Annual statement by the Remuneration Committee chairman

Dear Shareholder

On behalf of the board, I am pleased to introduce our 2015 directors' remuneration report (the Remuneration Report), for which we seek your support at our annual general meetings (AGMs), in London in April, and in Brisbane in May.

The Remuneration Report is designed to demonstrate the link between the Group's strategy, its performance, and the remuneration outcomes for our executives, particularly the executive directors.

With a view to delivering shareholder returns through the cycle, Rio Tinto takes a long-term approach to its activities, and this means concentrating on developing long-life, low-cost, expandable operations that are capable of providing competitive returns throughout business cycles. Our executives' performance objectives are set accordingly.

The Remuneration Report has been prepared in accordance with applicable legislation and corporate governance guidance in the UK and Australia. Australian legislation requires disclosures in respect of "key management personnel", being those persons having authority and responsibility for planning, directing and controlling the activities of the Group. The key management personnel are, in addition to the Executive Directors, the non-director members of the Executive Committee. The Executive Committee comprises the executive directors, product group chief executive officers and Group executives. Throughout this Remuneration Report, the members of the Executive Committee are collectively referred to as "executives". They are listed on pages 51 and 54, which also show the positions held during the year and dates of appointment.

Shareholders will be aware that we have to comply with UK and Australian legislation in the remuneration arena and that the rules differ. We have structured the voting arrangements such that all shareholders vote on both remuneration resolutions that we are putting to our AGMs.

This Remuneration Report is divided into two parts: the statement of remuneration policy, which summarises our compensation policies and practices (the Remuneration Policy); and the annual report on remuneration, which shows how the Remuneration Policy has been applied (the Implementation Report).

The Remuneration Policy was subject to a binding vote for UK law purposes in 2015 and became effective in respect of payments to directors from 7 May 2015. Minor changes have been made to the Remuneration Policy since then; these do not require shareholder approval this year. A version of the Remuneration Policy which highlights these changes can be found on our website. There will be no vote for UK law purposes on the Remuneration Policy.

The Implementation Report (including this statement) is subject to an advisory vote for UK law purposes. The Remuneration Report as a whole is subject to an advisory vote for Australian law purposes. Both resolutions are to be voted on at the AGMs as Joint Decision Matters by Rio Tinto plc and Rio Tinto Limited shareholders.

In the absence of circumstances which may necessitate a change to the Remuneration Policy, it is our intention that it will next be put before shareholders for a vote, for UK law purposes, at our AGMs in 2018.

Although, as a matter of UK law, the Remuneration Policy only applies to the remuneration of our directors, it is the Committee's intention that its broad policy principles will continue to inform the way in which our non-director key management personnel on the Executive Committee are remunerated.

The Remuneration Policy describes, among other things: our executive remuneration structure; the details of the discretions available to the Committee; our approach to remuneration on recruitment; the details of executives' service contracts; and how we treat leavers.

Remuneration for executives comprises fixed compensation in the form of base salary, participation in a pension plan, superannuation fund and/or a cash allowance to contribute to a pension fund, the receipt of certain benefits, and performance-related remuneration. Each element is described in the Remuneration Policy.

The majority of the remuneration of executives will normally be performance related, and is provided in the form of variable short and long-term incentives, weighted towards the long-term in shares.

In relation to the short-term incentive plan (STIP), the Committee each year sets performance criteria relative to three benchmarks: threshold, target and outstanding. Target performance is intended to be stretching, and is typically equivalent to the business plan for the year.

Our approach to the disclosure of measures, weightings and targets remains unchanged. In relation to the long-term incentive plan (LTIP), these will all be disclosed in advance, at the beginning of each five-year performance period. In relation to the STIP, we will, when it comes to disclosure, distinguish between safety goals and financial and individual goals. In the area of safety goals, we will continue to disclose the measures, weightings and targets at the beginning of each year. In the area of financial and individual goals, we will continue to disclose, at the beginning of each year, the measures and weightings only, because we regard the targets as commercially sensitive. However, as we said in the Remuneration Report last year, we intended to disclose, and have in the Implementation Report disclosed, the targets and outcomes for 2015 retrospectively. In the rare instances where this may not be prudent on grounds of commercial sensitivity, I will seek to explain why, and give an indication of when they would be disclosed.

The chart on page 89 demonstrates the usual timeframe for the delivery of the components of remuneration, using 2015 as an example. This emphasises the long-term nature of our remuneration arrangements.

You will see several mechanisms in the Remuneration Report that are intended to create alignment of interest between shareholders and executives (I show some of these at work later in this statement). We have, for our executives, a mandatory conversion of 50 per cent of any annual short-term bonus payment into shares, with vesting deferred for three years. The performance measures under our long-term remuneration plans are structured to support and incentivise the creation of long-term shareholder value. In addition, should circumstances warrant, we have reserved to the Committee such discretions as enable it to safeguard against the return experience of shareholders being materially misaligned with the reward experience of executives. We want the remuneration outcomes properly to reflect the Group's overall performance. We also have meaningful share ownership requirements for our executives as described in the Implementation Report.

There are many examples in the Remuneration Policy and practice of how our dialogue with shareholders has influenced the Committee's decisions. In 2013, we added a new performance measure to our Performance Share Plan (PSP), namely the relative EBIT margin improvement measure. We did this because many of our owners had expressed a wish that our PSP should incorporate some diversification beyond total shareholder return (TSR). We extended the performance period of the PSP from four to five years and we materially reduced the pay-out for threshold performance. We have adjusted the safety measures in our STIP targets to reflect lost time injuries and all injury frequency rates. In addition, from and including 2016, we have included performance metrics relating to a key programme to support our goal of fatality elimination, called Critical Risk Management, which is described in more detail on page 24.

The decisions relating to base pay changes for executive directors and executives are broadly guided by pay changes for the wider employee

Remuneration Report: Annual statement by the Remuneration Committee chairman

continued

population, which means that this year there has been a salary freeze for the executives.

Building on the dialogue at our corporate governance round table meetings in 2014 and 2015 (which were well attended and provided an opportunity for me to discuss remuneration related topics with shareholders), I plan to discuss the topic of remuneration with our large institutional shareholders in the UK and Australia during the course of this year.

2015 performance and remuneration

On page 80 and 82 of this Report, we retrospectively disclose the financial and individual targets set by the Board for 2015. I won't repeat here the details of performance against targets, save to say that, in the main, targets were met, especially when looking at the financial targets on a 'flexed' basis. I believe that, despite the inescapable impact on earnings of the sharp downdraft in commodity prices, shareholder interests were well protected by the energetic management of capital, costs, working capital, debt and production during 2015.

I know that shareholders expect to see strong alignment between the value of their own shareholdings and the wealth of executives. The remuneration outcomes shown in the single total figure of remuneration testify clearly to this alignment. Fifty per cent of the annual STIP awards are deferred into shares (through the Bonus Deferral Plan (BDP)) for three years, specifically to ensure that a material proportion of short-term pay is exposed over the medium term to fluctuations in our share price. The value of the 2015 and 2016 PSP awards also reflects the downward movement in share price. The alignment is further evidenced by our share ownership policy, which is designed to create and maintain significant individual exposure through share ownership to upwards and downwards movements in the value of our equity.

The single total figure of remuneration is lower in 2015 for the chief executive, chief financial officer and most executives, due mainly to the significantly lower value of LTIP awards compared to 2014. This was caused both by a lower vesting level for the PSP awards and a lower UK and Australian share price at the date the 2012 PSP awards vested in February 2016 (£18.51 versus £31.64 and A$42.22 versus A$63.55 respectively).

The 2015 STIP awards for both Executive Directors and the majority of the other executives are lower, and in some cases significantly lower, than last year, with a broad variability of outcomes, reflecting performance against stretching safety, financial and individual targets. I will talk in a moment about the aggregate STIP financial score, but before that I will talk about the 2015 safety performance.

Looking at achievement against our 2015 safety STIP targets, the Group's all injury frequency rate improved from 0.59 in 2014 to a new all-time low of 0.44 in 2015, which out-performed the Group's "outstanding" target of 0.45. There were 220 lost time injuries in 2015 compared to 381 in 2014. This also out-performed the level set for "outstanding" performance for the Group of 231 lost time injuries. This has led to the maximum total safety outcome for the Group, of 200 per cent.

However, reductions were applied to the safety performance component of the STIP where a fatality occurred. For example, the safety result for the chief executive was halved from 200 per cent to 100 per cent due to the compensation impact of fatalities in 2015. Such adjustments reflect the level of oversight which the chief executive and other executives had for safety leadership during the year and the level of management control over the causal factors of the fatalities. There were also safety related downward adjustments to the remuneration of the chief financial officer and of certain other executives, particularly those with portfolios where a fatality occurred.

In terms of achievement against our 2015 financial STIP targets, the Committee determined that the threshold level for underlying "unflexed" earnings set by the board was not met. However, the "unflexed" free cash flow target and "flexed" earnings and free cash flow targets were exceeded. Cash flow performance was close to "outstanding" with a significant contribution from cost reductions, which substantially exceeded target.

To remind you, in considering financial performance against the annual plan, we measure half against the original plan; the other half is "flexed" to exclude the impact of fluctuations in exchange rates, and quoted metal and other prices during the year, which are outside management's control. We have used this approach consistently since 2005 for measuring our earnings performance, and have flexed the cash flow outcomes since the introduction of this measure in the STIP in 2009. When commodity prices rise, or there are favourable exchange rate variations, we protect shareholders by ensuring that 50 per cent of the STIP opportunity is denied the benefit of that rise. When the reverse happens, and commodity prices fall or there are negative exchange rate variations, the STIP opportunity is safeguarded (as to 50 per cent) against the fall. Our view is that this approach maintains appropriate incentive for executives, even in times of significant earnings volatility.

Taking all these points into consideration, the Committee determined that the *prima facie* STIP financial score for 2015 should be 132 per cent out of a maximum of 200 per cent. However, the Committee seeks to ensure, in making its year end determination of STIP awards, that actual performance is directly comparable to the targets set at the beginning of the year. This resulted in the Committee making certain minor adjustments to the targets in 2015 to take account of events outside management's control and to ensure a like-for-like comparison. Following review by management and the Committee, both upward and downward adjustments were made to the targets, with reference to principles agreed by the Committee which have been consistently applied over many years, to ensure the outcomes are fair. An example of such an adjustment was in relation to severe weather events, which were in excess of what was incorporated in the business plan. The consequence of this process was that we reduced the 132 per cent referred to above to 131 per cent.

Turning to the LTIP, both the amount of the original award, and the actual value of the awards vesting to executives in 2015 were lower than 2014. The PSP awards granted in 2012 have two performance metrics – the Euromoney Global Mining index and the MSCI World Index (weighted 50 per cent each). I believe that the award outcome clearly demonstrates that our decision some years ago to have these two indices operate alongside each other has protected shareholders against windfall gains for executives. For while our TSR against the Mining Index demonstrated significant outperformance, we underperformed against the MSCI. The outcome, which is explained in the Implementation Report, was an award of 65.4 per cent out of a potential 150 per cent.

The Committee considered the Group's overall performance during the four-year performance period and concluded that the vesting of awards, based upon the achievement of the TSR measures, was justified.

As we announced in February 2015, Harry Kenyon-Slaney, chief executive of the former Energy group, left the Group on 18 March, 2015. The details of his departure terms are summarised on page 88, and the terms are compliant with our Remuneration Policy and precedent.

The Company continues to monitor gender pay and is satisfied that awards made between male and female employees demonstrate equality.

2016 decisions

There will be no annual salary increases for executives, in keeping with the salary freeze for other employees (other than those protected by legislation or prior industrial agreements). This was a difficult but

necessary decision reflecting the exigencies of the commodities cycle, but it is no reflection on the performance and contribution of our people.

For 2016, the STIP measures and opportunities for executives remain weighted 50 per cent for financial, 30 per cent for individual and 20 per cent for safety measures. The Group financial targets relate to earnings and free cash flow. The individual targets include objectives relating to business transformation, cost reduction, performance delivery and leadership and engagement. The 2016 safety measures, weightings and targets are fully disclosed on page 89. The financial measures and weightings are also described on page 89. We expect to describe the financial and individual targets retrospectively in the 2016 Implementation Report.

The level of LTIP awards to be granted to executives in March 2016, as a percentage of base salary, will be lower than those made in 2015. The number of conditional shares awarded will be announced to the market in due course and is calculated using the average share price over the previous calendar year, and as such, the awards granted in 2016 will be calculated using the 2015 average share prices of £26.346 and A$54.184 respectively. This compares with the market price of Rio Tinto plc and Rio Tinto Limited shares at 15 February 2016 of £18.51 and A$42.22 respectively. Executives do not therefore benefit (via a larger number of conditional shares being issued because of a lower price) when the spot share price is lower at the time of grant than the average share price over the previous calendar year. This is a further example of our Remuneration Policy operating in a way which aligns the interests of shareholders and executives.

The performance conditions for the 2016 PSP awards are outlined in the Implementation report. The 2016 comparator group for the EBIT margin measure has been reviewed and Fortescue Metals Group will replace Peabody in the comparator group for awards made from 2016, our judgment being that in terms of size and likeness to Rio Tinto, Fortescue now offers a better comparator.

Retirements from the Committee

I would like to thank Mike Fitzpatrick, who retired from the Committee in May, 2015, and Richard Goodmanson, who will retire from the Committee in May, 2016, for their valued advice and guidance over many years. I will miss their contributions.

Meanwhile I welcome Megan Clark, who will be joining the Committee in May, 2016.

Governance and owners' views

It has been and continues to be our intention to be alert to evolving best practice as well as to the views and guidance given to us in the conversations we have with our owners. The Committee reaffirms its commitment to keep under review the level of vesting for threshold performance under the PSP. We are committed to a continuing dialogue with shareholders, including listening to views about this report, which are most welcome.

Yours sincerely,

John Varley
Remuneration Committee chairman

Remuneration Report: Remuneration Policy

Remuneration Policy introduction

This Remuneration Policy applies to our executive and non-executive directors and to the chairman. It also sets out, in conformance with Australian law, the broad policy principles which generally apply to the non-director members of the Executive Committee. The policy applying to our chairman and non-executive directors is set out at the end of the Remuneration Policy.

Shareholders should note that this Remuneration Policy is binding only in so far as it relates to directors.

Our remuneration policies, principles and practices

Our first objective is to spend remuneration resource wisely in pursuit of the implementation of the Group's strategy. We want our pay policies to be regarded as fair by shareholders and employees alike. Although we have remuneration structures which are fit for purpose, the Committee retains appropriate discretions, enabling it to override inappropriate mechanistic outcomes, if it thinks fit, but always within the confines of the Remuneration Policy.

Rio Tinto operates in global and local markets where it competes for a limited pool of talented executives. High-quality people, who are capable of achieving stretching performance targets, are essential to generating superior returns for the Group. Our compensation strategies aim to provide this support by enabling the Group to attract and retain people whose contribution will increase shareholder value over time.

We aim to engage our people over the long term by fostering diversity, providing challenging work and development opportunities, and encouraging strong delivery by good performance. This people strategy is underpinned by our values of respect, integrity, teamwork and accountability and by our commitment to provide sustainable growth and development for both Rio Tinto and its employees.

Our policy is based on the principle of aligning remuneration outcomes with the successful delivery of strategy. The remuneration strategy and the policies which support it, together with a description of how we believe they will help Rio Tinto achieve its vision, are set out below and under the heading "Executive remuneration structure – policy table". Complementary remuneration structures are designed for other employees, drawing on these strategies and policies.

Competitive, performance-related remuneration

We aim to provide competitive rewards that attract, retain and motivate executives of the high calibre required to lead the Group, while ensuring that rewards remain appropriate and proportionate when compared both to market practice and to remuneration arrangements for other employees in the Group.

- The majority of remuneration is linked to demanding performance targets over both the short and long term to ensure that executive rewards are directed at delivering good performance for shareholders.
- For the purposes of assessing the appropriate level of executive remuneration, the Committee refers to the FTSE30 (excluding financial services companies) as the initial comparator group. The FTSE30 is considered the most relevant comparator group as it largely comprises organisations broadly comparable to the Group in terms of global reach, revenue, market capitalisation and complexity. References are also made to other relevant supplementary comparator groups, including a cross-section of comparable international industrial organisations and other international mining companies.
- Typically we aim to position base salaries at the median of these comparator groups, while our incentive plans are designed with the potential to deliver total remuneration outcomes across the full market range according to business and individual performance.
- Benchmarking is undertaken periodically, but not annually, and our intention is to apply judgment in evaluating market data. We will take salary increases in the broader employee population into account in determining any change to the base pay of executives. We normally use three-year average exchange rates, in order to mitigate the impact of exchange rate volatility, to help determine the appropriate positioning of executive remuneration against internal and external comparators.
- We regularly consult with shareholders on the design of our policies and programmes, most recently on the subjects of the safety measure component of the STIP, the ceasing of the use of share options as a mechanism for long-term reward, and the performance conditions and the performance period for the Performance Share Plan (PSP).
- Employee share plans provide the opportunity for employees to participate in the voting on executive remuneration. Employees who are shareholders – approximately 25 per cent of the workforce at the time the Remuneration Policy was approved – are able to vote on the Remuneration Report. Employees have not been consulted on the Remuneration Policy but are free to ask any questions they wish and to offer any opinions they have through our normal employee communications channels.

Safety

We have a strong focus on safety in the STIP targets.

- As an organisation, we strive for superior long-term shareholder value creation in a healthy, safe and environmentally appropriate way. These are important elements of our licence to operate.
- Safety key performance indicators determine a significant portion of the STIP for executives.
- Any fatality will have a material impact on the STIP score for the relevant executives. Further details on the approach to fatalities are provided in the Implementation Report.

Long-term focus

Consistent with our strategy of investing in and operating long-life, low-cost, expandable operations in the most attractive industry sectors, we seek to provide incentive plans that focus on longer-term performance.

- Our incentive plans are designed to promote and reward decision-making with a positive long-term impact while avoiding excessive risk.
- Fifty per cent of the STIP for executives is deferred into shares which vest after three years, through the Bonus Deferral Plan (BDP).
- The performance-based options and shares awarded prior to 2013 have a three and four-year performance period, respectively. The performance period for performance shares awarded under the PSP from 2013 is five years. However, as a transitional measure, awards granted in 2013 will potentially vest 50 per cent after four years and 50 per cent after five years.
- Options are no longer granted, but existing options may be exercised (subject to their vesting conditions) up to ten years after their grant.
- The Committee intends to keep the Group's long-term incentive arrangements under review.

Shareholder alignment

Our share ownership policy requires executives to build up and maintain a meaningful shareholding as described in the Implementation Report under the heading "Share ownership policy for executives".

We reward executives for delivering shareholder value by using relative TSR as one of the measures for our LTIP.

- For awards granted from 2013 under the PSP, a relative EBIT margin improvement measure has complemented the existing relative TSR measures, and incentivises executives to deliver long-term shareholder value while maximising operational performance in the medium term. This comprises one-third of the total value opportunity under the PSP awards.
- The reward opportunity under the remaining portion of the PSP awards is delivered based on relative TSR performance against both the Euromoney Global Mining Index (formerly the HSBC Global Mining Index) and the broader market of large global companies as

measured through the Morgan Stanley Capital World Index (MSCI).

- The choice of both the Euromoney Global Mining Index and MSCI reflects the fact that Rio Tinto competes in a global market for investors as well as within the mining sector. It is consistent with rewarding executives for providing stable returns over the long term relative to the broader market and the mining sector.

Risk management – malus and claw back

The Committee has authority under the "malus" provisions of the PSP to reduce or cancel awards made from 2013 in the event of gross misconduct which may have a material effect on the value or reputation of the Group, a materially adverse error in the Group's or a product group's financial statements, exceptional events that have a materially detrimental impact on the value of any Group company, or for any other reason that the Committee decides in a particular case.

The Committee also has authority under the "claw back" provisions of the PSP to recover the value of any vested awards made from 2013 in the event of deliberate misconduct by a participant that may have a material impact on the value or reputation of a Rio Tinto Group company or for any other reason that the Committee decides in a particular case.

"Malus" and "claw back" can be applied by the Committee in relation to the STIP and its deferral into BDP. The Committee evaluates the outcomes of the STIP for fairness with the original targets and with shareholder experience, and may make discretionary adjustments for executives using "malus" principles as necessary. Any such adjustments are disclosed in the Implementation Report for the relevant financial period.

The Committee retains discretion with respect to the vesting of BDP awards made from 2013 onwards prior to their vesting dates, such that if an executive resigns or is dismissed for misconduct, or for any other reason that the Committee decides in the event of an executive terminating their employment, BDP awards may be "clawed back" and consequently lapse.

The Committee reserves rights to exercise discretions more generally as described under the heading "Discretions".

Executive remuneration structure – policy table

The Committee seeks to achieve a remuneration mix which best reflects the long-term nature of the business. The total remuneration package is therefore designed to provide an appropriate balance between fixed and variable components, with an emphasis on long-term variable pay. The remuneration structure for executives, including the relationship between each element of remuneration and Group performance, is summarised below. Further details on the key performance indicators used to assess Group performance are provided in the Strategic report under the heading "Key performance indicators". Shareholders should note that the following remuneration structure is binding only insofar as it relates to directors.

Any commitment made before this Remuneration Policy takes effect or before an executive became or becomes a director will be honoured even if it is not consistent with this Remuneration Policy or any subsequent policy.

Remuneration arrangements – Fixed		Link to Group performance and strategy
Base salary	– Base salary provides the main fixed element of the remuneration package. – Base salaries are reviewed annually, with a maximum increase of nine per cent, or inflation if higher, per annum. An increase may be higher than this for executives who are not directors in the circumstances described below. – Any increase is generally aligned with the average base salary increases applying to the broader employee population unless there were significant changes to an individual's role and/or responsibilities during the year. Any increases are determined with reference to underlying Group and individual performance, global economic conditions, role responsibilities, an assessment against relevant comparator groups and internal relativities. – An increase above the maximum noted above for executives who are not directors may be made in the event of internal promotion or increase in responsibility or where the executive's salary is significantly below market positioning. – Benchmarking is undertaken periodically but not annually, and our intention is to apply judgment in evaluating market data.	– We pay competitive salaries to hire, motivate and retain highly competent people.
Pension or super-annuation	– Employment benefits typically include participation in a pension plan, superannuation fund, or a cash allowance to contribute to a personal pension or superannuation fund. – The maximum level of Company contribution to an individual executive director's schemes annually is 35 per cent of base salary.	– We provide locally competitive post-employment benefits in a cost-efficient manner in order to hire and retain.
Other benefits	– Other benefits include private healthcare cover for the executive and their dependants, company car or allowance, car parking, life insurance, accident insurance, provision of Company-provided transport/chauffeur, professional advice, participation in local flexible benefit programmes and certain other minor benefits (including modest retirement gifts in applicable circumstances, occasional spouse travel in support of the business and any Rio Tinto business expenses which are deemed to be taxable where the Company has paid the tax on their behalf). – Secondment, relocation and localisation benefits (for example, housing, tax equalisation, cost of living allowance, the payment of school fees, periodic visits home for the executive and their family and where relevant, localisation payments) may also be made to and on behalf of executives living outside their home country. Examples of these types of payments are set out in the Implementation Report. – Other benefits are paid at cost and, given the nature and variety of the items, there is no formal maximum level of Company contribution.	– We provide competitive other benefits in a cost-efficient manner to hire and retain.

Remuneration Report: Remuneration Policy
continued

Remuneration arrangements – Performance-related (At risk)		Link to Group performance and strategy
Short Term Incentive Plan (STIP)	– If target performance is achieved under the STIP, the bonus opportunity is up to 120 per cent of base salary for executive directors and up to 100 per cent of base salary for other executives. The award for achieving threshold performance is 50 per cent of the target bonus opportunity and the maximum bonus award for outstanding performance is 200 per cent of base salary. These percentages, with the exception of the maximum percentage, are subject to the exercise of discretion by the Committee. – A scorecard of key performance indicators (KPIs) is established for each executive at the commencement of the financial year. The measures and the relative weightings are selected by the Committee in order to drive business performance for the current year, including the achievement of financial, safety and other individual business outcomes that are priorities for the financial year in question. – The measures, weightings and targets are reviewed annually and are included either prospectively or retrospectively each year in the Implementation Report. The Committee retains flexibility to determine the measures, weightings and targets as appropriate, based on the outcomes of its annual review. – We expect to disclose the measures, weightings and targets for safety goals at the beginning of each year. In the area of financial and individual goals, we will, at the beginning of each year, disclose the measures and weightings only, because we regard the targets as commercially sensitive. However, we intend to disclose these targets and outcomes retrospectively. In the rare instances where this may not be prudent on grounds of commercial sensitivity, we will seek to explain why, and give an indication of when they will be disclosed. – Threshold, target and outstanding performance levels are established for all STIP measures to help drive high levels of business and individual performance. – The central case or "base" plan delivers what the board considers to be target performance. Target performance is intended to be stretching. Probability factors are then applied, based upon a range of potential operating and cost scenarios, to establish the threshold and outstanding performance levels. These threshold (below target), target, and outstanding (above target) levels are determined by the Committee at the beginning of each performance year. – The Committee seeks to ensure, in making its year-end determination of STIP awards, that actual performance is directly comparable to the targets set at the beginning of the year. This sometimes results in adjustments to the targets being made by the Committee (in particular to take account of events outside management's control), to ensure a like-for-like comparison. Both upward and downward adjustments can be made, with reference to principles agreed by the Committee, to ensure the outcomes are fair. – Safety KPIs comprise a significant portion of the STIP for executives, and any fatality will have a material impact on the STIP score for the relevant executives.	– STIP focuses participants on achieving demanding annual performance goals, which are based on the Group's KPIs, in pursuit of the creation of sustainable shareholder value. – We demand that sustainable business practices are adhered to, particularly in the context of safety. – When reviewing the outcome of the awards under the STIP the Committee will, when evaluating overall safety, financial, Group and individual performance, consider the overall fairness against original expectations and shareholder experience. – Any discretionary adjustments for directors will be disclosed in the Implementation Report for the financial period.
Bonus Deferral Plan (BDP)	– Fifty per cent of the STIP is delivered in deferred shares under the BDP, with the remainder delivered in cash. – The BDP vests in the December of the third year after the end of performance year to which it relates. – The number of BDP shares awarded is increased by reference to the dividends paid in the deferral period before vesting. – BDP shares vest on a change of control.	– The BDP ensures ongoing alignment between executives and shareholders through deferral of 50 per cent of STIP awards into Rio Tinto shares.

Remuneration arrangements – Performance-related (At risk)		Link to Group performance and strategy

Performance Share Plan (PSP)	– A new plan was approved by shareholders at the 2013 AGMs.
	– Awards under the new PSP have a maximum face value of 438 per cent of base salary (ignoring dividend equivalents as described below).
	– The awards have been calculated independently by our consultants (Willis Towers Watson since 1 August 2013 and Deloitte LLP previously) to have an expected value of approximately 50 per cent of face value. Expected value is face value adjusted for the probability of the performance target being met.
	– Threshold performance, as explained in the Implementation Report, would result in the vesting of 22.5 per cent of the face value of an award.
	– The maximum expected value that can be awarded under the PSP is 219 per cent of base salary (ie 438 per cent x 50 per cent). The threshold value is a maximum of 98.6 per cent of base salary (ie 438 per cent x 22.5 per cent).
	– Actual award levels may vary for each executive and are included in the Implementation Report.
	– Conditional share awards vest subject to the achievement of stretching performance conditions, comparing Rio Tinto's performance against:
	  – One-third: TSR relative to the Euromoney Global Mining Index;
	  – One-third: TSR relative to the Morgan Stanley Capital World Index (MSCI); and
	  – One-third: improvement in EBIT margin relative to the global mining comparators which will be listed in the Implementation Report each year.
	– Each component of the award will be assessed independently. Details of the TSR and EBIT margin measures (targets and vesting schedules) will be set out in the Implementation Report each year. With respect to the EBIT margin measure, in order to ensure that outcomes are fair and that business performance has been appropriately taken into account, the Committee will consider, on a discretionary basis, any specific, significant, unusual, "below the line" items (eg impairments) reported by Rio Tinto or its peers during the performance period to ensure genuine comparability when determining any level of vesting indicated by third-party data (currently S&P Capital IQ). The application of any such discretion will be disclosed.
	– The outperformance required for maximum vesting under all components of the award is considered by the Committee to be very stretching.
	– If, but only if, vesting is achieved, participants in the PSP shall be entitled to receive a number of additional shares whose market value reflects the aggregate cash amount of dividends that would have been received had the shares which have vested at the end of the performance period been held throughout the performance period.
	– Awards and performance conditions can be adjusted to take account of variations of capital and other transactions. Subject to this policy, performance conditions may be amended in other circumstances if the Committee considers that a changed performance condition would be a fairer measure of performance.
	– If there is a change of control, awards will vest to the extent performance conditions are then satisfied. If the change of control happens during the first 36 months from the date of grant of the award, the number of shares that can vest will be reduced pro rata over that 36 months period. The Committee may, alternatively, with agreement of an acquiring company, replace awards with equivalent new awards over shares in the acquiring company.
	– The Committee retains the discretion, where circumstances warrant, to amend or waive performance conditions under the Plan rules.
	– As described under the malus and claw back provisions set out earlier in this Policy Report, the Committee retains the discretion to reduce or cancel awards before they vest ("malus") or to recover the value of awards after vesting ("claw back").
	– The Committee will seek to ensure that outcomes are fair and that they take account of the overall performance of the Company during the performance period.
		– The PSP incorporates a simple structure to align executive reward with shareholder returns and business strategy, to help drive performance over a long-term horizon.
		– Award levels are set to incentivise executives to meet the long-term strategic goals of the Group, to provide retention for the executive team and to contribute towards the competitiveness of the overall remuneration package.
		– TSR rewards the delivery of superior returns to shareholders over the long term.
		– EBIT margin improvement rewards sustained operational performance of our business and the cost-competitive operation of our mining assets, a core part of our strategy.
		– How performance is generated is as important as what level of performance is delivered. Before vesting, the Committee must satisfy itself that relative TSR and EBIT margin performances are an appropriate reflection of the underlying performance of the business, and can adjust vesting accordingly.
		– Awards will normally have a five-year performance period to provide long-term alignment with the interests of shareholders.
		– As a transitional measure, awards granted in 2013 will vest 50 per cent after four years and 50 per cent after five years.

The long-term incentive awards made prior to 2013, and under which payments are still intended to be made should the relevant performance conditions be satisfied, can be paid out under this policy. The details of the awards granted prior to 2013 which have yet to vest, including the details of the performance conditions, are provided in the Implementation Report.

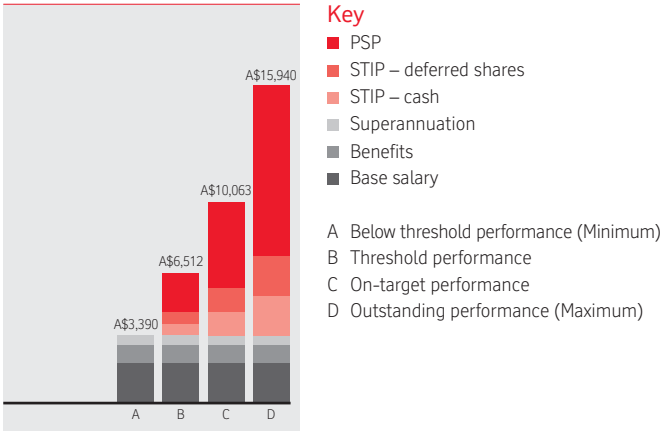
Total remuneration opportunity

The following charts provide an indication, based on 2015 remuneration and the 2015 PSP awards, of what can be achieved under the Remuneration Policy for the executive directors at below threshold (A), threshold (B), target (C) and outstanding (D) performance levels, together with the proportion of the package delivered through fixed and variable remuneration. The PSP, STIP deferred shares (BDP) and STIP cash are all performance-related remuneration. UK legislation requires that these charts are given in relation to the first year in which the Remuneration Policy applies (ie 2015).

Sam Walsh (chief executive)

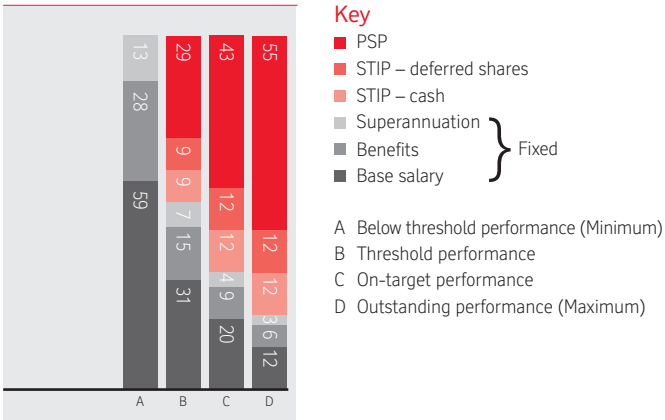
Potential value of 2015 remuneration package

A$'000



Proportion of the 2015 remuneration package value delivered through fixed and variable remuneration

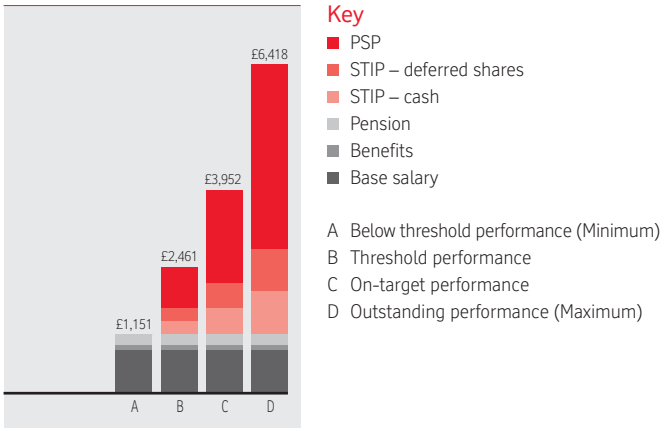
%



Chris Lynch (chief financial officer)

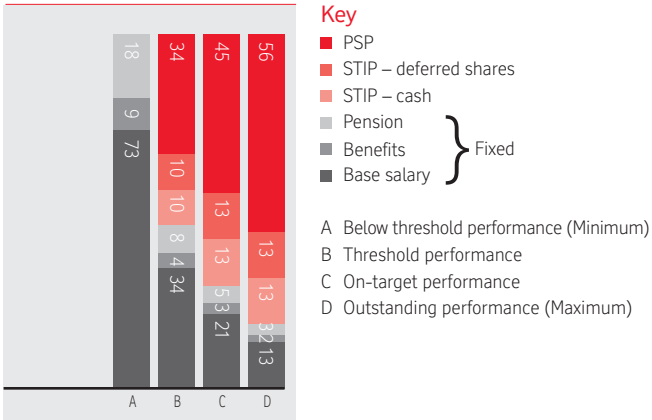
Potential value of 2015 remuneration package

£'000



Proportion of the 2015 remuneration package value delivered through fixed and variable remuneration

%



The following table provides the basis for the values included in the charts above:

Fixed (stated in '000) – shown as column A above	Base Salary [a]	Superannuation or pension [b]	Benefits [c]	Total fixed
Sam Walsh	A$1,992	A$450	A$948	A$3,390
Chris Lynch	£836	£208	£107	£1,151

(a) Base salary is the salary effective at the time the Remuneration Policy was approved.

(b) Superannuation for Sam Walsh is the value effective at the time the Remuneration Policy was approved and assumed that Sam's accrued benefit would receive investment earnings at the rate of six per cent. The values in the Implementation Report reflect the actual investment earnings received.

(c) Benefits are as measured at the benefits figure in the single figure tables for 2014 as set out in the Implementation Report excluding amounts considered to be one-off in nature. One-off items for Sam in 2014 of A$82,000 included a relocation related benefit for the removal of household goods into storage in Australia and immigration related services. Note that this number for Sam includes expatriate benefits which are not capped and are subject to exchange rate fluctuations.

Performance-related (At risk)	
Threshold STIP and LTIP [(a)] performance – shown as column B above	– A STIP award of 50% of the target STIP opportunity, ie 60% of base salary – Threshold vesting of the PSP award at – 22.5% of face value, calculated as 96.8% of base salary
Target STIP and LTIP performance – shown as column C above	– A STIP award of 100% of the target STIP opportunity, ie 120% of base salary – Expected value of the PSP award of 50% of face value, calculated as 215% of base salary
Outstanding STIP and LTIP performance (Maximum) – shown as column D above	– A maximum STIP award of 200% of base salary – Full vesting of the PSP award, calculated as 430% of base salary

(a) Long-term incentives consist of share awards only, measured at 2015 face value. This does not constitute an estimate of the value of awards that may potentially vest with respect to year end 31 December 2015. No assumption has been made for changes in share price or payment of dividends.

Context for outstanding performance

Demanding performance targets are designed to ensure that the level of remuneration is aligned with performance delivered for shareholders.

Outstanding business and individual performance is required to achieve the maximum level of remuneration. This comprises:

- outstanding performance against all financial, health and safety, and individual STIP measures;
- TSR outperformance against both the Euromoney Global Mining and MSCI indices by six per cent per annum over five years; and
- EBIT margin improvement equal to or greater than the second ranked company in the comparator group over five years.

The intention of the Committee is that if these levels of reward are achieved by our executives then shareholders will benefit over time from superior share price performance.

Discretions

The Committee recognises the importance of ensuring that the outcomes of the Group's executive pay arrangements described in this Remuneration Policy properly reflect the Group's overall performance and the experience of its shareholders and other stakeholders over the performance period.

The Committee undertakes to owners that it will exercise discretion diligently and in a manner that is aligned with our strategy to create long-term shareholder value. Accordingly, when reviewing the operation of short and long-term incentive plans and the outcome of awards made under these plans, the Committee will, when evaluating safety, financial, Group and individual performance, consider the overall shareholder experience during the performance period in question.

It is the Committee's intention that the mechanistic outcome of performance conditions relating to awards made under such plans will routinely be subject to review to avoid outcomes which could be seen as contrary to shareholders' expectations. To the extent provided for in the terms of any performance condition or in accordance with any relevant amendment power under the plan rules, the Committee may adjust and/or set different performance measures if events occur (such as a change in strategy, a material acquisition or divestment, a change in control or unexpected event) which cause the Committee to determine that the measures are no longer appropriate or in the best interests of shareholders, and that the amendment is required so that the measures achieve their original purpose. Committee discretion should not operate as an automatic override, and it must be exercised judiciously.

To the extent that discretion is applied in any year, the Committee undertakes that this will be clearly explained and disclosed to shareholders in the Implementation Report.

Recruitment remuneration

Our approach to recruitment remuneration for executives (both external and internal) is set out below. Shareholders are reminded that the following principles are binding only in so far as they relate to the recruitment of directors.

We aim to position base salary at an appropriate level, taking into consideration a range of factors including an executive's current remuneration, experience, internal relativities, an assessment against relevant comparator groups and cost.

Other elements of remuneration will be established in line with the Remuneration Policy set out earlier in this Policy Report in the executive remuneration structure table. As such, annual variable remuneration for new appointees will comprise a maximum award of 200 per cent of base salary under the STIP and a maximum award of 438 per cent of base salary under the PSP.

In the event that an internal appointment is made, existing commitments will be honoured.

If the Committee concludes that it is necessary and appropriate to secure an appointment, relocation-related support and international mobility benefits may also be provided depending on the circumstances.

Any relocation arrangements will be set out in the Implementation Report.

Any compensation provided to an executive recruited from outside the Group for the forfeiture of any award under variable remuneration arrangements entered into with a previous employer is considered separately to the establishment of forward looking annual remuneration arrangements. Our policy with respect to such "buy-outs" is to determine a reasonable level of award, on a like-for-like basis, of primarily equity-based, but also potentially cash or restricted stock, taking into consideration the quantum of forfeited awards, their performance conditions and vesting schedules. The Committee will obtain an independent external assessment of the value of awards proposed to be bought out and retains discretion, subject to the above, to make such compensation as it deems necessary and appropriate to secure the relevant executive's employment. The Committee's intention is that buy-out compensation should include, where appropriate, performance-tested equity.

No form of "golden hello" will be provided upon recruitment.

Executives' service contracts and termination

The Committee will seek to honour any commitments made in respect of termination of employment in the executive directors' service contracts predating this Remuneration Policy which are described in this section. This section also sets out Rio Tinto's policy on termination payments and notice periods. Shareholders are reminded that such policy is binding only in so far as it relates to directors.

For new appointments where the Company terminates by making a payment in lieu of notice, the Committee will for executive directors (to the extent permitted by relevant law) have regard to the executive director's ability to mitigate his loss in assessing the payment to be made.

The executive directors may have or may be offered service contracts which can be terminated by either party with up to 12 months' notice in writing, or immediately by paying the base salary only in lieu of any unexpired notice. An initial notice period of up to 24 months during the first two years of employment, reducing to up to 12 months thereafter, may sometimes be necessary to secure an external appointment. In some circumstances, it may also be appropriate to use fixed-term contracts for executive directors.

Other executives can be offered service contracts which can be terminated by the Company with up to 12 months' notice in writing, and by the employee with six months' notice in writing, or immediately by the Company by paying the base salary only in lieu of any unexpired notice.

The current contract terms of both directors and the other executives are included in the Implementation Report.

Executives may be required to undertake garden leave during all or part of their notice period and may receive their contractual salary, STIP and benefits during the notice period (or the cash equivalent). Where applicable, tax equalisation and other expatriate benefits will continue in accordance with the executive's prevailing terms and conditions.

In the case of dismissal for cause, the Company can terminate employment without notice and without payment of any salary or compensation in lieu of notice. Deferred bonus shares and outstanding awards under the LTIP may be forfeited in these circumstances.

Accrued but untaken annual leave and any long service leave will be paid out on termination, in accordance with the relevant country legislation and applicable practice applying to all employees. For eligible leavers (as defined below), in Australia the value of the leave is calculated on the basis of base salary, target STIP and car allowance. No STIP is included where the executive is not an eligible leaver.

If termination is a result of redundancy, the terms of the relevant local policy may apply in the same way as for other local employees.

On termination, the Company will pay relocation or expatriation benefits as agreed on the original expatriation and/or in accordance with its applicable policies on travel and relocation. For example, Sam Walsh is provided with expatriation benefits and allowances and on termination of his employment by the Company repatriation expenses would be paid.

On termination other than for cause, the Company may make a payment in consideration for entry by the departing executive director into appropriate restrictive covenants to protect Rio Tinto and its shareholders. The amount of such payment will be determined by the Committee based on the content and duration of the covenant.

Following termination, executive directors may be eligible to exercise long- term incentives awards under the conditions described in the sections following. They and their dependants may also be eligible for post-retirement benefits such as medical and life insurance. The Company may also agree to continue certain other benefits for a period following termination where the arrangements are provided under term contracts or in accordance with the terms of the service contract, for example, payment for financial advice, tax advice and preparation of tax returns for a tax year. In some cases, they may receive a modest retirement gift.

The Company may pay such amount as it determines is reasonable to settle any claims which in the Committee's view are legitimate which the executive director may have in connection with the termination of his employment. The Company may also pay reasonable legal and other professional fees (including outplacement support) to or in respect of a director in connection with the termination of his employment. These may include legal fees incurred by him in negotiating a settlement agreement with Rio Tinto. In assessing what is reasonable, the Company will take account of prevailing rates for such advice and support and determine appropriate level of contribution based on the complexity of the issues.

Treatment of STIP and LTIP on termination

The STIP and share plan rules govern the entitlements that executive participants may have under those plans upon termination of employment.

The concept of an "eligible leaver" is defined in the relevant Plan rules. In general terms, an eligible leaver is an executive who leaves the Group by reason of ill-health, injury, disability (as determined by the executive's employer); retirement; redundancy; transfer of the undertaking in which the executive works; change of control of the executive's employing company; or death; and usually there is a discretion for the Remuneration Committee to treat an executive as an eligible leaver.

Short Term Incentive Plan (STIP)

If an eligible leaver leaves the Group during a performance year, the Committee may determine in its absolute discretion to award a pro rata portion of the STIP based on the amount of the year served and based on actual assessment of performance against targets. Any cash payment will be made at the normal STIP payment date and no portion of the award will be deferred into shares.

If an executive provides the Company notice of their resignation during the performance year, but does not leave the Group until after the end of the performance year, the Committee may determine in its absolute discretion to make an award under the STIP. In these circumstances, the executive will only be eligible to receive the cash portion of the award and will forfeit the deferred shares portion. Any cash payment will be made at the normal STIP payment date.

No STIP award will be made where an executive who is not an eligible leaver leaves the Group, resigns or is terminated for cause prior to the end of the performance year.

Bonus Deferral Plan (BDP) (2013 onwards)

For grants made to executives from and including 2013, awards will normally be retained and vest at the scheduled vesting date, save where the Committee determines otherwise. There will be no pro rata reduction of awards and any dividend equivalent shares will be calculated on the vested shares.

If the executive resigns or is dismissed for misconduct, or for any other reason that the Committee decides, the awards will lapse.

BDP (pre-2013) [(a)]

For grants made to eligible leavers before 2013, awards will normally vest at the scheduled vesting date save where the Committee determines otherwise. There will be no pro rata reduction of awards and any dividend equivalent shares will be calculated on the vested shares.

If an executive leaves the Group for any other reason, awards will lapse.

For any BDP award, where required by law or regulation, and where the Remuneration Committee so decides, cash may be provided in lieu of shares.

PSP (2013 onwards)

For grants made to executives from and including 2013, awards will normally be retained, and vest at the scheduled vesting date. Unvested awards remain subject to the satisfaction of the performance conditions. Any dividend equivalent shares will be calculated on the vested shares at vesting.

If the executive leaves the Group during the first 36 months from the date of grant of the award, the number of shares that can vest will be reduced pro rata over that 36-month period.

Awards will vest immediately on death, but if an executive dies during the first 36 months from the date of grant of the award, the number of shares that can vest will be reduced pro rata over that 36-month period.

If the executive resigns or is dismissed for misconduct, or for any other reason that the Committee decides, the awards will lapse.

PSP (pre-2013) [(a)]

For grants made to eligible leavers before 2013, awards will normally be retained and vest at the scheduled vesting date, although the Committee may determine that awards should vest early. Unvested awards remain subject to the satisfaction of the performance conditions.

Awards vest immediately on death. The number of shares vesting is determined on the assumption that performance conditions are met at median level or at the level to which they are actually satisfied at the date of death, if higher. If an executive leaves the Group for any other reason, awards will lapse.

For any PSP award, where permitted by the Plan Rules, and where the Remuneration Committee so decides, awards may be made in cash in lieu of shares.

Share Option Plan (SOP) (pre-2013) [(a)]

For grants made to eligible leavers before 2013, awards will normally be retained. If the executive is an eligible leaver, vested awards will lapse one year from the date the executive leaves the Group and unvested awards will lapse one year from the vesting date or such

longer period as permitted by the Committee. At the date of this report there are no awards under the SOP which remain subject to the satisfaction of performance conditions.

Awards vest in full on death.

If an executive leaves the Group for any other reason, unvested awards and vested awards that have not been exercised will lapse.

Management Share Plan (MSP) [(a)]

Awards under the MSP are only made to executives prior to their appointment as an Executive Committee member. All retained awards will be reduced pro rata to reflect the proportion of the period between the date of grant of the award and the normal vesting date which has not elapsed at the time employment ceased. Any dividend equivalent shares or cash equivalent will be calculated on the vested shares. Awards vest on death, subject to the pro rata reduction described above.

For grants made to executives from and including 2013, awards will normally be retained, and vest, at the Committee's discretion, at the scheduled vesting date (although awards of US taxpayers may vest on leaving).

If the executive resigns or is dismissed for misconduct, or for any other reason that the Committee decides, the awards will lapse.

(a) All awards granted under pre-2013 plans or in the case of the MSP, awards granted prior to 2014, have now vested.

Chairman and non-executive directors' remuneration

Chairman

It is Rio Tinto's policy that the chairman should be remunerated on a competitive basis and at a level which reflects his contribution to the Group, as assessed by the board.

The Committee determines the terms of service, including remuneration, of the chairman. The chairman's fees are set by the Committee. The chairman has no part in the setting of his fees and is not present at any discussion at the Committee about his fees.

The chairman receives a fixed annual fee and does not receive any additional fee or allowance either for committee membership or chairmanship, or for travel. The chairman does not participate in the Group's incentive plans.

The chairman is provided with a car and driver. Any use for transport between home and the office and other personal travel is a taxable benefit to the chairman, and the Company pays any tax arising on the chairman's behalf. The chairman pays a fixed annual fee to the Company for the personal travel element.

Other benefits provided include private healthcare cover, accident insurance (note this is neither contractual nor a taxable benefit), other minor benefits (including modest retirement gifts in applicable circumstances), occasional spouse travel in support of the business and any Rio Tinto business expenses which are deemed to be taxable where the Company has paid the tax on his behalf. Rio Tinto does not pay retirement or post-employment benefits to the chairman.

Non-executive directors

Fees paid to non-executive directors reflect their respective duties and responsibilities and the time required to be spent by them so as to make a meaningful and effective contribution to the affairs of Rio Tinto.

The non-executive directors' fees and other terms are set by the board upon the recommendation of the Chairman's Committee (which comprises the chairman, chief executive and chief financial officer).

Non-executive directors receive a fixed annual fee comprising a base fee, committee membership or committee chairmanship fee or senior independent director fee, as applicable, and allowances for attending meetings which involve medium or long-distance air travel. They do not participate in any of the Group's incentive plans.

Where the payment of statutory minimum superannuation contributions for Australian non-executive directors is required by Australian superannuation law, these contributions are deducted from the director's overall fee entitlements.

Non-executive directors may on occasion receive reimbursement for costs incurred in relation to the provision of professional advice. These payments, if made, are taxable benefits to the non-executive directors and the tax arising is paid by the Company on the director's behalf.

Other benefits provided include accident insurance (note this is neither contractual nor a taxable benefit), other minor benefits (including modest retirement gifts in applicable circumstances), occasional spouse travel in support of the business and any Rio Tinto business expenses which are deemed to be taxable where the Company has paid the tax on their behalf. Rio Tinto does not pay retirement or post-employment benefits to non-executive directors.

Appointment

The appointment of non-executive directors (including the chairman) is handled through the Nominations Committee and board processes. The current fee levels are set out in the Implementation Report.

Details of each element of remuneration paid to the chairman and non-executive directors are set out in the Implementation Report in table 1b.

The chairman's letter of appointment from the Company stipulates his duties as chairman of the Group. His appointment may be terminated without liability on the part of Rio Tinto in accordance with the Group's constitutional documents dealing with retirement, disqualification from office or other vacation from office. Otherwise, his appointment may be terminated by giving 12 months' notice. There are no provisions for compensation payable on termination of his appointment, other than if his appointment as chairman is terminated by reason of his removal as a director pursuant to a resolution of shareholders in general meeting in which case the Company shall be liable to pay any fees accrued to the date of any such removal.

The non-executive directors' letters of appointment from the Company stipulate their duties and responsibilities as directors. Each non-executive director is appointed subject to their election and annual re-election by shareholders. Non-executive directors' appointments may be terminated by giving three months' notice. There are no provisions for compensation payable on termination of their appointment. The letters of appointment are available for inspection at Rio Tinto plc's registered office, and at its annual general meeting.

In accordance with the provisions of the Group's constitutional documents, the maximum aggregate fees payable to the non-executive directors (including the chairman) in respect of any year, including fees received by the non- executive directors for serving on any committee of the boards, and any travel allowances received by the non-executive directors for attending meetings, will not exceed £3,000,000. Non-monetary benefits are not included in this limit.

Remuneration Report: Implementation Report

Implementation Report introduction

This Implementation Report is presented to shareholders for approval at the AGMs. It outlines how our Remuneration Policy was implemented in 2015 and how we intend to operate it in 2016.

Remuneration for executives, set out in the single total figure of remuneration tables on pages 81, 84, 90 and 91, is shown gross of tax and in the relevant currency of award or payment. The information reported for executives in table 1a on pages 96 and 97 is reported in accordance with Australian statutory disclosure requirements and is shown gross of tax and in US dollars. Where applicable, amounts have been converted using the relevant average exchange rates included in the notes to table 1a on page 96 [(a)].

In addition to executive remuneration, this report covers, in table 1b on page 98, the remuneration of the chairman and the non-executive directors. All figures are shown gross of tax and in US dollars.

Remuneration Committee responsibilities

The Committee's responsibilities are set out in its terms of reference which are available in the corporate governance section of the Rio Tinto website. The responsibilities of the Committee include:

- determining the Group's remuneration structure and policies, and assessing their cost, including pension and superannuation arrangements for executives;
- determining the mix and use of short and long-term incentive plans for executives;
- overseeing the operation of the Group's short and long-term incentive plans as they relate to executives, including the approval of awards, the setting of performance criteria, where applicable, and the determination of any vesting;
- determining contractual notice periods and termination commitments and setting any retention and termination arrangements for executives;
- determining awards under the Group's all-employee share plans; and
- determining the terms of service upon appointment and any subsequent changes for the chairman and executives.

The Committee considers the level of pay and conditions throughout the Group when determining executive remuneration and ensures that the same principles are used when designing the broader employee remuneration policies.

The membership and meeting attendances are detailed in the corporate governance section on page 57.

The Committee is supported by executives and members of senior management who attend meetings to provide information as requested by the Committee. These included Sam Walsh (chief executive), Hugo Bague (Group executive, Organisational Resources), John Beadle (global head, Performance and Reward) and Eleanor Evans (company secretary). None of the attendees mentioned above was present when matters associated with their own remuneration were considered by the Committee.

Independent advisers

The independent advisers engaged by the Committee during 2015 were Willis Towers Watson, formerly known as Towers Watson. Willis Towers Watson reports to the Committee and not to management.

To ensure that "remuneration recommendations" (being advice relating to the elements of remuneration for key management personnel, as defined under the Australian Corporations Act) were made free from undue influence by key management personnel to whom they may relate, the Committee established a protocol for the engagement of and interaction with remuneration consultants and has monitored compliance with its requirements throughout 2015. Declarations were given by Willis Towers Watson to the effect that its remuneration recommendations were made free from undue influence by key management personnel to whom they related. The board has received assurance from the Committee and is satisfied that the remuneration recommendations received from Willis Towers Watson were made free from undue influence.

Willis Towers Watson is a member of the Remuneration Consultants' Group and, as such, voluntarily operates under the Code of Conduct (the Code) in relation to executive remuneration consulting in the UK. The Code is based upon principles of transparency, integrity, objectivity, competence, due care and confidentiality. Willis Towers Watson has confirmed that it adhered to the Code throughout 2015 for all remuneration services provided to Rio Tinto. The Code is available online at remunerationconsultantsgroup.com.

Willis Towers Watson is the only remuneration consultant which provided remuneration recommendations to the Committee during 2015. The Committee is content that Willis Towers Watson, in providing remuneration advice to the Committee, did not have any connections with Rio Tinto that impaired its independence.

During 2015, as part of its engagement, Willis Towers Watson provided remuneration recommendations to the Committee. Its services included Committee meeting attendance and advice in relation to management proposals. Willis Towers Watson was paid US$179,223 (2014: US$349,905) for these services.

Willis Towers Watson provided general and technical executive remuneration services. These services included the giving of advice about remuneration of employees other than key management personnel across the Group, and advice in relation to preparation of the 2015 Remuneration Report. Willis Towers Watson was paid US$28,183 (2014: US$147,547) for these services. Other services and publications relating to remuneration data were received from a range of sources.

(a) UK and Australian remuneration figures are generally not comparable due to the different methodologies required to calculate various parts of the remuneration packages, most notably LTIP arrangements and the value of pension or superannuation.

How the Committee spent its time in 2015

During 2015, the Committee met seven times. It fulfilled its responsibilities as set out in its terms of reference.

In particular, its work in 2015 and in the early part of 2016 has included:

- reviewing and determining any base salary adjustments for executives;
- reviewing and determining threshold, target and outstanding performance targets for the 2015 STIP;
- reviewing actual performance against the targets for the 2015 STIP and assessing applicable adjustments;
- reviewing and determining the outcomes for LTIP awards vesting at the end of 2015;
- reviewing and determining LTIP grants for the executives in 2016;
- determining the terms of departure for the outgoing chief executive, Energy (Harry Kenyon-Slaney);
- reviewing the strategy and annual reports on the Group's global benefit plans;
- reviewing progress towards compliance with the Group's share ownership requirements;
- determining the 2016 STIP targets; and
- preparing the Remuneration Report (including this Implementation Report).

The performance targets under the LTIP and the Company's approach to establishing the performance targets under the STIP are detailed in the executive remuneration structure table on pages 71 to 73. The Committee's approach to the commercial sensitivity of certain targets is discussed below.

Performance review process for executives

Rio Tinto conducts an annual performance review process for all of its executives. In the case of members of the Executive Committee, the chief executive conducts the review. In the case of the chief executive, his performance is assessed by the chairman of the board.

The key objectives of the performance review process are to:

- improve organisational effectiveness by creating alignment between the executive's objectives and Rio Tinto's strategy; and
- provide a consistent, transparent and balanced approach to measure, recognise and reward executive performance.

All such reviews took place in 2015 or early 2016.

Share ownership policy for executives

The Group recognises the importance of aligning executives' interests with those of shareholders and they are therefore expected to build up and maintain a meaningful shareholding. The Committee intends that executives should aim to reach a share ownership (defined below) in Rio Tinto shares equivalent in value to:

	Share ownership requirement
Chief executive	4 x base salary
Other executives	3 x base salary

The Committee expects that this shareholding will be built up over a five-year period by holding shares and share options that vest under the LTIPs. For new hires, longer periods may be accepted, given the five-year vesting periods for the PSP.

Shares will be treated as "owned" if they are not subject to restriction, and as such include shares directly held by the executive and any shares where there is a beneficial interest. A beneficial interest includes any shares where the executive receives the benefit of ownership (such as a right to receive dividends) without directly owning the shares. A value for vested, but unexercised, share options is included, with a 50 per cent discount for the likely effects of taxation, on the basis that executives with unexercised vested options have a strong financial alignment with the share price and therefore with shareholder interests.

Shareholding requirements also exist for senior management below the Executive Committee.

Details of executives' beneficial interests in Rio Tinto shares are set out in table 2 on page 99 and the details of awards of shares and options under long-term incentive plans are set out in table 3 on pages 100 to 104.

Executives' external and other appointments

Executives may be invited to become non-executive directors of other companies. It is Rio Tinto's policy that such appointments can broaden the experience and knowledge of executives, to the benefit of the Group. This policy limits each executive's external appointment to one FTSE100 company directorship or equivalent. Consequently, where there is no likelihood that such an appointment will give rise to a conflict of interest, the board will normally provide consent to the appointment. The executive is typically permitted to retain any fees earned.

Details of all executives' external appointments can be found on page 54.

Performance and impact on 2015 STIP

Group financial and safety measures are included in the STIP for executive directors and Group executives. The STIP measures for the product group chief executive officers (PGCEOs) include product group financial and safety measures in addition to the Group financial measures.

Safety measures for all executives in 2015 were split equally between all injury frequency rate (AIFR) and lost time injuries (LTIs). Our goal is zero harm, including, above all, the elimination of workplace fatalities.

The Committee selected the current financial measures of underlying earnings and free cash flow because they are KPIs used in managing the business.

Underlying earnings is the key financial performance indicator used across the Group. It gives insight into cost management, production growth and performance efficiency.

Operating free cash flow is a complementary measure to underlying earnings. It also provides insight into how we are managing costs and increasing efficiency and productivity across the business.

In measuring financial performance against the annual plan, half is measured against the original plan, and half is "flexed" to exclude the impact of fluctuations in exchange rates, quoted metal and other prices during the year, which are outside management's control. These financial goals have been higher than the "unflexed" targets set by the board when commodity prices have risen and, as in the case of 2015, lower when commodity prices fall. Earnings and free cash flow results are compared against equally weighted "flexed" and "unflexed" targets.

The aggregate scores for Group safety and financial measures are set out in the table below. The outcomes for the executive directors, with commentary on key highlights on performance against individual objectives, are provided on pages 82 and 84. Additional details for other executives are provided on page 87.

Group measures	Weight (%)	Result (out of 200%)	Weighted result
Group safety [a]	20.0	200	40.0
Underlying earnings	12.5	0	0.0
Underlying earnings – flexed	12.5	156	19.5
Free cash flow	12.5	168	21.0
Free cash flow – flexed	12.5	200	25.0
Group financial	50.0	131	65.5
Safety and financial measures [b]	**70.0**	**150.7**	**105.5**
Individual measures [c]	30.0	–	–
Total [c]	**100.0**	**–**	**–**

(a) This excludes the impact of adjustments for fatalities in 2015 which vary by executive.

(b) The weighted result represents the total Group safety and financial measures result (out of a maximum of 200 per cent) weighted based on the total STIP opportunity of 70 per cent allocated to the safety and financial measures. This excludes the impact of adjustments for fatalities in 2015 which vary by executive.

(c) The outcomes against individual measures and the total result for executives (scored out of 200 per cent) are included in the following pages.

Safety performance

Four people lost their lives while working at Rio Tinto managed operations in 2015, which meant we did not achieve our goal of zero fatalities.

The Remuneration Committee sought guidance from the Sustainability Committee on safety performance for 2015, as per our normal procedures. Both committees noted the continued improvement in AIFR, with the Group's AIFR improving from 0.59 in 2014 to an all-time low of 0.44 in 2015. This outcome out-performed the level set for "outstanding" performance for the Group for 2015 of 0.45.

There were 220 lost time injuries (LTI's) in 2015 compared with 381 in 2014. This also out-performed the level set for "outstanding" performance for the Group of 231 lost time injuries.

The combined performance against our AIFR and LTI targets meant that the Group achieved an "outstanding" STIP safety result, with three of the four product groups also achieving an "outstanding" or close to "outstanding" STIP safety result. The total STIP safety result for the Group was 200 per cent (out of a maximum of 200 per cent).

However reductions were applied as required for executives where a fatality has occurred. Thus the safety results for the chief executive and the chief financial officer were reduced from 200 per cent to 100 per cent and 150 per cent respectively for the impact of fatalities in 2015. These adjustments reflect the level of oversight they had for safety leadership during the year and the level of management control over the causal factors of the fatalities. Similarly there were downward adjustments made for certain other executives.

Group financial performance

Highlights of our 2015 performance can be found on pages 8 to 11 of this Annual report.

The table below provides details of performance against our "unflexed" and "flexed" underlying earnings and free cash flow financial targets for 2015.

Group measures	Unflexed Target	Flexed Target	Actual result
Underlying earnings	US$5.9b	US$4.1b	US$4.5b
Free cash flow	US$3.3b	US$1.2b	US$4.8b

The 'threshold' level for underlying "unflexed" earnings for the Group set by the board was not met. However, the "unflexed" free cash flow 'target' and "flexed" earnings and free cash flow 'targets' were exceeded. These outcomes are reflected in the financial component of the STIP awards, both at the Group and product group level.

These outcomes (adjusted as described below) translate into a Group performance against financial targets of 132 per cent (out of a maximum of 200 per cent).

The Committee seeks to ensure, in making its year end determination of STIP awards, that actual performance is directly comparable to the targets set at the beginning of the year. This resulted in the Committee making certain minor adjustments to the targets in 2015 to take account of events outside management's control and to ensure a like-for-like comparison. Both upward and downward adjustments were made to the targets by reference to principles agreed by the Committee, which have been consistently applied over several years, to ensure the outcomes are fair.

This process reduced the Group's performance score against the financial targets from 132 per cent to 131 per cent out of a maximum of 200 per cent (2014: from 154 per cent to 153 per cent).

STIP individual measures for 2015

Individual measures were set by the chairman for the chief executive and by the chief executive for other executives based on the following categories:

1. Business transformation
2. Cost reduction
3. Performance delivery
4. Leadership and engagement

Details of the outcomes against the individual measures are provided in the following pages.

Performance and impact on LTIP vesting outcome for the period ended 31 December 2015

The performance shares under the PSP awarded in 2012 had a four-year performance period that ended on 31 December 2015. Conditional share awards vest subject to the TSR performance condition which compares Rio Tinto's TSR against the Euromoney Global Mining Index (50 per cent) and the Morgan Stanley Capital World Index (MSCI) (50 per cent).

Rio Tinto outperformed the Euromoney Global Mining Index by 29.4 per cent for the four-year performance period starting 1 January 2012 and ending on 31 December 2015. This equated to an outperformance of 6.7 per cent per annum positioning performance between "target" and "outstanding". The level of outperformance required for maximum vesting against this index was 8 per cent per annum. The vesting outcome against this index was therefore 130.7 per cent compared to the maximum of 150 per cent.

The level of vesting against the MSCI was nil as Rio Tinto underperformed this index.

This award, which has been calculated by Willis Towers Watson, has a vesting of 65.4 per cent of face value against a maximum possible vesting of 150 per cent of face value. The vesting as a percentage of the maximum possible vesting was therefore 43.6 per cent which is calculated as 65.4 per cent divided by 150 per cent.

The Committee considered the Group's overall performance in the context of the LTIP awards that were due to vest at the end of 2015 and concluded that the vesting of awards based upon the achievement of the TSR measures set by shareholders was justified.

Further details of the LTIP outcomes for the period ended 31 December 2015 and in prior years, including a chart on TSR performance against both indices, are provided on page 93.

Sam Walsh (chief executive)

Single total figure of remuneration

The table below provides a summary of actual remuneration in respect of 2015 and prior years in accordance with UK legislation. It is stated in Australian dollars, the currency of Sam Walsh's remuneration arrangements. This is in addition to the Australian statutory disclosure requirements set out in US dollars in table 1a on pages 96 and 97. The remuneration details set out in table 1a include theoretical accounting values relating to various parts of the remuneration packages, most notably LTIP arrangements, and require a different methodology for calculating the superannuation value. Accordingly, the figures below are not directly comparable with those in table 1a.

(stated in A$'000)	**2015**	2014	2013
Base salary paid [a]	**1,985**	1,940	1,889
STIP payment – cash	**1,631**	1,721	1,371
STIP payment – deferred shares [b]	**1,632**	1,721	1,370
Total short-term pay	**5,248**	5,382	4,630
Value of LTIP awards vesting [c]	**2,076**	3,161	3,121
Superannuation [d]	**584**	841	1,322
Other benefits [e]	**1,217**	1,030	997
Single total figure of remuneration	**9,125**	10,414	10,070
Percentage change in total remuneration (2015 versus 2014; 2014 versus 2013)	**(12.4%)**	3.4%	
Percentage of total remuneration provided as performance-related pay (STIP and LTIP)	**58.5%**	63.4%	58.2%
Percentage of total remuneration provided as non-performance-related pay (base salary, pension and other benefits)	**41.5%**	36.6%	41.8%
Percentage of maximum STIP awarded [f]	**81.9%**	88.4%	72.1%
Percentage of maximum STIP forfeited	**18.1%**	11.6%	27.9%
Percentage of target STIP awarded	**136.5%**	147.3%	120.2%
Percentage of PSP award vesting	**65.4%**	73.5%	75%
Percentage SOP award vesting	**–**	–	–

The decrease in the single total figure of remuneration is due mainly to the significantly lower value of shares in the LTIP awards vesting in 2015 compared with 2014. This was due to a lower vesting level for the PSP awards (65.4 per cent for the 2012 PSP versus 73.5 per cent for the 2011 PSP), combined with lower share prices at the date the 2012 PSP awards vested in February 2016 compared to the share prices at the date the 2011 PSP awards vested in February 2015. A lower STIP in 2015 and a lower value of superannuation accrued during 2015 have also contributed to the reduction in total remuneration.

(a) Salary paid in the financial year to 31 December. Salaries are generally reviewed with effect from 1 March.

(b) Value of STIP deferred under the BDP, the vesting of which is subject to continued service.

(c) Based on the value of the LTIP awards, including a cash payment for dividends, which vested in respect of the performance period that ended 31 December. The Rio Tinto Ltd share price used to calculate the value of the award vesting is based on the closing price on 15 February 2016 of A$42.22. The performance conditions for awards vesting for the period ending 31 December 2015 are detailed in the notes to table 3 on page 104.

(d) Superannuation reflects the value of the superannuation accrued during the year assuming that it was to come into payment immediately. This differs from the value reported in table 1a which is calculated using an IAS19 methodology and assumptions on rates of investment return, inflation and salary increases.

(e) Other benefits include international assignment benefits (e.g. house rental costs) of A$1,001,000 for 2015 (2014: A$810,000), allowance for professional tax services, car allowance, Company provided transport and other contractual payments or benefits. Other benefits were higher in 2015 due primarily to the impact of exchange rates on house rental costs, to costs related to the storage of household goods in Australia and to higher company provided transport benefits.

(f) The maximum potential STIP award is 200 per cent of base salary.

Base salary

Sam's base salary will remain unchanged for 2016.

	2016	2015	% change
Base salary (stated in A$'000)	**1,992**	1,992	–

STIP individual objectives for 2015

Sam's performance against his individual objectives is summarised below:

Category	Performance
Business transformation	– Effectively repositioned the cost base through the embedded cash focus of the organisation. – Continued to consolidate and build on strong platform to engage with all leaders and employees, and further drive transformation and cultural change. – Continued discipline in capital management and prioritisation and focus on costs (see below). – Continued progress with outsourcing and offshoring opportunities in emerging markets. The further centralisation of Procurement delivered value of more than US$1.7 billion both through cost reductions and cost avoidance.
Cost and capital reductions	– Achieved a further US$1.3 billion of sustainable operating cash cost improvements. – Generated net cash from operating activities of US$9.4 billion in 2015 and free cash flow of US$4.8 billion. – Tight management of working capital generated a further US$1.5 billion cash inflow in 2015. – Reduced capital expenditure by US$3.5 billion to US$4.7 billion. – Maintained a strong balance sheet with net debt of US$13.8 billion and gearing of 24 per cent.
Performance delivery	– Pilbara 360: The construction of the 360 Mt/a infrastructure was completed during 2015 on schedule and below budget. The Brockman Fuel Hub project was also finished as planned. – Kitimat Modernisation Project: Construction was completed and first hot metal was delivered during 2015, within the revised schedule and budget. – Significant progress made on the Amrun bauxite project. – Oyu Tolgoi in its second full year of operations with agreements signed to finance the proposed underground project. – Development of the fourth kimberlite pipe at Diavik.
Leadership and engagement	– Simplified the organisation to better reflect the current environment and prepare the business for cost challenges, including but not limited to removing the Energy Product Group, consolidating Coal with Copper and Uranium with Diamonds and Minerals. – Substantially increased communication and engagement with investors and the market. – Re-established the strength of our governance processes to ensure the best investment decisions. – Further development of executive talent.

The Committee, with input from the chairman of the board, assessed Sam's performance against his individual objectives as 170 per cent (out of 200 per cent) for his individual contribution to the business during the year.

STIP outcomes for 2015

The following table summarises the STIP outcomes for 2015.

Measures	Weight (%)	Result (out of 200%)	Weighted result
Safety [(a)]	20	100.0	20.0
Group financial [(a)]	50	131.0	65.5
Safety and financial	70	122.1	85.5
Individual	30	170.0	51.0
Total (% of target out of 200%)	**100**	–	136.5

(a) Refer to page 80 for further details of Group safety and financial performance. The Group safety result of 200 per cent has been reduced by 50 per cent to 100 per cent for the impact of fatalities in 2015.

As a result, Sam received a STIP award of 136.5 per cent of target (2014: 147.3 per cent), equivalent to 163.8 per cent of base salary (2014: 176.8 per cent), half to be delivered in cash in March 2016, and the remainder to be delivered in deferred shares, vesting in December 2018.

STIP measures for 2016

The 2016 STIP measures and weightings are described on page 89 of this Report.

LTIP outcome for the period ended 31 December 2015

Sam received 41,555 shares (2014: 45,387 shares) in Rio Tinto Limited on 15 February 2016 from the vesting of the PSP awarded in 2012. The market price of Rio Tinto Limited shares at 15 February 2016, the date these awards first became available for election and the latest practicable date before the date of publication of this report, was A$42.22 (16 February 2015: A$63.55). He also received a cash payment of A$321,760 (2014: A$277,051) equal to the aggregate net dividends that would have been paid on the shares that vested had he owned them during that four-year period. No dividends were paid in respect of the share awards that lapsed. The total value of the LTIP awards vesting from the performance period ending 31 December 2015, inclusive of the cash payment for dividends on the 2012 PSP, was therefore A$2,076,000 (2014: A$3,161,000).

Further details of the awards vesting in 2016 and in prior years are provided on page 93 and in table 3 on page 101.

LTIP award granted in 2015

The details of Sam's 2015 LTIP award are summarised in the following table.

Type of award	Grant date	Face value of award (% of base salary)	Face value of award (A$'000) [(a)]	% vesting at threshold performance	End of the performance period over which the performance conditions have to be fulfilled [(b)(c)]
PSP	23 March 2015	430%	8,567	22.5%	31 Dec 2019

(a) The face value represents the maximum value of the award and resulted in an award of 138,010 conditional shares based on the average share price over 2014 of A$62.074. The expected value of the award is 50 per cent of the face value or A$4,283,500.

(b) The 2015 PSP award may vest after five years in 2020.

(c) The full performance conditions for the award are set out in detail in table 3 on page 104.

LTIP award for 2016

Sam's PSP award in 2016 will have a face value of 400 per cent of base salary and an expected value of 200 per cent of base salary. The award may vest after five years in 2021, subject to the Group's relative TSR and relative EBIT margin performance. Save for the change to the EBIT margin comparator group, the performance conditions for the award are unchanged from 2015 and the full performance conditions are set out in detail on page 88. As with other participants, Sam's award in 2016 may be subject to pro-rating depending on the date of his retirement from Rio Tinto.

The number of conditional shares awarded under the LTIP is calculated using the average share price over the previous calendar year, and as such, the awards granted in 2016 will be calculated using the 2015 average Rio Tinto Limited share price A$54.184. This compares with the market price of Rio Tinto Limited shares at 15 February 2016 of A$42.22. This has the effect of reducing the nominal value of the award as at 15 February 2016 from 400 per cent to 312 per cent of salary.

Shareholding

Sam's shareholding for the purposes of the share ownership policy, calculated using the market price of Rio Tinto shares on the latest practicable date each year before the date of publication of this report was:

	31 December 2015	31 December 2014	Increase in shareholding/ value of options
Holding of ordinary shares	**194,780**	146,993	32.5%
Value of vested but unexercised options ('000)	**A$175**	A$809	(78.4%)
Multiple of base salary	**4.2**	5.2	(1.0)

The value of vested but unexercised options is calculated based on the share price as at the relevant date in February each year less the exercise price and with a 50 per cent discount for the effects of taxation.

Sam's shareholding at 31 December 2015 exceeds the level required under the Share ownership policy of 4 times base salary and Sam's holding of ordinary shares has increased. However, the value of the shares and options and the multiple of base salary as at 31 December 2015 is lower than the multiple reported as at 31 December 2014 due to the lower share price.

Superannuation

Sam is provided with superannuation through an employer funded plan as provided to Australian-based employees.

In line with Australian-based employees with defined benefit provision who remain in service beyond age 62, Sam's benefit is calculated as the greater of:

(a) 20 per cent of base salary, averaged over three years, for each year of service and proportionate month with the Company to date of retirement; or

(b) (i) his accrued benefit at age 62 of 4.05 times final base salary; plus

(ii) Company contributions required under Australian legislation sufficient to meet the maximum contribution base as detailed within the Superannuation Guarantee legislation, being at the rate of 9.5 per cent for the period 1 January to 31 December 2015, less tax; plus

(iii) investment earnings at the rate the trustee of the superannuation fund may determine from time to time for the period from age 62 to the date of retirement.

In line with typical market practice in Australia, Sam continues to receive an additional Company contribution on a defined contribution basis of 20 per cent of the lesser of:

(a) 50 per cent of the annual STIP award; or

(b) 20 per cent of base salary.

This benefit can be taken without employer or trustee consent and without actuarial reduction on cessation of employment on or after age 62.

The accrued lump sum benefit as at 31 December 2015 was A$10,220,837 (31 December 2014: A$9,496,489). The accrued lump sum benefit as at 31 December 2015 calculated by reference to Sam's base salary as set out in (a) above was A$9,144,489 (31 December 2014: A$8,235,215). The additional Company contribution on a defined contribution basis for 2015 was A$77,900 (2014: A$75,999). Sam elected to take the defined contribution element as a cash amount less any applicable withholdings.

Fees received from external appointments

Sam received no fees from external appointments in 2015 or 2014.

Service contract

Positions held and date of appointment to position

Position held during 2015	Date of appointment to position
Chief executive	17 January 2013

As announced in October 2014, effective 7 May 2015, Sam transferred to a rolling contract which can be terminated by either party with 12 months' notice in writing, or immediately by paying the base salary only in lieu of any unexpired notice.

Other

Sam receives a housing allowance and other assignment benefits during his secondment to London. His remuneration is not subject to tax equalisation or cost of living adjustments, both of which are standard provisions for other international assignees in the Group. The amounts are included in note (e) under the single total figure of remuneration table on page 81. At the relevant time, he will also be repatriated to Australia at the conclusion of his assignment.

Sam will be eligible to receive the value of unused annual leave and long service leave at the conclusion of his employment in accordance with Australian legislation and applicable practice applying to all employees in Australia; the value of this leave as at 15 February 2016 was A$879,000 and A$1,816,000 respectively.

Chief executive's pay and employee pay

The table below compares the changes from 2014 to 2015, in salary, benefits and annual incentives paid for the chief executive and the Australian workforce. We have chosen the comparison to the Australian workforce because it is the country where approximately 40 per cent of the total workforce is based. This comparator group has been selected due to the availability of comparative data and to remove the impacts of year-on-year exchange rate fluctuations. The underlying elements of the chief executive's pay are based on the values reported in the single total figure of remuneration table.

The chief executive's base pay was increased by 2.3 per cent with effect from 1 March 2015, compared to an average increase of 2.9 per cent across the Australian workforce.

	Percentage change in salary paid	Percentage change in other benefits paid	Percentage change in annual incentive paid [c][d]
Chief executive	2.3%	18.2%	25.5%
Australian workforce	2.9%	1.0%	(14.1%)

(a) The percentage change in each element of remuneration for the workforce is calculated on a per capita basis using average employee numbers.

(b) The percentage change in annual incentive compares amounts paid in 2015 with respect to the 2014 performance year, to amounts paid in 2014 with respect to the 2013 performance year. Annual incentives for the workforce comprise a number of different short-term incentive arrangements.

(c) The increase in annual incentive paid to the chief executive was primarily due to a higher individual performance score in 2014 compared to 2013 and the impact of a 10 per cent reduction to the overall incentive in 2013 levied by the Committee using its discretion.

(d) The lower average annual incentive paid to the Australian workforce was due mainly to lower average financial and safety performance outcomes in 2014 compared to 2013, particularly for Iron Ore which represents a significant portion of the Australian workforce.

Chris Lynch (chief financial officer)

Single total figure of remuneration

The table below provides a summary of actual remuneration in respect of 2015 and the prior year in accordance with UK legislation, stated in pounds sterling, the currency of Chris's arrangements. This is in addition to the Australian statutory disclosure requirements set out in US dollars in table 1a on pages 96 to 97. The remuneration details for 2015 set out in table 1a include theoretical accounting values relating to various parts of the remuneration packages, most notably LTIP arrangements, and require a different methodology for calculating the pension value. Accordingly, the figures below are not directly comparable with those in table 1a.

(stated in £'000)	2015	2014	2013 [g]
Base salary paid/fees [a]	**834**	817	702
STIP payment – cash [a]	**690**	746	457
STIP payment – deferred shares [b]	**690**	746	4562
Total short-term pay	**2,214**	2,309	1,615
Value of LTIP awards vesting [c]	**0**	0	0
Pension [d]	**208**	204	167
Other benefits [e]	**151**	107	941
Single total figure of remuneration	**2,573**	2,620	2,723
Percentage change in total remuneration (2015 versus 2014; 2014 versus 2013)	**(1.8%)**	(3.8%)	–
Percentage of total remuneration provided as performance-related pay (STIP and LTIP)	**53.6%**	56.9%	33.5%
Percentage of total remuneration provided as non-performance- related pay (base salary/fees, pension and other benefits)	**46.4%**	43.1%	66.5%
Percentage of maximum STIP awarded [f]	**82.5%**	91.0%	68.1%
Percentage of maximum STIP forfeited	**17.5%**	9.0%	31.9%
Percentage of target STIP awarded	**137.5%**	151.7%	113.5%
Percentage of PSP award vesting [c]	**–**	–	–
Percentage SOP award vesting [c]	**–**	–	–

The decrease in the single total figure of remuneration is due mainly to the lower STIP award in 2015 compared with 2014, partly offset by a higher base salary paid and higher other benefits due primarily to prior year tax planning fees being recognised in 2015 instead of 2014 and higher Company provided transport benefits.

(a) Salary/fees paid in the financial year to 31 December. Salaries are generally reviewed with effect from 1 March.

(b) Value of STIP deferred under the BDP, the vesting of which is subject to continued service.

(c) Chris had no LTIP awards vest in respect of the performance period that ended 31 December 2015 as he received no LTIP awards prior to the award made in 2013.

(d) Pension reflects the value of the pension contribution and payment in lieu of pension paid during the year.

(e) Includes healthcare, allowance for professional tax services and car allowance. 2013 includes one-off costs of £896,000 associated with Chris's relocation from Melbourne, Australia to London.

(f) The maximum potential STIP award is 200 per cent of base salary.

(g) Remuneration for 2013 includes director's fees of A$35,000 for the period Chris was a non-executive director from 1 January 2013 to 28 February 2013.

Base salary

Chris's base salary will remain unchanged in 2016.

	2016	2015	% change
Base salary (stated in £'000)	**836**	836	–

STIP individual objectives for 2015

Chris's performance against his individual objectives is summarised below:

Category	Performance
Business transformation	– Significant cost reductions achieved through the consolidation of Strategy and Business Development functions. – Successful completion of strategic review.
Cost and capital reductions	– Achieved a further US$1.3 billion of sustainable operating cash cost improvements. – Generated net cash from operating activities of US$9.4 billion in 2015 and free cash flow of US$4.8 billion. – Tight management of working capital generated a further US$1.5 billion cash inflow in 2015. – Reduced capital expenditure by US$3.5 billion to US$4.7 billion. – Maintained a strong balance sheet with net debt of US$13.8 billion and gearing of 24 per cent.
Performance delivery	– Strengthened the Evaluation and Plan Review Committees. – Actively contributed to the above Committees as well as Investment Committee, Executive Committee and the board.
Leadership and engagement	– Strong functional performance while reducing costs by 20 per cent. – Strong investor engagement.

The Committee, with input from the chief executive, assessed Chris's performance against his individual objectives as 140 per cent (out of 200 per cent) for his individual contribution to the business during the year.

STIP outcomes for 2015

The following table summarises the STIP outcomes for 2015.

Measures	Weight (%)	Result (out of 200%)	Weighted Result
Safety [a]	20	150.0	30.0
Group financial [a]	50	131.0	65.5
Safety and financial	70	136.4	95.5
Individual	30	140.0	42.0
Total (% of target out of 200%)	**100**	**–**	**137.5**

(a) Refer to page 80 for further details of Group safety and financial performance. The Group safety result of 200 per cent has been reduced by 25 per cent to 150 per cent for the impact of fatalities in 2015.

As a result, Chris received a STIP award of 137.5 per cent of target (2014: 151.7 per cent), equivalent to 165.0 per cent of base salary (2014: 182.0 per cent), half to be delivered in cash in March 2016, and the remainder to be delivered in deferred shares, vesting in December 2018.

STIP measures for 2016

The 2016 STIP measures and weightings are described on page 89 of this Report.

LTIP outcome for the period ended 31 December 2015

Chris had no LTIP awards which had a performance period that ended on 31 December 2015, having become an executive director on 1 March 2013.

LTIP award granted in 2015

The details of Chris's 2015 LTIP award are summarised in the following table.

Type of award	Grant date	Face value of award (% of base salary)	Face value of award (£'000) [a]	% vesting at threshold performance	End of the performance period over which the performance conditions have to be fulfilled [b][c]
PSP	23 March 2015	430%	3,597	22.5%	31 Dec 2019

(a) The face value represents the maximum value of the award and resulted in an award of 112,620 conditional shares based on the average share price over 2014 of £31.935. The expected value of the award is 50 per cent of the face value or £1,798,500.

(b) The 2015 PSP award may vest after five years in 2020.

(c) The full performance conditions for the award are set out in detail in table 3 on page 104.

LTIP award for 2016

Chris's PSP award in 2016 will have a face value of 400 per cent of base salary and an expected value of 200 per cent of base salary. The award may vest after five years in 2021, subject to the Group's relative TSR and the relative EBIT margin performance. Save for the change to the EBIT margin comparator group, the performance conditions for the award are unchanged from 2015 and the full performance conditions are set out in detail on page 88.

The number of conditional shares awarded under the LTIP is calculated using the average share price over the previous calendar year, and as such, the awards granted in 2016 will be calculated using the 2015 average share price of £26.346. This compares with the market price of Rio Tinto plc shares at 15 February 2016 of £18.51. This has the effect of reducing the nominal value of the award as at 15 February 2016 from 400 per cent to 281 per cent of salary.

Shareholding

Chris's shareholding for the purposes of the share ownership policy, calculated using the market price of Rio Tinto shares on the latest practicable date each year before the date of publication of this report was:

	31 December 2015	31 December 2014	Increase in shareholding
Holding of ordinary shares	**9,182**	9,050	1.5%
Multiple of base salary	**0.2**	0.4	(0.2)

Chris holds no options over Rio Tinto shares. He has until 2018 to build up his ownership in shares to three times his salary as chief financial officer.

Pension

Chris is employed in the UK and is provided with pension benefits on a defined contribution basis.

The Company paid a pension contribution to a funded UK company pension arrangement of 25 per cent of £135,000, being the current maximum salary on which pension contributions are based under that arrangement. The pension contribution for 2015 was £33,750 (2014: £33,750).

Chris also received a cash supplement equal to 25 per cent of the amount by which his base salary exceeded £135,000, less any applicable withholdings. The gross cash supplement for 2015 was £174,667 (2014: £170,417).

Fees from external appointments

Chris received no fees from external appointments in 2015 or 2014.

Service contract

Positions held and date of appointment to position

Position held during 2015	Date of appointment to position
Chief financial officer	18 April 2013

As announced in October 2014, effective 7 May 2015, Chris transferred to a rolling contract which can be terminated by either party with 12 months' notice in writing, or immediately by paying the base salary only in lieu of any unexpired notice.

Other

As a UK contracted employee, Chris is not eligible for tax equalisation on his remuneration, cost of living or any other ongoing assignment benefits such as a housing allowance.

Past-director payments

Guy Elliott retired on 31 December 2013. Upon his retirement, good leaver treatment and pro-rating, where applicable, were applied to outstanding LTIP awards in accordance with the plan rules.

Accordingly, Mr Elliott received 22,171 Rio Tinto plc shares on 15 February 2016 resulting from the vesting of the PSP awarded in 2012. In accordance with the Remuneration Policy, he also received a cash payment of £95,484 equal to the aggregate net dividends that would have been paid on those shares had he owned them during the four-year performance period. No dividends were paid in respect of the 11,730 share awards which lapsed.

The market price of Rio Tinto plc shares at 15 February 2016, the date these awards first became available for election and the latest practicable date before the date of publication of this report, was £18.51. The total value of the LTIP awards vesting with respect to the performance period ending 31 December 2015, inclusive of the cash payment for dividends on the 2012 PSP, was therefore £506,000.

During 2015, the UK tax authorities completed a review of their interpretation of the UK/USA Double Tax Treaty. In this context, they reviewed the UK tax returns of a number of Rio Tinto employees, including the former chief executive, Tom Albanese, in connection with foreign tax credits. The periods under review related to Mr Albanese's tenure prior to his appointment as chief executive, when he was on a tax equalised assignment to the UK.

The outcome of this review resulted in an assessment of additional UK tax for the 2004/05, 2005/06 and 2006/07 tax years. It is noted that all tax returns were prepared and submitted in good faith, in line with best practice at the time and that neither the Company nor Mr Albanese has failed in meeting their compliance obligations.

The estimated additional tax and related professional fees for this matter in 2015, the payment of which on behalf of Mr Albanese is in accordance with our policies, is in the region of £245,000 (subject to exchange rate fluctuations). An estimate of the costs can only be given at this time as the final amount depends on the outcome of ongoing discussions with the US Tax Authorities. The final settlement will be advised accordingly in a subsequent Report.

In addition, Mr Albanese was reimbursed a gross amount of US$4,769 by the Company as a result of an over-withholding of taxes on a Stock Option awarded in 2003.

This Stock Option was awarded when Mr Albanese was tax equalised. The Stock Option was exercised in 2013. The amount reimbursed to Mr Albanese was calculated by the Company's external tax advisers following the completion of his US Tax Return. This reimbursement is in line with policy and precedent.

What we paid our chairman and non-executive directors

Positions held

Details of the Non-executive directors who held office during 2015 are set out below. Each Non-executive director held office for the whole of 2015 unless otherwise indicated. Years of appointment for each Non-executive director are included in the section headed Board of directors on page 51.

Name	Title
Jan du Plessis	Chairman
Robert Brown	Non-executive director
Megan Clark	Non-executive director
Michael Fitzpatrick	Non-executive director to 7 May 2015
Ann Godbehere	Non-executive director
Richard Goodmanson	Non-executive director
John Kerr	Non-executive director to 7 May 2015
Anne Lauvergeon	Non-executive director
Michael L'Estrange	Non-executive director
Paul Tellier	Non-executive director
Simon Thompson	Non-executive director
John Varley	Non-executive director

Annual fees payable

The table below sets out the annual fees paid in 2015 and payable in 2016 to the chairman and the non-executive directors.

	2016	2015	2014
Director fees			
Chairman's fee	**£730,000**	£730,000	£730,000
Non-executive director base fee [a]	**£ 90,000**	£ 90,000	£ 90,000
Senior independent director	**£ 40,000**	£ 40,000	£ 40,000
Committee fees			
Audit Committee chairman	**£ 35,000**	£ 35,000	£ 35,000
Audit Committee member	**£ 20,000**	£ 20,000	£ 20,000
Remuneration Committee chairman	**£ 30,000**	£ 30,000	£ 30,000
Remuneration Committee member	**£ 15,000**	£ 15,000	£ 15,000
Sustainability Committee chairman	**£ 30,000**	£ 30,000	£ 30,000
Sustainability Committee member	**£ 15,000**	£ 15,000	£ 15,000
Nominations Committee member	**£ 7,500**	£ 7,500	£ 7,500
Meeting allowances			
Long distance (flights over 10 hours per journey)	**£ 10,000**	£ 10,000	£ 10,000
Medium distance (flights of 5-10 hours per journey)	£ 5,000	£ 5,000	£ 5,000

(a) The fees payable to non-executive directors are subject to review by the board on the recommendation of the Chairman's Committee. There has been no change to the base fee for non-executive directors since 1 January 2014. There have been no changes to other fees or allowances since 1 January 2012, save that the travel allowances have since 2013 been based on length of flights (unchanged) rather than whether the travel is overseas.

Details of each element of remuneration and the single total figure of remuneration paid to the chairman and non-executive directors during 2015 and 2014 are set out in US dollars in table 1b on page 98. No post-employment, termination payments or share-based payments were made. Where the payment of statutory minimum superannuation contributions for non-executive directors is required by Australian superannuation law, these contributions are deducted from the director's overall fee entitlements.

The total fee and allowances payments made to the chairman and non-executive directors in 2015 are within the maximum aggregate annual amount of £3 million set out in the Group's constitutional documents approved by shareholders at the 2009 annual general meetings.

Share ownership policy for non-executive directors

The board, in 2006, adopted a policy whereby non-executive directors are encouraged to build up a shareholding within three years of their appointment equal in value to one year's base fee. Details of non-executive directors' share interests in the Group, including total holdings, are set out in table 2 on page 99.

Non-executive directors' share ownership

The non-executive directors' shareholdings, calculated using the market price of Rio Tinto shares on the latest practicable date before the date of publication of this report were:

Director	Share ownership level at 31 December 2015 as a multiple of base fee
Jan du Plessis	0.8
Robert Brown	0.9
Megan Clark	0.6
Ann Godbehere	0.6
Richard Goodmanson	1.1
Anne Lauvergeon	0.7
Michael L'Estrange	0.2
Paul Tellier	5.0
Simon Thompson	1.5
John Varley	2.0

Note that while in some cases the holding in ordinary shares has increased, the value of the shares and the multiple of base salary as at 31 December 2015 is lower than the multiple reported as at 31 December 2014 due to the lower share price.

What we paid our other Executive Committee members and why

Base salary

Base salaries will remain unchanged at the time of the publication of the Report, in keeping with the salary freeze applied to other employees in the Group.

Stated in '000	**2016**	2015	% change
Hugo Bague	**£494**	£494	–
Alfredo Barrios	**C$964**	C$964	–
Alan Davies [a]	**£540**	£540	–
Andrew Harding	**£571**	£571	–
Jean-Sébastien Jacques	**£553**	£553	–
Greg Lilleyman	**A$778**	A$778	–
Debra Valentine	**US$696**	US$696	–

(a) Given Alan Davies has been living and working in the UK for some time, his remuneration was localised in accordance with policy with effect from 1 March 2015.

STIP objectives and outcomes for 2015

Overview of STIP weightings and measures for 2015

The following table provides an overview of the measures and weightings used to determine STIP awards for members of the Executive Committee in 2015:

	Weighting for executive directors and Group executives	Weighting for PGCEOs
Safety – split equally between AIFR and LTIs adjusted for fatalities	20%	20%
Financial measures split equally between underlying earnings and free cash flow for the Group	50%	20%
Financial measures split equally between underlying earnings and free cash flow for the relevant product group	0%	30%
Individual measures based on key strategic initiatives of each role and contribution to overall company performance	30%	30%

The Group safety result was outstanding and the average performance against safety goals for individual Executive Committee members, excluding the impact of adjustments for fatalities in 2015, was also close to outstanding.

Average performance against the individual product group financial goals was above target.

The individual performance of Executive Committee members who are not executive directors was reviewed by the Committee against these measures and, on average, was considered above target. This reflected, among other things, the "outstanding" performance against the cost reduction targets set for 2015, and the tight management of capital and consequent reduction in levels of debt.

The 2015 STIP awards are detailed in the table below. All awards, both as a percentage of salary and as an absolute value, are lower than 2014 save for those of Andrew Harding and Jean-Sébastien Jacques, where the increases were mostly attributable to improved safety performance this year, and of Alfredo Barrios, who received a pro-rata award for part year service in 2014.

	2015 STIP Award (% of Salary) [a]	2015 STIP Award (000's)
Hugo Bague	135.0%	£667
Alfredo Barrios	138.5%	C$1,335
Alan Davies	113.5%	£613
Andrew Harding	141.9%	£810
Jean-Sébastien Jacques	168.1%	£930
Harry Kenyon-Slaney [b]	114.6%	£97
Greg Lilleyman	134.0%	A$1,042
Debra Valentine	136.6%	US$951

(a) Results out of 200% have been rounded to one decimal place in the above table. As the actual STIP awards do not use rounding conventions, small rounding variances may occur.

(b) STIP Award for the period 1 January 2014 – 28 February 2015. The full STIP award for the period 1 January 2015 – 18 March 2015 was £127,000.

Detailed commentary on the performance of each product group is provided in the Annual report on pages 32 to 39. The average overall performance of Executive Committee members who are not executive directors was adjudged by the Committee to be above target.

LTIP outcomes for the period ended 31 December 2015

Executives received shares in Rio Tinto plc or Rio Tinto Limited as applicable on 15 February 2016 from the vesting of the PSP awarded in 2012. The market price of Rio Tinto plc and Rio Tinto Limited shares at 15 February 2016, the date these awards first became available for election and the latest practicable date before the date of publication of this report, was £18.51 and A$42.22 respectively. Executives who were members of the Executive Committee at the time the 2012 PSP awards were granted (Hugo Bague, Andrew Harding, Harry Kenyon-Slaney and Debra Valentine) also received a cash payment equal to the aggregate net dividends that would have been paid on the 2012 PSP shares that vested had they owned them during the four-year performance period. No dividends were paid in respect of the share awards that lapsed. The total value of LTIP awards vesting is included in the single total figure of remuneration.

Further details of the LTIP outcomes for the period ended 31 December 2015 are provided on page 93 and pages 100 to 101.

LTIP awards granted in 2015

The maximum potential value of PSP awards granted in 2015 was 438 per cent of base salary. The Committee decided that the PSP awards in 2015 would have a face value of awards as shown in the table below. The eventual value of the award will depend on the Group's relative TSR and relative EBIT margin performance during the years 2015-2019. The 2015 PSP award may vest after five years in 2020. Save for the change to the EBIT margin comparator group, the performance conditions for the awards granted in 2015 are consistent with the performance conditions for awards to be granted in 2016 as set out below.

LTIP awards for 2016

The Committee has determined that the PSP awards in 2016 will have a face value as shown in the table below. The award levels have been set to incentivise executives to meet the long-term strategic goals of the Group, to provide retention and to contribute towards the competitiveness of the overall remuneration package.

The number of conditional shares awarded under the LTIP is calculated using the average share price over the previous calendar year, and as such, the awards granted in 2016 will be calculated using the 2015 average share prices for Rio Tinto plc and Rio Tinto Limited of £26.346 and A$54.184 respectively. This compares with the market price of Rio Tinto plc and Rio Tinto Limited shares at 15 February 2016 of £18.51 and A$42.22 respectively. This has the effect of reducing the nominal value of the award in the same manner as described for the chief executive and the chief financial officer.

The average face value of awards to be made to Executive Committee members in 2016, excluding the executive directors, is 384 per cent of base salary (2015: 413 per cent of salary). The actual value of awards at the date of grant was also lower than 2015 given the reduction in share price compared to the prior year.

Maximum value (Percentage of 1 March base salary)	**2016**	2015
Hugo Bague	**400**	430
Alfredo Barrios	**390**	400
Alan Davies	**390**	420
Andrew Harding	**390**	420
Jean-Sébastien Jacques	**400**	420
Greg Lilleyman	**340**	400
Debra Valentine	**380**	400
Average	**384**	413

The performance conditions for the PSP awards made from 2013 are the same. The expected value of the awards made from 2013 is equal to 50 per cent of the face value. The percentage vesting at threshold performance is 22.5 per cent. The 2016 award may vest after five years in 2021, subject to the Group's relative TSR and relative EBIT margin performance.

For the TSR component (constituting two-thirds of the award), where TSR performance is measured against both the Euromoney Global Mining Index and the broader market of large global companies as measured through the Morgan Stanley Capital World Index, the award will vest as follows:

Outperformance of the index by 6 per cent per annum	1.0 x award vests
Performance between equal to the index and 6 per cent outperformance	Proportionate vesting between 0.225 x and 1.0 x vesting
Performance equal to the index	0.225 x award vests
Performance less than the index	Nil vesting

For the EBIT margin measure, change in the EBIT margin of Rio Tinto and each of the comparator companies (measured on a "point-to-point" basis using the last financial year in the performance period and the financial year prior to the start of the performance period) will be calculated using independent third-party data. Vesting will be subject to Rio Tinto's interpolated ranking position using the following schedule:

Equal to or greater than 2nd ranked company	1.0 x award vests
Between the 5th and 2nd ranked companies	Proportionate vesting between 0.225 x and 1.0 x vesting
Above the 6th ranked company	0.225 x award vests
Equal to the 6th ranked company or below	Nil vesting

The 2015 comparator group for the EBIT margin measure is: Alcoa, Antofagasta, Anglo American, Barrick Gold, BHP Billiton, Freeport McMoRan, Glencore, Peabody, Teck Resources and Vale.

For awards from 2016, Fortescue Metals Group will replace Peabody in the comparator group. The Committee's judgment being that in terms of size and likeness to Rio Tinto, Fortescue now offers a better comparator. There will be no retrospective application of any change to the comparator group to prior grants.

Share ownership

The following table illustrates the executive share ownership level for current members of the Executive Committee in office at 31 December 2015 as a multiple of salary as at the same date.

	Share Ownership level at 31 December 2015 as a multiple of base pay
Hugo Bague	2.5
Alfredo Barrios	0.1
Alan Davies	1.2
Andrew Harding	2.1
Jean-Sébastien Jacques	0.5
Greg Lilleyman	1.4
Debra Valentine	2.6

The share ownership level is calculated using the market price of Rio Tinto shares on the latest practicable date each year before the date of publication of this report. The value of any vested but unexercised options is calculated based on the share price as at the relevant date in February less the exercise price and with a 50 per cent discount for the effects of taxation. The recent vesting of the 2012 PSP has increased the multiples noted above for several executives.

Most executives have increased their holding of ordinary shares. However the value of the shares, and options if applicable, and therefore the multiple of base salary as at 31 December 2015 is lower than the multiple reported as at 31 December 2014 due to the lower share price.

Post-employment benefits

Executives may participate in pension, superannuation and post-employment medical and life insurance benefits, which are typically offered to the broader employee population in similar locations.

Service contracts

All other executives have service contracts which can be terminated by the Company with 12 months' notice in writing, and by the employee with six months' notice in writing, or immediately by the Company by paying the base salary only in lieu of any unexpired notice.

Positions held and date of appointment to position

Name	Position(s) held during 2015	Date of appointment to position
Other executives		
Hugo Bague	Group executive, Organisational Resources	1 March 2013
Alfredo Barrios	Chief executive, Aluminium	1 June 2014
Alan Davies	Chief executive, Diamonds & Minerals	1 September 2012
Andrew Harding	Chief executive, Iron Ore	14 February 2013
Jean-Sébastien Jacques	Chief executive, Copper	14 February 2013
	Chief executive, Copper & Coal	1 March 2015
Harry Kenyon-Slaney [(a)]	Chief executive, Energy	1 September 2012
Greg Lilleyman	Group executive, Technology & Innovation	1 January 2014
Debra Valentine	Group executive, Legal & Regulatory Affairs	15 January 2008

(a) Harry stepped down from the Executive Committee on 28 February 2015.

Departures from the Executive Committee

The role of chief executive, Energy was made redundant effective 1 March 2015 after the reorganisation of the Product groups. As a result, Harry Kenyon-Slaney stepped down from the Executive Committee on 28 February 2015 and left the Group on 18 March 2015. Harry received his normal base salary and contractual benefits until 18 March 2015. As such, he remained eligible to receive a pro rata STIP for the period 1 January 2015 to 18 March 2015, which has been calculated based on actual business and individual performance and will be paid fully in cash in March 2016. Outstanding LTIP awards were also treated, where required, in accordance with eligible leaver provisions of each plan with pro rating, where applicable, up to 18 March 2015.

Consistent with severance practice in the UK, Harry received a payment equal to 12 months' base salary based on his 12 months' contractual notice period and a severance payment capped at 12 months' base salary. The total severance payment was therefore equal to two years' base salary. Unused and accrued vacation was also paid as at the termination date in line with UK policy. Harry is eligible for executive outplacement support and is subject to the post-termination restrictions in his contract.

Harry also received standard benefits related to his repatriation from Australia to the UK.

STIP measures, weightings and targets for 2016

As in 2015, the STIP measures and opportunities for Executive Directors and executives will be weighted 50 per cent for financial, 30 per cent for individual and 20 per cent for safety measures. The individual targets include objectives relating to business transformation, cost reduction, performance delivery and leadership and engagement.

The financial and individual targets which have been set for 2016 are regarded by the board to be commercially sensitive. As such, the specific targets for these measures, and the performance against them, are expected to be described retrospectively in the 2016 Implementation Report. The Group financial targets relate to earnings and free cash flow.

The safety measures, weightings and targets for 2016 are outlined opposite.

2016 safety measures, weightings and targets

We entered 2015 with a renewed safety strategy focused on fatality elimination, injury reduction and catastrophic event prevention. Whilst our AIFR and injury rates have reduced to record lows, the loss of four colleagues during 2015 is unacceptable. Recognising the need to increase our fatality elimination efforts, we took the decision to implement Critical Risk Management (CRM) as a key fatality elimination programme. See page 24 for further details of this programme.

For 2016, the safety measures for all executives will be split between AIFR (30 per cent), LTIs (30 per cent) and measures relating to the implementation of CRM (40 per cent). The 2016 safety element of the STIP seeks to balance the focus between injury reduction and fatality elimination.

For the AIFR and LTI measures, 'target' performance for the Group has been set at a 7.5 per cent improvement compared with the actual outcome for 2015 which is the 'threshold' number for calculation purposes. 'Outstanding' performance for both measures has been set at twice the 'target' improvement.

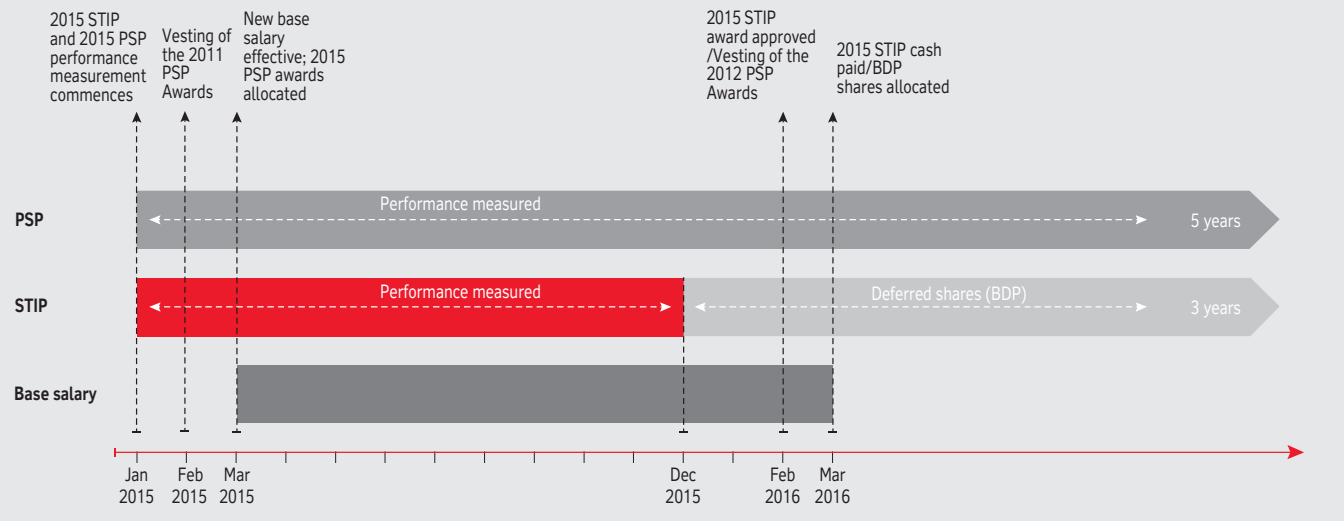
The Group-wide deployment of CRM will be completed over the next two years and the metrics for CRM will focus on effective implementation against plan and leadership participation, with equal weighting to each.

The safety STIP result will continue to be adjusted for fatalities. The adjustment for fatalities for 2016 in the event a fatality occurs remains unchanged from 2015 and will be:

- For the product group chief executives and the Group executive, Technology & Innovation, the STIP safety result is reduced by 50 per cent if a fatality occurs within their respective product groups or function.
- For the chief executive and the Group executive, Organisational Resources, the STIP safety result is reduced by 25 per cent if a fatality occurs in the Group.
- For the chief financial officer and the Group executive, Legal & Regulatory Affairs, the STIP safety result is reduced by 15 per cent if a fatality occurs in the Group.
- The fatality adjustment for a multiple fatality incident, or multiple incidents resulting in fatalities, will remain at the discretion of the board in respect of Executive Committee members and at the discretion of the chief executive in respect of other employees.

When remuneration is delivered

The following chart provides a timeline of when total remuneration is delivered, using 2015 as an example.



Remuneration Report: Implementation Report
continued

Single total figure of remuneration

The table below provides a summary of actual remuneration in respect of 2015 and 2014, stated in the currency of payment. While not required under UK or Australian legislation, the information is presented for consistency with the disclosures for executive directors on pages 81 and 84. This is in addition to the Australian statutory disclosure requirements set out in US dollars in table 1a on pages 96 and 97. The remuneration details set out in table 1a include theoretical accounting values relating to various parts of the remuneration packages, most notably LTIP arrangements, and require a different methodology for calculating the pension and superannuation values. Accordingly, the figures below are not directly comparable with those in table 1a.

	Hugo Bague		Alfredo Barrios [g]		Alan Davies [h]	
(stated in '000)	**2015**	2014	**2015**	2014	**2015**	2014
Base salary paid [a]	**£492**	£482	**C$961**	C$551	**£515**	A$787
STIP payment – cash	**£333**	£353	**C$667**	C$482	**£306**	A$691
STIP payment – deferred shares [b]	**£334**	£354	**C$668**	C$482	**£307**	A$691
Total short-term pay	**£1,159**	£1,189	**C$2,296**	C$1,515	**£1,128**	A$2,169
Value of LTIP awards vesting [c]	**£329**	£596	**C$0**	C$283	**£91**	A$564
Pension or superannuation [d]	**£118**	£115	**C$275**	C$110	**£119**	A$191
Other benefits [e]	**£46**	£36	**C$125**	C$1,625	**£765**	A$547
Single total figure of remuneration	**£1,652**	£1,936	**C$2,696**	C$3,533	**£2,103**	A$3,471
Percentage change in total remuneration (2015 versus 2014)	**(14.7%)**		**(23.7%)**		**10.6%** [h]	
Percentage of total remuneration provided as performance-related pay (STIP and LTIP)	**60.3%**	67.3%	**49.5%**	35.3%	**33.5%**	56.1%
Percentage of total remuneration provided as non-performance-related pay (base salary, pension and other benefits)	**39.7%**	32.7%	**50.5%**	64.7%	**66.5%**	43.9%
Percentage of maximum STIP awarded [f]	**67.5%**	73.0%	**69.2%**	87.0%	**56.8%**	87.4%
Percentage of maximum STIP forfeited	**32.5%**	27.0%	**30.8%**	13.0%	**43.2%**	12.6%
Percentage of target STIP awarded	**135.0%**	146.0%	**138.5%**	174.0%	**113.5%**	174.8%

	Andrew Harding		Jean-Sébastien Jacques		Harry Kenyon-Slaney [i]	
(stated in '000)	**2015**	2014	**2015**	2014	**2015**	2014
Base salary paid [a]	**£569**	£557	**£546**	£500	**£88**	£523
STIP payment – cash	**£405**	£346	**£465**	£394	**£97**	£501
STIP payment – deferred shares [b]	**£405**	£346	**£465**	£395	**–**	–
Total short-term pay	**£1,379**	£1,249	**£1,476**	£1,289	**£185**	£1,024
Value of LTIP awards vesting [c]	**£334**	£603	**£58**	£350	**£54**	£882
Pension or superannuation [d]	**£147**	£143	**£130**	£117	**£34**	£125
Other benefits [e]	**£403**	£493	**£31**	£31	**£161**	£276
Single total figure of remuneration	**£2,263**	£2,488	**£1,695**	£1,787	**£434**	£2,307
Percentage change in total remuneration (2015 versus 2014)	**(9.0%)**		**(5.1%)**		**(81.2%)**	
Percentage of total remuneration provided as performance-related pay (STIP and LTIP)	**50.6%**	52.0%	**58.3%**	63.7%	**34.8%**	59.9%
Percentage of total remuneration provided as non-performance-related pay (base salary, pension and other benefits)	**49.4%**	48.0%	**41.7%**	36.3%	**65.2%**	40.1%
Percentage of maximum STIP awarded [f]	**70.9%**	61.8%	**84.0%**	77.0%	**57.3%**	47.7%
Percentage of maximum STIP forfeited	**29.1%**	38.2%	**16.0%**	23.0%	**42.7%**	52.3%
Percentage of target STIP awarded	**141.9%**	123.6%	**168.1%**	154.0%	**114.6%**	95.4%

(stated in '000)	Greg Lilleyman 2015	Greg Lilleyman 2014	Debra Valentine 2015	Debra Valentine 2014
Base salary paid [a]	**A$775**	A$760	**US$694**	US$681
STIP payment – cash	**A$521**	A$542	**US$475**	US$517
STIP payment – deferred shares [b]	**A$521**	A$542	**US$476**	US$518
Total short-term pay	**A$1,817**	A$1,844	**US$1,645**	US$1,716
Value of LTIP awards vesting [c]	**A$154**	A$482	**US$485**	US$960
Pension or superannuation [d]	**A$170**	A$590	**US$236**	US$226
Other benefits [e]	**A$79**	A$236	**US$557**	US$594
Single total figure of remuneration	**A$2,220**	A$3,152	**US$2,923**	US$3,496
Percentage change in total remuneration (2015 versus 2014)	**(29.6%)**		**(16.4%)**	
Percentage of total remuneration provided as performance-related pay (STIP and LTIP)	**53.9%**	49.7%	**49.1%**	57.1%
Percentage of total remuneration provided as non-performance related pay (base salary, pension and other benefits)	**46.1%**	50.3%	**50.9%**	42.9%
Percentage of maximum STIP awarded [f]	**67.0%**	71.3%	**68.3%**	75.8%
Percentage of maximum STIP forfeited	**33.0%**	28.7%	**31.7%**	24.2%
Percentage of target STIP awarded	**134.0%**	142.6%	**136.6%**	151.7%

(a) Salary paid in the financial year to 31 December. Salaries are generally reviewed with effect from 1 March.

(b) Value of STIP deferred under the BDP, the vesting of which is subject to continued service.

(c) Based on the value of the LTIP awards which vested in respect of the performance period that ended 31 December. The Rio Tinto Ltd and Rio Tinto plc share prices used to calculate the value of the awards vesting are based on the closing prices on 15 February 2016 which were A$42.22 and £18.51 respectively. Executives who were members of the Executive Committee at the time the 2012 PSP awards were granted (Hugo Bague, Andrew Harding, Harry Kenyon-Slaney and Debra Valentine) also received a cash payment equal to the aggregate net dividends that would have been paid on the 2012 PSP shares that vested had they owned them during the four-year performance period. No payment was made in respect of the shares that lapsed.

(d) For defined benefit plans, pension or superannuation reflects the value of the pension or superannuation accrued during the year assuming that it was to come into payment immediately. For defined contribution plans and cash paid in lieu of pension contributions it is the amount contributed in the year by the Company. This differs from the value reported in table 1a which is calculated using an IAS19 methodology and assumptions on rates of investment return, inflation and salary increases.

(e) Includes healthcare, other post-employment benefits, allowance for professional tax services and car allowance or car. Includes active or legacy expatriate related benefits, as relevant.

(f) The maximum potential STIP award is 200 per cent of base salary.

(g) Remuneration details for 2014 reflect remuneration received for the period 1 June 2014 – 31 December 2014. The value of LTIP awards vesting in 2014 includes an award of 5,278 MSP shares granted on 16 September 2014 which vested on 31 October 2014. This award was made to Mr Barrios in lieu of forfeited and foreshortened vesting periods of stock options from his previous employer.

(h) Given Alan Davies has been living and working in the UK for some time, his remuneration was localised in accordance with policy, with effect from 1 March 2015. To comply with Australian legislation, the Company made a payment to Alan for his accrued long-service leave, which was valued at £240,000. In addition, Alan received a part payment of his accrued annual leave of £167,000 and a lump sum payment of £225,000 in lieu of contractual commitments already made in relation to his future, multi-year entitlements to housing allowance, education assistance, home leave and a resettlement allowance. The percentage change in total remuneration has been calculated by converting Alan's 2014 remuneration denominated in Australian dollars to pound sterling using the 2014 average exchange rate of £1 = 1.82531 A$.

(i) Remuneration details for 2015 reflect remuneration received for the period 1 January 2015 – 28 February 2015. Remuneration received for the period 1 March 2015 – 18 March 2015 was base salary of £26,000, STIP of £30,000, value of LTIP awards vesting of £16,000, pension of £3,000 and other benefits of £45,000. Other benefits included unused and accrued vacation, healthcare benefits and standard benefits related to repatriation from Australia to the UK. A severance payment of £1,050,000 was paid on termination. Further details are provided under the heading - Departures from the Executive Committee.

Context to outcomes for the Executive Committee

The decrease in the single total figure of remuneration for most executives is due mainly to the significantly lower value of LTIP awards vesting in 2015 compared with 2014. This was due to a lower vesting level for the PSP awards (65.4 per cent for the 2012 PSP versus 73.5 per cent for the 2011 PSP) combined with lower share prices at the date the 2012 PSP awards vested in February 2016 compared with the share prices at the date the 2011 PSP awards vested in February 2015.

In addition, a number of executives (Alan Davies, Jean-Sébastien Jacques and Greg Lilleyman) had residual MSP awards vest during 2014 which were granted prior to their appointment as executives.

Alf Barrios' 2014 remuneration included the vesting of an MSP award which was made to him in lieu of forfeited and foreshortened vesting periods of stock options from his previous employer. His total short-term pay has increased in 2015 as his remuneration details for 2014 reflect remuneration received for part year service only.

The increase total remuneration for Alan Davies in 2015 is influenced by the one-off payments explained in note (h) above.

Potential value of 2016 remuneration package

The table below shows the potential minimum and maximum value of the 2016 remuneration package and the threshold, target and maximum value of the 2016 STIP and LTIP awards.

Stated in '000	Currency	Base salary	Superannuation or pension[a]	Benefits[b]	Minimum potential remuneration[c]	Threshold value of STIP and LTIP awards[d]	Target value of STIP and LTIP awards[e]	Maximum value of STIP and LTIP awards[f]	Maximum potential remuneration
Executive directors									
Sam Walsh	A$	A$1,992	A$584	A$1,217	**A$3,793**	A$2,988	A$6,374	A$11,952	**A$15,745**
Chris Lynch	£	£836	£208	£127	**£1,171**	£1,254	£2,675	£5,016	**£6,187**
Other executives									
Hugo Bague	£	£494	£118	£46	**£658**	£692	£1,482	£2,964	**£3,622**
Alfredo Barrios	C$	C$964	C$275	C$125	**C$1,364**	C$1,328	C$2,844	C$5,688	**C$7,052**
Alan Davies	£	£540	£119	£92	**£751**	£744	£1,593	£3,186	**£3,937**
Andrew Harding	£	£571	£147	£403	**£1,121**	£787	£1,684	£3,369	**£4,490**
Jean-Sébastien Jacques	£	£553	£130	£31	**£714**	£774	£1,659	£3,318	**£4,032**
Greg Lilleyman	A$	A$778	A$170	A$79	**A$1,027**	A$984	A$2,101	A$4,201	**A$5,228**
Debra Valentine	US$	US$696	US$236	US$557	**US$1,489**	US$943	US$2,018	US$4,037	**US$5,526**

(a) Superannuation or pension is measured at the superannuation or pension figure in the single figure tables on pages 81, 84, 90 and 91.

(b) Benefits are as measured at the benefits figure in the single figure tables on pages 81, 84, 90 and 91, excluding any significant one-off items where applicable. One-off items for Alan Davies in 2015 included a payment for his accrued long-service leave, which was valued at £240,000. In addition, Alan received a part payment of his accrued annual leave of £167,000 and a lump sum payment of £225,000 in lieu of contractual commitments already made in relation to his future, multi-year entitlements to housing allowance, education assistance, home leave and a resettlement allowance.

(c) The sum of base salary, pension/superannuation and benefits is the minimum potential remuneration (fixed remuneration).

(d) Calculated based on threshold performance under the STIP (50 per cent of STIP target) and threshold PSP vesting (22.5 per cent of the face value of the 2016 PSP award).

(e) Calculated based on target performance under the STIP (100 per cent of STIP target) and target PSP vesting (50 per cent of the face value of the 2016 PSP award).

(f) Calculated based on outstanding performance under the STIP (200 per cent of base salary) and maximum PSP vesting (100 per cent of the face value of the 2016 PSP award).

Long-term incentives – awards made prior to 2013

In 2012 and prior years, awards were made in the form of options under the Share Option Plan (SOP) and/or performance shares under the PSP.

For 2011 and 2012, executives were able to express a preference regarding the mix of their long-term incentive opportunity.

- They could choose either a mix of performance shares and share options (with a maximum face value performance share award of 200 per cent of base salary, and a performance "kicker" leading to a vesting up to 1.5 times for exceptional performance), together with a maximum share option award of 300 per cent of base salary.
- Or alternatively, they could choose to receive the full award in performance shares (with a maximum face value performance share award of 292 per cent of base salary, and a performance "kicker" leading to a vesting up to 1.5 times for exceptional performance).
- The maximum value of award if an executive elected to take the full award in performance shares was therefore 438 per cent of base salary (292 per cent x 150 per cent).
- The total expected value of awards made under either preference was the same, at 190 per cent of base salary.
- Both awards were based on relative TSR performance against the Euromoney Global Mining Index and the Morgan Stanley Capital World Index to reward executives for increasing the share price and delivering superior TSR performance against other companies over a long-term timeframe.

Before awards vest, the Committee must also satisfy itself that TSR performance is an appropriate reflection of the underlying performance of the business and/or the health of the Group. The Committee may therefore adjust vesting subject to the plan rules.

Long-term incentives – vesting outcomes for the period ended 31 December 2015

The 2012 PSP awards had a performance period that ended on 31 December 2015.

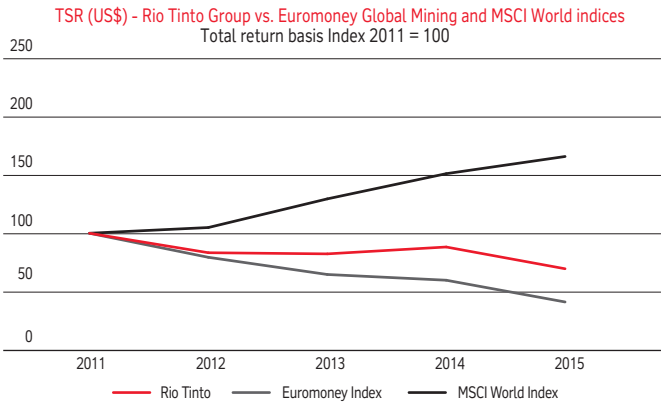
2012 PSP awards

Performance period (4 years)	1 January 2012 – 31 December 2015
Rio Tinto TSR	(30.8%)

Comparator index	Euromoney Global Mining Index	MSCI
Index TSR	(60.2%)	66.8%
Outperformance per annum	6.7%	(60.6%)
Vesting against index	130.7%	0%
% of shares vested	65.4% (43.6% of maximum)	
% of shares forfeited	84.6% (56.4% of maximum)	

The performance conditions for the PSP awards are included in the notes to table 3 on page 104.

The graph below shows Rio Tinto's performance under the 2012 PSP performance condition. The methodology used for this graph is consistent with the methodology used to calculate the vesting for the 2012 PSP award.



The methodology used to calculate the starting share prices for TSR comparison purposes, for Rio Tinto and the index, was the 12-month average prior to the commencement of the performance period.

The period used in the methodology to calculate the ending share prices for TSR comparison purposes, for Rio Tinto and the index, was the last 12 months of the performance period. The usual conventions were also applied to set the number of shares awarded, based upon the prior year average share price.

The table below summarises the average vesting of performance shares for executive directors over the five-year period 2012-2016.

Performance period	Vesting year	% of shares vested	% of maximum shares vested
2008-2011	2012	0.0	0.0
2009-2012	2013	92.5	61.7
2010-2013	2014	75.0	50.0
2011-2014	2015	73.5	49.0
2012-2015	2016	65.4	43.6
Average vesting	–	61.3	40.9

The SOP ceased operation from 2013. No awards of share options have been made since 2012.

MSP awards

Executives are not eligible to receive awards under the MSP after their appointment as executives. Greg Lilleyman's final MSP award granted prior to his appointment as an executive vested on 15 February 2016.

TSR

Relative TSR against the Euromoney Global Mining Index and the MSCI World Index were the performance measures used to determine the vesting of awards made under the PSP prior to 2013. Rio Tinto's TSR relative to the relevant index over the performance period has a direct impact on the levels of LTIP vesting.

The effect of this performance on the value of shareholdings, as measured by TSR delivered over the past five years, based on the sum of dividend paid and share price movements during each calender year, is detailed in the table.

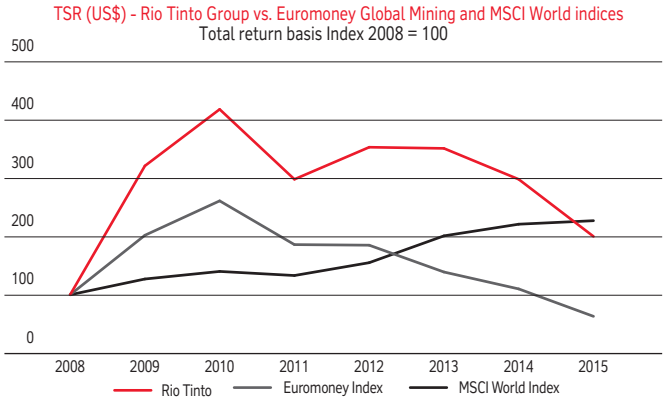
	Dividends paid during the year	Share price – Rio Tinto plc pence		Share price – Rio Tinto Limited A$		**Total shareholder return (TSR)**
Year	US cents per share	1 Jan	31 Dec	1 Jan	31 Dec	**Group %**
2015	226.5	3,000	1,980	58.00	44.71	**(26.6)**
2014	204.5	3,409	3,000	68.18	58.00	**(9.7)**
2013	178.0	3,512	3,409	66.01	68.18	**2.1**
2012	163.5	3,125	3,512	60.30	66.01	**14.8**
2011	117.0	4,487	3,125	85.47	60.30	**(31.2)**

The graph on page 94 illustrates the TSR performance of the Group against the Euromoney Global Mining Index and the MSCI over the past seven years to the end of 2015. These two indices are used to assess Rio Tinto's relative TSR performance for awards made under the PSP in 2012.

The graph has been prepared in accordance with the requirements of Schedule 8 of the UK Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended) and is not an indication of the likely vesting of awards granted under the PSP.

Five years of TSR performance were presented when this report was first prepared in accordance with Schedule 8 and this will progressively increase to ten years of TSR performance in the fifth year of this report being prepared in accordance with Schedule 8.

The executive remuneration structure policy table on pages 71 to 73 provides further details of the performance conditions for the current PSP. The performance conditions for the previous PSP are provided in the notes to table 3 on page 104.



Chief executive's remuneration summary

Year	Chief executive[a]	Single total figure of remuneration ('000)	Annual STIP award against maximum opportunity	Long-term incentive vesting against maximum opportunity (SOP)[b][c]	Long-term incentive vesting against maximum opportunity (PSP)[c]
2009	Tom Albanese	£3,516	54.1%	0.0%	26.4%
2010	Tom Albanese	£4,512	87.8%	0.0%	24.3%
2011	Tom Albanese	£4,256	0.0%	100.0%	0.0%
2012	Tom Albanese	£4,040	0.0%	100.0%	61.7%
2013	Tom Albanese	£53	0.0%	–	–
	Sam Walsh	A$10,070	72.1%	–	50.0%
2014	Sam Walsh	A$10,414	88.4%	–	49.0%
2015	Sam Walsh	A$9,125	81.9%	–	43.6%

(a) Tom Albanese held the role of chief executive until 17 January 2013, and left the Group on 16 July 2013. The single total figure of remuneration for Tom Albanese for 2013 is for the period up until 17 January 2013. Sam Walsh took over as chief executive from 17 January 2013, having previously been the chief executive, Iron Ore and Australia.

(b) In 2011 and 2012, Sam Walsh elected to receive his full LTIP awards under the PSP and as a result he has no options under the SOP that were granted in 2011 or 2012 and which had performance periods that ended on 31 December 2013 and 31 December 2014 respectively. The SOP ceased operation from 2013 and awards from 2013 have been made under the PSP.

(c) All outstanding but unvested LTIP awards earned in previous years lapsed and were forfeited when Tom Albanese left the Group.

Employee share plans

Management Share Plan (MSP)

The primary focus of the MSP is to support the Group's ability to attract and retain key staff below executive level in an increasingly tight and competitive labour market. Executives are not eligible to participate in the MSP.

Retention of key individuals is also important given the long-term nature of the delivery of the business strategy. MSP awards are conditional awards not subject to a performance condition as they vest subject to continued employment, at the end of three years, and thus act as an effective retention tool. Shares to satisfy the awards are purchased in the market and no new shares are issued.

All employee share plans

Executives may participate in broad-based share and share option plans which are available to Group employees generally and for which performance conditions do not apply. These plans form part of standard remuneration practice whereby employees are offered participation in plans to encourage alignment with the long-term performance of the Group.

Global employee share plan

The Committee believes that all employees should be given the opportunity to become shareholders in our business. A global employee share purchase plan is normally offered to all eligible employees across the world save for any local jurisdictional restrictions. Under the plan, employees may acquire shares up to the value of US$5,000 (or equivalent in other currencies) per year, capped at ten per cent of base salary. Each share purchased will be matched by the Company providing the participant holds the shares, and remains employed, at the end of the three-year vesting period. The Committee believes this plan will serve to engage, retain and motivate employees over the long-term.

Over 14,500 (approximately 28 per cent) of our employees are shareholders as a result of participating in this Plan.

Dilution

Awards under the SOP, PSP and all employee plans (other than the MSP) may be satisfied by, in the case of Rio Tinto plc, treasury shares or the issue of new shares or the purchase of shares in the market and in the case of Rio Tinto Limited by the issue of new shares or the purchase of shares in the market.

In the UK, the Investment Association has issued corporate governance guidelines in relation to the amount of new shares which may be issued having regard to the total issued share capital. These guidelines provide that the rules of a scheme must provide that commitments to issue new shares or re-issue treasury shares, when aggregated with awards under all of a company's other schemes, must not exceed 10 per cent of the issued ordinary share capital (adjusted for share issuance and cancellation) in any rolling 10 year period. Furthermore, commitments to issue new shares or re-issue treasury shares under executive (discretionary) schemes should not exceed 5 per cent of the issued ordinary share capital of a company (adjusted for share issuance and cancellation) in any rolling 10 year period. This may be exceeded where vesting is dependent on the achievement of significantly more stretching performance criteria. Rio Tinto PLC is in compliance with these guidelines. As at 31 December 2015 these limits had not been exceeded.

In Australia, as a condition of relief from prospectus requirements, the Australian Securities and Investments Commission has imposed a cap on the issue of shares to employees of 5 per cent of issued capital during a three year period. As Rio Tinto Limited satisfies awards by market purchase, this cap does not currently apply. However, Rio Tinto would be in compliance with this guideline.

All other share awards are satisfied by the use of shares which are purchased in the market. Further information in respect of the share plan arrangements and outstanding balances under each plan can be found in note 44 to the financial statements.

Shareholder voting

The table below sets out the results of the remuneration-related resolutions approved at the Group's 2015 AGMs.

Resolution	Total votes cast	Votes for	Votes against	Votes withheld [a]
Approval of the Remuneration Policy Report	1,252,724,326	1,186,605,279	43,739,074	22,379,973
		96.4%	3.6%	
Approval of the Directors' Report on Remuneration and Remuneration Committee chairman's letter	1,252,749,115	1,178,992,215	41,990,010	31,766,890
		96.7%	3.3%	
Approval of the Remuneration Report	1,252,746,938	1,179,871,511	41,082,997	31,792,430
		96.6%	3.4%	
Approval of potential termination benefits	1,252,724,326	1,186,605,279	43,739,074	22,379,973
		96.4%	3.6%	

(a) A vote "withheld" is not a vote in law, and is not counted in the calculation of the proportion of votes for and against the resolution.

Relative spend on remuneration

The table below sets out the details of total remuneration paid; distributions to shareholders; purchase of property, plant and equipment and intangible assets, and tax paid during the financial year. The items in addition to Remuneration paid were chosen by the directors as they represent other significant disbursements of the Company's funds.

Stated in US$m	**2015**	2014	Difference in spend
Remuneration paid [a]	**5,446**	6,659	(1,213)
Distributions to shareholders [b]	**6,104**	3,710	2,394
Purchase of property, plant and equipment and intangible assets [c]	**4,685**	8,162	(3,477)
Corporate income tax paid [c]	**1,792**	3,618	(1,826)

(a) Total employment costs for the financial year as per note 5 to the financial statements.

(b) Distributions to shareholders includes dividends paid during the financial year as per note 11 to the financial statements and own shares purchased from the owners of Rio Tinto as per the Group cash flow statement.

(c) Purchase of property, plant and equipment and intangible assets, and corporate income tax paid during the financial year are as per the Group cash flow statement and are calculated as per note 1 to the financial statements.

Table 1a – Executives' remuneration

Stated in US$'000 [a]		Short term benefits					Other long term benefits
		Base salary	Cash bonus [b]	Other cash based benefits [c]	Non-monetary benefits [d][e]	Total short term benefits	
Executive directors							
Sam Walsh	2015	1,494	1,188	127	805	3,614	–
	2014	1,751	1,411	150	784	4,096	–
Chris Lynch	2015	1,274	1,023	290	191	2,778	–
	2014	1,346	1,162	306	114	2,928	–
Other key management personnel							
Hugo Bague	2015	753	495	159	40	1,447	–
	2014	795	550	167	28	1,540	–
Alfredo Barrios	2015	753	480	196	95	1,524	–
	2014	500	416	77	1,361	2,354	–
Alan Davies	2015	787	453	161	1,099	2,500	–
	2014	711	567	180	385	1,843	–
Andrew Harding	2015	870	600	214	553	2,237	–
	2014	919	539	175	870	2,503	–
Jean-Sébastien Jacques	2015	835	689	177	13	1,714	–
	2014	823	614	170	12	1,619	–
Harry Kenyon-Slaney [k]	2015	134	144	56	218	552	–
	2014	862	780	203	470	2,315	–
Greg Lilleyman	2015	583	379	27	33	1,022	–
	2014	686	444	32	179	1,341	–
Debra Valentine	2015	694	475	26	515	1,710	–
	2014	681	517	26	571	1,795	–

Notes to Table 1a – Executives' remuneration

(a) 'Table 1a – Executives' remuneration' is reported in US$ using A$1 = 0.75256 US$; £1 = 1.52868 US$; C$1 = 0.78362 US$ year to date average rates, except for cash bonuses which use A$1 = 0.72833 US$; £1 = 1.48302 US$; C$1 = 0.72041 US$ year-end rates.

(b) 'Cash bonus' relates to the cash portion of the 2015 STIP to be paid in March 2016.

(c) 'Other cash based benefits' typically include cash in lieu of a car and fuel and, where applicable cash in lieu of Company pension or superannuation contributions.

(d) 'Non-monetary benefits' for executives include healthcare coverage, provision of a car, professional tax services/advice and flexible perquisites. For Executive directors, it also includes the value of company provided transport. For Alan Davies it includes the annual leave balance and long service leave paid on localisation to the United Kingdom.

(e) 'Non-monetary benefits' for executives living outside their home country include international assignment benefits comprising, where applicable, housing, education, relocation expenses, tax equalisation, assignee and family home leave trips where applicable and international assignment payments made to and on their behalf.

(f) 'Value of share-based awards' has been determined in accordance with the recognition and measurement requirements of IFRS2 "Share-based Payment". The fair value of awards granted under the Share Option Plan (SOP), the Management Share Plan (MSP), the Bonus Deferral Plan (BDP), the Performance Share Plan (PSP) and the Share Savings Plan (SSP) have been calculated at their dates of grant using valuation models provided by external consultants, Lane Clark and Peacock LLP, including an independent lattice-based option valuation model and a Monte Carlo valuation model which take into account the constraints on vesting and exercise attached to these awards. Further details of the valuation methods and assumptions used for these awards are included in note 44 (Share Based Payments) in the financial statements. The fair value of other share based awards is measured at the purchase cost of the shares from the market. The non-executive directors do not participate in the long term incentive share schemes.

Table 1a – Executives' remuneration (continued)

Stated in US$'000 [a]		Long term benefits Value of share-based awards [f]					Post employment benefits [i]				
		BDP [g]	PSP	MSP	SOP	Others [h]	Pension and superannuation	Other post employment benefits	Termination benefits	Total remuneration [j]	Currency of actual payment
Executive directors											
Sam Walsh	2015	1,072	3,014	–	–	2	364	–	–	8,066	A$
	2014	1,002	3,645	–	–	2	421	–	–	9,166	A$
Chris Lynch	2015	716	1,881	–	–	5	52	–	–	5,432	£
	2014	330	1,291	–	–	–	55	–	–	4,604	£
Other key management personnel											
Hugo Bague	2015	455	1,372	–	43	4	41	–	–	3,362	£
	2014	385	1,409	–	314	3	44	–	–	3,695	£
Alfredo Barrios	2015	221	563	–	–	1	20	–	–	2,329	C$
	2014	51	135	257	–	–	23	–	–	2,820	C$
Alan Davies	2015	398	1,047	–	–	3	40	–	–	3,988	£
	2014	286	880	92	–	2	25	–	–	3,128	A$
Andrew Harding	2015	515	1,597	–	44	7	57	–	–	4,457	£
	2014	423	1,597	–	318	5	61	–	–	4,907	£
Jean-Sébastien Jacques	2015	446	1,170	–	–	9	41	–	–	3,380	£
	2014	216	785	154		1	44	–	–	2,819	£
Harry Kenyon-Slaney [k]	2015	34	233	–	34	–	20	–	–	873	£
	2014	320	1,670	–	222	9	179	–	–	4,715	£
Greg Lilleyman	2015	249	654	76	–	3	174	–	–	2,178	A$
	2014	152	522	154	–	–	169	–	–	2,338	A$
Debra Valentine	2015	429	1,223	–	42	4	236	4	–	3,648	US$
	2014	363	1,320	–	305	2	226	5	–	4,016	US$

(g) 'BDP (Bonus Deferral Plan)' represents the deferral of the 2012-2015 bonus under STIP into Rio Tinto Shares.

(h) 'Others' include the Global Employee Share Plan (myShare), Share Savings Plan, Share Ownership Plan and Global Employee Share Plan as described in the Remuneration report on page 94.

(i) The costs shown for defined benefit pension plans and post-retirement medical benefits are the service costs attributable to the individual, calculated in accordance with IAS19. The cost for defined contribution plans is the amount contributed in the year by the Company.

(j) 'Total remuneration' represents the disclosure of total emoluments and compensation required under the Australian Corporations Act 2001 and applicable accounting standards.

(k) Harry Kenyon-Slaney stepped down from the Executive Committee on 28 February 2015 and remained with the Group in an advisory role until 18 March 2015. The amounts reported in Table 1a relate to the period when he was an executive.

Table 1b – Non-executive directors' remuneration

Stated in US$'000 [a]		Fees and allowances [b]	Non-monetary benefits [c][d]	Single total figure of remuneration [e]	Currency of actual payment
Chairman					
Jan du Plessis	2015	1,116	134	1,250	£
	2014	1,203	92	1,295	£
Non-executive directors					
Robert Brown [h]	2015	310	59	369	£
	2014	286	50	336	£
Megan Clark	2015	268	–	268	A$
	2014	21	–	21	A$
Michael l'Estrange	2015	275	–	275	A$
	2014	91	–	91	A$
Michael Fitzpatrick [g]	2015	97	3	100	A$
	2014	284	–	284	A$
Ann Godbehere	2015	249	20	269	£
	2014	251	23	274	£
Richard Goodmanson	2015	340	25	365	£
	2014	350	20	370	£
Anne Lauvergeon	2015	218	23	241	£
	2014	180	11	191	£
Lord Kerr [f]	2015	76	15	91	£
	2014	218	13	231	£
Paul Tellier [h]	2015	325	72	397	£
	2014	309	67	376	£
Simon Thompson	2015	218	9	227	£
	2014	172	3	175	£
John Varley	2015	333	13	346	£
	2014	342	10	352	£

Notes to Table 1b – Non-executive directors' remuneration

(a) The remuneration is reported in US dollars. The amounts have been converted using the relevant 2015 average exchange rates of £1 = 1.52868 US$ and A$1 = 0.75256 US$ (1 Jan to 31 Dec 2015 average).

(b) 'Fees and allowances' comprise the total fees for the chairman and all non-executive directors and travel allowances for the non-executive directors (other than the chairman). The payment of statutory minimum superannuation contributions for Australian non-executive directors is required by Australian superannuation law. These contributions are included in the Fees and Allowances amount disclosed for Australian non-executive directors.

(c) 'Non-monetary benefits' include, as in previous year, amounts which are deemed by the UK tax authorities to be benefits in kind relating largely to the costs of non-executive directors' expenses in attending Board meetings held at the Company's UK registered office (including associated hotel and subsistence expenses). Given these expenses are incurred by directors in the fulfilment of their duties, the Company pays the tax on them.

(d) In 2015, the following additional amounts are included as noted for the relevant director. For Jan du Plessis the value of company provided transport and medical insurance premiums. Mr du Plessis is provided with a car and driver in his capacity as chairman of Rio Tinto. From time to time, Mr du Plessis uses his car and driver for SABMiller plc business and SABMiller makes a payment to Rio Tinto as a contribution towards his travel costs. For the year ended 31 December 2015, the amount was £45,600.

(e) Represents disclosure of the single total figure of remuneration under Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended) and total remuneration under the Australian Corporations Act 2001 and applicable accounting standards.

(f) The amounts reported for Lord Kerr reflect the period when he was an active member of the Board from 1 January to 7 May 2015.

(g) The amounts reported for Michael Fitzpatrick reflect the period when he was an active member of the Board from 1 January to 7 May 2015.

(h) Travel allowances were overpaid in 2015 due to an administrative error to Robert Brown and Paul Tellier and are in the process of being repaid.

Table 2 – Directors' and executives' beneficial interests in Rio Tinto shares

	Rio Tinto plc [a]			**Rio Tinto Limited**			Movements		
	1 Jan 2015 [b]	31 Dec 2015 [c]	15 Feb 2016 [c]	**01 Jan 2015 [b]**	**31 Dec 2015 [c]**	**15 Feb 2016 [c]**	Exercise of options [d]	Compensation [e]	Other [f]
Directors									
Robert Brown	4,200	4,200	4,200	**–**	**–**	**–**	–	–	–
Megan Clark	–	–	–	**165**	**2,715**	**2,715**	–	–	2,550
Jan du Plessis	30,000	30,000	30,000	**–**	**–**	**–**	–	–	–
Michael Fitzpatrick [g]	–	–	–	**6,252**	**6,252**	**–**	–	–	–
Ann Godbehere	3,100	3,100	3,100	**–**	**–**	**–**	–	–	–
Richard Goodmanson	5,512	5,512	5,512	**–**	**–**	**–**	–	–	–
Lord Kerr [g]	15,000	15,000	–	**–**	**–**	**–**	–	–	–
Anne Lauvergeon	3,350	3,539	3,539	**–**	**–**	**–**	–	–	189
Michael L'Estrange	–	–	–	**303**	**1,003**	**1,003**	–	–	700
Chris Lynch	2,160	2,292	2,292	**6,890**	**6,890**	**6,890**	–	123	9
Paul Tellier	21,022	24,248	24,248	**–**	**–**	**–**	–	–	3,226
Simon Thompson	7,458	7,458	7,458	**–**	**–**	**–**	–	–	–
John Varley	9,685	9,685	9,685	**–**	**–**	**–**	–	–	–
Sam Walsh	–	–	–	**146,993**	**194,780**	**194,780**	125	66,225	(18,563)
Executives									
Hugo Bague	60,964	67,354	67,400	**–**	**–**	**–**	–	24,971	(18,535)
Alfredo Barrios	2,585	2,835	2,872	**–**	**–**	**–**	–	137	150
Alan Davies	0	72	139	**23,521**	**31,704**	**31,704**	–	16,652	(8,330)
Andrew Harding	8,618	22,303	22,303	**36,605**	**36,605**	**36,605**	–	26,195	(12,510)
Jean-Sébastien Jacques	9,565	13,563	15,249	**–**	**–**	**–**	–	9,049	(3,365)
Harry Kenyon-Slaney [g]	47,944	48,391	N/A	**–**	**–**	**–**	434	13	0
Greg Lilleyman	–	–	–	**31,226**	**26,258**	**26,294**	–	16,626	(21,557)
Debra Valentine	50,571	65,490	65,543	**–**	**–**	**–**	–	24,961	(9,988)

Notes to table 2

(a) Rio Tinto plc ordinary shares or American Depositary Shares.

(b) Or date of appointment, if later.

(c) Or date of retirement/date stepped down from the Executive Committee, if earlier.

(d) Shares obtained through the exercise of options under the Rio Tinto Share Savings Plan or the Share Option Plan. The number of shares retained may differ from the number of options exercised.

(e) Shares obtained through the Rio Tinto Share Ownership Plan and/or vesting of awards under the PSP, MSP and BDP.

(f) Share movements due to sale or purchase of shares, shares received under a Dividend Reinvestment Plan, shares purchased/sold through the Rio Tinto America Savings Plan or non-executive directors' Share Purchase Plan.

(g) Lord Kerr and Michael Fitzpatrick retired as directors on 7 May 2015. Harry Kenyon-Slaney stepped down from the Executive Committee on 28 February 2015.

(h) Interests in outstanding awards under LTIPs and option plans are set out in table 3.

Table 3 – Plan interests (awards of shares and options under long-term incentive plans)

	Conditional award granted	Market price at award [a],[b]	1 Jan 2015	Awarded	Lapsed/ cancelled	Dividend shares	Vested	31 Dec 2015	15 Feb 2016	Performance period concludes [c]	Date of election	Market price at election	Monetary value of award at election US$ [d]
Bonus Deferral Plan													
Hugo Bague	27-May-13	£28.67	6,945	–	–	1,004	7,949	–	–	01-Dec-15	11-Dec-15	£19.23	233,673
	17-Mar-14	£31.54	9,669	–	–	–	–	9,669	9,669	01-Dec-16			
	23-Mar-15	£29.43	–	12,354	–	–	–	12,354	12,354	01-Dec-17			
Alfredo Barrios	23-Mar-15	£29.43	–	8,931				8,931	8,931	01-Dec-17			
Alan Davies	27-May-13	A$53.11	6,702	–	–	882	7,584	–	–	01-Dec-15	08-Dec-15	A$43.75	249,699
	17-Mar-14	A$61.67	6,709	–	–	–	–	6,709	6,709	01-Dec-16			
	23-Mar-15	£29.43	–	12,493	–	–	–	12,493	12,493	01-Dec-17			
Andrew Harding	27-May-13	£28.67	7,870	–	–	1,137	9,007	–	–	01-Dec-15	11-Dec-15	£19.72	271,521
	17-Mar-14	£31.54	11,776	–	–	–	–	11,776	11,776	01-Dec-16			
	23-Mar-15	£29.43	–	12,093	–	–	–	12,093	12,093	01-Dec-17			
Jean-Sébastien Jacques	27-May-13	£28.67	2,113	–	–	305	2,418	–	–	01-Dec-15	09-Dec-15	£19.53	72,190
	17-Mar-14	£31.54	8,259	–	–	–	–	8,259	8,259	01-Dec-16			
	23-Mar-15	£29.43	–	13,781	–	–	–	13,781	13,781	01-Dec-17			
Harry Kenyon-Slaney [e]	27-May-13	£28.67	8,128	–	–	N/A	N/A	N/A	N/A	18-Mar-15			
	17-Mar-14	£31.54	9,217	–	–	N/A	N/A	N/A	N/A	18-Mar-15			
Greg Lilleyman	27-May-13	A$53.11	2,094	–	–	275	2,369	–	–	01-Dec-15	10-Dec-15	A$43.06	76,768
	17-Mar-14	A$61.67	2,754	–	–	–	–	2,754	2,754	01-Dec-16			
	23-Mar-15	A$58.21	–	9,321	–	–	–	9,321	9,321	01-Dec-17			
Christopher Lynch	17-Mar-14	£31.54	14,479	–	–	–	–	14,479	14,479	01-Dec-16			
	23-Mar-15	£29.43	–	26,066	–	–	–	26,066	26,066	01-Dec-17			
Debra Valentine	27-May-13	£28.67	7,173	–	–	1,037	8,210	–	–	01-Dec-15	14-Dec-15	£18.88	236,953
	17-Mar-14	£31.54	8,153	–	–	–	–	8,153	8,153	01-Dec-16			
	23-Mar-15	£29.43	–	12,227	–	–	–	12,227	12,227	01-Dec-17			
Sam Walsh	27-May-13	A$53.11	18,413	–	–	2,424	20,837	–	–	01-Dec-15	08-Dec-15	A$43.75	686,048
	17-Mar-14	A$61.67	22,226	–	–	–	–	22,226	22,226	01-Dec-16			
	23-Mar-15	A$58.21	–	29,609	–	–	–	29,609	29,609	01-Dec-17			
Performance Share Plan [f]													
Hugo Bague	06-May-11	£41.51	22,943	–	6,080	–	16,863	–	–	31-Dec-14	16-Feb-15	£31.30	806,855
	19-Mar-12	£36.15	22,056	–	–	–	–	22,056	14,424	31-Dec-15			
	27-May-13	£28.67	29,294	–	–	–	–	29,294	29,294	31-Dec-16			
	27-May-13	£28.67	29,295	–	–	–	–	29,295	29,295	31-Dec-17			
	17-Mar-14	£31.44	61,607	–	–	–	–	61,607	61,607	31-Dec-18			
	23-Mar-15	£29.43	–	66,516	–	–	–	66,516	66,516	31-Dec-19			
Alfredo Barrios	15-Sep-14	£31.44	43,568	–	–	–	–	43,568	43,568	31-Dec-18			
	23-Mar-15	£29.43	–	66,390	–	–	–	66,390	66,390	31-Dec-19			
Alan Davies	21-Mar-11	A$81.00	6,228	–	1,651	–	4,577	–	–	31-Dec-14	19-Feb-15	A$63.98	220,378
	19-Mar-12	A$65.85	6,663	–	–	–	–	6,663	4,357	31-Dec-15			
	27-May-13	A$53.11	27,047	–	–	–	–	27,047	27,047	31-Dec-16			
	27-May-13	A$53.11	27,047	–	–	–	–	27,047	27,047	31-Dec-17			
	17-Mar-14	A$61.03	51,817	–	–	–	–	51,817	51,817	31-Dec-18			
	23-Mar-15	£29.43	–	71,019	–	–	–	71,019	71,019	31-Dec-19			
Andrew Harding	06-May-11	£41.51	23,219	–	6,154	–	17,065	–	–	31-Dec-14	23-Feb-15	£31.82	830,086
	19-Mar-12	£36.15	22,390	–	–	–	–	22,390	14,643	31-Dec-15			
	27-May-13	£28.67	35,547	–	–	–	–	35,547	35,547	31-Dec-16			
	27-May-13	£28.67	35,548	–	–	–	–	35,548	35,548	31-Dec-17			
	17-Mar-14	£31.44	76,539	–	–	–	–	76,539	76,539	31-Dec-18			
	23-Mar-15	£29.43	–	75,083	–	–	–	75,083	75,083	31-Dec-19			

Table 3 – Plan interests (awards of shares and options under long-term incentive plans) (continued)

	Conditional award granted	Market price at award [a],[b]	1 Jan 2015	Awarded	Lapsed/ cancelled	Dividend shares	Vested	31 Dec 2015	15 Feb 2016	Performance period concludes [c]	Date of election	Market price at election	Monetary value of award at election US$ [d]
Performance Share Plan continued [f]													
Jean-Sébastien Jacques	19-Mar-12	£36.15	4,793	–	–	–	–	4,793	3,134	31-Dec-15	15-Feb-16	£18.52	88,727
	27-May-13	£28.67	25,682	–	–	–	–	25,682	25,682	31-Dec-16			
	27-May-13	£28.67	25,683	–	–	–	–	25,683	25,683	31-Dec-17			
	17-Mar-14	£31.44	70,057	–	–	–	–	70,057	70,057	31-Dec-18			
	23-Mar-15	£29.43	–	72,768	–	–	–	72,768	72,768	31-Dec-19			
Harry Kenyon-Slaney [e]	06-May-11	£41.51	33,936	–	8,994	–	24,942	N/A	N/A	31-Dec-14			
	19-Mar-12	£36.15	22,390	–	–	–	–	N/A	N/A	31-Dec-15			
	27-May-13	£28.67	33,353	–	–	–	–	N/A	N/A	31-Dec-16			
	27-May-13	£28.67	33,354	–	–	–	–	N/A	N/A	31-Dec-17			
	17-Mar-14	£31.44	66,798	–	–	–	–	N/A	N/A	31-Dec-18			
Greg Lilleyman	06-May-11	A$79.57	5,423	–	1,438	–	3,985	–	–	31-Dec-14	17-Feb-15	A$63.91	191,660
	19-Mar-12	A$65.85	5,585	–	–	–	–	5,585	3,652	31-Dec-15			
	27-May-13	A$53.11	6,898	–	–	–	–	6,898	6,898	31-Dec-16			
	27-May-13	A$53.11	6,898	–	–	–	–	6,898	6,898	31-Dec-17			
	17-Mar-14	A$61.03	47,321	–	–	–	–	47,321	47,321	31-Dec-18			
	23-Mar-15	A$58.21	–	50,101	–	–	–	50,101	50,101	31-Dec-19			
Christopher Lynch	27-May-13	£28.67	52,084	–	–	–	–	52,084	52,084	31-Dec-16			
	27-May-13	£28.67	52,085	–	–	–	–	52,085	52,085	31-Dec-17			
	17-Mar-14	£31.44	104,312	–	–	–	–	104,312	104,312	31-Dec-18			
	23-Mar-15	£29.43	–	112,620	–	–	–	112,620	112,620	31-Dec-19			
Debra Valentine	06-May-11	£41.51	22,553	–	5,977	–	16,576	–	–	31-Dec-14	17-Feb-15	£31.88	807,693
	19-Mar-12	£36.15	21,257	–	–	–	–	21,257	13,902	31-Dec-15			
	27-May-13	£28.67	26,274	–	–	–	–	26,274	26,274	31-Dec-16			
	27-May-13	£28.67	26,275	–	–	–	–	26,275	26,275	31-Dec-17			
	17-Mar-14	£31.44	55,522	–	–	–	–	55,522	55,522	31-Dec-18			
	23-Mar-15	£29.43	–	52,942	–	–	–	52,942	52,942	31-Dec-19			
Sam Walsh	06-May-11	A$79.57	61,752	–	16,365	–	45,387	–	–	31-Dec-14	17-Feb-15	A$63.85	2,181,011
	19-Mar-12	A$65.85	63,540	–	–	–	–	63,540	41,555	31-Dec-15			
	27-May-13	A$53.11	66,627	–	–	–	–	66,627	66,627	31-Dec-16			
	27-May-13	A$53.11	66,628	–	–	–	–	66,628	66,628	31-Dec-17			
	17-Mar-14	A$61.03	134,026	–	–	–	–	134,026	134,026	31-Dec-18			
	23-Mar-15	A$58.21	–	138,010	–	–	–	138,010	138,010	31-Dec-19			
Management Share Plan													
Alan Davies	19-Mar-12	A$65.85	3,997	–	–	312	4,309	–	–	31-Dec-14	19-Feb-15	A$63.98	207,473
Jean-Sébastien Jacques	19-Mar-12	£36.15	2,875	–	–	267	3,142	–	–	31-Dec-14	16-Feb-15	£31.46	151,113
Greg Lilleyman [g]	19-Mar-12	A$65.85	3,351	–	–	262	3,613	–	–	31-Dec-14	16-Feb-15	A$63.61	172,956
	27-May-13	A$53.11	4,598	–	–	–	–	4,598	5,278	14-Feb-16			

Table 3 – Plan interests (awards of shares and options under long-term incentive plans) (continued)

	Date of Grant	1 Jan 2015 [a]	Vested during 2015	Exercised	Lapsed/ cancelled	Vested and exercisable on 31 Dec 2015 [b]
Share Savings Plan [h]						
Hugo Bague	04-Oct-11	425	–	–	–	–
Andrew Harding	20-Oct-09	723	723	–	723	–
	05-Oct-10	555	–	–	–	–
Harry Kenyon-Slaney [e]	20-Oct-09	434	434	434	–	–
Greg Lilleyman	05-Oct-10	555	–	–	–	–
Sam Walsh	20-Oct-09	125	125	125	–	–
	05-Oct-10	457	–	–	457	–
Share Option Plan [h]						
Hugo Bague	22-Mar-10	47,297	–	–	–	47,297
	06-May-11	34,415	–	–	–	34,415
	19-Mar-12	33,085	–	–	–	33,085
Andrew Harding	17-Mar-09	6,268	–	–	–	6,268
	22-Mar-10	46,597	–	–	–	46,597
	06-May-11	34,829	–	–	–	34,829
	19-Mar-12	33,585	–	–	–	33,585
Harry Kenyon-Slaney [e]	17-Mar-09	6,938	–	–	–	N/A
	22-Mar-10	47,297	–	–	–	N/A
	19-Mar-12	33,585	–	–	–	N/A
Greg Lilleyman	09-Mar-05	1,275	–	1,275	–	–
	07-Mar-06	2,186	–	2,186	–	–
	17-Mar-09	3,058	–	3,058	–	–
Debra Valentine	17-Mar-09	13,558	–	–	–	13,558
	22-Mar-10	47,831	–	–	–	47,831
	06-May-11	33,830	–	–	–	33,830
	19-Mar-12	31,886	–	–	–	31,886
Sam Walsh	07-Mar-06	48,079	–	–	–	48,079
	17-Mar-09	40,005	–	–	–	40,005
	22-Mar-10	83,763	–	–	–	83,763

Table 3 – Plan interests (awards of shares and options under long-term incentive plans) (continued)

	31-Dec-15	Vested and exercisable on 15 Feb 2016	15 Feb 16	Exercise price	Value of options exercised during 2015	Market price on date of exercise	Date from which first exercisable	Expiry date
Share Savings Plan [h]								
Hugo Bague	425	–	425	£28.630	–	–	01-Jan-17	01-Jul-17
Andrew Harding	–	–	–	A$48.73	–	–	01-Jan-15	01-Jul-15
	555	–	555	£27.810	–	–	01-Jan-16	01-Jul-16
Harry Kenyon-Slaney [e]	–	–	–	£21.480	£12,172	£28.045	01-Jan-15	01-Jul-15
Greg Lilleyman	555	–	555	A$59.26	–	–	01-Jan-16	01-Jul-16
Sam Walsh	–	–	–	A$48.73	A$7,988	$63.90	01-Jan-15	01-Jul-15
	–	–	–	A$59.26	–	–	01-Jan-16	01-Jul-16
Share Option Plan [h]								
Hugo Bague	47,297	47,297	47,297	£37.050	–	–	22-Mar-13	22-Mar-20
	34,415	34,415	34,415	£42.450	–	–	06-May-14	06-May-21
	33,085	33,085	33,085	£35.179	–	–	19-Mar-15	19-Mar-22
Andrew Harding	6,268	6,268	6,268	A$33.451	–	–	17-Mar-12	17-Mar-19
	46,597	46,597	46,597	A$76.150	–	–	22-Mar-13	22-Mar-20
	34,829	34,829	34,829	£42.450	–	–	06-May-14	05-May-21
	33,585	33,585	33,585	£35.179	–	–	19-Mar-15	19-Mar-22
Harry Kenyon-Slaney [e]	N/A	N/A	N/A	£16.530	–	–	17-Mar-12	18-Mar-16
	N/A	N/A	N/A	£37.050	–	–	22-Mar-13	18-Mar-16
	N/A	N/A	N/A	£35.179	–	–	19-Mar-15	19-Mar-16
Greg Lilleyman	–	–	–	A$30.933	A$81,753	A$64.12	09-Mar-08	09-Mar-15
	–	–	–	A$54.951	A$140,123	A$64.10	07-Mar-09	07-Mar-16
	–	–	–	A$33.451	A$196,110	A$64.13	17-Mar-12	17-Mar-19
Debra Valentine	13,558	13,558	13,558	£16.530	–	–	17-Mar-12	17-Mar-19
	47,831	47,831	47,831	£37.050	–	–	22-Mar-13	22-Mar-20
	33,830	33,830	33,830	£42.450	–	–	06-May-14	06-May-21
	31,886	31,886	31,886	£35.179	–	–	19-Mar-15	19-Mar-22
Sam Walsh	48,079	48,079	48,079	A$54.951	–	–	07-Mar-09	07-Mar-16
	40,005	40,005	40,005	A$33.451	–	–	17-Mar-12	17-Mar-19
	83,763	83,763	83,763	A$76.150	–	–	22-Mar-13	22-Mar-20

Notes to Table 3

(a) Awards denominated in pounds sterling were for Rio Tinto plc ordinary shares of 10 pence each and awards denominated in Australian dollars were for Rio Tinto Limited shares. All options are granted over ordinary shares. Rio Tinto plc ordinary shares of 10 pence each stated in sterling. Rio Tinto Limited ordinary shares stated in Australian dollars. Each option is granted over one share at no cost to participants. Where an exercise price is stated, it represents the amount payable per share on the exercise of each option by participants.

(b) The weighted fair value per share of conditional awards granted in 2015 under the BDP was £29.11 for Rio Tinto plc and A$58.45 for Rio Tinto Limited and for PSP was £19.63 for Rio Tinto plc and A$39.33 for Rio Tinto Limited. Conditional awards are awarded at no cost to the recipient and no amount remains unpaid on any shares awarded.

(c) Details of performance conditions for the BDP are provided below.

50 per cent of the STIP is delivered in cash and 50 per cent is delivered in deferred shares under the BDP. The BDP vests in December of the third year after the end of performance year.

Details of performance conditions for the PSP are provided below.

For 2012 awards, the awards have a four-year performance period and from 2014, awards have a five-year performance period commencing on 1 January of the year of grant. For 2013 awards only, 50 per cent of the award granted will be measured against the performance conditions after four years (at the end of 2016) and 50 per cent of the awards granted will be measured against the performance conditions after five years (at the end of 2017).

For 2012 awards, subject to the "mix" chosen, awards have a maximum face value of 292 per cent of base salary with the potential for 1.5 times of this value, ie 438 per cent of base salary, for outstanding performance. The expected value of the 2012 awards is 190 per cent of base salary. For awards granted from 2013, awards have a maximum face value of 438 per cent of base salary and a maximum expected value of 219 per cent of base salary. The actual award levels granted from 2013 vary by executive.

For 2012 awards, conditional share awards vest subject to the achievement of a stretching TSR performance condition, comparing Rio Tinto's TSR performance against

– 50 per cent: the Euromoney Global Mining Index

– 50 per cent: the Morgan Stanley Capital World Index (MSCI)

Vesting of awards made in 2012 is as follows:

Out-performance of the index by 8 per cent per annum	1.5x award vests
Performance between index and 8 per cent out-performance	Proportionate vesting for performance between index and 8 per cent out-performance of the index
Out-performance of the index by approximately 5 per cent per annum	1.0x award vests
Performance equal to index	0.35x award vests
Performance less than index	Nil vesting

For awards granted from 2013, for the TSR component (constituting two-thirds of the award), where TSR performance is measured against both the Euromoney Global Mining Index and the Morgan Stanley Capital World Index, the award will vest as follows:

Out-performance of the index by 6 per cent per annum	1.0x award vests
Performance between equal to the index and 6 per cent out-performance	Proportionate vesting between 0.225x and 1.0x vesting
Performance equal to the index	0.225x award vests
Performance less than index	Nil vesting

For the EBIT margin measure (constituting one-third of the award), change in the EBIT margin of Rio Tinto and each of the comparator companies (measured on a "point-to-point" basis using the last financial year in the performance period and the financial year prior to the start of the performance period) will be calculated using independent third-party data. Vesting will be subject to Rio Tinto's interpolated ranking position using the following schedule.

Equal to or greater than 2nd ranked company	1.0x award vests
Between the 5th and 2nd ranked companies	Proportionate vesting between 0.225x and 1.0x vesting
Above the 6th ranked company	0.225x award vests
Equal to the 6th ranked company or below	Nil vesting

For awards granted in 2012 , if vesting is achieved, a cash payment will be paid equal to the dividends that would have been received had the number of shares which have vested at the end of the performance period been held throughout the performance period. For awards granted from 2013, if vesting is achieved, participants will be entitled to receive a number of additional shares whose market value reflects the aggregate cash amount of dividends that would have been received had the number of shares which have vested at the end of the performance period been held throughout the period.

(d) The amount in US dollars has been converted at the rate of £1=US$1.52868 and A$1=US$0.75256, being the average exchange rates for 2015.

(e) Harry Kenyon-Slaney stepped down from the Executive Committee on 28 February 2015.

(f) The 2012 PSP awards granted on 19 March 2012 with a performance period that concluded on 31 December 2015 vested at 65.4 per cent per cent. This award vested on 15 February 2016 as follows: Hugo Bague, awarded 22,056, lapsed 7,632, vested 14,424; Alan Davies, awarded 6,663, lapsed 2,306 vested 4,357; Andrew Harding, awarded 22,390, lapsed 7,747, vested 14,643; Debra Valentine, awarded 21,257, lapsed 7,355, vested 13,902; Sam Walsh, awarded 63,540, lapsed 21,985, vested 41,555; Jean-Sébastien Jacques, awarded 4,793, lapsed 1,659, vested 3,134. Jean-Sébastien exercised his award on 15 February 2016; Greg Lilleyman, awarded 5,585, lapsed 1,933, vested 3,652.

(g) The 2013 MSP awards granted on 27 May 2013 vested on 15 February 2016 as follows: Greg Lilleyman awarded 4,598, dividend shares 680, vested 5,278.

(h) No options have been granted to executives since 19 March 2012.

The closing price of Rio Tinto plc ordinary shares at 31 December 2015 was £19.80 and of Rio Tinto Limited ordinary shares at 31 December 2015 was A$44.71. The high and low prices during 2015 of Rio Tinto plc and Rio Tinto Limited shares were £32.38 and £18.48 and A$65.60 and A$41.76 respectively.

As of 15 February 2016, members of the Executive Committee held 2,115,308 shares awarded and not vested under long-term incentive plans and 536,563 options to acquire Rio Tinto plc and Rio Tinto Limited shares.

Audited information

Under Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 (as amended), the information included in respect of: the single total figure of remuneration for each director as set out on pages 81 and 84 and Table 1b on page 98; details of the directors' total pension entitlements as set out on pages 83 and 85; details of scheme interests awarded to the directors during the financial year as set out on pages 82 and 85 and Table 3 on pages 100 to 104; details of payments to past directors as set out on page 85; and the statement of the directors' shareholdings and share interests, as set out in Tables 2 and 3 on pages 99 to 104 of the Implementation Report are all auditable. The Australian Securities and Investments Commission issued an order dated 14 December 2015 under which the Remuneration Report must be prepared and audited in accordance with the requirements of the Corporations Act 2001 applied on the basis of certain modifications set out in the order (as detailed on page 200). The information provided in the Remuneration Report has been audited as required by section 308(3C) of the Corporations Act.

Going concern

The directors, having made appropriate enquiries, have satisfied themselves that it is appropriate to adopt the going concern basis of accounting in preparing the financial statements. Additionally the directors have considered longer-term viability and their statement in this regard may be found on page 15.

Annual general meetings

The 2016 annual general meetings will be held on 14 April in London and 5 May in Brisbane. Separate notices of the 2016 annual general meetings are produced for the shareholders of each Company.

Directors' approval statement

The Directors' report is delivered in accordance with a resolution of the board.

Jan du Plessis
Chairman

2 March 2016

2015 financial statements

Contents

	Page
Primary financial statements	
Group income statement	107
Group statement of comprehensive income	108
Group cash flow statement	109
Group balance sheet	110
Group statement of changes in equity	111
Reconciliation with Australian Accounting Standards	112
Outline of dual listed companies structure and basis of financial statements	112
Notes to the 2015 financial statements	
Group income statement	
Note 1 – Principal accounting policies	113
Note 2 – Operating segments	125
Note 3 – Operating segments – additional information	128
Note 4 – Net operating costs	129
Note 5 – Employment costs	129
Note 6 – Impairment charges and reversals	130
Note 7 – Share of profit after tax of equity accounted units	131
Note 8 – Finance income and finance costs	132
Note 9 – Taxation	132
Note 10 – (Loss)/earnings per ordinary share	133
Note 11 – Dividends	134
Group balance sheet	
Note 12 – Goodwill	135
Note 13 – Intangible assets	136
Note 14 – Property, plant and equipment	137
Note 15 – Investments in equity accounted units	138
Note 16 – Inventories	139
Note 17 – Deferred taxation	139
Note 18 – Trade and other receivables	141
Note 19 – Assets and liabilities held for sale	141
Note 20 – Other financial assets (including loans to equity accounted units)	141
Note 21 – Cash and cash equivalents	141
Note 22 – Borrowings and other financial liabilities	142
Note 23 – Capitalised finance leases	143
Note 24 – Consolidated net debt	143
Note 25 – Trade and other payables	144
Note 26 – Provisions (including post-retirement benefits)	144
Capital and reserves	
Note 27 – Share capital – Rio Tinto plc	145
Note 28 – Share capital – Rio Tinto Limited	145
Note 29 – Other reserves and retained earnings	146
Additional disclosures	
Note 30 – Financial instruments and risk management	147
Note 31 – Contingencies and commitments	156
Note 32 – Average number of employees	158
Note 33 – Principal subsidiaries	159
Note 34 – Principal joint operations	161
Note 35 – Principal joint ventures	162
Note 36 – Principal associates	163
Note 37 – Purchases and sales of subsidiaries, joint ventures, associates and other interests in businesses	164
Note 38 – Directors' and key management remuneration	165
Note 39 – Auditors' remuneration	166
Note 40 – Related-party transactions	166
Note 41 – Exchange rates in US$	167
Note 42 – Bougainville Copper Limited (BCL)	167
Note 43 – Events after the balance sheet date	167
Note 44 – Share based payments	167
Note 45 – Post-retirement benefits	170
Note 46 – Rio Tinto Limited parent company disclosures	175
Note 47 – Related undertakings	176
Rio Tinto plc company information	190
Rio Tinto financial information by business unit	194
Australian Corporations Act – summary of ASIC relief	199
Directors' declaration	200
Auditor's independence declaration	201
Independent auditors' report of PricewaterhouseCoopers LLP to the members of Rio Tinto plc and PricewaterhouseCoopers to the members of Rio Tinto Limited	202
Financial summary 2006-2015	209
Summary financial data	211

Group income statement

Years ended 31 December

	Note	2015 US$m	2014 US$m	2013 US$m
Consolidated operations				
Consolidated sales revenue	2,3	**34,829**	47,664	51,171
Net operating costs (excluding items shown separately)	4	**(27,919)**	(33,910)	(36,104)
Impairment charges net of reversals	6	**(2,791)**	(1,062)	(7,315)
Net gains/(losses) on consolidation and disposal of interests in businesses	2,37	**64**	(563)	787
Exploration and evaluation costs	13	**(576)**	(747)	(948)
Profit/(loss) relating to interests in undeveloped projects	13	**8**	(36)	(161)
Operating profit		**3,615**	11,346	7,430
Share of profit after tax of equity accounted units	7	**361**	625	698
Impairment charges net of reversals of investments in equity accounted units after tax	6	**–**	589	(216)
Profit before finance items and taxation		**3,976**	12,560	7,912
Finance items				
Net exchange losses on external debt and intragroup balances	24	**(3,538)**	(1,995)	(3,672)
Net (losses)/gains on derivatives not qualifying for hedge accounting		**(88)**	(46)	59
Finance income	8	**52**	64	82
Finance costs	8	**(750)**	(649)	(507)
Amortisation of discount		**(378)**	(382)	(369)
		(4,702)	(3,008)	(4,407)
(Loss)/profit before taxation		**(726)**	9,552	3,505
Taxation	9	**(993)**	(3,053)	(2,426)
(Loss)/profit after tax for the year		**(1,719)**	6,499	1,079
– attributable to owners of Rio Tinto (net (loss)/earnings)		**(866)**	6,527	3,665
– attributable to non-controlling interests		**(853)**	(28)	(2,586)
Basic (loss)/earnings per share	10	**(47.5c)**	353.1c	198.4c
Diluted (loss)/earnings per share	10	**(47.5c)**	351.2c	197.3c

The notes on pages 113 to 189 are an integral part of these consolidated financial statements.

Group statement of comprehensive income

Years ended 31 December

	Note	2015 US$m	2014 US$m	2013 US$m
(Loss)/profit after tax for the year		**(1,719)**	6,499	1,079
Other comprehensive income/(loss):				
Items that will not be reclassified to profit or loss:				
Actuarial gains/(losses) on post-retirement benefit plans	45	**619**	(735)	2,260
Share of other comprehensive losses of equity accounted units, net of tax		**–**	–	(1)
Tax relating to these components of other comprehensive income	9	**(175)**	215	(641)
		444	(520)	1,618
Items that have been/may be subsequently reclassified to profit or loss:				
Currency translation adjustment [(a)]		**(2,395)**	(2,004)	(2,657)
Currency translation on companies disposed of, transferred to the income statement		**(2)**	53	81
Fair value movements:				
– Cash flow hedge (losses)/gains		**(41)**	(48)	195
– Cash flow hedge losses/(gains) transferred to the income statement		**32**	55	(92)
– Losses on revaluation of available for sale securities		**(19)**	(36)	(101)
– Losses on revaluation of available for sale securities transferred to the income statement		**11**	6	146
Share of other comprehensive losses of equity accounted units, net of tax		**(57)**	(44)	(44)
Tax relating to these components of other comprehensive income	9	**(3)**	(9)	(56)
Other comprehensive loss for the year, net of tax		**(2,030)**	(2,547)	(910)
Total comprehensive (loss)/income for the year		**(3,749)**	3,952	169
– attributable to owners of Rio Tinto		**(2,443)**	4,322	3,261
– attributable to non-controlling interests		**(1,306)**	(370)	(3,092)

(a) Excludes a currency translation charge of US$503 million (2014: US$376 million; 2013: US$804 million) arising on Rio Tinto Limited's share capital for the year ended 31 December 2015, which is recognised in the Group statement of changes in equity. Refer to Group statement of changes in equity on page 111.

The notes on pages 113 to 189 are an integral part of these consolidated financial statements.

Group cash flow statement

Years ended 31 December

	Note	2015 US$m	2014 US$m	2013 US$m
Cash flows from consolidated operations [a]		**12,102**	18,896	19,531
Dividends from equity accounted units		**210**	298	600
Cash flows from operations		**12,312**	19,194	20,131
Net interest paid		**(827)**	(981)	(1,164)
Dividends paid to holders of non-controlling interests in subsidiaries		**(310)**	(309)	(191)
Tax paid		**(1,792)**	(3,618)	(3,698)
Net cash generated from operating activities		**9,383**	14,286	15,078
Cash flows from investing activities				
Acquisitions of subsidiaries, joint ventures and associates	37	**(3)**	–	4
Disposals of subsidiaries, joint ventures and associates	37	**(38)**	887	1,896
Purchases of property, plant and equipment and intangible assets	2	**(4,685)**	(8,162)	(13,001)
Sales of financial assets		**65**	172	224
Purchases of financial assets		**(49)**	(24)	(75)
Net funding of equity accounted units		**11**	(117)	(88)
Other investing cash flows [b]		**99**	741	94
Net cash used in investing activities		**(4,600)**	(6,503)	(10,946)
Cash flows before financing activities		**4,783**	7,783	4,132
Cash flows from financing activities				
Equity dividends paid to owners of Rio Tinto	11	**(4,076)**	(3,710)	(3,322)
Proceeds from additional borrowings		**1,837**	442	3,954
Repayment of borrowings		**(3,518)**	(3,476)	(1,832)
Proceeds from issue of equity to non-controlling interests		**103**	1,291	159
Own shares purchased from owners of Rio Tinto		**(2,028)**	–	–
Other financing cash flows		**12**	17	107
Net cash flows used in financing activities		**(7,670)**	(5,436)	(934)
Effects of exchange rates on cash and cash equivalents		**(159)**	(156)	(261)
Net (decrease)/increase in cash and cash equivalents		**(3,046)**	2,191	2,937
Opening cash and cash equivalents less overdrafts		**12,400**	10,209	7,272
Closing cash and cash equivalents less overdrafts	21	**9,354**	12,400	10,209
(a) Cash flows from consolidated operations				
(Loss)/profit after tax for the year		**(1,719)**	6,499	1,079
Adjustments for:				
– Taxation		**993**	3,053	2,426
– Finance items		**4,702**	3,008	4,407
– Share of profit after tax of equity accounted units		**(361)**	(625)	(698)
– Impairment charges net of reversals of investments in equity accounted units after tax		**–**	(589)	216
– Net (gains)/losses on disposal and consolidation of interests in businesses	37	**(64)**	563	(787)
– Impairment charges net of reversals	6	**2,791**	1,062	7,315
– Depreciation and amortisation		**4,645**	4,860	4,791
– Provisions (including exchange differences on provisions)	26	**726**	712	1,449
Utilisation of provisions	26	**(585)**	(973)	(871)
Utilisation of provision for post-retirement benefits	26	**(230)**	(296)	(635)
Change in inventories		**526**	937	(330)
Change in trade and other receivables		**1,404**	962	84
Change in trade and other payables		**(431)**	(380)	803
Other items [c]		**(295)**	103	282
		12,102	18,896	19,531

(b) Other investing cash flows in 2015 mainly relate to the disposal of property, plant and equipment across the Group. In 2014, this included the disposal of the Group's St James's Square properties.

(c) Includes a cash outflow in 2015 of US$227 million (2014: inflow of US$66 million; 2013: outflow of US$267 million) mainly relating to derivative contracts transacted for operational purposes and not designated in a hedge relationship.

The notes on pages 113 to 189 are an integral part of these consolidated financial statements.

Group balance sheet

At 31 December

	Note	2015 US$m	2014 US$m
Non-current assets			
Goodwill	12	**892**	1,228
Intangible assets	13	**3,336**	5,880
Property, plant and equipment	14	**61,057**	68,693
Investments in equity accounted units	15	**4,941**	4,868
Inventories	16	**253**	397
Deferred tax assets	17	**3,309**	3,540
Trade and other receivables	18	**1,356**	1,304
Tax recoverable		**78**	70
Other financial assets (including loans to equity accounted units)	20	**788**	722
		76,010	86,702
Current assets			
Inventories	16	**3,168**	4,350
Trade and other receivables	18	**2,386**	3,623
Tax recoverable		**118**	146
Other financial assets (including loans to equity accounted units)	20	**223**	271
Cash and cash equivalents	21	**9,366**	12,423
		15,261	20,813
Assets of disposal groups held for sale	19	**293**	312
Total assets		**91,564**	107,827
Current liabilities			
Borrowings and other financial liabilities	22	**(2,484)**	(2,684)
Trade and other payables	25	**(6,237)**	(7,437)
Tax payable		**(135)**	(800)
Provisions including post-retirement benefits	26	**(1,190)**	(1,299)
		(10,046)	(12,220)
Non-current liabilities			
Borrowings and other financial liabilities	22	**(21,140)**	(22,535)
Trade and other payables	25	**(682)**	(871)
Tax payable		**(295)**	(370)
Deferred tax liabilities	17	**(3,286)**	(3,574)
Provisions including post-retirement benefits	26	**(11,876)**	(13,303)
		(37,279)	(40,653)
Liabilities of disposal groups held for sale	19	**(111)**	(360)
Total liabilities		**(47,436)**	(53,233)
Net assets		**44,128**	54,594
Capital and reserves			
Share capital			
– Rio Tinto plc	27	**224**	230
– Rio Tinto Limited	28	**3,950**	4,535
Share premium account		**4,300**	4,288
Other reserves	29	**9,139**	11,122
Retained earnings	29	**19,736**	26,110
Equity attributable to owners of Rio Tinto		**37,349**	46,285
Attributable to non-controlling interests		**6,779**	8,309
Total equity		**44,128**	54,594

The notes on pages 113 to 189 are an integral part of these consolidated financial statements.

The financial statements on pages 106 to 200 were approved by the directors on 2 March 2016 and signed on their behalf by

Jan du Plessis
Chairman

Sam Walsh AO
Chief executive

Chris Lynch
Chief financial officer

Group statement of changes in equity

Year ended 31 December 2015	Attributable to owners of Rio Tinto						
	Share capital (notes 27 and 28) US$m	Share premium US$m	Other reserves (note 29) US$m	Retained earnings (note 29) US$m	Total US$m	Non-controlling interests US$m	Total equity US$m
Opening balance	**4,765**	**4,288**	**11,122**	**26,110**	**46,285**	**8,309**	**54,594**
Total comprehensive loss for the year [a]	–	–	(2,020)	(423)	(2,443)	(1,306)	(3,749)
Currency translation arising on Rio Tinto Limited's share capital [b]	(503)	–	–	–	(503)	–	(503)
Dividends	–	–	–	(4,076)	(4,076)	(315)	(4,391)
Share buyback	(88)	–	6	(1,946)	(2,028)	–	(2,028)
Own shares purchased from Rio Tinto shareholders to satisfy share options	–	–	(25)	(28)	(53)	–	(53)
Treasury shares reissued and other movements	–	12	–	1	13	–	13
Change in equity interest held by Rio Tinto	–	–	–	20	20	(17)	3
Equity issued to holders of non-controlling interests	–	–	–	–	–	103	103
Companies no longer consolidated	–	–	–	–	–	5	5
Employee share options and other IFRS 2 charges taken to the income statement	–	–	56	78	134	–	134
Closing balance	**4,174**	**4,300**	**9,139**	**19,736**	**37,349**	**6,779**	**44,128**

Year ended 31 December 2014	Attributable to owners of Rio Tinto						
	Share capital (notes 27 and 28) US$m	Share premium US$m	Other reserves (note 29) US$m	Retained earnings (note 29) US$m	Total US$m	Non-controlling interests US$m	Total equity US$m
Opening balance	5,141	4,269	12,871	23,605	45,886	7,616	53,502
Total comprehensive income for the year [a]	–	–	(1,689)	6,011	4,322	(370)	3,952
Currency translation arising on Rio Tinto Limited's share capital [b]	(376)	–	–	–	(376)	–	(376)
Dividends	–	–	–	(3,710)	(3,710)	(304)	(4,014)
Own shares purchased from Rio Tinto shareholders to satisfy share options	–	–	(129)	(31)	(160)	–	(160)
Treasury shares reissued and other movements	–	19	–	3	22	–	22
Newly consolidated operations	–	–	–	–	–	6	6
Change in equity interest held by Rio Tinto	–	–	–	36	36	(29)	7
Equity issued to holders of non-controlling interests [c]	–	–	–	–	–	1,291	1,291
Companies no longer consolidated	–	–	–	–	–	(18)	(18)
Employee share options and other IFRS 2 charges taken to the income statement	–	–	69	196	265	117	382
Closing balance	4,765	4,288	11,122	26,110	46,285	8,309	54,594

Year ended 31 December 2013	Attributable to owners of Rio Tinto						
	Share capital (notes 27 and 28) US$m	Share premium US$m	Other reserves (note 29) US$m	Retained earnings (note 29) US$m	Total US$m	Non-controlling interests US$m	Total equity US$m
Opening balance	5,945	4,244	14,868	21,496	46,553	11,187	57,740
Total comprehensive income for the year [a]	–	–	(1,984)	5,245	3,261	(3,092)	169
Currency translation arising on Rio Tinto Limited's share capital [b]	(804)	–	–	–	(804)	–	(804)
Dividends	–	–	–	(3,322)	(3,322)	(196)	(3,518)
Own shares purchased from Rio Tinto shareholders to satisfy share options	–	–	(77)	(44)	(121)	–	(121)
Treasury shares reissued and other movements	–	25	–	55	80	–	80
Change in equity interest held by Rio Tinto	–	–	–	102	102	(78)	24
Equity issued to holders of non-controlling interests	–	–	–	–	–	159	159
Companies no longer consolidated	–	–	–	–	–	(369)	(369)
Employee share options and other IFRS 2 charges taken to the income statement	–	–	64	73	137	5	142
Closing balance	5,141	4,269	12,871	23,605	45,886	7,616	53,502

(a) Refer to Group statement of comprehensive income.

(b) Refer to note 1(d).

(c) Equity issued to holders of non-controlling interests in 2014 included US$1,158 million of proceeds from a rights issue by Turquoise Hill Resources Ltd in January 2014.

Group statement of changes in equity
continued

Reconciliation with Australian Accounting Standards

The Group's financial statements have been prepared in accordance with IFRS, as defined in note 1, which differs in certain respects from the version of International Financial Reporting Standards that is applicable in Australia, referred to as Australian Accounting Standards (AAS).

Prior to 1 January 2004, the Group's financial statements were prepared in accordance with UK GAAP. Under IFRS, as defined in note 1, goodwill on acquisitions prior to 1998, which was eliminated directly against equity in the Group's UK GAAP financial statements, has not been reinstated. This was permitted under the rules governing the transition to IFRS set out in IFRS 1. The equivalent Australian Standard, AASB 1, does not provide for the netting of goodwill against equity. As a consequence, shareholders' funds under AAS include the residue of such goodwill, which amounted to US$560 million at 31 December 2015 (2014: US$553 million).

Save for the exception described above, the Group's financial statements drawn up in accordance with IFRS are consistent with the requirements of AAS.

Outline of dual listed companies structure and basis of financial statements

The Rio Tinto Group

These are the financial statements of the Group formed through the merger of economic interests of Rio Tinto plc and Rio Tinto Limited (Merger), and presented by both Rio Tinto plc and Rio Tinto Limited as their consolidated accounts in accordance with both UK and Australian legislation and regulations.

Merger terms

On 21 December 1995, Rio Tinto plc and Rio Tinto Limited, which are listed respectively on stock exchanges in the UK and Australia, entered into a dual listed companies (DLC) merger. This was effected by contractual arrangements between the companies and amendments to Rio Tinto plc's Memorandum and Articles of Association and Rio Tinto Limited's Constitution.

As a result, Rio Tinto plc and Rio Tinto Limited and their respective groups operate together as a single economic enterprise, with neither assuming a dominant role. In particular, the arrangements:

- confer upon the shareholders of Rio Tinto plc and Rio Tinto Limited a common economic interest in both groups;
- provide for common boards of directors and a unified management structure;
- provide for equalised dividends and capital distributions; and
- provide for the shareholders of Rio Tinto plc and Rio Tinto Limited to take key decisions, including the election of directors, through an electoral procedure in which the public shareholders of the two companies in effect vote on a joint basis.

The merger involved no change in the legal ownership of any assets of Rio Tinto plc or Rio Tinto Limited, nor any change in the ownership of any existing shares or securities of Rio Tinto plc or Rio Tinto Limited, nor the issue of any shares, securities or payment by way of consideration, save for the issue by each company of one special voting share to a trustee company which facilitates the joint electoral procedure for public shareholders. During 2002, each of the parent companies issued a DLC Dividend Share to facilitate the efficient management of funds within the DLC structure.

Accounting standards

The financial statements have been drawn up in accordance with IFRS as defined in note 1. The Merger was accounted for as a merger under UK GAAP. As permitted under the rules governing the transition to IFRS, which are set out in IFRS 1, the Group did not restate business combinations that occurred before the transition date of 1 January 2004. As a result, the DLC Merger of economic interests described above continues to be accounted for as a merger under IFRS as defined in note 1.

The main consequence of adopting merger rather than acquisition accounting is that the balance sheet of the merged Group includes the assets and liabilities of Rio Tinto plc and Rio Tinto Limited at their carrying values prior to the merger, subject to adjustments to achieve uniformity of accounting policies, rather than at their fair values at the date of the merger. For accounting purposes Rio Tinto plc and Rio Tinto Limited are viewed as a single public parent company (with their respective public shareholders being the shareholders in that single company). As a result, the amounts attributable to both Rio Tinto plc and Rio Tinto Limited public shareholders are included in the amounts attributed to owners of Rio Tinto on the balance sheet, income statement and statement of comprehensive income.

Australian Corporations Act

The financial statements are drawn up in accordance with an order, under section 340 of the Australian Corporations Act 2001, issued by the Australian Securities and Investments Commission (ASIC) on 14 December 2015. The main effect of the order is that the financial statements are prepared on the basis that Rio Tinto Limited, Rio Tinto plc and their respective controlled entities are treated as a single economic entity, and in accordance with the principles and requirements of International Financial Reporting Standards as adopted by the European Union (EU IFRS) and include a reconciliation from EU IFRS to the Australian equivalents of IFRS (see above).

For further details of the ASIC Class Order relief see page 199.

Notes to the 2015 financial statements

1 Principal accounting policies

Corporate information

Rio Tinto's business is finding, mining and processing mineral resources. Major products are aluminium, copper, diamonds, gold, industrial minerals (borates, titanium dioxide and salt), iron ore, thermal and metallurgical coal and uranium. Activities span the world and are strongly represented in Australia and North America, with significant businesses in Asia, Europe, Africa and South America.

Rio Tinto plc is incorporated in the UK and listed on the London Stock Exchange and Rio Tinto Limited is incorporated in Australia and listed on the Australian Stock Exchange. Rio Tinto plc's registered office is at 6 St James's Square, London SW1Y 4AD, UK. Rio Tinto Limited's registered office is at 120 Collins Street, Melbourne, Australia, 3000.

These financial statements consolidate the accounts of Rio Tinto plc and Rio Tinto Limited (together "the Companies") and their respective subsidiaries (together "the Group") and include the Group's share of joint arrangements and associates as explained in note 1(b) below. The Group's financial statements for the year ended 31 December 2015 were authorised for issue in accordance with a directors' resolution on 2 March 2016.

Notes 33 to 36 provide more information on the Group's subsidiaries, joint arrangements and associates and note 40 provides information on the Group's other related-party transactions.

Basis of preparation of the financial statements

The basis of preparation and the accounting policies used in preparing the Group's 2015 financial statements are set out below.

The financial statements have been prepared on a going concern basis in accordance with the Companies Act 2006 applicable to companies reporting under International Financial Reporting Standards and in accordance with applicable UK law, applicable Australian law as amended by the Australian Securities and Investments Commission Order dated 14 December 2015 and Article 4 of the European Union IAS regulation and also with:

- International Financial Reporting Standards as issued by the International Accounting Standards Board (IASB) and interpretations issued from time to time by the IFRS Interpretations Committee (IFRS IC) both as adopted by the European Union (EU) and which are mandatory for EU reporting as at 31 December 2015; and
- International Financial Reporting Standards as issued by the IASB and interpretations issued from time to time by the IFRS IC which are mandatory as at 31 December 2015.

The above accounting standards and interpretations are collectively referred to as "IFRS" in this report. The Group has not early adopted any other amendments, standards or interpretations that have been issued but are not yet mandatory.

The Group's financial statements have been prepared on the basis of accounting policies consistent with those applied in the financial statements for the year ended 31 December 2014 except for the implementation of a number of minor amendments issued by the IASB and endorsed by the EU which applied for the first time in 2015. These new pronouncements do not have a significant impact on the accounting policies, methods of computation or presentation applied by the Group and therefore prior-period financial statements have not been restated for these pronouncements.

The Group has not applied the following pronouncements which are not mandatory for 2015.

Mandatory for 2016

Endorsed by the EU

Amendment to IAS 1 "Presentation of Financial Statements – Disclosure Initiative". The amendment provides clarification of guidance in IAS 1 on materiality and aggregation, the presentation of subtotals, the structure of financial statements and the disclosure of accounting policies.

Amendments to IAS 16 and IAS 38. The amendments provide clarification of acceptable methods of depreciation and amortisation.

Annual improvements to IFRS 2012-2014 cycle.

Amendments to IFRS 11 "Joint Arrangements". The amendments deal with the accounting for acquisitions of interests in joint operations.

Mandatory for 2017 – not yet endorsed by the EU

Amendments to IAS 12: Recognition of Deferred Tax Assets for Unrealised Losses. These amendments on the recognition of deferred tax assets for unrealised losses clarify how to account for deferred tax assets related to debt instruments measured at fair value.

IAS 7 – Statement of cash flows, Narrow-scope amendments. The amendments introduce an additional disclosure that will enable users of financial statements to evaluate changes in liabilities arising from financing activities.

Mandatory for 2018 – not yet endorsed by the EU

IFRS 15 "Revenue from Contracts with Customers". The core principle of IFRS 15 is that an entity recognises revenue to depict the transfer of promised goods or services when control of the goods or services passes to customers. The amount of revenue recognised should reflect the consideration to which the entity expects to be entitled in exchange for those goods or services. A modified transitional approach is permitted under which a transitional adjustment is recognised in retained earnings at the date of implementation of the standard without adjustment of comparatives. The new standard will only be applied to contracts that are not completed at that date.

IFRS 9 "Financial Instruments". The standard includes a single approach for the classification of financial assets, based on cash flow characteristics and the entity's business model. It introduces a new model for the recognition of impairment losses, the expected credit losses model, which requires expected losses to be recognised when financial instruments are first recognised. The standard amends the rules on hedge accounting to align the accounting treatment with the risk management practices of an entity.

Mandatory for 2019 – not yet endorsed by the EU

IFRS 16 "Leases". Under the new standard, a lessee is in essence required to:

(a) recognise all lease assets and liabilities (including those currently classed as operating leases) on the balance sheet, initially measured at the present value of unavoidable lease payments;

(b) recognise amortisation of lease assets and interest on lease liabilities in the income statement over the lease term; and

(c) separate the total amount of cash paid into a principal portion (presented within financing activities) and interest (which companies can choose to present within operating or financing activities consistent with presentation of any other interest paid) in the cash flow statement.

The Group is currently evaluating the impact of the above pronouncements which may have an impact on the Group's earnings or shareholders' funds in future years. The most significant impact is likely to be from IFRS 16. Information on the undiscounted amount of the Group's operating lease commitments at 31 December 2015 under IAS 17, the current leases standard, is disclosed in note 31. Under IFRS 16, the present value of these commitments would be shown as a liability on the balance sheet together with an asset representing the right of use.

Judgments in applying accounting policies and key sources of estimation uncertainty

The preparation of the financial statements requires management to make assumptions, judgments and estimates and to use judgment in applying accounting policies and in making critical accounting estimates.

These judgments, estimates and assumptions are based on management's best knowledge of the relevant facts and circumstances, having regard to previous experience, but actual results may differ materially from the amounts included in the financial statements. Key

1 Principal accounting policies continued

areas of judgment and estimation uncertainty are highlighted below and further information is contained in the accounting policies and/or the notes to the financial statements.

Areas of judgment that have the most significant effect on the amounts recognised in the financial statements are:

- Merger accounting for the 1995 merger of the economic interests of Rio Tinto plc and Rio Tinto Limited into the dual listed companies (DLC) structure (see Dual listed companies structure on page 112);
- Acquisitions – note 1(b) and note 37;
- Review of asset carrying values, impairment charges and reversals and the recoverability of goodwill – note 1(e) and (i), note 6, note 12 and note 13;
- Estimation of asset lives – note 1(e) and (i);
- Determination of ore reserve and mineral resource estimates – note 1(j);
- Provision for onerous contracts – note 1(i)
- Close-down, restoration and environmental obligations – note 1(k);
- Deferral of stripping costs – note 1(h);
- Uncertain tax positions – note 1(m) and note 31;
- Recognition of deferred tax on mining rights recognised in acquisitions – note 1(m);
- Recoverability of potential deferred tax assets – note 17(c), (e) and (f);
- Capitalisation of exploration and evaluation costs – note 1(f);
- Identification of functional currencies – note 1(d);
- Basis of consolidation – note 1(b) and note 42;
- Contingencies – note 31; and
- Post-retirement cost assumptions – note 1(n) and note 45.

Key sources of estimation uncertainty that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are:

- Review of asset carrying values, impairment charges and reversals and the recoverability of goodwill – note1 (e) and (i), note 6, note 12 and note 13;
- Estimation of asset lives – note 1(e) and (i);
- Determination of ore reserve and mineral resource estimates – note 1(j);
- Estimation of close-down, restoration and environmental costs and the timing of expenditure – note 1(k) and note 26;
- Estimation of obligations for post-retirement costs – note 1(n) and note 45;
- Recoverability of potential deferred tax assets – note 17 (c), (e) and (f);
- Contingencies – note 31; and
- Capitalisation of exploration and evaluation costs – note 1(f).

These areas of judgment and estimation are discussed further in critical accounting policies and estimates on page 122.

(a) Accounting convention

The financial information included in the financial statements for the year ended 31 December 2015, and for the related comparative periods, has been prepared under the historical cost convention, as modified by the revaluation of certain derivative contracts and financial assets, the impact of fair value hedge accounting on the hedged item and the accounting for post-retirement assets and obligations. The Group's policy in respect of these items is set out in the notes below.

The Group's financial statements are presented in US dollars and all values are rounded to the nearest million (US$m) unless otherwise stated.

Where applicable, comparatives have been adjusted to measure or present them on the same basis as current period figures.

(b) Basis of consolidation (notes 33 to 36)

All intragroup transactions and balances have been eliminated on consolidation.

Where necessary, adjustments are made to the locally reported assets, liabilities, and results of subsidiaries, joint arrangements and associates to bring their accounting policies into line with those used by the Group.

Subsidiaries: Subsidiaries are entities controlled by either of the Companies. Control exists where either of the Companies has: power over the entities, that is existing rights that give it the current ability to direct the relevant activities of the entities (those that significantly affect the Companies' returns); exposure, or rights, to variable returns from its involvement with the entities; and the ability to use its power to affect those returns. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

Joint arrangements: A joint arrangement is an arrangement of which two or more parties have joint control. Joint control is the contractually agreed sharing of control such that decisions about the relevant activities of the arrangement (those that significantly affect the Companies' returns) require the unanimous consent of the parties sharing control. The Group has two types of joint arrangement:

Joint operations (JO): A JO is a joint arrangement in which the parties that share joint control have rights to the assets, and obligations for the liabilities, relating to the arrangement. This includes situations where the parties benefit from the joint activity through a share of the output, rather than by receiving a share of the results of trading. In relation to its interest in a JO, the Group recognises: its share of assets and liabilities; revenue from the sale of its share of the output and its share of any revenue generated from the sale of the output by the JO; and its share of expenses. These are incorporated into the Group's financial statements under the appropriate headings.

Joint ventures (JV): A JV is a joint arrangement in which the parties that share joint control have rights to the net assets of the arrangement. JVs are accounted for using the equity accounting method.

Associates: An associate is an entity that is neither a subsidiary nor a joint arrangement, over which the Group has significant influence. Significant influence is presumed to exist where there is neither control nor joint control and the Group has over 20 per cent of the voting rights, unless it can be clearly demonstrated that this is not the case. Significant influence can arise where the Group holds less than 20 per cent of the voting rights if it has the power to participate in the financial and operating policy decisions affecting the entity. Investments in associates are accounted for using the equity accounting method.

The Group uses the term "equity accounted units" (EAUs) to refer to associates and JVs collectively. For all EAUs, the carrying value will include any long-term loans to the EAUs that in substance form part of the Group's net investment. Under the equity accounting method the investment is recorded initially at cost to the Group, including any goodwill on acquisition. In subsequent periods the carrying amount of the investment is adjusted to reflect the Group's share of the EAUs' retained post-acquisition profit or loss and other comprehensive income. When the Group's share of losses in an EAU equals or exceeds its interest in the EAU, including any other unsecured receivables, the Group does not recognise further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the EAU.

Acquisitions (note 37)

Under the "acquisition" method of accounting for business combinations, the purchase consideration is allocated to the identifiable assets acquired and liabilities and contingent liabilities assumed (the identifiable net assets) on the basis of their fair value at the date of acquisition, which is the date on which control is obtained.

The consideration transferred for the acquisition of a subsidiary comprises the fair values of the assets transferred, the liabilities incurred

to the former owners of the acquiree, the fair value of any asset or liability resulting from a contingent consideration arrangement and any equity interests issued by the Group. Costs related to the acquisition of a subsidiary are expensed as incurred.

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill. Any shortfall is immediately recognised in the income statement.

Provisional fair values allocated at a reporting date are finalised within 12 months of the acquisition date.

Non-controlling interests in the acquiree, that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation, are recognised by the Group in one of two ways with the choice being available on an acquisition-by-acquisition basis. They can be measured at either the non-controlling interest's proportionate share of the acquiree's identifiable net assets or at fair value. In some cases, non-controlling interests may be treated as equity options and valued on that basis. Goodwill (see note (e)) and amounts attributable to non-controlling interests will differ depending on the basis used.

Where the Group has a previously held non-controlling interest in the acquiree, this is remeasured to fair value at the date control is gained with any gain or loss recognised in the income statement. The cash cost of the share purchase that gives rise to control is included within "Investing activities" in the cash flow statement.

Where the Group increases its ownership interest in a subsidiary, the difference between the purchase price and the carrying value of the share of net assets acquired is recorded in equity. The cash cost of such purchases is included within "Financing activities" in the cash flow statement.

The results of businesses acquired during the year are included in the consolidated financial statements from the date on which control, joint control or significant influence commences.

Disposals (note 37)

Individual non-current assets or "disposal groups" (that is, groups of assets and liabilities) to be disposed of by sale or otherwise in a single transaction are classified as "held for sale" if the following criteria are met at the period end:

- the carrying amount will be recovered principally through a sale transaction rather than through continuing use; and
- the disposal group is available for immediate sale in its present condition subject only to terms that are usual and customary for such sales; and
- the sale is highly probable.

Disposal groups held for sale are carried at the lower of their carrying amount and fair value less costs to sell. The comparative balance sheet is not restated. Disposal groups acquired with a view to resale are held at the fair value determined at the acquisition date. For these assets acquired for resale no profits or losses are recognised between the acquisition date and the disposal date, unless there is a subsequent impairment.

On classification as held for sale, the assets are no longer depreciated and, if applicable, equity accounting ceases.

If control is lost, any interest in the entity retained by the Group is remeasured to its fair value and the change in carrying amount is recognised in the income statement. The retained interest may be subsequently accounted for as a joint venture, joint operation, associate or financial asset depending on the facts. Certain amounts previously recognised in other comprehensive income in respect of the entity disposed of, or for which control, joint control or significant influence has ceased, may be recycled to the income statement in proportion to the interest disposed of. The cash proceeds of disposals are included within "Investing activities" in the cash flow statement.

Changes in the Group's interest in a subsidiary that do not result in a loss of control are accounted for in equity. The cash proceeds of such disposals are included within "Financing activities" in the cash flow statement.

(c) Sales revenue

Sales revenue comprises sales to third parties at invoiced amounts. All shipping and handling costs incurred by the Group are recognised as operating costs. Amounts billed to customers in respect of shipping and handling are classified as sales revenue where the Group is responsible for freight. If the Group is acting solely as an agent, amounts billed to customers are offset against the relevant costs. Revenue from services is recognised as those services are rendered and accepted by the customer.

Sales revenue excludes any applicable sales taxes. Mining royalties payable are presented as an operating cost or, where they are in substance a profit-based tax, within taxation.

Revenues from the sale of significant by-products, such as gold, are included in sales revenue. Sundry revenue, incidental to the main revenue-generating activities of the operations, and which is a consequence of producing and selling the main products, is treated as a credit to operating costs.

Third-party commodity swap arrangements for delivery and receipt of smelter grade alumina are offset within operating costs.

Sales of copper concentrate are stated at their invoiced amount which is net of treatment and refining charges.

Sales revenue is only recognised on individual sales when all of the following criteria are met:

- the significant risks and rewards of ownership of the product have been transferred to the buyer;
- neither continuing managerial involvement to the degree usually associated with ownership, nor effective control over the goods sold, has been retained;
- the amount of revenue can be measured reliably;
- it is probable that the economic benefits associated with the sale will flow to the Group; and
- the costs incurred or to be incurred in respect of the sale can be measured reliably.

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 will be shipped, the destination port or the customer's premises.

The Group's products are sold to customers under contracts which vary in tenure and pricing mechanisms, with some volumes sold in the spot market.

Pricing for iron ore is on a range of terms, the majority being either monthly or quarterly average pricing mechanisms, with a smaller proportion of iron ore volumes being sold on the spot market. Substantially all iron ore sales are reflected at final prices in the results for the period, based on the best available information at the period end.

Sales revenue is commonly subject to adjustment based on an inspection of the product by the customer. In such cases, sales revenue is initially recognised on a provisional basis using the Group's best estimate of contained metal, and adjusted subsequently.

Certain products are "provisionally priced", that is, the selling price is subject to final adjustment at the end of a period normally ranging from 30 to 180 days after delivery to the customer. The final price is based on the market price at the relevant quotation point stipulated in the contract.

As is customary in the industry, revenue on provisionally priced sales is recognised based on estimates of the fair value of the consideration receivable based on relevant forward market prices. At each reporting date, provisionally priced metal is marked to market based on the forward selling price for the quotational period stipulated in the contract. For this purpose, the selling price can be measured reliably for those products, such as copper, for which there exists an active and freely-traded commodity market, such as the London Metals Exchange, and the value of product sold by the Group is directly linked to the form in which it is traded on that market.

1 Principal accounting policies continued

The marking to market of provisionally priced sales contracts is recorded as an adjustment to sales revenue. Information on provisionally priced sales contracts is included in note 30.

(d) Currency translation

The functional currency for each entity in the Group, and for joint arrangements and associates, is the currency of the primary economic environment in which that entity operates. For many entities, this is the currency of the country in which they are located. Transactions denominated in other currencies are converted to the functional currency at the exchange rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated at year-end exchange rates. The Group's accounting policies for derivative financial instruments and hedge accounting are explained in more detail in note 1(p)(iii).

The Group's financial statements are presented in US dollars, as that presentation currency most reliably reflects the global business performance of the Group as a whole. On consolidation, income statement items for each entity are translated from the functional currency into US dollars at average rates of exchange where the average is a reasonable approximation of rates prevailing on the transaction date. Balance sheet items are translated into US dollars at period-end exchange rates.

Exchange differences arising on the translation of the net assets of entities with functional currencies other than the US dollar are recognised directly in the currency translation reserve. These translation differences are shown in the statement of comprehensive income, with the exception of translation adjustments relating to Rio Tinto Limited's share capital which are shown in the statement of changes in equity.

Where an intragroup balance is, in substance, part of the Group's net investment in an entity, exchange gains and losses on that balance are taken to the currency translation reserve.

Except as noted above, or in note 1(p) below relating to derivative contracts, all other exchange differences are charged or credited to the income statement in the year in which they arise.

(e) Goodwill and intangible assets (excluding exploration and evaluation expenditure) (notes 12 and 13)

Goodwill is not amortised; it is tested annually for impairment or more frequently if events or changes in circumstances indicate a potential impairment. Investments in EAUs, including any goodwill, are tested for impairment as a single asset when a trigger for impairment has been identified. The Group's impairment policy is explained in note 1(i).

Purchased intangible assets are initially recorded at cost. Finite-life intangible assets are amortised over their useful economic lives on a straight line or units of production basis, as appropriate. Intangible assets that are deemed to have indefinite lives and intangible assets that are not yet ready for use are not amortised; they are reviewed annually for impairment or more frequently if events or changes in circumstances indicate a potential impairment in accordance with accounting policy note 1(i).

The Group considers that intangible assets have indefinite lives when, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate cash flows for the Group. The factors considered in making this judgment include the existence of contractual rights for unlimited terms or evidence that renewal of the contractual rights without significant incremental cost can be expected for indefinite future periods in view of the Group's investment intentions. The life cycles of the products and processes that depend on the asset are also considered.

(f) Exploration and evaluation (note 13)

Exploration and evaluation expenditure comprises costs that are directly attributable to:

- researching and analysing existing exploration data;
- conducting geological studies, exploratory drilling and sampling;
- examining and testing extraction and treatment methods; and/or
- compiling pre-feasibility and feasibility studies.

Exploration expenditure relates to the initial search for deposits with economic potential. Expenditure on exploration activity is not capitalised.

Evaluation expenditure relates to a detailed assessment of deposits or other projects that have been identified as having economic potential. Capitalisation of evaluation expenditure commences when there is a high degree of confidence that the Group will determine that a project is commercially viable, that is the project will provide a satisfactory return relative to its perceived risks, and therefore it is considered probable that future economic benefits will flow to the Group.

The carrying values of capitalised evaluation expenditure are reviewed for impairment twice a year by management. In the case of undeveloped mining projects (projects for which the decision to mine has not yet been approved at the appropriate authorisation level within the Group) which have arisen through acquisition, the allocation of the purchase price consideration may result in undeveloped properties being recognised at an earlier stage of project evaluation compared with organic projects. The impairment review is based on a status report summarising the Group's intentions to recover value through development, sale or other partnering arrangements. Subsequent expenditure on acquired undeveloped projects is only capitalised if it meets the high degree of confidence threshold discussed above.

In some cases, undeveloped projects are regarded as successors to orebodies, smelters or refineries currently in production. Where this is the case, it is intended that these will be developed and go into production when the current source of ore is exhausted or to replace the output when existing smelters and/or refineries are closed.

(g) Property, plant and equipment (note 14)

Once an undeveloped mining project has been determined as commercially viable and approval to mine has been given, expenditure other than that on land, buildings, plant, equipment and capital work in progress is capitalised under "Mining properties and leases" together with any amount transferred from "Exploration and evaluation". Ore reserves may be declared for an undeveloped mining project before its commercial viability has been fully determined. Evaluation costs may continue to be capitalised during the period between declaration of ore reserves and approval to mine as further work is undertaken in order to refine the development case to maximise the project's returns.

Costs of evaluation of a smelter or refinery prior to approval to develop are capitalised under "Capital works in progress", provided that there is a high degree of confidence that the project will be deemed to be commercially viable.

Costs which are necessarily incurred whilst commissioning new assets, in the period before they are capable of operating in the manner intended by management, are capitalised. Development costs incurred after the commencement of production are capitalised to the extent they are expected to give rise to a future economic benefit. Interest on borrowings related to construction or development projects is capitalised, at the rate payable on project-specific debt if applicable or at the Group's cost of borrowing if not, until the point when substantially all the activities that are necessary to make the asset ready for its intended use are complete.

Property, plant and equipment is stated at cost, as defined in IAS 16, less accumulated depreciation and accumulated impairment losses. The cost of property, plant and equipment includes the estimated close-down and restoration costs associated with the asset.

(h) Deferred stripping (note 14)

In open pit mining operations, overburden and other waste materials must be removed to access ore from which minerals can be extracted economically. The process of removing overburden and waste materials is referred to as stripping. During the development of a mine (or pit), before production commences, stripping costs are capitalised as part of the cost of construction of the mine (or pit) and are subsequently amortised over the life of the mine (or pit) on a units of production basis.

In order for production phase stripping costs to qualify for capitalisation as a stripping activity asset, three criteria must be met:

- it must be probable that there will be an economic benefit in a future accounting period because the stripping activity has improved access to the orebody; and
- it must be possible to identify the "component" of the orebody for which access has been improved; and
- it must be possible to reliably measure the costs that relate to the stripping activity.

A "component" is a specific section of the orebody that is made more accessible by the stripping activity. It will typically be a subset of the larger orebody that is distinguished by a separate useful economic life (for example, a pushback).

Production phase stripping can give rise to two benefits: the extraction of ore in the current period and improved access to ore which will be extracted in future periods. When the cost of stripping which has a future benefit is not distinguishable from the cost of producing current inventories, the stripping cost is allocated to each of these activities based on a relevant production measure using a life-of-component strip ratio. The ratio divides the tonnage of waste mined for the component for the period either by the quantity of ore mined for the component or by the quantity of minerals contained in the ore mined for the component. In some operations, the quantity of ore is a more appropriate basis for allocating costs, particularly where there are significant by-products. Stripping costs for the component are deferred to the extent that the current period ratio exceeds the life of component ratio. The stripping activity asset is depreciated on a "units of production" basis based on expected production of either ore or contained minerals over the life of the component unless another method is more appropriate.

The life-of-component ratios are based on the ore reserves of the mine (and for some mines, other mineral resources) and the annual mine plan; they are a function of the mine design and therefore changes to that design will generally result in changes to the ratios. Changes in other technical or economic parameters that impact the ore reserves (and for some mines, other mineral resources) may also have an impact on the life-of-component ratios even if they do not affect the mine design. Changes to the ratios are accounted for prospectively.

It may be the case that subsequent phases of stripping will access additional ore and that these subsequent phases are only possible after the first phase has taken place. Where applicable, the Group considers this on a mine-by-mine basis. Generally, the only ore attributed to the stripping activity asset for the purposes of calculating a life-of-component ratio, and for the purposes of amortisation, is the ore to be extracted from the originally identified component.

Where a mine operates several open pits that are regarded as separate operations for the purpose of mine planning, initial stripping costs are accounted for separately by reference to the ore from each separate pit. If, however, the pits are highly integrated for the purpose of mine planning, the second and subsequent pits are regarded as extensions of the first pit in accounting for stripping costs. In such cases, the initial stripping (ie overburden and other waste removal) of the second and subsequent pits is considered to be production phase stripping.

The Group's judgment as to whether multiple pit mines are considered separate or integrated operations depends on each mine's specific circumstances.

The following factors would point towards the initial stripping costs for the individual pits being accounted for separately:

- If mining of the second and subsequent pits is conducted consecutively with that of the first pit, rather than concurrently.
- If separate investment decisions are made to develop each pit, rather than a single investment decision being made at the outset.
- If the pits are operated as separate units in terms of mine planning and the sequencing of overburden removal and ore mining, rather than as an integrated unit.
- If expenditures for additional infrastructure to support the second and subsequent pits are relatively large.
- If the pits extract ore from separate and distinct orebodies, rather than from a single orebody.

If the designs of the second and subsequent pits are significantly influenced by opportunities to optimise output from the several pits combined, including the co-treatment or blending of the output from the pits, then this would point to treatment as an integrated operation for the purposes of accounting for initial stripping costs.

The relative importance of each of the above factors is considered in each case.

Deferred stripping costs are included in "Mining properties and leases" within "Property, plant and equipment" or within "Investments in equity accounted units", as appropriate. Amortisation of deferred stripping costs is included in "Depreciation of property, plant and equipment" within "Net operating costs" or in "Share of profit after tax of equity accounted units", as appropriate.

(i) Depreciation and impairment (notes 13 and 14)

Depreciation of non-current assets

Property, plant and equipment is depreciated over its useful life, or over the remaining life of the mine or smelter or refinery if that is shorter and there is no reasonable alternative use for the asset.

The useful lives of the major assets of a cash-generating unit are often dependent on the life of the orebody to which they relate. Where this is the case, the lives of mining properties, and their associated refineries, concentrators and other long-lived processing equipment are generally based on the expected life of the orebody. The life of the orebody, in turn, is estimated on the basis of the life-of-mine plan. Where the major assets of a cash-generating unit are not dependent on the life of a related orebody, management applies judgment in estimating the remaining service potential of long-lived assets. Factors affecting the remaining service potential of smelters include, for example, smelter technology and electricity purchase contracts when power is not sourced from the company's, or in some cases a local government's, electricity generating capacity.

The useful lives and residual values for material assets and categories of assets are reviewed annually and changes are reflected prospectively.

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

Units of production basis

For mining properties and leases and certain mining equipment, consumption of the economic benefits of the asset is linked to production. Except as noted below, these assets are depreciated on a units of production basis.

In applying the units of production method, depreciation is normally calculated based on production in the period as a percentage of total expected production in current and future periods based on ore reserves and, for some mines, other mineral resources. Other mineral resources may be included in depreciation calculations in limited circumstances and where there is a high degree of confidence that they can be extracted economically. This would be the case when the other mineral resources do not yet have the status of ore reserves merely because the necessary detailed evaluation work has not yet been performed and the responsible technical personnel agree that inclusion of a proportion of measured and indicated resources is appropriate based on historical reserve conversion rates.

Other mineral resources would usually only be included in unit of production calculations where there are very large areas of contiguous mineralisation, for which the economic viability is not sensitive to likely variations in grade, as may be the case for certain iron ore, bauxite and industrial minerals deposits. The required level of confidence is unlikely to exist for minerals that are typically found in low-grade ore (compared with the above), such as copper or gold. In these cases, specific areas of

1 Principal accounting policies continued

mineralisation have to be evaluated in considerable detail before their economic status can be predicted with confidence.

Where measured and indicated resources are used in the calculation of depreciation for infrastructure, primarily rail and port, which will benefit current and future mines, then the measured and indicated resources may relate to mines which are currently in production or to mines where there is a high degree of confidence that they will be brought into production in the future. The quantum of mineral resources is determined taking into account future capital costs as required by the Joint Ore Reserves Committee (JORC) code. The depreciation calculation, however, does not take into account future development costs for mines which are not yet in production. Measured and indicated resources are currently incorporated into depreciation calculations in the Group's Australian iron ore business.

Straight-line basis
Assets within operations for which production is not expected to fluctuate significantly from one year to another or which have a physical life shorter than the related mine are depreciated on a straight-line basis.

Impairment charges/reversals of non-current assets

Impairment charges and reversals are assessed at the level of cash-generating units which, in accordance with IAS 36 "Impairment of Assets", are identified as the smallest identifiable asset or group of assets that generate cash inflows, which are largely independent of the cash inflows from other assets. The existence of an active market for intermediate products is also monitored and separate cash-generating units are identified even if the majority of those products are further processed internally and therefore the cash flows are not independent. Impairment of financial assets is discussed in note 1(p) below.

In some cases, individual business units consist of several operations with independent cash-generating streams which constitute separate cash-generating units.

Goodwill acquired through business combinations is allocated to the cash-generating unit, or groups of cash-generating units if that is the lowest level within the Group at which goodwill is monitored for internal management purposes, that are expected to benefit from the related business combination. All goodwill and intangible assets that are not yet ready for use or have an indefinite life are tested annually for impairment as at 30 September, regardless of whether there has been an impairment trigger, or more frequently if events or changes in circumstances indicate a potential impairment.

Property, plant and equipment and intangible assets with finite lives are reviewed for impairment if there is an indication that the carrying amount may not be recoverable. The Group conducts an internal review of the asset values annually as at 30 September which is used as a source of information to assess for indications of impairment or reversal of previously recognised impairment losses. External factors, such as changes in expected future prices, costs and other market factors, are also monitored to assess for indications of impairment or reversal of previously recognised impairment losses. If any such indication exists then an impairment review is undertaken, the recoverable amount is assessed by reference to the higher of value in use (being the net present value of expected future cash flows of the relevant cash-generating unit in its current condition) and fair value less costs of disposal (FVLCD).

When the recoverable amount of the cash-generating unit is measured by reference to FVLCD, this amount is further classified in accordance with the fair value hierarchy for observable market data that is consistent with the unit of account for the cash-generating unit being tested. The Group considers that the best evidence of FVLCD is the value obtained from an active market or binding sale agreement and, in this case, the recoverable amount is classified in the fair value hierarchy as level 1. When FVLCD is based on quoted prices for equity instruments but adjusted to reflect factors such as a lack of liquidity in the market, the recoverable amount is classified as level 2 in the fair value hierarchy. No cash-generating units are currently assessed for impairment by reference to a recoverable amount based on FVLCD classified as level 2.

Where unobservable inputs are material to the measurement of the recoverable amount, FVLCD is based on the best information available to reflect the amount the Group could receive for the cash-generating unit in an orderly transaction between market participants at the measurement date. This is often estimated using discounted cash flow techniques and is classified as level 3 in the fair value hierarchy.

Where the recoverable amount is assessed using FVLCD based on discounted cash flow techniques, the resulting estimates are based on detailed life-of-mine and/or long-term production plans. The latter may include brownfield expansions which have not yet been approved at the appropriate authorisation level in the Group.

The cash flow forecasts for FVLCD purposes are based on management's best estimates of expected future revenues and costs, including the future cash costs of production, capital expenditure, closure, restoration and environmental costs. For the purposes of determining FVLCD from a market participant's perspective, the cash flows incorporate management's price and cost assumptions in the short and medium term. In the longer term, operating margins are assumed to remain constant where appropriate; as it is considered unlikely that a market participant would prepare detailed forecasts over a longer term. The cash flow forecasts may include net cash flows expected to be realised from extraction, processing and sale of material that does not currently qualify for inclusion in ore reserves. Such non-reserve material is only included when there is a high degree of confidence in its economic extraction. This expectation is usually based on preliminary drilling and sampling of areas of mineralisation that are contiguous with existing ore reserves. Typically, the additional evaluation required to achieve reserve status for such material has not yet been done because this would involve incurring evaluation costs earlier than is required for the efficient planning and operation of the mine.

As noted above, cost levels incorporated in the cash flow forecasts for FVLCD purposes are based on the current life-of-mine plan or long-term production plan for the cash-generating unit. This differs from value in use which requires future cash flows to be estimated for the asset in its current condition and therefore does not include future cash flows associated with improving or enhancing an asset's performance. Anticipated enhancements to assets may be included in FVLCD calculations and therefore generally result in a higher value.

Where the recoverable amount of a cash-generating unit is dependent on the life of its associated orebody, expected future cash flows reflect the current life of mine and/or long-term production plans, which are based on detailed research, analysis and iterative modelling to optimise the level of return from investment, output and sequence of extraction. The mine plan takes account of all relevant characteristics of the orebody, including waste-to-ore ratios, ore grades, haul distances, chemical and metallurgical properties of the ore impacting on process recoveries and capacities of processing equipment that can be used. The life-of-mine plan and/or long-term production plans are therefore the basis for forecasting production output and production costs in each future year.

Forecast cash flows for ore reserve estimation for JORC purposes are generally based on Rio Tinto's commodity price forecasts, which assume short-term market prices will revert to the Group's assessment of the long-term price, generally over a period of three to five years. For most commodities, these forecast commodity prices are derived from a combination of analyses of the marginal costs of the producers and of the incentive price of these commodities. These assessments often differ from current price levels and are updated periodically. The Group does not believe that published medium and long-term forward prices provide a good indication of future levels because they tend to be strongly influenced by spot prices. The price forecasts used for ore reserve estimation are generally consistent with those used for impairment testing unless management deems that in certain economic environments, a market participant would not assign Rio Tinto's view on

prices, in which case management estimates the assumptions that a market participant would be expected to use.

Forecast future cash flows of a cash-generating unit take into account the sales prices under existing sales contracts.

The discount rates applied to the future cash flow forecasts represent an estimate of the rate the market would apply having regard to the time value of money and the risks specific to the asset for which the future cash flow estimates have not been adjusted. The Group's weighted average cost of capital is generally used as a starting point for determining the discount rates, with appropriate adjustments for the risk profile of the countries in which the individual cash-generating units operate. For final feasibility studies and ore reserve estimation, internal hurdle rates, which are generally higher than the Group's weighted average cost of capital, are used. For developments funded with project finance, the debt component of the weighted average cost of capital may be calculated by reference to the specific interest rate of the project finance and anticipated leverage of the project.

For operations with a functional currency other than the US dollar, the impairment review is undertaken in the relevant functional currency. In estimating FVLCD, internal forecasts of exchange rates take into account spot exchange rates, historical data and external forecasts, and are kept constant in real terms from 2020 onwards. The great majority of the Group's sales are based on prices denominated in US dollars. To the extent that the currencies of countries in which the Group produces commodities strengthen against the US dollar without commodity price offset, cash flows and, therefore, net present values are reduced. Management considers that over the long term, there is a tendency for movements in commodity prices to compensate to some extent for movements in the value of the US dollar, particularly against the Australian dollar and Canadian dollar, and vice versa. However, such compensating changes are not synchronised and do not fully offset each other. In estimating value in use, the present value of future cash flows in foreign currencies is translated at the spot exchange rate on the testing date.

Non-current assets (excluding goodwill) that have suffered impairment are reviewed using the same basis for valuation of such assets as explained above whenever events or changes in circumstances indicate that the impairment loss may no longer exist, or may have decreased. If appropriate an impairment reversal will be recognised. The carrying amount of the cash-generating unit after reversal must be the lower of (a) the recoverable amount, as calculated above, and (b) the carrying amount that would have been determined (net of amortisation or depreciation) had no impairment loss been recognised for the cash-generating unit in prior periods.

An onerous contract is defined under IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" as a contract under which the unavoidable costs of meeting the obligations under the contract exceed the economic benefits expected to be received under it. However, no provision is required provided that the related assets, which may be the wider cash-generating unit of which the business unit forms part, are not fully impaired.

(j) Determination of ore reserve and mineral resource estimates

The Group estimates its ore reserves and mineral resources based on information compiled by Competent Persons as defined in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves of December 2012 (the "JORC code", which is produced by the Australasian Joint Ore Reserves Committee).

Ore reserves and, for certain mines, other mineral resources, determined in this way are used in the calculation of depreciation, amortisation and impairment charges and for forecasting the timing of the payment of close-down and restoration costs and the recovery of deferred tax assets. The depreciation and impairment policy above notes instances in which mineral resources are taken into account for accounting purposes. In addition, value may be attributed to mineral resources in purchase price allocations undertaken for the purposes of business combination accounting.

(k) Close-down, restoration and environmental obligations (note 26)

The Group has provisions for close-down and restoration costs which include the dismantling and demolition of infrastructure, the removal of residual materials and the remediation of disturbed areas for mines and certain refineries and smelters. These provisions are based on all regulatory requirements and any other commitments made to stakeholders. Closure provisions are not made for those operations that have no known restrictions on their lives as the closure dates cannot be reliably estimated. This applies primarily to certain North American smelters which have water rights or power agreements with local governments.

Close-down and restoration costs are a normal consequence of mining or production, and the majority of close-down and restoration expenditure is incurred in the years following closure of the mine, refinery or smelter. Although the ultimate cost to be incurred is uncertain, the Group's businesses estimate their costs using current restoration standards and techniques.

Close-down and restoration costs are provided for in the accounting period when the obligation arising from the related disturbance occurs, based on the net present value of the estimated future costs of restoration to be incurred during the life of the operation and post closure. Where appropriate, the provision is estimated using probability weighting of the different remediation and closure scenarios. The obligation may occur during development or during the production phase of a facility.

Provisions for close-down and restoration costs do not include any additional obligations which are expected to arise from future disturbance. The costs are estimated on the basis of a closure plan, and are reviewed six monthly during the life of the operation to reflect known developments. The estimates are also subject to formal review at regular intervals.

The initial close-down and restoration provision is capitalised within "Property, plant and equipment". Subsequent movements in the close-down and restoration provisions for ongoing operations, including those resulting from new disturbance related to expansions or other activities qualifying for capitalisation, updated cost estimates, changes to the estimated lives of operations, changes to the timing of closure activities and revisions to discount rates are also capitalised within "Property, plant and equipment". These costs are then depreciated over the lives of the assets to which they relate. Changes in closure provisions relating to closed operations are charged/credited to "Net operating costs" in the income statement.

Where rehabilitation is conducted systematically over the life of the operation, rather than at the time of closure, provision is made for the estimated outstanding continuous rehabilitation work at each balance sheet date and the cost is charged to the income statement.

The amortisation or "unwinding" of the discount applied in establishing the provisions is charged to the income statement in each accounting period. The amortisation of the discount is shown within "Finance items" in the income statement.

Environmental costs result from environmental damage that was not a necessary consequence of operations, and may include remediation, compensation and penalties. Provision is made for the estimated present value of such costs at the balance sheet date. These costs are charged to "Net operating costs", except for the unwinding of the discount which is shown within "Finance items".

Remediation procedures may commence soon after the time the disturbance, remediation process and estimated remediation costs become known, but can continue for many years depending on the nature of the disturbance and the remediation techniques used.

(l) Inventories (note 16)

Inventories are valued at the lower of cost and net realisable value, primarily on a weighted average cost basis. Average costs are calculated by reference to the cost levels experienced in the relevant month together with those in opening inventory. The cost of raw materials and

1 Principal accounting policies continued

consumable stores is the purchase price. The cost of partly-processed and saleable products is generally the cost of production, including:

- labour costs, materials and contractor expenses which are directly attributable to the extraction and processing of ore and the production of alumina and aluminium;
- the depreciation of mining properties and leases and of property, plant and equipment used in the extraction and processing of ore and the production of alumina and aluminium; and
- production overheads.

Work in progress includes ore stockpiles and other partly processed material. Stockpiles represent ore that has been extracted and is available for further processing. If there is significant uncertainty as to if and when the stockpiled ore will be processed, the ore is expensed as mined. If the ore will not be processed within the 12 months after the balance sheet date, it is included within non-current assets and net realisable value is calculated on a discounted cash flow basis. Quantities of stockpiled ore are assessed primarily through surveys and assays.

(m) Taxation (note 9 and note 17)

Current tax is the tax expected to be payable on the taxable income for the year calculated using rates that have been enacted or substantively enacted at the balance sheet date. It includes adjustments for tax expected to be payable or recoverable in respect of previous periods. Where the amount of tax payable or recoverable is uncertain, Rio Tinto establishes provisions based on the Group's judgment of the probable amount of the liability, or recovery.

Deferred tax is calculated in accordance with IAS 12. The Group provides for deferred tax in respect of fair value adjustments on acquisitions. These adjustments may relate to assets such as mining rights that, in general, are not eligible for income tax allowances. Provision for deferred tax is based on the difference between the carrying value of the asset and its income tax base (which may be US$nil). Even when there is no income tax base, the existence of a tax base for capital gains tax purposes is not usually taken into account in determining the deferred tax provision for the assets, unless they are classified as held for sale, because it is expected that the carrying amount will be recovered primarily through use of the assets and not from disposal.

(n) Post-employment benefits (note 45)

The Group operates a number of defined benefit plans which provide lump sums, pensions, medical benefits and life insurance to retirees. For post-retirement defined benefit plans, the difference between the fair value of any plan assets and the present value of the plan obligations is recognised as an asset or liability in the balance sheet.

The fair value of plan assets is the price that would be received to sell the assets in orderly transactions between market participants at the measurement date. Where appropriate, the recognition of assets may be restricted to the present value of any amounts the Group expects to recover by way of refunds from the plan or reductions in future contributions. In determining the extent to which a refund will be available the Group has considered whether any third party, such as a trustee or pension committee, has the power to enhance benefits or to wind up a pension plan without the Group's consent.

The most significant assumptions used in accounting for pension plans are the discount rate, the inflation assumption and the mortality assumptions. The discount rate is used to determine the net present value of the obligations, the interest cost on the obligations and the interest income on plan assets. The discount rate used is the yield on high-quality corporate bonds with maturities and terms that match those of the post-retirement obligations as closely as possible. Where there is no developed corporate bond market in a country, the rate on government bonds is used. The inflation assumption is used to project increases in future benefit payments for those plans that have benefits linked to inflation. The mortality assumption is used to project the future stream of benefit payments, which is then discounted to arrive at the net present value of the obligations.

Valuations of the obligations are carried out using the projected unit method which values benefits accrued at the valuation date with allowance where appropriate for future increases to pay and pensions. The values of the obligations are assessed in accordance with the advice of independent qualified actuaries.

The current service cost, any past service cost and the effect of any curtailment or settlements are recognised in the income statement. The interest cost less interest income on assets held in the plans is also charged to the income statement. All amounts charged to the income statement in respect of these plans are included within "Net operating costs" or in "Share of profit after tax of equity accounted units", as appropriate.

Actuarial gains and losses arising in the year are credited or charged to the statement of comprehensive income and comprise the effects of changes in actuarial assumptions and experience adjustments due to differences between the previous actuarial assumptions and what has actually occurred. In particular, the difference between the interest income and the actual return on plan assets is recognised in the statement of comprehensive income.

The Group's contributions to defined contribution plans are charged to the income statement in the period to which the contributions relate.

(o) Cash and cash equivalents

For the purpose of the balance sheet, cash and cash equivalents comprise: cash on hand, deposits held on call with banks, and short-term, highly liquid investments that are readily convertible into known amounts of cash and which are subject to insignificant risk of changes in value. Bank overdrafts are shown as current liabilities in the balance sheet.

For the purposes of the cash flow statement, cash and cash equivalents are net of bank overdrafts that are repayable on demand.

(p) Financial instruments (note 30)

(i) Financial assets

Classification

The Group classifies its financial assets in the following categories: at fair value through profit or loss; loans and receivables; held-to-maturity; and available-for-sale investments. The classification depends on the purpose for which the financial assets were acquired. The Group's policy with regard to financial risk management is set out in note 30. Generally, the Group does not acquire financial assets for the purpose of selling in the short term. When the Group enters into derivative contracts, these transactions are designed to reduce exposures related to assets and liabilities, firm commitments or anticipated transactions.

Management determines the classification of financial assets at initial recognition.

(a) Financial assets at fair value through profit or loss

Derivatives, including embedded derivatives separated from the host contracts, are included within financial assets at fair value through profit or loss unless they are designated as effective hedging instruments. Assets in this category are classified as current assets if expected to be settled within 12 months, otherwise they are classified as non-current.

(b) Loans and receivables

Loans and receivables comprise non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Trade receivables are included within this category; however, trade receivables subject to provisional pricing are valued as explained in note 1(c) Sales revenue.

(c) Held-to-maturity

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity that the Group has the intention and ability to hold to maturity and which do not qualify as loans and receivables. Assets in this category are classified as Other investments and are classified as current assets or non-current assets based on their maturity.

(d) Available-for-sale
Available-for-sale financial assets are non-derivative financial assets that are either designated as available-for-sale or not classified in any of the other categories. They are included in non-current assets unless the Group intends to dispose of the assets within 12 months of the balance sheet date or the asset matures within 12 months.

Recognition and measurement
Regular purchases and sales of financial assets are recognised on the trade-date, being the date on which the Group commits to purchase or sell the asset. Financial assets are de-recognised when the rights to receive cash flows from the assets have expired or have been transferred and the Group has transferred substantially all risks and rewards of ownership.

Available-for-sale financial assets and financial assets at fair value through profit or loss are initially recognised at fair value, with transaction costs expensed in the income statement, and are subsequently carried at fair value. Loans and receivables and held-to-maturity financial assets are initially recognised at fair value plus transactions costs and are subsequently carried at amortised cost using the effective interest method.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Where relevant market prices are available, these are used to determine fair values, adjusted where necessary for market liquidity, bid/offer spreads and credit considerations. In other cases, fair values are calculated using quotations from independent financial institutions, or by using valuation techniques consistent with general market practice applicable to the instrument.

The fair values of cash, short-term borrowings and loans to joint ventures and associates approximate to their carrying values, as a result of their short maturity or because they carry floating rates of interest. The fair values of the various derivative instruments used for hedging purposes are disclosed in note 30. Movements on the hedging reserve are disclosed in note 29.

Offsetting financial instruments
Financial assets and liabilities are offset and the net amount reported in the balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously.

Impairment of financial assets
The Group assesses at each balance sheet date whether there is objective evidence that a financial asset or a group of financial assets is impaired. If impairment is identified for a financial asset carried at amortised cost, the carrying amount of the asset is reduced through the use of an allowance account and the loss is recognised in the income statement.

In the case of equity securities classified as available-for-sale, an evaluation is made as to whether a decline in fair value is "significant" or "prolonged" based on an analysis of indicators such as significant adverse changes in the technological, market, economic or legal environment in which the issuing company operates. If such evidence exists for available-for-sale financial assets, the cumulative loss, measured as the difference between acquisition cost less any impairment loss previously recognised in the income statement, and the current fair value is removed from equity and recognised in the income statement.

(ii) Financial liabilities
Borrowings and other financial liabilities (including trade payables but excluding derivative liabilities) are recognised initially at fair value, net of transaction costs incurred, and are subsequently stated at amortised cost.

Any difference between the amounts originally received for borrowings and other financial liabilities (net of transaction costs) and the redemption value is recognised in the income statement over the period to maturity using the effective interest method.

The fair values of medium and long-term borrowings are calculated as the present value of the estimated future cash flows using quoted prices in active markets or an appropriate market based yield curve. The carrying value of the borrowings is amortised cost.

Where an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as a de-recognition of the original liability and the recognition of a new liability, and the difference in the respective carrying amounts is recognised in the income statement.

(iii) Derivative financial instruments and hedging activities
Derivatives embedded in host contracts are treated as separate derivatives when their risks and characteristics are not closely related to their host contracts. In some cases, derivatives and embedded derivatives may be designated as hedges.

Derivatives are initially recognised at their fair value on the date the derivative contract is entered into and transaction costs are expensed in the income statement. They are subsequently re-measured to fair value at each balance sheet date. Gains or losses on derivatives which are not designated as hedges are taken to the income statement. The method of recognising the resulting gain or loss for derivatives designated as hedging instruments depends on the nature of the item being hedged. The Group designates certain derivatives as either: hedges of the fair value of recognised assets or liabilities or of firm commitments (fair value hedges); or hedges of a particular risk associated with a recognised asset or liability or of a highly probable forecast transaction (cash flow hedges).

Fair value hedges: Changes in the fair value of derivatives that are designated and qualify as fair value hedges are recorded in the income statement, together with any changes in the fair value of the hedged asset or liability or firm commitment that is attributable to the hedged risk.

When a fair value interest rate hedging instrument expires or is sold, or when a fair value interest rate hedge no longer meets the criteria for hedge accounting, the fair value adjustments which have been made to the hedged item are amortised through the income statement over the remaining life of the hedged item or written off immediately when the hedged item is de-recognised.

Cash flow hedges: The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in other comprehensive income. The gain or loss relating to the ineffective portion is recognised immediately in the income statement. Amounts accumulated in equity are recycled in the income statement in the period when the hedged item affects profit or loss, for example when the forecast sale that is being hedged takes place. When the forecast transaction that is being hedged results in the recognition of a non-financial asset, for example, property, plant and equipment, the gains and losses previously deferred in equity are transferred from equity and adjust the cost of the asset. The gains and losses are recognised subsequently in the income statement when the non-financial asset is amortised or sold.

When a cash flow hedging instrument expires or is sold, or when a cash flow hedge no longer meets the criteria for hedge accounting, although the forecast transaction is still expected to occur, any cumulative gain or loss relating to the instrument which is held in equity at that time remains in equity and is recognised in the income statement at the same time as the forecast transaction. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that is held in equity is immediately recognised in the income statement.

1 Principal accounting policies continued

(q) Share-based payments (note 44)

The fair value of the Group's share plans is recognised as an expense over the expected vesting period with a corresponding entry to retained earnings for Rio Tinto plc plans and to other reserves for Rio Tinto Limited plans.

The Group uses fair values provided by independent actuaries calculated using either a lattice-based option valuation model or a Monte Carlo simulation model. The fair value of the share plans is determined at the date of grant, taking into account any market-based vesting conditions attached to the award. Non-market based vesting conditions (for example, earnings per share targets) are taken into account in estimating the number of awards likely to vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date, at which point the estimate is adjusted to reflect the actual awards issued. No adjustment is made after the vesting date even if the awards are forfeited or not exercised.

The terms of each plan are considered at the balance sheet date to determine whether they should be accounted for as equity or cash settled. The Group no longer operates any plans as cash-settled. However the Performance Share Plan can, at the discretion of the directors, offer employees an equivalent amount in cash. This is not standard practice. In some jurisdictions, employees are granted cash-settled awards where equity-settled awards are prohibited by local laws and regulations. The value of these awards is immaterial.

The Group's equity-settled share plans are settled either by: the issue of shares by the relevant parent company, the purchase of shares on market, or the use of shares held in treasury which were previously acquired as part of a share buy-back. If the cost of shares acquired to satisfy the plans differs from the expense charged, the difference is taken to retained earnings or other reserves, as appropriate.

(r) Share capital (notes 27 and 28)

Ordinary shares are classified as equity. Incremental costs directly attributable to the issuance of new shares are shown in equity as a deduction, net of tax, from the proceeds.

Where any Group company purchases the Group's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs (net of income taxes) is deducted from equity attributable to owners of Rio Tinto. Where such shares are subsequently reissued, any consideration received, net of any directly-attributable incremental costs and the related income tax effects, is included in equity attributable to owners of Rio Tinto.

(s) Segment reporting (notes 2 and 3)

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker (CODM). The CODM, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as Rio Tinto's chief executive.

Critical accounting policies and estimates

(i) Dual listed companies reporting

As described in the "Outline of dual listed companies structure and basis of financial statements", for the purposes of preparing the IFRS compliant consolidated financial statements of the Rio Tinto Group, both the DLC companies, Rio Tinto plc and Rio Tinto Limited, are a single company, and the interests of shareholders of both companies are presented as the equity interests of shareholders in the reporting entity.

The 2015 Annual report satisfies the obligations of Rio Tinto Limited to prepare consolidated accounts under Australian company law, as amended by an order issued by the Australian Securities and Investments Commission on 14 December 2015. The 2015 financial statements disclose the effect of the adjustments to the Group's consolidated profit/(loss), consolidated total comprehensive income/(loss) and consolidated shareholders' funds as prepared under IFRS as defined on page 113 that would be required under the version of International Financial Reporting Standards that is applicable in Australia, referred to as Australian Accounting Standards (AAS).

The US dollar is the presentation currency used in these financial statements, as it most reliably reflects the Group's global business performance.

(ii) Acquisitions (note 37)

The determination of the fair values of net identifiable assets acquired, and of any goodwill, involves significant judgment. This is particularly the case when the acquisition involves little or no cash, for example when the Group gains control of a company in stages or by the issuance of shares. The allocation of fair value between intangible assets, and the tangible assets with which they are used, is also judgmental. The Group engages third-party valuers to advise on the purchase price allocation for significant acquisitions.

(iii) Impairment review of asset carrying values (notes 6, 12 and 13)

Events or changes in circumstances can give rise to significant impairment charges or reversals of impairment.

Estimates in respect of the timing of project expansions and the cost to complete asset construction are critical to determining the recoverable amounts for cash-generating units.

Where the recoverable amounts of the Group's cash-generating units are assessed using analyses of discounted cash flows, the resulting valuations are also sensitive to changes in estimates of long-term commodity prices, production timing and recovery rates, exchange rates, operating costs, reserve estimates, closure costs and discount rates.

Note 6 outlines the significant judgments and assumptions made in measuring the impairments recorded and notes 12 and 13 outline judgments in relation to the testing of cash-generating units containing goodwill and indefinite-life intangible assets respectively.

(iv) Estimation of asset lives and determination of ore reserve and mineral resource estimates

Intangible assets are considered to have indefinite lives when, based on an analysis of all of the relevant factors, there is no foreseeable limit to the period over which the asset is expected to generate cash flows for the Group. The factors considered in making this judgment include the existence of contractual rights for unlimited terms; or evidence that renewal of the contractual rights without significant incremental cost can be expected for indefinite periods into the future in view of the Group's investment intentions.

Rio Tinto estimates its ore reserves and mineral resources based on information compiled by Competent Persons as defined in accordance with the JORC code (see note 1(j)). The amounts presented under IFRS and AAS are based on the ore reserves, and in some cases mineral resources, determined under the JORC code.

The estimation of ore reserves and mineral resources requires judgment to interpret available geological data and then to select an appropriate mining method and establish an extraction schedule. It also requires assumptions about future commodity prices, exchange rates, production costs, recovery rates and discount rates and, in some instances, the renewal of mining licences. There are many uncertainties in the estimation process and assumptions that are valid at the time of estimation may change significantly when new information becomes available.

New geological data, as well as changes in assumptions, may change ore reserve and mineral resource estimates and may ultimately result in their restatement. Changes in ore reserves and, in some cases, mineral resources, could have an impact on: depreciation and amortisation rates; the carrying values of intangible assets and property, plant and equipment; deferred stripping calculations; provisions for close-down and restoration costs; and the recovery of deferred tax assets.

(v) Close-down, restoration and environmental obligations (note 26)

Provision is made for close-down, restoration and environmental costs when the obligation occurs, based on the net present value of estimated future costs with, where appropriate, probability weighting of the different remediation and closure scenarios. The ultimate cost of close-down and restoration is uncertain, and management uses its judgment and experience to provide for these costs over the life of the operations.

Cost estimates can vary in response to many factors including: changes to the relevant legal or local/national government ownership requirements and any other commitments made to stakeholders; review of remediation and relinquishment options; the emergence of new restoration techniques and the effects of inflation. Experience gained at other mine or production sites is also a significant consideration, although elements of the restoration and rehabilitation of each site are relatively unique to the site and, in some cases, there may be relatively limited restoration and rehabilitation activity and historical precedent against which to benchmark cost estimates. External experts support the cost estimation process where appropriate.

Cost estimates are updated throughout the life of the operation and generally must comply with the Group's Capital Project Framework once the operation is ten years from expected closure. The expected timing of expenditure included in cost estimates can also change, for example in response to changes to expectations relating to ore reserves and mineral resources, production rates, operating licences or economic conditions. Expenditure may occur before and after closure and can continue for an extended period of time depending on the specific site requirements. Some expenditure can continue into perpetuity. In such cases, the provision for these ongoing costs may be restricted to a period for which the costs can be reliably estimated.

Cash flows must be discounted if this has a material effect. The selection of appropriate sources on which to base the calculation of the risk-free discount rate used for such close-down, restoration and environmental obligations requires judgment.

As a result of all of the above factors, there could be significant adjustments to the provision for close-down, restoration and environmental costs which would affect future financial results. Increases and decreases in environmental obligations and increases in close-down and restoration provisons for closed operations are charged or credited directly to the income statement. Increases and decreases in close-down obligations for operating businesses are accounted for as indicated in note 1(k) above. An increase in capitalised close-down and restoration provisions would increase the unwind of the discount (as for all provisions) and depreciation charges in the income statement in future years and increase the carrying value of property, plant and equipment, potentially impacting any future impairment charges or reversals.

(vi) Deferral of stripping costs (note 14)

Stripping of waste materials takes place throughout the production phase of a surface mine or pit. The identification of components within a mine and of life of component strip ratios is dependent on an individual mine's design. Changes to that design may introduce new components and/or change the life of component strip ratios. Changes in other technical or economic parameters that impact ore reserves may also have an impact on the life of component strip ratios, even if they do not affect the mine's design. Changes to the life of component strip ratios, are accounted for prospectively.

The Group's judgment as to whether multiple pit mines are considered separate or integrated operations determines whether initial stripping of a pit is deemed to be pre-production or production phase stripping and, therefore, the amortisation base for those costs. The judgment depends on each mine's specific circumstances and the analysis requires judgment: another mining company could make a different judgment even where the fact pattern appears to be similar.

(vii) Recognition of deferred tax liabilities on mining rights recognised in acquisitions

Deferred tax is provided in respect of fair value adjustments on acquisitions. These adjustments may relate to assets such as mining rights that, in general, are not eligible for income tax allowances. Provision for deferred tax is based on the difference between the carrying value of the asset and its income tax base (which may be nil). Even where there is no income tax base, the existence of a tax base for capital gains tax purposes is not usually taken into account in determining the deferred tax liability for the assets, unless they are classified as held for sale, because it is expected that the carrying amount will be recovered primarily through use of the assets and not from disposal. For acquisitions after 1 January 2004, such a deferred tax liability on acquisition results in a consequential increase in the amounts attributed to goodwill. For acquisitions prior to 1 January 2004, such deferred tax was recognised in equity on transition to IFRS.

(viii) Capitalisation of exploration and evaluation costs and development costs prior to the decision to mine/construct (note 13)

Under the Group's accounting policy, exploration expenditure is not capitalised. Evaluation expenditure is capitalised when there is a high degree of confidence that the Group will determine that a project is commercially viable and it is therefore considered probable that future economic benefits will flow to the Group.

A project's commercial viability is determined based on whether it will provide a satisfactory return relative to its perceived risks. Once commercial viability has been established, the Group will decide, at the appropriate authorisation level (that is, the Rio Tinto Investment Committee, and the board where appropriate) whether the project should proceed. In determining whether to approve a mining project, the Investment Committee reviews the ore reserves estimate together with analyses of the net present value of the project and sensitivity analyses for the key assumptions.

There are occasions when the Group concludes that the asset recognition criteria are met at an earlier stage than approval to proceed is granted. In these cases, evaluation expenditure is capitalised if there is a high degree of confidence that the Group will determine the project is commercially viable. The Group's view is that a high degree of confidence is greater than "more likely than not" (that is, greater than 50 per cent certainty) and less than "virtually certain" (that is, less than 90 per cent certainty). Determining whether there is a high degree of confidence that the Group will determine that an evaluation project is commercially viable requires a significant degree of judgment and assessment of all relevant factors such as the nature and objective of the project; the project's current stage; project timeline; current estimates of the project's net present value, including sensitivity analyses for the key assumptions; and the main risks of the project. Development expenditure incurred prior to the decision to proceed is subject to the same criteria for capitalisation, being a high degree of confidence that the Group will determine that a project is commercially viable.

In accordance with IFRS 6 "Exploration for and Evaluation of Mineral Resources", the criteria for the capitalisation of evaluation costs are applied consistently from period to period.

Subsequent recovery of the carrying value for evaluation costs depends on successful development, sale or other partnering arrangements of the undeveloped project. If a project does not prove viable, all irrecoverable costs associated with the project net of any related impairment provisions are charged to the income statement.

(ix) Identification of functional currencies

The functional currency for each subsidiary, joint operation and equity accounted unit, is the currency of the primary economic environment in which it operates. Determination of functional currency involves significant judgment and other companies may make different judgments based on similar facts. For many of Rio Tinto's businesses, their functional currency is the currency of the country in which they operate. The Group reconsiders the functional currency of its businesses if there is a change in the underlying transactions, events or conditions which determine their primary economic environment.

1 Principal accounting policies continued

The determination of functional currency affects the carrying value of non-current assets included in the balance sheet and, as a consequence, the amortisation of those assets included in the income statement. It also impacts exchange gains and losses included in the income statement and in equity.

(x) Estimation of obligations for post-employment costs (note 45)

The value of the Group's obligations for post-retirement benefits is dependent on the amount of benefits to be paid out and is discounted to the balance sheet date. This amount will vary depending on the assumptions made about the future pay increases received by members of final pay plans, the level of inflation (for those benefits that are subject to some form of inflation protection), the number of individuals and how long individuals live in retirement. Most of the Group's defined benefit pension plans are closed to new entrants and the majority of the obligations relate to former employees. As a consequence, the carrying value of the Group's post-retirement obligations is less sensitive to assumptions about future salary increases than it is to assumptions regarding future inflation. The assumption regarding future inflation is based on market yields on inflation-linked instruments where possible, combined with consensus views on future inflation, and is derived using the same process at each reporting date. Changes to the assumption therefore reflect changes to the market and consensus views of future inflation.

The Group reviews the actual mortality rates of retirees in its major pension plans on a regular basis and uses these rates to set its current mortality assumptions. It also allows for future improvements in mortality having regard to standard improvement scales in each relevant country.

The discount rate used to value post-retirement obligations is based upon the yields on high quality corporate bonds in the relevant currency and which have durations consistent with the nature of the obligations. The discount rate will vary from one period to another in line with movements in corporate bond yields, but at any given measurement date there is relatively little estimation uncertainty. This rate is also used to calculate the interest cost on obligations and interest income on plan assets.

Details of the key assumptions, how they have moved since the previous balance sheet date and the sensitivity of the carrying value to changes in the assumptions are set out in note 45.

For 2015, the charge against income for post-retirement benefits net of tax and non-controlling interests was US$266 million. This charge included both pension and post-retirement healthcare benefits. The charge is net of interest income of US$371 million after tax and non-controlling interests.

The weighted average future increase in compensation levels was assumed to be 3.3 per cent in 2015 and will be 3.2 per cent for 2016. The average discount rate used was 3.5 per cent in 2015 and will be 3.7 per cent in 2016 reflecting the net impact of changes in corporate bond yields in the currencies in which the Group has pension obligations.

Based on the known changes in assumptions noted above and other expected circumstances, the expected impact of post-retirement costs on the Group's net earnings in 2016 would be US$95 million more than in 2015. The actual charge may be impacted by other factors that cannot be predicted, such as the effect of changes in benefits, number of employees and exchange rates.

The table below sets out the potential change in the Group's 2015 net loss (after tax and non-controlling interests) that would result from hypothetical changes to post-retirement assumptions and estimates. The sensitivities are viewed for each assumption in isolation, although a change in one assumption is likely to result in some offset elsewhere. The figures in the table only show the impact on underlying and net earnings. Changing the assumptions would also have an impact on the balance sheet, and this is shown in note 45.

	US$ million
Sensitivity of the Group's 2015 underlying earnings and net losses to changes in:	
Discount rate	
Increase of 0.5 percentage points	36
Decrease of 0.5 percentage points	(31)
Inflation	
Increase of 0.5 percentage points	(24)
Decrease of 0.5 percentage points	23
Salary increases	
Increase of 0.5 percentage points	(7)
Decrease of 0.5 percentage points	6
Demographic – allowance for additional future mortality improvements	
Participants assumed to have the mortality rates of individuals who are one year older	15
Participants assumed to have the mortality rates of individuals who are one year younger	(15)

(xi) Recoverability of potential deferred tax assets (note 17)

The Group has tax losses, and other deductible temporary differences, mainly in Australian, Canadian, French, UK, and US taxable entities that have the potential to reduce tax payments in future years. Deferred tax assets have been recognised to the extent that their recovery is probable, having regard to the availability of sufficient taxable temporary differences relating to the same taxation authority and the same taxable entity, the projected future taxable income of these taxable entities and after taking account of specific risk factors that are expected to affect the recovery of these assets.

(xii) Contingencies (note 31)

Disclosure is made of material contingent liabilities unless the possibility of any loss arising is considered remote.

(xiii) Basis of consolidation (notes 33 to 36)

Judgment is sometimes required to determine whether the Group has control, joint control or significant influence over an entity.

2 Operating segments

Gross sales revenue [a]	2015 US$m	2014 US$m	2013 US$m
Iron Ore	**15,305**	23,281	25,994
Aluminium	**10,117**	12,123	12,463
Copper & Coal	**7,705**	9,957	10,434
Diamonds & Minerals	**3,674**	4,783	5,129
Other Operations	**13**	241	1,761
Reportable segments total	**36,814**	50,385	55,781
Inter-segment transactions	**(29)**	(344)	(1,182)
Product group total	**36,785**	50,041	54,599
Items excluded from underlying earnings	**(1)**	–	(24)
Gross sales revenue	**36,784**	50,041	54,575
Share of equity accounted units and adjustments for inter-subsidiary/equity accounted units sales	**(1,955)**	(2,377)	(3,404)
Consolidated sales revenue per income statement	**34,829**	47,664	51,171
Depreciation and amortisation [b]			
Iron Ore	**1,906**	1,953	1,627
Aluminium	**1,172**	1,180	1,151
Copper & Coal	**1,441**	1,464	1,476
Diamonds & Minerals	**488**	619	765
Other Operations	**32**	34	67
Reportable segments total	**5,039**	5,250	5,086
Other items	**68**	82	106
Less: depreciation and amortisation of equity accounted units	**(462)**	(472)	(401)
Depreciation and amortisation per note 4	**4,645**	4,860	4,791
Underlying earnings [c]			
Iron Ore	**3,952**	8,107	9,858
Aluminium	**1,118**	1,248	557
Copper & Coal	**274**	831	965
Diamonds & Minerals	**189**	269	237
Other Operations	**(88)**	(240)	(279)
Reportable segments total	**5,445**	10,215	11,338
Inter-segment transactions	**–**	–	(4)
Other items	**(375)**	(593)	(730)
Exploration and evaluation not attributed to product groups	**(141)**	(156)	(145)
Net finance costs	**(389)**	(161)	(242)
Underlying earnings	**4,540**	9,305	10,217
Items excluded from underlying earnings [d]	**(5,406)**	(2,778)	(6,552)
Net (loss)/earnings attributable to owners of Rio Tinto per income statement	**(866)**	6,527	3,665
Tax charge			
Iron Ore	**1,757**	3,698	5,290
Aluminium	**303**	303	(18)
Copper & Coal	**(96)**	98	296
Diamonds & Minerals	**131**	135	131
Other Operations	**(73)**	(135)	(229)
Reportable segments total	**2,022**	4,099	5,470
Other items	**(192)**	(193)	(302)
Exploration and evaluation not attributed to product groups	**(25)**	(34)	(23)
Net finance costs	**(245)**	(396)	(77)
	1,560	3,476	5,068
Tax credit excluded from underlying earnings [d]	**(567)**	(423)	(2,642)
Tax charge per income statement	**993**	3,053	2,426

2 Operating segments continued

Capital expenditure	2015 US$m	2014 US$m	2013 US$m
Iron Ore	**1,726**	4,211	6,814
Aluminium	**1,682**	2,021	2,226
Copper & Coal	**1,564**	2,128	3,392
Diamonds & Minerals	**446**	562	1,162
Other Operations	**(36)**	(56)	278
Reportable segments total	**5,382**	8,866	13,872
Other items	**65**	(416)	145
Less: capital expenditure of equity accounted units	**(859)**	(1,032)	(1,073)
Capital expenditure per financial information by business units	**4,588**	7,418	12,944
Add: Proceeds from disposal of property, plant and equipment	**97**	744	57
Capital expenditure per cash flow statement	**4,685**	8,162	13,001

Rio Tinto's management structure is based on the principal product groups in the table above together with the global functions that support the business. The chief executive of each product group reports to the chief executive of Rio Tinto. The chief executive of Rio Tinto monitors the performance of each product group based on a number of measures, including capital expenditure and operating cash flows, with underlying earnings being the key financial performance indicator. Finance costs and net debt are managed on a Group basis.

In 2015 the Energy product group as presented in previous periods was split, with the coal assets taken to the newly formed Copper & Coal product group and the uranium assets to the Diamonds & Minerals product group.

Generally, business units are allocated to product groups based on their primary product. The Diamonds & Minerals product group includes businesses with products such as uranium, borates, salt and titanium dioxide feedstock together with diamond operations and the Simandou iron ore project, which is the responsibility of the Diamonds & Minerals product group chief executive. The Copper & Coal group includes certain gold operations in addition to copper and coal.

The financial information by business unit provided on page 194 of these financial statements provides additional voluntary disclosure which the Group considers useful to the users of the financial statements.

(a) Gross sales revenue

Gross sales revenue includes the sales revenue of equity accounted units (after adjusting for sales to subsidiaries) of US$2,115 million (2014: US$2,533 million, 2013: US$3,757 million) which are not included in consolidated sales revenue. Consolidated sales revenue includes subsidiary sales of US$160 million (2014: US$156 million, 2013: US$353 million) to equity accounted units which are not included in gross sales revenue.

(b) Depreciation and amortisation

Product group depreciation and amortisation totals include 100 per cent of subsidiaries' depreciation and amortisation and include Rio Tinto's share of the depreciation and amortisation of equity accounted units. Rio Tinto's share of the depreciation and amortisation charge of equity accounted units is deducted to arrive at depreciation and amortisation, excluding equity accounted units, as shown in note 4. These figures exclude impairment charges and reversals, which are excluded from underlying earnings.

(c) Underlying earnings

Underlying earnings is reported by Rio Tinto to provide greater understanding of the underlying business performance of its operations and to enhance comparability of reporting periods.

The measure of underlying earnings is used by the chief executive of Rio Tinto to assess the performance of the product groups. Underlying earnings and net (loss)/earnings both represent amounts net of tax attributable to owners of Rio Tinto. The following items are excluded from net (loss)/earnings in arriving at underlying earnings in each period irrespective of materiality:

- Net (losses)/gains on disposal and consolidation of interests in businesses.
- Impairment charges and reversals.
- Profit/(loss) after tax from discontinued operations.
- Exchange and derivative gains and losses. This exclusion includes exchange gains/(losses) on US dollar net debt and intragroup balances, gains/(losses) on currency and interest rate derivatives not qualifying for hedge accounting and gains/(losses) on commodity derivatives not qualifying for hedge accounting.

In addition, there is a final judgmental category which includes, where applicable, other credits and charges that, individually or in aggregate if of a similar type, are of a nature or size to require exclusion in order to provide additional insight into underlying business performance.

Product group earnings include earnings of subsidiaries and equity accounted units stated before finance items but after the amortisation of discount.

Rio Tinto's share of the underlying profits of equity accounted units amount to US$390 million in 2015 (2014: US$626 million, 2013: US$710 million). This amount is attributable as follows: US$307 million profit to the Copper & Coal product group and US$83 million profit to other product groups (2014: US$551 million profit attributable to the Copper & Coal product group and US$75 million profit to other product groups; 2013: US$705 million profit attributable to the Copper & Coal product group and US$5 million to other product groups). These amounts are included in underlying earnings of the relevant product groups and include the underlying earnings of the Group's tolling entities which process alumina. Tolling entities recharge the majority of their costs and generally have minimal earnings.

The Copper & Coal product group's underlying earnings in 2013 included a US$131 million impairment after tax in relation to the product group's investment in Northern Dynasty Minerals Ltd following a strategic review of this shareholding by the product group.

(d) Reconciliation of net (losses)/earnings to underlying earnings

Exclusions from underlying earnings	Pre-tax[m] 2015 US$m	Taxation 2015 US$m	Non-controlling interests 2015 US$m	Net amount 2015 US$m	Net amount 2014 US$m	Net amount 2013 US$m
Impairment charges net of reversals (note 6)	(2,791)	(57)	1,046	(1,802)	(138)	(3,428)
Net gains/(losses) on consolidation and disposal of interests in businesses [e]	64	(2)	(14)	48	(349)	847
Exchange and derivative (losses)/gains:						
– Exchange losses on US dollar net debt and intragroup balances [f]	(3,518)	269	(33)	(3,282)	(1,858)	(2,929)
– (Losses)/gains on currency and interest rate derivatives not qualifying for hedge accounting [g]	(86)	(1)	(1)	(88)	(22)	2
– Gains on commodity derivatives not qualifying for hedge accounting [h]	146	(58)	–	88	30	196
Restructuring costs including global headcount reductions	(344)	86	–	(258)	(82)	(367)
Increased closure provision for legacy operations	(262)	29	–	(233)	–	–
Recognition of deferred tax assets relating to planned divestments	–	250	(16)	234	–	–
Write off of deferred tax asset following the MRRT repeal	–	–	–	–	(362)	–
Gain on disposal of the Group's St James's Square properties	–	–	–	–	356	–
Clermont/Blair Athol [i]	–	–	–	–	–	(173)
Deferred tax asset write off	–	–	–	–	–	(114)
Rio Tinto Kennecott [j]	21	(3)	–	18	–	(283)
Simandou and QMM IFRS 2 charge [k]	(11)	–	–	(11)	(116)	–
Other exclusions [l]	(179)	54	5	(120)	(237)	(303)
Total excluded from underlying earnings	(6,960)	567	987	(5,406)	(2,778)	(6,552)
Net (loss)/earnings	(726)	(993)	853	(866)	6,527	3,665
Underlying earnings	6,234	(1,560)	(134)	4,540	9,305	10,217

(e) Pre-tax gain of US$64 million arose mainly from the reduction in shareholding in SouthGobi Resources, the sale of the Group's interest in Murowa Diamonds and Sengwa Colliery on the 17 June 2015 and from the Aluminium product group's divestment of ECL on 9 July 2015 and Alsea on 24 November 2015.

Net loss on disposal and consolidation of interests in businesses during 2014 mainly related to further adjustments in respect of contractual obligations for product sales and delivery which remain with the Group following the sale of the Group's interest in the Clermont mine on 29 May 2014, the disposal of the Group's interest in Rio Tinto Mozambique on 7 October 2014 and indemnities provided in respect of prior disposals.

(f) Net exchange losses in 2015 comprise post-tax foreign exchange losses of US$1,197 million on US dollar denominated net debt in non-US dollar functional currency companies (on borrowings of approximately US$23.1 billion), and US$2,085 million losses on intragroup balances, as the Australian dollar, Canadian dollar and the euro all weakened against the US dollar.

In late 2015 the Group restructured certain internal group borrowings to reduce the income statement volatility resulting from the retranslation of US dollar denominated debt issued by entities with a non-US dollar functional currency.

(g) Valuation changes on currency and interest rate derivatives, which are ineligible for hedge accounting, other than those embedded in commercial contracts, and the currency revaluation of embedded US dollar derivatives contained in contracts held by entities whose functional currency is not the US dollar.

(h) Valuation changes on commodity derivatives, including those embedded in commercial contracts, that are ineligible for hedge accounting, but for which there will be an offsetting change in future Group earnings.

(i) Adjustments in relation to Clermont and Blair Athol arose in 2013 following reclassification to disposal groups held for sale, and reflect contractual obligations for product sales and funding of closure activities, which will remain with the Group following completion of the divestments.

(j) On 10 April 2013, Rio Tinto Kennecott's Bingham Canyon mine experienced a slide along a geological fault line of its north-eastern wall. Charges relating to the slide, which have been excluded from underlying earnings, primarily comprise the write off of certain deferred stripping assets and damaged equipment. In 2015, adjustments for settlement of insurance claims have been made to the amount excluded from underlying earnings, and will continue as insurance claims are settled.

(k) In 2015, the charge of US$11 million (after non-controlling interests and tax), calculated in accordance with IFRS 2 "Share-based Payment", reflects the recapitalisation of QIT Madagascar Minerals S.A. In 2014, the charge of US$116 million (after non-controlling interests and tax), calculated in accordance with IFRS 2 "Share-based Payment", reflects the discount to an estimate of fair value at which shares are transferrable to the Government of Guinea under the Simandou project Investment Framework ratified on 26 May 2014.

(l) Other credits and charges that, individually, or in aggregate if of similar type, are of a nature or size to require exclusion in order to provide additional insight into underlying business performance. In 2015, other exclusions included a provision relating to the uncompleted divestment of Carbone Savoie within the Rio Tinto Aluminium product group, divestment costs and an increase in provision relating to the Gove refinery. In 2014, other exclusions included adjustments relating to the five-year community support package for the Nhulunbuy area and community following the Gove refinery curtailment. In 2013, other exclusions included adjustments relating to inventory sold by Richards Bay Minerals during the period, which had been recognised at fair value on initial consolidation in 2012.

(m) Exclusions from underlying earnings relating to equity accounted units are stated after tax and are included in the column "Pre-tax".

3 Operating segments – additional information

Consolidated sales revenue by destination [a]	2015 %	2014 [b] %	2013 [b] %	2015 US$m	2014 [b] US$m	2013 [b] US$m
China	**41.8**	38.3	36.3	**14,558**	18,247	18,590
United States of America	**15.2**	13.2	13.4	**5,292**	6,279	6,865
Other Asia	**13.5**	15.1	15.7	**4,695**	7,221	8,011
Japan	**11.2**	15.6	16.3	**3,907**	7,447	8,355
Europe (excluding UK)	**8.0**	8.7	9.6	**2,783**	4,142	4,901
Canada	**4.3**	3.6	3.1	**1,488**	1,715	1,578
Australia	**2.5**	2.0	1.8	**867**	976	942
UK	**1.0**	1.0	1.0	**339**	464	503
Other	**2.5**	2.5	2.8	**900**	1,173	1,426
Consolidated sales revenue	**100.0**	100.0	100.0	**34,829**	47,664	51,171

(a) Consolidated sales revenue by geographical destination is based on the ultimate country of destination of the product, if known. If the eventual destination of the product sold through traders is not known then revenue is allocated to the location of the product at the time when the risks and rewards of ownership are transferred. Rio Tinto is domiciled in both the UK and Australia.

(b) 2014 and 2013 comparative figures are adjusted to conform with the 2015 presentation of consolidated sales revenue.

Gross sales revenue by product

Gross sales revenues of the Group are derived from the following products sold to external customers:

	2015 US$m	2014 US$m	2013 US$m
Iron Ore	**15,239**	23,178	26,235
Aluminium	**9,904**	11,667	12,059
Copper	**3,381**	4,815	4,766
Coal	**2,799**	3,685	4,557
Industrial Minerals	**2,155**	3,238	3,330
Gold	**1,093**	1,007	402
Diamonds	**698**	901	859
Other	**1,515**	1,550	2,367
Total	**36,784**	50,041	54,575
Share of equity accounted units sales and inter-subsidiary equity accounted units sales and items excluded from underlying earnings	**(1,955)**	(2,377)	(3,404)
Consolidated sales revenue	**34,829**	47,664	51,171

Non-current assets other than excluded items

The total of non-current assets other than items excluded is shown by location below. This is allocated based on the location of the business units holding the assets.

Non-current assets other than excluded items [b]	2015 US$m	2014 US$m
Australia	**32,615**	38,162
Canada	**14,396**	17,065
Mongolia	**7,712**	7,842
United States of America	**5,372**	5,163
Africa	**3,682**	5,838
South America	**3,639**	3,552
Indonesia	**1,385**	1,116
Europe (excluding France and the UK)	**451**	460
UK	**274**	236
France	**267**	491
Other countries	**895**	1,417
	70,688	81,342
Non-current assets excluded from analysis above:		
Deferred tax assets	**3,309**	3,540
Accounts receivable	**964**	800
Derivatives and other financial assets (excluding tax recoverable)	**788**	722
Quasi equity loans to equity accounted units [c]	**183**	228
Tax recoverable	**78**	70
Total non-current assets per balance sheet	**76,010**	86,702

(b) Allocation of non-current assets by country is based on the location of the business units holding the assets. It includes investments in equity accounted units totalling US$4,758 million (2014: US$4,640 million) which represents the Group's share of net assets excluding quasi equity loans shown separately within "Loans to equity accounted units" above.

(c) Loans to equity accounted units comprise quasi equity loans of US$183 million (2014: US$228 million) included in "Investments in equity accounted units" on the face of the balance sheet and non-current non-quasi equity loans of US$nil (2014: US$nil) shown within "Other financial assets".

4 Net operating costs

	Note	2015 US$m	2014 US$m	2013 US$m
Raw materials, consumables, repairs and maintenance		**9,610**	11,044	11,164
Amortisation of intangible assets	13	**207**	237	255
Depreciation of property, plant and equipment	14	**4,438**	4,623	4,536
Employment costs	5	**5,446**	6,659	7,568
Shipping and other freight costs		**2,165**	3,370	3,513
Decrease in finished goods and work in progress		**701**	1,284	199
Royalties		**1,863**	2,516	2,883
Amounts charged by equity accounted units [(a)]		**459**	1,554	1,728
Net foreign exchange (losses)/gains		**(263)**	(34)	(71)
Other external costs		**4,181**	3,074	4,025
Provisions (including exchange differences on provisions)	26	**731**	1,138	1,449
Research and development		**104**	112	231
Costs included above qualifying for capitalisation		**(661)**	(738)	(582)
Other operating income		**(1,062)**	(929)	(794)
Net operating costs (excluding items shown separately)		**27,919**	33,910	36,104

(a) Amounts charged by equity accounted units relate to toll processing and also include purchases from equity accounted units of bauxite and aluminium which are then processed by the product group or sold to third parties. Generally, purchases are in proportion to the Group's share of the equity accounted unit but in 2015, US$378 million (2014: US$463 million; 2013: US$529 million) related to purchases of the other investor's share of production.

5 Employment costs

	Note	2015 US$m	2014 US$m	2013 US$m
Total employment costs				
– Wages and salaries		**4,670**	5,878	7,181
– Social security costs		**430**	467	421
– Net post-retirement charge	45	**439**	590	805
– Share option charge	44	**128**	152	142
		5,667	7,087	8,549
Less: charged within provisions		**(221)**	(428)	(981)
Employment costs	4	**5,446**	6,659	7,568

6 Impairment charges and reversals

	Pre-tax 2015 US$m	Taxation 2015 US$m	Non-controlling interests 2015 US$m	Net amount 2015 US$m	Pre-tax amount 2014 US$m	Pre-tax amount 2013 US$m
Diamonds & Minerals – Simandou	(2,039)	–	921	(1,118)	–	–
Diamonds & Minerals – Energy Resources of Australia Ltd	(260)	(123)	121	(262)	–	–
Diamonds & Minerals – Roughrider	(229)	30	–	(199)	–	–
Aluminium – Other	(179)	20	–	(159)	(46)	(57)
Aluminium – Kitimat	–	–	–	–	(1,092)	(950)
Aluminium – Pacific Aluminium	–	–	–	–	1,224	–
Copper & Coal – Molybdenum Autoclave Process	(17)	6	–	(11)	(559)	–
Copper & Coal – Oyu Tolgoi	–	–	–	–	–	(4,716)
Copper & Coal – SouthGobi	–	–	–	–	–	(269)
Copper & Coal – Rio Tinto Coal Mozambique	–	–	–	–	–	(497)
Other	(67)	10	4	(53)	–	(1,042)
Total impairment charge net of reversals	**(2,791)**	**(57)**	**1,046**	**(1,802)**	(473)	(7,531)
Allocated as:						
Goodwill (note 12)	(116)				–	(1,149)
Intangible assets (note 13)	(1,833)				–	(1,287)
Property, plant and equipment (note 14)	(652)				(1,034)	(4,882)
Investment in equity accounted units	–				589	(216)
Other assets and liabilities	(190)				(28)	3
Total impairment charge net of reversals	**(2,791)**				(473)	(7,531)
Comprising:						
Impairment charges net of reversals of consolidated balances				(2,791)	(1,062)	(7,315)
Impairment reversals/(charges) of investments in equity accounted units (pre-tax)				–	841	(230)
Total impairment charge net of reversals in the financial information by business unit (page 195)				(2,791)	(221)	(7,545)
Taxation (including related to EAUs)				(57)	83	1,561
Non-controlling interests				1,046	–	2,556
Total impairment in the income statement				(1,802)	(138)	(3,428)

Diamonds & Minerals

Simandou, Guinea

On 26 May 2014, Rio Tinto and its Simandou project partners signed an Investment Framework with the Government of Guinea which provided the legal and commercial foundation for the project and formally separated the infrastructure and mine development plan. The Simandou project partners are currently finalising an integrated Bankable Feasibility Study for the mine, port and infrastructure elements of the project, which is scheduled to be submitted to the Government of Guinea in May 2016.

As a result of current market conditions and uncertainty over infrastructure ownership and funding, the Group has determined that it would be appropriate to record a pre-tax impairment charge of US$1,655 million to exploration and evaluation intangible assets and a pre-tax impairment charge of US$194 million to property, plant and equipment to fully write-down the long-term assets of the project and a charge of US$7 million in relation to inventories. The Group will expense the cost of further studies as incurred.

A further pre-tax charge of US$183 million has been recognised as a financial liability for contractual arrangements made in relation to the development of the Simandou project.

Energy Resources of Australia Ltd (ERA), Australia

On 11 June 2015, Rio Tinto announced that it supported ERA's decision not to proceed with the final Feasibility Study of the Ranger 3 Deeps project. Rio Tinto also determined it did not support any further study or future development of Ranger 3 Deeps due to the project's economic challenges. This resulted in a pre-tax write down to property, plant and equipment and intangible assets of US$260 million to fully write off these long-term assets. Deferred tax assets of US$123 million were also fully written off. The business continues to process low-grade ore stockpiled from the now closed open-pit operations.

Roughrider, Canada

The Group completed an Order of Magnitude study for the Roughrider project in late 2015, which provided an updated view of the development concept and geological model for this uranium project. The cash-generating unit is tested annually for impairment as it contains goodwill. The impairment test resulted in a pre-tax impairment charge of US$116 million to fully write off goodwill and a pre-tax impairment charge of US$113 million to exploration and evaluation intangible assets, which were capitalised as a result of the Hathor Exploration acquisition in 2012.

The recoverable amount for Roughrider has been determined to be US$250 million assessed by reference to a fair value less cost of disposal (FVLCD) model in line with the accounting policy set out in note 1(i). The recoverable amount for the cash-generating unit is classified as level 3 under the fair value hierarchy.

In arriving at FVLCD, post-tax cash flows expressed in real terms have been estimated and discounted using a post-tax discount rate of 7.3 per cent. Technical oversight of the Roughrider project has transitioned to Rio Tinto Exploration. The Group is continuing to evaluate the optimum development pathway in light of a subdued medium-term outlook for uranium demand.

Aluminium

Other

In the six months to 30 June 2015 challenging economic conditions at the Carbone Savoie cash-generating unit resulted in an US$147 million impairment charge. Property, plant and equipment and intangible assets were fully impaired on the basis of US$nil recoverable amount.

In 2015, a pre-tax impairment loss of US$32 million was recorded in relation to other aluminium businesses which were subsequently disposed of in the second half of the year.

In 2014, a pre-tax impairment loss of US$46 million was recorded in relation to other aluminium businesses.

In 2013, a pre-tax impairment loss of US$57 million was recorded in relation to the Shawinigan aluminium smelter following the decision to close the plant.

Kitimat, Canada

During the first half of 2014, further revisions to future capital required to complete the modernisation project resulted in a pre-tax impairment charge of US$1,092 million to the property, plant and equipment of the cash-generating unit. The recoverable amount was determined by reference to a FVLCD model, in line with the accounting policy set out in note 1(i).

In 2013, the annual impairment review of the Group's Aluminium cash-generating units with indefinite-life intangible assets resulted in a pre-tax impairment charge of US$950 million in the Kitimat cash-generating unit. The indefinite-life intangible assets relating to water rights at Kitimat were fully impaired following the allocation of this impairment loss.

Pacific Aluminium, Australia and New Zealand

Impairment reversal was recorded in 2014 in relation to the Tomago, Bell Bay and Boyne smelters, and the Gladstone Power Station, within the Pacific Aluminium cash-generating unit as evidence emerged that previously recognised impairment losses from 2011 and 2012 had reversed.

Copper & Coal

Molybdenum Autoclave Process, US

In 2015, previously estimated net disposal proceeds for the Molybdenum Autoclave Process project were reduced resulting in a pre-tax impairment of US$17 million recorded against property, plant and equipment. In 2014, following a review of the investment case and subsequent decision to terminate the project, a pre-tax impairment charge of US$559 million was recorded against property, plant and equipment.

Oyu Tolgoi, Mongolia

In May 2015, the Oyu Tolgoi Underground Mine Development and Financing Plan was signed, resolving the outstanding shareholder issues and demonstrating a commitment to develop the underground mine by all key stakeholders. In December 2015, a project financing package was agreed which confirms the sources of funding, pricing and leverage parameters for the project.

As part of the annual impairment review at 30 September 2015, the carrying value of the project was compared with a post-tax FVLCD model of cash flows from the open pit and underground mines. The value indicated by the FVLCD model for Oyu Tolgoi exceeded the carrying value of the cash-generating unit by US$0.3 billion at 30 September 2015. As such, no impairment charge has been recognised (2014: no impairment charge). No impairment indicators were identified subsequent to the annual testing date.

The assumptions subject to the most estimation uncertainty for the FVLCD calculation are the long-term copper price and the discount rate. To illustrate these sensitivities on the downside, the valuation indicated by the FVLCD modelling would reduce by US$0.8 billion if long-term copper prices were lower than forecast by 15 US cents per pound. Alternatively an increase in the project discount rate of one per cent would reduce the indicated FVLCD by US$1.4 billion if all other model inputs remained the same. In the absence of mitigating actions being taken by management, these scenarios would indicate a material impairment loss had occurred.

Other key assumptions to which the calculation of FVLCD for Oyu Tolgoi is most sensitive are operating costs, the long-term gold price, and Mongolian tugrik and Chinese yuan exchange rates against the US dollar. Future selling prices and operating costs have been estimated in line with the policy set out in note 1(i).

SouthGobi, Mongolia

The assets of SouthGobi were fully written-off as a result of the 2013 impairment testing.

Rio Tinto Coal Mozambique

In 2013, a pre-tax impairment charge was allocated to the Benga and Zambeze cash-generating units which formed Rio Tinto Coal Mozambique. The business was subsequently disposed of during 2014.

Other

In 2013, a pre-tax impairment charge of US$790 million was recorded in relation to the full write off of property, plant and equipment at the Gove alumina refinery following the decision to curtail operations. The refinery is reported separately from Aluminium within Other Operations.

7 Share of profit after tax of equity accounted units

	2015 US$m	2014 US$m	2013 US$m
Sales revenue: Rio Tinto share [(a)]	**2,149**	2,852	4,113
Operating costs	**(1,609)**	(1,804)	(2,871)
Profit before finance items and taxation	**540**	1,048	1,242
Finance items	**(37)**	(49)	(97)
Share of profit after tax of equity accounted units	**35**	30	31
Profit before taxation	**538**	1,029	1,176
Taxation	**(177)**	(404)	(478)
Profit for the year (Rio Tinto share)	**361**	625	698

(a) Sales revenue of equity accounted units excludes sales by equity accounted units to Group subsidiaries.

Further information relating to the Group's interests in joint ventures and associates is given in notes 35 and 36.

8 Finance income and finance costs

	Note	2015 US$m	2014 US$m	2013 US$m
Finance income from equity accounted units (Rio Tinto share)		**8**	10	14
Other finance income (including bank deposits and other financial assets)		**44**	54	68
Total finance income		**52**	64	82
Interest payable and similar charges [a]		**(1,004)**	(1,119)	(1,234)
Amounts capitalised	14	**254**	470	727
Total finance costs		**(750)**	(649)	(507)

(a) Interest payable and similar charges relate to interest on bank loans and other borrowings. This includes a fair value loss on interest rate swaps designated as fair value hedges of US$11 million (2014: US$199 million gain; 2013: US$266 million loss) and a fair value loss on bonds and notes attributable to interest rate risk of US$17 million (2014: US$200 million loss; 2013: US$257 million gain).

9 Taxation

	Note	2015 US$m	2014 US$m	2013 US$m
Taxation charge				
– Current		**1,132**	3,402	4,102
– Deferred	17	**(139)**	(349)	(1,676)
		993	3,053	2,426

Prima facie tax reconciliation	2015 US$m	2014 US$m	2013 US$m
(Loss)/profit before taxation	**(726)**	9,552	3,505
Deduct: share of profit after tax of equity accounted units	**(361)**	(625)	(698)
(Deduct)/add: (impairment reversal)/impairment after tax of investments in equity accounted units [a]	**–**	(589)	216
Parent companies' and subsidiaries' (loss)/profit before tax	**(1,087)**	8,338	3,023
Prima facie tax (receivable)/payable at UK rate of 20 per cent (2014: 21 per cent; 2013: 23 per cent)	**(217)**	1,751	695
Higher rate of taxation on Australian earnings	**506**	1,038	1,411
Impact of items excluded in arriving at underlying earnings [b]:			
Impairment charges net of reversals	**615**	(112)	135
Gains and losses on disposal and consolidation of businesses	**(11)**	(85)	(199)
Foreign exchange on excluded finance items	**481**	231	77
Recognition of deferred tax assets relating to planned divestments	**(250)**	–	–
Impact of tax law changes on recognition of deferred tax assets [c]	**–**	401	–
Other exclusions	**(17)**	(35)	(7)
Impact of changes in tax rates and laws	**(3)**	(11)	12
Other tax rates applicable outside the UK and Australia	**(68)**	5	(63)
Resource depletion and other depreciation allowances	**(15)**	(121)	(103)
Research, development and other investment allowances	**(21)**	(34)	(49)
Recognition of previously unrecognised deferred tax assets	**(40)**	(106)	–
Unrecognised current year operating losses	**45**	73	339
Other items [d]	**(12)**	58	178
Total taxation charge [e]	**993**	3,053	2,426

(a) For the year ended 31 December 2014, the impairment reversal in investments in equity accounted units is net of a tax charge of US$252 million (31 December 2013: tax credit of US$14 million).

(b) The impact for each item includes the effect of tax rates applicable outside the UK.

(c) For the year ended 31 December 2014, the remaining Minerals Resource Rent Tax (MRRT) starting base deferred tax asset was de-recognised on repeal of the tax in Australia.

(d) Other items include various adjustments to provisions for taxation in prior periods.

(e) This tax reconciliation relates to the Group's parent companies, subsidiaries and joint operations. The Group's share of profit of equity accounted units is net of tax charges of US$177 million (31 December 2014: US$404 million; 31 December 2013: US$478 million).

	2015 Total US$m	2014 Total US$m	2013 Total US$m
Tax on exchange adjustments	–	(3)	(17)
Tax on fair value movements:			
– Cash flow hedge fair value (gains)/losses	(3)	2	(34)
– Cash flow hedge gains transferred to the income statement	–	–	19
– Losses on revaluation of available for sale securities	–	1	2
– Losses on revaluation of available for sale securities transferred to the income statement	–	(1)	(20)
Tax (charge)/credit on actuarial (gains)/losses on post-retirement benefit plans	(175)	215	(641)
Other	–	(8)	(6)
Tax relating to components of other comprehensive (loss)/income for the year [a]	(178)	206	(697)

(a) This comprises deferred tax charge of US$174 million (2014: credit of US$205 million; 2013: charge of US$697 million) and current tax charge of US$4 million (2014: credit of US$1 million; 2013: US$nil), plus share of tax on other comprehensive income of equity accounted units shown separately (see note 17).

10 (Loss)/earnings per ordinary share

	2015 Loss US$m	2015 Weighted average number of shares (millions)	2015 Per share amount (cents)	2014 Earnings US$m	2014 Weighted average number of shares (millions)	2014 Per share amount (cents)
Basic (loss)/earnings per share attributable to ordinary shareholders of Rio Tinto [a]	(866)	1,824.7	(47.5)	6,527	1,848.4	353.1
Diluted (loss)/earnings per share attributable to ordinary shareholders of Rio Tinto [b]	(866)	1,824.7	(47.5)	6,527	1,858.7	351.2

	2013 Earnings US$m	2013 Weighted average number of shares (millions)	2013 Per share amount (cents)
Basic earnings per share attributable to ordinary shareholders of Rio Tinto [a]	3,665	1,847.3	198.4
Diluted earnings per share attributable to ordinary shareholders of Rio Tinto [b]	3,665	1,857.7	197.3

(a) The weighted average number of shares is calculated as the average number of Rio Tinto plc shares outstanding not held as treasury shares of 1,398.1 million (2014: 1,413.0 million; 2013: 1,411.6 million) plus the average number of Rio Tinto Limited shares outstanding of 426.6 million (2014: 435.4 million; 2013: 435.7 million) over the relevant period. No Rio Tinto Limited shares were held by Rio Tinto plc in any of the periods presented.

(b) In accordance with IAS 33 "Earnings per share", for the purposes of calculating diluted loss per share, the effect of potentially dilutive securities has not been taken into account for the year ended 31 December 2015. For the purposes of calculating diluted earnings per share, the effect of dilutive securities of 10.3 million shares in 2014 and 10.4 million shares in 2013 is added to the weighted average number of shares described in (a) above. This effect is calculated under the treasury stock method. The Group's only potential dilutive ordinary shares are share options for which terms and conditions are described in note 44.

11 Dividends

	2015 US$m	2014 US$m	2013 US$m
Rio Tinto plc previous year final dividend paid	**1,642**	1,533	1,311
Rio Tinto plc interim dividend paid	**1,476**	1,299	1,213
Rio Tinto Limited previous year final dividend paid	**520**	473	406
Rio Tinto Limited interim dividend paid	**438**	405	392
Dividends paid during the year	**4,076**	3,710	3,322
Dividends per share: paid during the year	**226.5c**	204.5c	178.0c
Dividends per share: proposed in the announcement of the results for the year	**107.5c**	119.0c	108.5c

	Dividends per share 2015	Dividends per share 2014	Dividends per share 2013
Rio Tinto plc previous year final (pence)	**77.98p**	65.82p	60.34p
Rio Tinto plc interim (pence)	**68.92p**	56.90p	54.28p
Rio Tinto Limited previous year final – fully franked at 30% (Australian cents)	**152.98c**	120.14c	91.67c
Rio Tinto Limited interim – fully franked at 30% (Australian cents)	**144.91c**	103.09c	93.00c

	Number of shares 2015 (millions)	Number of shares 2014 (millions)	Number of shares 2013 (millions)
Rio Tinto plc previous year final	**1,412.7**	1,413.2	1,411.9
Rio Tinto plc interim	**1,395.2**	1,413.8	1,412.5
Rio Tinto Limited previous year final	**435.0**	435.6	435.8
Rio Tinto Limited interim	**423.7**	435.7	435.5

The dividends paid in 2015 are based on the following US cents per share amounts: 2014 final – 119.0 cents, 2015 interim – 107.5 cents (2014 dividends paid: 2013 final – 108.5 cents, 2014 interim – 96.0 cents; 2013 dividends paid: 2012 final – 94.5 cents, 2013 interim – 83.5 cents).

The number of shares on which Rio Tinto plc dividends are based excludes those held as treasury shares and those held by employee share trusts which waived the right to dividends. Employee share trusts waived dividends on 342,902 Rio Tinto plc ordinary shares and 24,582 ADRs for the 2014 final dividend and on 237,266 Rio Tinto plc ordinary shares and 27,050 ADRs for the 2015 interim dividend (2014: 207,766 Rio Tinto plc ordinary shares and 3,353 ADRs for the 2013 final dividend and on 90,304 Rio Tinto plc ordinary shares and 1,912 ADRs for the 2014 interim dividend; 2013: 150,361 Rio Tinto plc ordinary shares and nil ADRs for the 2012 final dividend and 124,636 Rio Tinto plc ordinary shares and 7,303 ADRs for the 2013 interim dividend). In 2015, 2014 and 2013, no Rio Tinto Limited shares were held by Rio Tinto plc.

The number of shares on which Rio Tinto Limited dividends are based excludes those held by shareholders who have waived the rights to dividends. Employee share trusts waived dividends on 727,676 Rio Tinto Limited shares for the 2014 final dividend and on 474,665 Rio Tinto Limited shares for the 2015 interim dividend (2014: Dividend waivers applied to 183,981 Rio Tinto Limited shares for the 2013 final dividend and on 24,046 Rio Tinto Limited shares for the 2014 interim dividend; 2013: There were no applicable waivers in respect of Rio Tinto Limited shares for the 2012 final dividend. Dividend waivers applied to 222,439 Rio Tinto Limited shares for the 2013 interim dividend).

In addition, the directors of Rio Tinto announced a final dividend of 107.5 cents per share on 11 February 2016. This is expected to result in payments of US$1,931 million (Rio Tinto plc: US$1,475 million, Rio Tinto Limited US$456 million). The dividends will be paid on 7 April 2016 to Rio Tinto plc and Rio Tinto Limited shareholders on the register at the close of business on 26 February 2016.

The proposed Rio Tinto Limited dividends will be franked out of existing franking credits or out of franking credits arising from the payment of income tax during 2016.

The approximate amount of the Rio Tinto Limited consolidated tax group's retained profits and reserves that could be distributed as dividends and franked out of available credits that arose from net payments of income tax in respect of periods up to 31 December 2015 (after deducting franking credits expected to be utilised on the 2015 final dividend declared), is US$10,899 million.

12 Goodwill

	2015 US$m	2014 US$m
Net book value		
At 1 January	**1,228**	1,349
Adjustment on currency translation	**(220)**	(121)
Impairment charges [(a)]	**(116)**	–
At 31 December	**892**	1,228
– cost	**17,120**	20,122
– accumulated impairment	**(16,228)**	(18,894)
At 1 January		
– cost	**20,122**	22,678
– accumulated impairment	**(18,894)**	(21,329)

At 31 December, goodwill has been allocated as follows:

	2015 US$m	2014 US$m
Net book value		
Richards Bay Minerals	**439**	591
Pilbara	**363**	409
Hathor [(a)]	**–**	128
Other	**90**	100
	892	1,228

(a) The impairment charge of US$116 million represents the full impairment of goodwill arising from the Hathor Exploration Limited (Hathor) acquisition, which includes the Roughrider project. Refer to note 6 for further details.

Impairment tests for goodwill

Richards Bay Minerals

The Group consolidated Richards Bay Minerals on 3 September 2012. Goodwill arose in accordance with the requirement in IFRS, as defined in note 1, to recognise a deferred tax asset or liability on the difference between the fair value of newly consolidated assets and liabilities and their tax base and is retranslated at each period end for changes in the South African rand. The recognition of Richards Bay Minerals' identifiable assets and liabilities in the balance sheet was based on fair values at the acquisition date determined with the assistance of an independent third party valuer.

Richards Bay Minerals' annual impairment review resulted in no impairment charge for 2015 (2014: no impairment charge). The recoverable amount has been assessed by reference to FVLCD, in line with the policy set out in note 1(i) and classified as level 3 under the fair value hierarchy. FVLCD was determined by estimating cash flows until the end of the life-of-mine plan including anticipated expansions. In arriving at FVLCD, a post-tax discount rate of 9.3 per cent (2014: 9.2 per cent) has been applied to the post-tax cash flows expressed in real terms.

The key assumptions to which the calculation of FVLCD for Richards Bay Minerals is most sensitive and the corresponding decrease in FVLCD are set out below:

	US$ million
5% decrease in the titanium slag price	208
1% increase in the discount rate applied to post-tax cash flows	264
10% strengthening of the South African rand	670

Other assumptions include the long-term pig iron and zircon prices and operating costs. Future selling prices and operating costs have been estimated in line with the policy set out in note 1(i). The recoverable amount of the cash-generating unit exceeds the carrying value for each of these sensitivities applied in isolation.

Pilbara

The recoverability of goodwill arising from the acquisition of Robe River and monitored at the Pilbara cash-generating unit level has been assessed by reference to FVLCD using discounted cash flows, which is in line with the policy set out in note 1(i) and is classified as level 3 under the fair value hierarchy. In arriving at FVLCD, a post-tax discount rate of 7.3 per cent (2014: 7.2 per cent) has been applied to the post-tax cash flows expressed in real terms. The recoverable amounts were determined to be significantly in excess of carrying value, and there are no reasonably possible changes in key assumptions that would cause the remaining goodwill to be impaired.

13 Intangible assets

Year ended 31 December 2015	Exploration and evaluation [a] US$m	Trademarks, patented and non-patented technology US$m	Contract based intangible assets [b] US$m	Other intangible assets US$m	Total US$m
Net book value					
At 1 January 2015	2,596	156	2,454	674	5,880
Adjustment on currency translation	(134)	(15)	(393)	(58)	(600)
Expenditure during the year	152	–	–	64	216
Amortisation for the year [c]	–	(15)	(90)	(102)	(207)
Impairment charges [d]	(1,773)	(28)	(30)	(2)	(1,833)
Disposals, transfers and other movements [e]	(135)	(4)	197	(178)	(120)
At 31 December 2015	706	94	2,138	398	3,336
– cost	2,585	208	3,829	1,252	7,874
– accumulated amortisation and impairment	(1,879)	(114)	(1,691)	(854)	(4,538)

Year ended 31 December 2014	Exploration and evaluation [a] US$m	Trademarks, patented and non-patented technology US$m	Contract based intangible assets [b] US$m	Other intangible assets US$m	Total US$m
Net book value					
At 1 January 2014	1,854	198	2,831	538	5,421
Adjustment on currency translation	(86)	(21)	(195)	(55)	(357)
Expenditure during the year	142	–	–	307	449
Amortisation for the year [c]	–	(20)	(116)	(101)	(237)
Disposals, transfers and other movements [e]	686	(1)	(66)	(15)	604
At 31 December 2014	2,596	156	2,454	674	5,880
– cost	2,770	294	4,341	1,536	8,941
– accumulated amortisation and impairment	(174)	(138)	(1,887)	(862)	(3,061)

(a) Exploration and evaluation assets' useful lives are not determined until transferred to property, plant and equipment. The impairment charge in the year of US$1,773 million primarily relates to exploration and evaluation assets within the Simandou and Roughrider projects in the Diamonds & Minerals product group (see note 6).

(b) The Group benefits from certain intangible assets acquired with Alcan, including power supply contracts, customer contracts and water rights. The water rights are expected to contribute to the efficiency and cost effectiveness of operations for the foreseeable future: accordingly, these rights are considered to have indefinite lives and are not subject to amortisation but are tested annually for impairment. These water rights constitute the majority of the amounts in "Contract based intangible assets".

The remaining carrying value of the water rights (US$1,655 million) as at 31 December 2015 relates wholly to the Quebec smelters cash-generating unit. The Quebec smelters cash-generating unit was tested for impairment by reference to FVLCD using discounted cash flows, which is in line with the policy set out in note 1(i). The recoverable amount of the Quebec smelters is classified as level 3 under the fair value hierarchy. In arriving at FVLCD, post-tax cash flows expressed in real terms have been estimated over the expected useful economic lives of the underlying smelting assets and discounted using a real post-tax discount rate of 7.3 per cent (2014: 7.2 per cent).

The recoverable amounts were determined to be significantly in excess of carrying value, and there are no reasonably possible changes in key assumptions that would cause the remaining water rights to be impaired.

(c) Finite life intangible assets are amortised over their useful economic lives on a straight line or units of production basis, as appropriate. Where amortisation is calculated on a straight line basis, the following useful lives have been determined:

Trademarks, patented and non-patented technology
Trademarks: 14 to 20 years
Patented and non-patented technology: ten to 20 years

Contract based intangible assets
Power contracts/water rights: two to 45 years
Other purchase and customer contracts: five to 15 years

Other intangible assets
Internally generated intangible assets and computer software: two to five years
Other intangible assets: two to 20 years

(d) Other impairment charges, excluding charges against exploration and evaluation, primarily relate to the full write off of the intangible assets of the Carbone Savoie cash-generating unit (see note 6).

(e) Disposals, transfers and other movements for exploration and evaluation include US$164 million transferred to Mining Property in relation to the Amrun project in Australia. Rio Tinto announced on 27 November 2015 the approval of the Amrun bauxite project (previously known as South of Embley) expansion in north Queensland, Australia. Production and shipping are expected to commence in the first half of 2019, ramping up to full production by the end of that year.

In 2014 disposals, transfers and other movements for exploration and evaluation included US$700 million previously classified as non-current receivables pending ratification of the Simandou project Investment Framework.

Exploration and evaluation expenditure

The charge for the year and the net amount of intangible assets capitalised during the year are as follows:

	2015 US$m	2014 US$m	2013 US$m
Net expenditure in the year (net of proceeds of US$nil (2014: US$11 million; 2013: US$27 million) on disposal of undeveloped projects)	**(705)**	(872)	(1,317)
Changes in accruals (including impairment of undeveloped projects of US$nil (2014: US$nil; 2013: US$159 million) and non-cash proceeds on disposal of undeveloped projects)	**(15)**	(53)	(160)
Amount capitalised during the year	**152**	142	368
Net charge for the year	**(568)**	(783)	(1,109)
Reconciliation to income statement			
Exploration and evaluation costs	**(576)**	(747)	(948)
Profit/(loss) relating to interests in undeveloped projects	**8**	(36)	(161)
Net charge for the year	**(568)**	(783)	(1,109)

At 31 December 2015, a total of US$0.8 billion had been capitalised related to projects which had not yet been approved to proceed. This comprised evaluation costs of US$0.7 billion included above and US$0.1 billion of early works expenditure within property, plant and equipment (31 December 2014: a total of US$2.9 billion had been capitalised comprising: evaluation costs of US$2.6 billion included above and US$0.3 billion of early works expenditure within property, plant and equipment).

14 Property, plant and equipment

Year ended 31 December 2015	Mining properties and leases [a] US$m	Land and buildings [b] US$m	Plant and equipment US$m	Capital works in progress US$m	Total US$m
Net book value					
At 1 January 2015	**11,913**	**7,085**	**39,810**	**9,885**	**68,693**
Adjustment on currency translation	**(1,049)**	**(890)**	**(4,268)**	**(754)**	**(6,961)**
Adjustments to capitalised closure costs (note 26)	**147**	**–**	**–**	**–**	**147**
Interest capitalised [c] (note 8)	**–**	**–**	**–**	**254**	**254**
Additions	**400**	**374**	**715**	**2,767**	**4,256**
Depreciation for the year [a] [d]	**(725)**	**(419)**	**(3,294)**	**–**	**(4,438)**
Impairment charges, net of reversals [e]	**(69)**	**(51)**	**(308)**	**(224)**	**(652)**
Disposals	**(4)**	**(15)**	**(77)**	**–**	**(96)**
Subsidiaries no longer consolidated	**–**	**(7)**	**(17)**	**–**	**(24)**
Transfers and other movements [f]	**533**	**1,494**	**5,339**	**(7,488)**	**(122)**
At 31 December 2015	**11,146**	**7,571**	**37,900**	**4,440**	**61,057**
– cost	**22,474**	**11,405**	**67,690**	**5,000**	**106,569**
– accumulated depreciation and impairment	**(11,328)**	**(3,834)**	**(29,790)**	**(560)**	**(45,512)**
Non-current assets held under finance leases [g]	**–**	**37**	**6**	**–**	**43**
Non-current assets pledged as security [h]	**911**	**294**	**6,293**	**2,402**	**9,900**

14 Property, plant and equipment continued

Year ended 31 December 2014	Mining properties and leases [a] US$m	Land and buildings [b] US$m	Plant and equipment US$m	Capital works in progress US$m	Total US$m
Net book value					
At 1 January 2014	10,880	7,410	38,466	14,071	70,827
Adjustment on currency translation	(687)	(564)	(2,918)	(545)	(4,714)
Adjustments to capitalised closure costs (note 26)	525	–	–	–	525
Interest capitalised [c] (note 8)	–	–	2	468	470
Additions	554	302	1,369	5,571	7,796
Depreciation for the year [a] [d]	(649)	(432)	(3,542)	–	(4,623)
Impairment charges, net of reversals [e]	139	(10)	277	(1,440)	(1,034)
Disposals	–	(162)	(61)	(14)	(237)
Subsidiaries no longer consolidated	–	–	(31)	–	(31)
Transfers and other movements [f]	1,151	541	6,248	(8,226)	(286)
At 31 December 2014	11,913	7,085	39,810	9,885	68,693
– cost	23,045	10,845	69,835	11,544	115,269
– accumulated depreciation and impairment	(11,132)	(3,760)	(30,025)	(1,659)	(46,576)
Non-current assets held under finance leases [g]	–	12	1	–	13
Non-current assets pledged as security [h]	1,261	173	2,823	259	4,516

(a) At 31 December 2015, the net book value of capitalised production phase stripping costs totalled US$1,923 million, with US$1,464 million within Property, plant and equipment and a further US$459 million within Investments in equity accounted units (2014 total of US$1,816 million with US$1,373 million in Property, plant and equipment and a further US$443 million within Investments in equity accounted units). During the year capitalisation of US$455 million was partly offset by depreciation of US$266 million. Depreciation of deferred stripping costs of US$173 million (2014: US$84 million; 2013: US$70 million) is included within "Depreciation for the year".

(b) At 31 December 2015, the net book value amount for land and buildings includes freehold US$7,435 million (2014: US$6,899 million); long leasehold US$136 million (2014: US$186 million); and no short leasehold (2014: no short leasehold).

(c) Interest is capitalised at a rate based on the Group's cost of borrowing or at the rate on project specific debt, where applicable. The Group's average borrowing rate used for capitalisation of interest is 3.7 per cent (2014: 4.0 per cent).

(d) Assets within operations for which production is not expected to fluctuate significantly from one year to another or which have a physical life shorter than the related mine are depreciated on a straight line basis as follows:

Land and buildings
Land: Not depreciated
Buildings: five to 50 years

Plant and equipment
Other plant and equipment: three to 50 years
Power assets: 25 to 50 years
Capital work in progress: Not depreciated

(e) During 2015 impairment charges primarily related to the Diamonds & Minerals and Aluminium businesses (see note 6). In 2014, impairment charges primarily related to the Aluminium business and charges of US$1,669 million were partially offset by US$635 million of impairment reversals.

(f) "Transfers and other movements" includes reclassifications between categories, including the transfer to assets of disposal groups held for sale.

(g) The finance leases under which these assets are held are disclosed in note 23.

(h) Excludes assets held under finance leases. Non-current assets pledged as security represent amounts pledged as collateral against US$701 million (2014: US$587 million) of loans, which are included in note 22. As at the date on which the Oyu Tolgoi Project Finance agreements were signed (15 December 2015), a substantial part of the non-current assets related to Oyu Tolgoi were deemed to be pledged. However, as at 31 December 2015, no amounts under the project financing have been drawn down.

15 Investments in equity accounted units

Summary balance sheet (Rio Tinto share)	**2015 US$m**	2014 US$m
Rio Tinto's share of assets		
Non-current assets	**6,780**	6,605
Current assets	**429**	901
	7,209	7,506
Rio Tinto's share of liabilities		
Current liabilities	**(941)**	(681)
Non-current liabilities	**(1,327)**	(1,957)
	(2,268)	(2,638)
Rio Tinto's share of net assets	**4,941**	4,868

Further details of investments in equity accounted units are set out in notes 35 and 36.

The impact of impairment charges and impairment reversals on the Group's investments in equity accounted units are summarised in note 6.

At 31 December 2015 and 2014 the Group had no investments in equity accounted units with shares listed on recognised stock exchanges.

At 31 December 2015, net debt of equity accounted units, excluding amounts due to Rio Tinto, was US$1,224 million (2014: US$922 million).

16 Inventories

	2015 US$m	2014 US$m
Raw materials and purchased components	**528**	726
Consumable stores	**1,030**	1,411
Work in progress	**1,142**	1,490
Finished goods and goods for resale	**721**	1,120
	3,421	4,747
Comprising:		
Expected to be used within one year	**3,168**	4,350
Expected to be used after more than one year	**253**	397
	3,421	4,747

Inventory write-downs, net of reversals, amounting to US$192 million (2014: US$94 million; 2013: US$201 million) were recognised during the year.

At 31 December 2015, US$587 million (2014: US$430 million; 2013: US$482 million) of inventories were pledged as security for liabilities.

17 Deferred taxation

	2015 US$m	2014 US$m
At 1 January	**34**	585
Adjustment on currency translation	**(149)**	(36)
Credited to the income statement	**(139)**	(349)
Charged/(credited) to statement of comprehensive income [a]	**174**	(205)
Disposals	**(1)**	10
Other movements [b]	**58**	29
At 31 December	**(23)**	34
Comprising:		
– deferred tax liabilities [c] [d]	**3,286**	3,574
– deferred tax assets [c] [e] [f]	**(3,309)**	(3,540)

17 Deferred taxation continued

Deferred tax balances for which there is a right of offset within the same tax jurisdiction are presented net on the face of the balance sheet as permitted by IAS 12. The closing deferred tax liabilities and assets, prior to this offsetting of balances, are shown below.

	Total 2015 US$m	Total 2014 US$m
Deferred tax liabilities arising from:		
Capital allowances	**5,311**	6,018
Unremitted earnings [d]	**664**	659
Capitalised interest	**432**	368
Unrealised exchange gains	**68**	255
Other temporary differences	**451**	248
	6,926	7,548
Deferred tax assets arising from:		
Tax losses [e]	**(2,170)**	(2,276)
Provisions	**(1,745)**	(2,096)
Capital allowances	**(794)**	(877)
Post-retirement benefits	**(829)**	(1,165)
Unrealised exchange losses	**(522)**	(658)
Other temporary differences	**(889)**	(442)
	(6,949)	(7,514)
(Credited)/charged to the income statement		
Unrealised exchange losses	**(108)**	(365)
Tax losses	**(335)**	72
Provisions	**40**	(122)
Capital allowances	**251**	272
Tax on unremitted earnings	**(16)**	2
Post-retirement benefits	**47**	34
Other temporary differences	**(18)**	(242)
	(139)	(349)

(a) The amounts credited directly to the Statement of comprehensive income include provisions for tax on exchange differences on intragroup loans qualifying for reporting as part of the net investment in subsidiaries, on cash flow hedges and on actuarial gains and losses on pension schemes and on post-retirement healthcare plans.

(b) "Other movements" include deferred tax relating to tax payable recognised by subsidiary holding companies on the profits of the equity accounted units to which it relates.

(c) The deferred tax liability of US$3,286 million (2014: US$3,574 million) includes US$3,275 million (2014: US$3,555 million) due in more than one year. The deferred tax asset of US$3,309 million (2014: US$3,540 million) includes US$3,091 million (2014: US$3,405 million) receivable in more than one year. All amounts are shown as non-current on the face of the balance sheet as required by IAS 12.

(d) Deferred tax is not recognised on the unremitted earnings of subsidiaries and joint ventures totalling US$2,763 million (2014: US$4,067 million) where the Group is able to control the timing of the remittance and it is probable that there will be no remittance in the foreseeable future. If these earnings were remitted, tax of US$136 million (2014: US$202 million) would be payable.

(e) There is a limited time period, the shortest of which is two years, for the recovery of US$1,482 million (2014: US$1,347 million) of tax losses and other tax assets which have been recognised as deferred tax assets in the financial statements.

(f) Recognised and unrecognised deferred tax assets are shown in the table below and totalled US$6,966 million at 31 December 2015 (2014: US$6,885 million). Of this total, US$3,309 million has been recognised as deferred tax assets (2014: US$3,540 million), leaving US$3,657 million (2014: US$3,345 million) unrecognised, as recovery is not considered probable.

The recognised amounts do not include deferred tax assets that have been netted off against deferred tax liabilities.

	Recognised		Unrecognised	
At 31 December	2015 US$m	2014 US$m	2015 US$m	2014 US$m
UK	**68**	131	**126**	150
France [i]	**331**	377	**1,112**	1,184
Canada	**420**	491	**645**	371
US	**928**	932	**5**	16
Australia	**1,242**	1,324	**323**	287
Other	**320**	285	**1,446**	1,337
Total [ii]	**3,309**	3,540	**3,657**	3,345

(i) US$1,112 million (2014: US$1,184 million) of the unrecognised assets relate to trading losses in France, which were acquired as part of the Alcan acquisition. The amount recognised takes account of legislation which restricts the recovery of losses.

(ii) US$784 million (2014: US$688 million) of the unrecognised assets relate to realised or unrealised capital losses, the recovery of which depends on the existence of capital gains in future years. There is a time limit, the shortest of which is one year, for the recovery of US$433 million of the unrecognised assets (2014: US$353 million).

18 Trade and other receivables

	Non-current 2015 US$m	Current 2015 US$m	Total 2015 US$m	Non-current 2014 US$m	Current 2014 US$m	Total 2014 US$m
Trade receivables [a]	5	1,365	1,370	5	2,483	2,488
Other receivables	370	752	1,122	435	884	1,319
Prepayment of tolling charges to jointly controlled entities [b]	288	–	288	387	–	387
Pension surpluses (note 45)	592	–	592	353	–	353
Amounts due from equity accounted units	–	27	27	–	36	36
Other prepayments	101	242	343	124	220	344
	1,356	2,386	3,742	1,304	3,623	4,927

(a) At 31 December 2015, trade and other receivables are stated net of provisions for doubtful debts of US$77 million (2014: US$39 million). Amounts of US$37 million (2014: US$35 million) were impaired; the majority of these receivables were more than 90 days overdue.

(b) Rio Tinto Aluminium has made certain prepayments to equity accounted units for toll processing of alumina. These prepayments will be charged to Group operating costs as processing takes place.

There is no material element of trade and other receivables that is interest bearing.

The fair value of current trade and other receivables and the majority of amounts classified as non-current assets approximates their carrying value.

As of 31 December 2015, trade receivables of US$188 million (2014: US$82 million) were past due but not impaired. The ageing of these receivables is as follows:

	2015 US$m	2014 US$m
less than 30 days overdue	71	34
between 30 and 60 days overdue	7	11
between 60 and 90 days overdue	23	30
more than 90 days overdue	22	7
	123	82

These relate to a number of customers for whom there is no recent history of default.

With respect to trade and other receivables that are neither impaired nor past due, there are no indications as of the reporting date that the debtors will not meet their payment obligations.

19 Assets and liabilities held for sale

At 31 December 2015, assets and liabilities held for sale primarily related to the Group's 40 per cent interest in the Bengalla coal Joint venture and its 71.2 per cent interest in the Blair Athol coal project (Blair Athol).

At 31 December 2014 assets and liabilities held for sale comprised the Group's 71.2 per cent interest in Blair Athol and its 28.4 per cent indirect interest in SouthGobi Resources Limited, which was acquired as part of the gain of control of Turquoise Hill Resources Ltd in 2012.

20 Other financial assets (including loans to equity accounted units)

	Non-current 2015 US$m	Current 2015 US$m	Total 2015 US$m	Non-current 2014 US$m	Current 2014 US$m	Total 2014 US$m
Derivative financial instruments	529	77	606	393	43	436
Equity shares and quoted funds	76	81	157	103	96	199
Other investments, including loans	183	23	206	226	61	287
Loans to equity accounted units	–	42	42	–	71	71
	788	223	1,011	722	271	993

Detailed information relating to other financial assets is given in note 30.

21 Cash and cash equivalents

	Note	2015 US$m	2014 US$m
Cash at bank and in hand		843	1,146
Money market funds and other cash equivalents		8,523	11,277
Balance per Group balance sheet		9,366	12,423
Bank overdrafts repayable on demand (unsecured)	22	(12)	(23)
Balance per Group cash flow statement		9,354	12,400

Cash and cash equivalents of US$426 million (2014: US$631 million) are held in countries where there are restrictions on remittances. Of this balance US$311 million (2014: US$455 million) could be used to repay subsidiaries' third-party borrowings.

There are also restrictions on a further US$802 million (2014: US$404 million) of cash and cash equivalents, the majority of which is held by partially owned entities and is not available for use in the wider Group due to the legal and contractual restrictions currently in place. Of this balance US$53 million (2014: US$24 million) could be used to repay subsidiaries' third-party borrowings.

22 Borrowings and other financial liabilities

Borrowings at 31 December	Note	Non-current 2015 US$m	Current 2015 US$m	Total 2015 US$m	Non-current 2014 US$m	Current 2014 US$m	Total 2014 US$m
Rio Tinto Finance (USA) Limited Bonds 1.875% 2015		–	–	–	–	500	500
Rio Tinto Finance (USA) plc Bonds 1.125% 2015		–	–	–	–	500	500
Rio Tinto Finance (USA) plc Bonds LIBOR plus 0.55% 2015		–	–	–	–	250	250
Alcan Inc. Global Notes 5.0% due 2015 [a]		–	–	–	–	496	496
Rio Tinto Finance (USA) Limited Bonds 2.500% 2016		–	–	–	698	–	698
Rio Tinto Finance (USA) Limited Bonds 2.250% 2016		–	–	–	498	–	498
Rio Tinto Finance (USA) plc Bonds 1.375% 2016		–	998	998	998	–	998
Rio Tinto Finance (USA) plc Bonds LIBOR plus 0.84% 2016		–	500	500	500	–	500
Rio Tinto Finance (USA) plc Bonds 2.0% 2017		500	–	500	499	–	499
Rio Tinto Finance (USA) plc Bonds 1.625% 2017		1,247	–	1,247	1,245	–	1,245
Rio Tinto Finance (USA) Limited Bonds 6.5% 2018 [a]		1,894	–	1,894	1,935	–	1,935
Rio Tinto Finance (USA) plc Bonds 2.250% 2018		1,242	–	1,242	1,239	–	1,239
Rio Tinto Finance (USA) Limited Bonds 9.0% 2019		1,481	–	1,481	1,474	–	1,474
Rio Tinto Finance (USA) Limited Bonds 3.5% 2020		997	–	997	996	–	996
Rio Tinto Finance plc Euro Bonds 2.0% due 2020 [a] [b]		848	–	848	934	–	934
Rio Tinto Finance (USA) Limited Bonds 4.125% 2021 [a]		989	–	989	998	–	998
Rio Tinto Finance (USA) Limited Bonds 3.750% 2021 [a]		1,142	–	1,142	1,144	–	1,144
Rio Tinto Finance (USA) plc Bonds 3.5% 2022 [a]		1,004	–	1,004	995	–	995
Rio Tinto Finance (USA) plc Bonds 2.875% 2022 [a]		994	–	994	988	–	988
Rio Tinto Finance plc Euro Bonds 2.875% due 2024 [a] [b]		584	–	584	646	–	646
Rio Tinto Finance (USA) Limited Bonds 3.75% 2025 [a]		1,202	–	1,202	–	–	–
Rio Tinto Finance (USA) Limited Bonds 7.125% 2028 [a]		1,000	–	1,000	1,008	–	1,008
Alcan Inc. Debentures 7.25% due 2028		106	–	106	106	–	106
Rio Tinto Finance plc Sterling Bonds 4.0% due 2029 [a] [b]		738	–	738	774	–	774
Alcan Inc. Debentures 7.25% due 2031		427	–	427	429	–	429
Alcan Inc. Global Notes 6.125% due 2033		741	–	741	745	–	745
Alcan Inc. Global Notes 5.75% due 2035		286	–	286	279	–	279
Rio Tinto Finance (USA) Limited Bonds 5.2% 2040		1,147	–	1,147	1,145	–	1,145
Rio Tinto Finance (USA) plc Bonds 4.75% 2042		490	–	490	490	–	490
Rio Tinto Finance (USA) plc Bonds 4.125% 2042		727	–	727	726	–	726
Loans from equity accounting units		–	37	37	–	52	52
Other secured loans		597	104	701	376	211	587
Other unsecured loans		382	595	977	497	627	1,124
Finance leases	23	45	7	52	49	5	54
Bank overdrafts	21	–	12	12	–	23	23
Total borrowings including overdrafts [c]		**20,810**	**2,253**	**23,063**	22,411	2,664	25,075

(a) These borrowings are subject to the hedging arrangements summarised below. Fair value hedge accounting has been applied except for the Rio Tinto Finance plc Sterling Bonds 4.0% due 2029 (see below).

(b) Rio Tinto has a US$10 billion (2014: US$10 billion) European Debt Issuance Programme (EDIP) against which the cumulative amount utilised was US$2.1 billion equivalent at 31 December 2015 (2014: US$2.3 billion). The carrying value of these bonds after hedge accounting adjustments amounted to US$2.2 billion (2014: US$ 2.4 billion) in aggregate.

(c) The Group's borrowings of US$23.1 billion (2014: US$25.1 billion) include some US$2.9 billion (2014: US$3.5 billion) which relates to subsidiary entity borrowings that are without recourse to the Group, of which US$0.7 billion (2014: US$0.6 billion) are subject to various financial and general covenants with which the respective borrowers were in compliance as at 31 December 2015.

Other financial liabilities	Non-current 2015 US$m	Current 2015 US$m	Total 2015 US$m	Non-current 2014 US$m	Current 2014 US$m	Total 2014 US$m
Derivative financial instruments	283	41	324	67	14	81
Other financial liabilities	47	190	237	57	6	63
Total other financial liabilities	330	231	561	124	20	144
Total borrowings including overdrafts (as above)	20,810	2,253	23,063	22,411	2,664	25,075
Total borrowings and other financial liabilities	21,140	2,484	23,624	22,535	2,684	25,219

Swap arrangements

At 31 December 2015, US$7.0 billion (2014: US$3.7 billion) US dollar notional of the fixed rate US dollar borrowings were swapped to floating US dollar rates and US$1.4 billion (2014: US$1.5 billion) US dollar notional equivalent of euro borrowings were fully swapped to floating US dollar rates.

Hedge accounting has been applied to the full notional of items marked (a) in the above table except for: US$750 million (2014: US$750 million) of the Rio Tinto Finance (USA) Limited Bonds 6.5% due 2018, US$nil (2014: US$1,000 million) of the Rio Tinto Finance (USA) Limited Bonds 4.125% due 2021; US$nil (2014: US$1,150 million) of the Rio Tinto Finance (USA) Limited Bonds 3.750% due 2021; US$nil (2014: US$250 million) of the Rio Tinto Finance (USA) plc Bonds 3.5% due 2022, US$nil (2014: US$250 million) of the Rio Tinto Finance (USA) plc Bonds 2.875% due 2022; and, US$75 million (2014: US$75 million) of the Rio Tinto Finance (USA) Limited Bonds 7.125% due 2028. These portions are held at amortised cost.

The Rio Tinto Finance plc Sterling Bond 4.0% due 2029 at US$0.7 billion (2014: US$0.8billion) US dollar notional equivalent of sterling was fully swapped to fixed US dollar rates. Cash flow hedging was applied to the annual interest coupons and principal of this bond. The hedge was fully effective in 2015 and 2014 financial years.

The fair value of interest rate and cross currency interest rate swaps at 31 December 2015 was US$189 million (2014: US$200 million) asset and US$275 million (2014: US$54 million) liability, respectively. These are included in "Other financial assets" and "Other financial liabilities" in the balance sheet.

Details of the major interest rate and cross currency interest rate swaps are shown in note 30.

23 Capitalised finance leases

	Note	2015 US$m	2014 US$m
Present value of minimum lease payments			
Total minimum lease payments		**53**	55
Effect of discounting		**(1)**	(1)
	14	**52**	54
Payments under capitalised finance leases			
Due within 1 year		**7**	5
Between 1 and 3 years		**28**	29
Between 3 and 5 years		**5**	6
More than 5 years		**12**	14
	14	**52**	54

24 Consolidated net debt

	2015 US$m	2014 US$m
Analysis of changes in consolidated net debt [a]		
Opening balance	**(12,495)**	(18,055)
Adjustment on currency translation	**1,586**	1,039
Exchange losses charged to the income statement [b]	**(1,630)**	(1,070)
Cash movements excluding exchange movements	**(1,109)**	5,357
Other movements	**(135)**	234
Closing balance	**(13,783)**	(12,495)
Total borrowings in balance sheet (note 22)	**(23,063)**	(25,075)
Derivatives related to net debt (included in "Other financial assets/liabilities") (note 30)	**(86)**	146
Equity accounted unit funded balances excluded from net debt [c]	**–**	11
Adjusted total borrowings	**(23,149)**	(24,918)
Cash and cash equivalents (note 21)	**9,366**	12,423
Consolidated net debt	**(13,783)**	(12,495)

	2015 US$m	2014 US$m	2013 US$m
Exchange (losses)/gains on US dollar net debt and intragroup balances excluded from underlying earnings			
Exchange losses on US dollar net debt	**(1,578)**	(1,056)	(2,098)
Exchange losses on intragroup balances	**(1,961)**	(940)	(1,574)
Exchange gains on loans from equity accounted units	**–**	1	–
Exchange gains on settlement of dividend	**1**	–	–
Charged to income statement	**(3,538)**	(1,995)	(3,672)

(a) Consolidated net debt is stated net of the impact of certain funding arrangements between equity accounted units and partially owned subsidiaries (equity accounted unit funded balances). This adjustment is required in order to avoid showing borrowings twice in the net debt disclosure, where funding has been provided to an equity accounted unit by the Group and subsequently on-lent by the equity accounted unit to a consolidated Group subsidiary.

(b) Exchange losses taken to the income statement include amounts excluded from underlying earnings.

(c) Equity accounted unit funded balances are defined as amounts owed by partially owned subsidiaries to equity accounted units, where such funding was provided to the equity accounted unit by the Group.

Further information relating to the currency and interest rate exposures arising from net debt and related derivatives is given in note 30.

25 Trade and other payables

	Non-current 2015 US$m	Current 2015 US$m	Total 2015 US$m	Non-current 2014 US$m	Current 2014 US$m	Total 2014 US$m
Trade payables	**9**	**2,567**	**2,576**	5	2,592	2,597
Accruals and deferred income	**179**	**1,400**	**1,579**	248	2,123	2,371
Other payables [(a)]	**263**	**1,075**	**1,338**	359	1,201	1,560
Employee entitlements	**–**	**747**	**747**	–	905	905
Royalties and mining taxes	**2**	**345**	**347**	2	526	528
Amounts owed to equity accounted units	**131**	**100**	**231**	147	78	225
Government grants deferred	**98**	**3**	**101**	110	12	122
	682	**6,237**	**6,919**	871	7,437	8,308

(a) "Other payables" include deferred consideration of US$nil (2014: US$29 million) relating to acquired assets. All other accounts payable and accruals are non-interest bearing.

Due to their short term maturities, the fair value of trade and other payables approximates their carrying value.

26 Provisions (including post-retirement benefits)

	Pensions and post-retirement healthcare [(a)] US$m	Other employee entitlements [(b)] US$m	Close down and restoration/ environmental [(c)] US$m	Other US$m	Total 2015 US$m	Total 2014 US$m
At 1 January	4,086	599	8,630	1,287	**14,602**	14,081
Adjustment on currency translation	(407)	(70)	(763)	(104)	**(1,344)**	(963)
Adjustments to mining properties (note 14)						
– changes in estimate	–	–	147	–	**147**	525
Charged/(credited) to profit:						
– increases to existing and new provisions	141	128	456	173	**898**	1,217
– unused amounts reversed	–	(47)	(92)	(119)	**(258)**	(170)
– exchange losses on provisions	–	–	39	52	**91**	91
– amortisation of discount	–	1	335	42	**378**	384
Utilised in year	(230)	(140)	(303)	(151)	**(824)**	(1,269)
Actuarial (gains)/losses recognised in equity	(442)	–	–	–	**(442)**	776
Newly consolidated operations (note 37)	–	–	–	–	**–**	11
Subsidiaries no longer consolidated	(14)	(3)	(11)	9	**(19)**	23
Transfers to assets held for sale	(12)	(12)	(17)	(16)	**(57)**	(23)
Transfers and other movements	–	2	5	(113)	**(106)**	(81)
At 31 December	3,122	458	8,426	1,060	**13,066**	14,602
Balance sheet analysis:						
Current	107	319	484	280	**1,190**	1,299
Non-current	3,015	139	7,942	780	**11,876**	13,303
Total	3,122	458	8,426	1,060	**13,066**	14,602

(a) The main assumptions used to determine the provision for pensions and post-retirement healthcare, and other information, including the expected level of future funding payments in respect of those arrangements, are given in note 45.

(b) The provision for other employee entitlements includes a provision for long service leave of US$322 million (2014: US$354 million), based on the relevant entitlements in certain Group operations and includes US$52 million (2014: US$113 million) of provision for redundancy and severance payments.

(c) The Group's policy on close-down and restoration costs is described in note 1(k) and in paragraph (v) under "Critical accounting policies and estimates" on pages 119 and 123. Close-down and restoration costs are a normal consequence of mining, and the majority of close-down and restoration expenditure is incurred in the years following closure of the mine, refinery or smelter. Remaining lives of operations and infrastructure range from one to over 50 years with an average for all sites, weighted by closure provision, of around 17 years (2014: 18 years). Although the ultimate cost to be incurred is uncertain, the Group's businesses estimate their respective costs based on current restoration standards and techniques. Provisions of US$8,426 million (2014: US$8,630 million) for close-down and restoration costs and environmental clean-up obligations are based on risk adjusted cash flows. These estimates have been discounted to their present value at a real risk free rate of 2 per cent per annum, based on an estimate of the long term, risk free, pre-tax cost of borrowing.

Non-current provisions for close down and restoration/environmental expenditure include amounts relating to environmental clean-up of US$286 million (2014: US$341 million) expected to take place between one and five years from the balance sheet date, and US$867 million (2014: US$798 million) expected to take place later than five years after the balance sheet date.

Close-down and restoration/environmental liabilities at 31 December 2015 have not been adjusted for amounts of US$97 million (2014: US$108 million) relating to insurance recoveries and other financial assets held for the purposes of meeting these obligations.

27 Share capital – Rio Tinto plc

	2015 Number (million)	2014 Number (million)	2013 Number (million)	2015 US$m	2014 US$m	2013 US$m
Issued and fully paid up share capital of 10p each						
At 1 January	**1,425.378**	1,425.377	1,425.376	**230**	230	230
Ordinary shares issued [a] [c]	**0.022**	0.001	0.001	**–**	–	–
Shares purchased and cancelled [b]	**(40.913)**	–	–	**(6)**	–	–
At 31 December	**1,384.487**	1,425.378	1,425.377	**224**	230	230
Shares held by public						
At 1 January	**1,414.147**	1,412.695	1,411.257			
Shares reissued from treasury [a]	**0.790**	1.451	1.437			
Shares purchased and cancelled [b]	**(40.913)**	–	–			
Ordinary shares issued [a] [c]	**0.022**	0.001	0.001			
At 31 December	**1,374.046**	1,414.147	1,412.695			
Shares held in treasury	**10.441**	11.231	12.682			
Shares held by public	**1,374.046**	1,414.147	1,412.695			
Total share capital	**1,384.487**	1,425.378	1,425.377			
Other share classes						
Special Voting Share of 10p each [d]	**1 only**	1 only	1 only			
DLC Dividend Share of 10p each [d]	**1 only**	1 only	1 only			
Equalisation Share of 10p each [d]	**1 only**	1 only	1 only			

(a) 21,709 ordinary shares were issued in 2015 under the Global Employee Share Plan. 789,887 ordinary shares were reissued from treasury during the year resulting from the vesting of awards and the exercise of options under Rio Tinto plc employee share-based payment plans, with exercise prices and market values between £15.086 and £32.375 per share (2014: 971 ordinary shares were issued, and 1,450,659 ordinary shares reissued from treasury with exercise prices and market values between £10.979 and £36.275 per share; 2013: 951 ordinary shares issued, and 1,436,542 ordinary shares reissued from treasury with exercise prices and market values between £10.43 and £35.76 per share).

(b) The authority for the Company to buy back its ordinary shares was renewed at the 2015 annual general meeting. 40,912,881 shares were bought back and cancelled in 2015 under the on-market buy-back programme. No shares were bought back in 2014 and 2013.

(c) The aggregate consideration for new shares issued under the Global Employee Share Plan was US$0.9 million (2014: US$0.05 million; 2013: US$0.04 million). The difference between the nominal value and the issue price of the shares issued was credited to the share premium account. The aggregate consideration received for treasury shares reissued was US$13 million (2014: US$22 million; 2013: US$32 million). No new shares were issued as a result of the exercise of options under Rio Tinto plc employee share-based payment plans in 2015, 2014 and 2013.

(d) The "Special Voting Share" was issued to facilitate the joint voting by shareholders of Rio Tinto plc and Rio Tinto Limited on Joint Decisions, following the DLC Merger. The "DLC Dividend Share" was issued to facilitate the efficient management of funds within the DLC structure. Directors have the ability to issue an Equalisation Share if that is required under the terms of the DLC Merger Sharing Agreement.

During 2015, US$34.1 million of shares and ADRs (2014: US$49.5 million; 2013: US$42 million) were purchased by employee share ownership trusts on behalf of Rio Tinto plc to satisfy future share options and awards as they vest. At 31 December 2015, 827,679 shares and 17,890 ADRs were held in the employee share ownership trusts on behalf of Rio Tinto plc.

Information relating to share options and other share-based incentive schemes is given in note 44.

28 Share capital – Rio Tinto Limited

	2015 Number (million)	2014 Number (million)	2013 Number (million)	2015 US$m	2014 US$m	2013 US$m
Issued and fully paid up share capital						
At 1 January	**435.76**	435.76	435.76	**4,535**	4,911	5,715
Adjustment on currency translation	**–**	–	–	**(503)**	(376)	(804)
Ordinary shares purchased and cancelled [a]	**(11.57)**	–	–	**(82)**	–	–
At 31 December	**424.19**	435.76	435.76	**3,950**	4,535	4,911
– Special Voting Share [b]	**1 only**	1 only	1 only			
– DLC Dividend Share [b]	**1 only**	1 only	1 only			
Total share capital	**424.19**	435.76	435.76			

(a) At the Rio Tinto Limited annual general meeting held in 2014 shareholders authorised off-market and on-market buy-backs of up to 43.5 million Rio Tinto Limited ordinary shares. In April 2015, 11,566,308 Rio Tinto Limited ordinary shares were purchased at A$48.44 per share and cancelled under an off-market share buy-back programme.

(b) The "Special Voting Share" was issued to facilitate the joint voting by shareholders of Rio Tinto Limited and Rio Tinto plc on Joint Decisions following the DLC Merger. The "DLC Dividend Share" was issued to facilitate the efficient management of funds within the DLC structure. Directors have the ability to issue an Equalisation Share if that is required under the terms of the DLC Merger Sharing Agreement.

28 Share Capital – Rio Tinto Limited continued

Share options exercised during the year to 31 December 2015 under various Rio Tinto Limited employee share option schemes were satisfied by the on-market purchase of Rio Tinto Limited shares by a third party on the Group's behalf.

Information relating to share options and other share-based incentive schemes is given in note 44.

29 Other reserves and retained earnings

	2015 US$m	2014 US$m	2013 US$m
Capital redemption reserve [a]			
At 1 January	**28**	28	28
Own shares purchased and cancelled	**6**	–	–
At 31 December	**34**	28	28
Hedging reserves [b]			
At 1 January	**12**	3	(68)
Parent and subsidiaries' net cash flow hedge fair value (losses)/gains	**(41)**	(48)	149
Parent and subsidiaries' net cash flow hedge losses/(gains) transferred to the income statement	**32**	55	(69)
Tax on the above	**(3)**	2	(9)
At 31 December	**–**	12	3
Available for sale revaluation reserves [c]			
At 1 January	**(130)**	(117)	(179)
Losses on available for sale securities	**(16)**	(19)	(67)
Losses on available for sale securities transferred to the income statement	**7**	6	146
Tax on the above	**–**	–	(17)
At 31 December	**(139)**	(130)	(117)
Other reserves [d]			
At 1 January	**11,704**	11,766	11,778
Own shares purchased from Rio Tinto Limited shareholders to satisfy share options	**(25)**	(129)	(77)
Employee share options: value of services	**58**	69	64
Deferred tax on share options	**(2)**	(2)	1
At 31 December	**11,735**	11,704	11,766
Foreign currency translation reserve [e]			
At 1 January	**(492)**	1,191	3,309
Parent and subsidiaries currency translation and exchange adjustments	**(1,940)**	(1,690)	(2,138)
Equity accounted units currency translation adjustments	**(57)**	(43)	(44)
Currency translation reclassified on disposal	**(2)**	53	81
Tax on the above	**–**	(3)	(17)
At 31 December	**(2,491)**	(492)	1,191
Total other reserves per balance sheet	**9,139**	11,122	12,871

	2015 US$m	2014 US$m	2013 US$m
Retained earnings [f]			
At 1 January	**26,110**	23,605	21,496
Parent and subsidiaries' (loss)/profit for the year	**(1,218)**	5,243	2,796
Equity accounted units' profit after tax for the year	**352**	1,284	869
Actuarial gains/(losses) [g]	**616**	(720)	2,211
Tax relating to components of other comprehensive income	**(173)**	204	(631)
Total comprehensive (loss)/income for the year	**(423)**	6,011	5,245
Share buy-back scheme	**(1,946)**	–	–
Dividends paid	**(4,076)**	(3,710)	(3,322)
Change in equity interest held by Rio Tinto	**20**	36	102
Own shares purchased/treasury shares reissued for share options and other movements	**(27)**	(28)	11
Employee share options and other IFRS 2 charges taken to the income statement	**78**	196	73
At 31 December	**19,736**	26,110	23,605

(a) The capital redemption reserve was set up to comply with section 733 of the UK Companies Act 2006 (previously section 170 of the UK Companies Act 1985) when shares of a company are redeemed or purchased wholly out of the company's profits. Balances reflect the amount by which the Company's issued share capital is diminished in accordance with this section.

(b) The hedging reserve records gains or losses on cash flow hedges that are recognised initially in equity, as described in note 1 (p) (iii).

(c) The available for sale revaluation reserves record fair value gains or losses relating to available for sale securities, as described in note 1 (p) (i) (d).

(d) Other reserves includes US$11,936 million which represents the difference between the nominal value and issue price of the shares issued arising from Rio Tinto plc's rights issue completed in July 2009. No share premium was recorded in the Rio Tinto plc financial statements through the operation of the merger relief provisions of the UK Companies Act 1985.

Other reserves also include the cumulative amount recognised under IFRS 2 in respect of options granted but not exercised to acquire shares in Rio Tinto Limited, less, where applicable, the cost of shares purchased to satisfy share options exercised. The cumulative amount recognised under IFRS 2 in respect of options granted but not exercised to acquire shares in Rio Tinto plc is recorded in retained earnings.

(e) Exchange differences arising on the translation of the Group's net investment in foreign controlled companies are taken to the foreign currency translation reserve, as described in note 1(d). The cumulative differences relating to an investment are transferred to the income statement when the investment is disposed of.

(f) Retained earnings and movements in reserves of subsidiaries include those arising from the Group's share of joint operations.

(g) There were no actuarial losses relating to equity accounted units in 2015, 2014 or 2013.

30 Financial instruments and risk management

Except where stated, the information given below relates to the financial instruments of the parent companies and their subsidiaries and joint operations, and excludes those of equity accounted units. The information is grouped in the following sections:

A – Financial assets and liabilities by categories

B – Derivative financial instruments

C – Fair values

A (a) Financial assets and liabilities by categories

At 31 December 2015	Note	Total US$m	Loans and receivables US$m	Available for sale securities US$m	Held at fair value US$m	Held to maturity assets/other financial liabilities US$m
Financial assets						
Cash and cash equivalents	21	**9,366**	9,366	–	–	–
Trade and other receivables [a]		**2,468**	2,456	–	12	–
Equity shares and quoted funds	20	**157**	–	157	–	–
Other investments, including loans	20	**206**	32	–	170	4
Currency and commodity derivatives: designated as hedges [b]	20	**5**	–	–	5	–
Derivatives and embedded derivatives not related to net debt: not designated as hedges [b]	20	**412**	–	–	412	–
Derivatives related to net debt [b]	20,22,24	**189**	–	–	189	–
Loans to equity accounted units including quasi equity loans		**225**	225	–	–	–
Total financial assets		**13,028**	**12,079**	**157**	**788**	**4**
Financial liabilities						
Trade and other payables [c]		**(5,373)**			(24)	(5,349)
Short term borrowings and bank overdrafts	22	**(2,253)**			–	(2,253)
Medium and long term borrowings	22	**(20,810)**			–	(20,810)
Derivatives related to net debt [b]	22,24	**(275)**			(275)	–
Other derivatives and embedded derivatives: not designated as hedges [b]	22	**(49)**			(49)	–
Other financial liabilities	22	**(237)**			–	(237)
Total financial liabilities		**(28,997)**			**(348)**	**(28,649)**

30 Financial instruments and risk management continued

At 31 December 2014	Note	Total US$m	Loans and receivables US$m	Available for sale securities US$m	Held at fair value US$m	Held to maturity assets/other financial liabilities US$m
Financial assets						
Cash and cash equivalents	21	12,423	12,423	–	–	–
Trade and other receivables [a]		3,727	3,715	–	12	–
Equity shares and quoted funds	20	199	–	199	–	–
Other investments, including loans	20	287	118	–	164	5
Currency and commodity derivatives: designated as hedges [b]	20	17	–	–	17	–
Derivatives and embedded derivatives not related to net debt: not designated as hedges [b]	20	219	–	–	219	–
Derivatives related to net debt [b]	20,22,24	200	–	–	200	–
Loans to equity accounted units including quasi equity loans		299	299	–	–	–
Total financial assets		17,371	16,555	199	612	5
Financial liabilities						
Trade and other payables [c]		(6,155)			(24)	(6,131)
Short term borrowings and bank overdrafts	22	(2,664)			–	(2,664)
Medium and long term borrowings	22	(22,411)			–	(22,411)
Derivatives related to net debt [b]	22,24	(54)			(54)	–
Other derivatives and embedded derivatives not designated as hedges [b]	22	(27)			(27)	–
Other financial liabilities	22	(63)			–	(63)
Total financial liabilities		(31,374)			(105)	(31,269)

(a) This excludes pension surpluses, prepayment of tolling charges to joint operations and other prepayments and specific items within other receivables and will therefore not agree to note 18.

(b) These financial assets and liabilities in aggregate agree to total derivative financial instruments disclosed in notes 20 and 22.

(c) Trade and other payables excludes deferred income, Government grants, royalties, mining taxes and employee entitlements and will therefore not agree to note 25.

A (b) Financial risk management

Funding and exposure management

The Group's policies on financial risk management are clearly defined and consistently applied. They are a fundamental part of the Group's long term strategy covering areas such as foreign exchange risk, interest rate risk, commodity price risk, credit risk, liquidity risk and capital management.

The Group mainly sells commodities it has produced and also enters into third party transactions and physical swaps on alumina to balance the regional positions and to balance the loading on production facilities.

The Group has a diverse portfolio of commodities and operates in a number of markets, which have varying responses to the economic cycle. The relationship between commodity prices and the currencies of most of the countries in which the Group operates provides a further natural hedge in the long term. Production of minerals, aluminium and alumina is an important contributor to the Gross Domestic Products of Australia and Canada, countries in which the Group has a large presence. As a consequence, the Australian and Canadian currencies have historically tended to strengthen when commodity prices are high and vice versa. These natural hedges significantly reduce the necessity for using derivatives or other forms of synthetic hedging. Such hedging is therefore undertaken to a strictly limited degree, as described below.

In addition, US dollar floating interest rates have historically also tended to be high when commodity prices are high, and vice versa, and hence the Group's interest rate policy is to generally borrow and invest, after the impact of hedging, at floating interest rates. However, in some circumstances, the Group elects to maintain a higher proportion of fixed rate funding.

Treasury operations

Treasury is a global and centralised support and service function that acts as the custodian of the Group's cash and balance sheet and its key financial risks. It performs its activities in a strong control environment, within Board approved limits. It is not a profit centre. It is responsible for managing liquidity through funding and investments as well as financial risks such as foreign exchange, interest, financial counterparty credit, commodity, insurance and pension risk. It is also responsible for managing banking relationships across the Group. Its activities are principally retained within the Group Treasury function.

Treasury policy

Rio Tinto does not acquire or issue derivative financial instruments for trading or speculative purposes; nor does it believe that it has material exposure to such trading or speculative holdings through its investments in joint arrangements and associates. However, derivatives are used as and when required in order to manage the Group's exposure in accordance with its underlying financial risk management principles. Cash management and investment activities are managed and co-ordinated centrally by Treasury using only approved counterparties and within allocated credit limits reviewed and approved by the Board at least annually.

(i) Foreign exchange risk

Management policy

The Group's shareholders' equity, earnings and cash flows are influenced by a wide variety of currencies due to the geographic diversity of the Group's sales and the countries in which it operates. The US dollar, however, is the currency in which the majority of the Group's sales are denominated. Operating costs are influenced by the currencies of those countries where the Group's mines and processing plants are located and also by those currencies in which the costs of imported equipment and services are determined. The Australian and Canadian dollars are the most important currencies (apart from the US dollar) influencing costs. In any particular year, currency fluctuations may have a significant impact on Rio Tinto's financial results. A strengthening of the US dollar against the currencies in which the Group's costs are partly

determined has a positive effect on Rio Tinto's Underlying earnings. However, a strengthening of the US dollar does reduce the value of non US dollar denominated net assets and therefore total equity.

Given the dominant role of the US currency in the Group's affairs, the US dollar is the currency in which financial results are presented both internally and externally. It is also the most appropriate currency for financing the Group's operations. Borrowings and cash are predominantly denominated in US dollars, either directly or through the use of derivatives.

Certain US dollar debt and other financial assets and liabilities, including intragroup balances, are held in currencies other than the functional currency of the relevant subsidiary. This results in an accounting exposure to exchange gains and losses as the financial assets and liabilities are translated into the functional currency of the subsidiary that holds those assets and liabilities. These exchange gains and losses are recorded in the Group's income statement except to the extent that they can be taken to equity under the Group's accounting policy which is explained in note 1(d). Gains and losses on US dollar net debt and on all intragroup balances are excluded from Underlying earnings. Other exchange gains and losses are included in Underlying earnings.

See section B for the details of cross currency interest rate swaps relating to borrowings.

After taking into account relevant swap instruments, almost all of the Group's net debt is denominated in US dollars. The table below summarises, by currency, the Group's net debt, after taking into account relevant cross currency interest rate swaps and foreign exchange contracts:

Net funds/(debt) by currency	Cash and cash equivalents US$m	Total borrowings in note 22 US$m	Derivatives related to net debt US$m	**Net funds/ (debt) 2015 US$m**	Net funds/ (debt) 2014 US$m
US dollar	8,767	(22,198)	(86)	**(13,517)**	(12,144)
Australian dollar	236	(513)	–	**(277)**	(125)
Euro	46	(134)	–	**(88)**	(127)
South African rand	80	(51)	–	**29**	(85)
Canadian dollar	42	(163)	–	**(121)**	(169)
Sterling	27	–	–	**27**	4
Other	168	(4)	–	**164**	151
Total	**9,366**	**(23,063)**	**(86)**	**(13,783)**	**(12,495)**

Hedging strategy

Under normal market conditions, the Group does not generally believe that active currency hedging of transactions would provide long term benefits to shareholders. The Group reviews its exposure on a regular basis and reserves the right to enter into hedges to maintain financial stability. Currency protection measures may be deemed appropriate in specific commercial circumstances, typically hedging of capital expenditures and other significant financial items such as acquisitions, disposals, tax and dividends, and are subject to strict limits laid down by the Board. A quarterly treasury report is provided to senior management which summarises corporate debt exposed to currency risks after the impact of derivatives. Refer to section B for the details of cross currency interest rate, currency forward and option contracts used to manage the currency risk exposures of the Group at 31 December 2015.

Sensitivities

The table below gives the estimated retranslation effect on financial assets and financial liabilities of a ten per cent strengthening in the closing exchange rate of the US dollar against significant currencies. The sensitivity associated with a ten per cent weakening of a particular currency would be broadly equal and opposite to the figures presented. The impact is expressed in terms of the effect on net earnings, underlying earnings and equity, assuming that each exchange rate moves in isolation. The sensitivities are based on financial assets and financial liabilities held at 31 December 2015, where balances are not denominated in the functional currency of the subsidiary or joint operation, and exclude financial assets and liabilities held by equity accounted units. These balances will not remain constant throughout 2016, and therefore the following information should be used with care.

At 31 December 2015
Gains/(losses) associated with ten per cent strengthening of the US dollar

Currency exposure	**Closing exchange rate US cents**	**Effect on net earnings US$m**	**Of which amount impacting underlying earnings US$m**	**Net impact on equity US$m**
Australian dollar	**73**	**(182)**	**58**	**–**
Canadian dollar	**72**	**(771)**	**2**	**–**
Euro	**109**	**60**	**(25)**	**–**
New Zealand dollar	**68**	**–**	**–**	**–**

At 31 December 2014
Gains/(losses) associated with ten per cent strengthening of the US dollar

Currency exposure	Closing exchange rate US cents	Effect on net earnings US$m	Of which amount impacting underlying earnings US$m	Net impact on equity US$m
Australian dollar	82	(855)	27	5
Canadian dollar	86	(1,537)	22	(1)
Euro	122	48	(16)	–
New Zealand dollar	78	28	–	–

30 Financial instruments and risk management continued

Ten per cent is the annual exchange rate movement that management deems to be reasonably probable (on an annual basis over the long run) for one of the Group's significant currencies and as such provides an appropriate representation.

(ii) Interest rate risk

Management policy

Interest rate risk refers to the risk that the value of a financial instrument or cash flows associated with the instrument will fluctuate due to changes in market interest rates. The Group's interest rate management policy is generally to borrow and invest at floating interest rates. This approach is based on a historical correlation between interest rates and commodity prices. However, in certain circumstances the Group may elect to maintain a higher proportion of fixed rate funding.

Hedging strategy

As noted above, the Group hedges its interest rate risk by entering into interest rate derivatives to achieve its policies. The market value of such instruments moves in alignment with the market and at times can act as an alternative source of funding. The Group reviews the positions on a regular basis and may act to monetise in-the-money instruments either to take advantage of favourable market conditions or manage counterparty credit risk.

At the end of 2015, US$12.3 billion (2014: US$17.6 billion) of the Group's adjusted total borrowings was at fixed rates after taking into account interest and currency interest rate swaps, resulting in a fixed to floating debt ratio of 53 per cent fixed to 47 per cent floating (2014: 71 per cent fixed to 29 per cent floating). On a net debt basis, the fixed to floating debt ratio was 89 per cent fixed liability to 11 per cent floating liability (2014: 139 per cent fixed liability to (39) per cent floating asset). The weighted average interest rate on total adjusted borrowings as at 31 December 2015 was approximately 3.5 per cent (2014: approximately 3.7 per cent) and the weighted average maturity was approximately 8 years (2014: 8 years). The weighted average maturity and weighted average effective interest rate are based on current interest rates and the carrying value of gross borrowings at the year end.

The fixed:floating net debt ratio at the end of 2015 and 2014 reflects the high level of cash, cash equivalents and other liquid resources held by the Group and the impact of borrowings held at fixed rates.

See note 22 for the details of debt outstanding at 31 December 2015.

Sensitivities

Based on the Group's net debt (refer to note 24) and other floating rate financial instruments outstanding as at 31 December 2015, the effect on net earnings of a half percentage point increase in US dollar LIBOR interest rates, with all other variables held constant, would be a charge of US$4 million (2014: credit of US$20 million). The Group has an exposure to interest rate volatility within shareholders' equity arising from fair value movements on derivatives in the cash flow reserve. These derivatives have an underlying exposure to sterling and US dollar rates. With all factors remaining constant and based on the composition of derivatives impacting the cash flow reserve at 31 December 2015, the sensitivity of a 100 basis point increase in interest rates in each of the currencies in isolation would impact equity, before tax, by US$100 million charge (2014: US$112 million charge) for sterling and US$103 million credit (2014: US$108 million credit) for US dollar. A 100 basis point decrease would have broadly the same impact in the opposite direction. These balances will not remain constant throughout 2016, and therefore this information should be used with care.

(iii) Commodity price risk

Management policy

The Group's normal policy is to sell its products at prevailing market prices. Exceptions to this rule are subject to strict limits laid down by the Board and to rigid internal controls.

Metals such as copper and aluminium are generally sold under contracts which vary in tenure and pricing mechanisms, with some volumes sold in the spot market. The prices are determined by reference to prevailing market prices on terminal markets, such as the London Metal Exchange (LME) and COMEX in New York. Prices fluctuate widely in response to changing levels of supply and demand but, in the long run, prices are related to the marginal cost of supply. Gold is also priced in an active market in which prices respond to daily changes in quantities offered and sought. Newly mined gold is only one source of supply; investment and disinvestment can be important elements of supply and demand. Contract prices for many other natural resource products including coal are generally agreed quarterly or for longer periods with customers, although volume commitments vary by product.

Certain products, predominantly copper concentrate, are provisionally priced, that is the selling price is determined normally 30 to 180 days after delivery to the customer, based on the market price at the relevant quotation point stipulated in the contract. Revenue is recognised on provisionally priced sales based on estimates of fair value of the consideration receivable which is based on forward market prices. At each reporting date provisionally priced metal sales are marked to market based on the forward selling price for the period stipulated in the contract. For this purpose the selling price can be measured reliably for those products such as copper concentrate for which the price is directly related to the price of copper for which an active and freely traded commodity market exists, such as the LME, and the value of product sold by the Group is directly linked to the form in which it is traded on that market.

The marking to market of provisionally priced sales contracts is recorded as an adjustment to sales revenue.

At the end of 2015, the Group had 252 million pounds of copper sales (2014: 331 million pounds) that were provisionally priced at US 217 cents per pound (2014: US 288 cents per pound). The final price of these sales will be determined during the first half of 2016. A ten per cent change in the price of copper realised on the provisionally priced sales, all other factors held constant, would increase or reduce net earnings by US$36 million (2014: US$51 million).

Hedging strategy

Rio Tinto's exposure to commodity prices is diversified by virtue of its broad commodity base and the Group does not generally believe commodity price hedging would provide a long term benefit to shareholders. The Group may hedge certain commitments with some of its customers or suppliers. Details of commodity derivatives held at 31 December 2015 are set out in section B.

Sensitivities

The Group's commodity derivatives are impacted by changes in market prices and include those aluminium forward and option contracts embedded in electricity purchase contracts outstanding at 31 December 2015. A ten per cent increase in market prices would reduce net earnings by US$70 million (2014: US$97 million), and a ten per cent decrease in prices would increase net earnings by US$58 million (2014: US$84 million). A ten per cent change in prices would have a nil impact on equity, before tax, (2014: US$4 million).

The Group's "own use contracts" are excluded from the sensitivity analysis as they are outside the scope of IAS 39. Such contracts to buy or sell non financial items can be net settled but were entered into and continue to be held for the purpose of the receipt or delivery of the non financial item in accordance with the business unit's expected purchase, sale or usage requirements.

(iv) Credit risk

Treasury management policy

Credit risk is the risk that a counterparty will not meet its obligations under a financial instrument or customer contract, leading to a financial loss. The Group is exposed to credit risk from its operating activities (primarily from customer receivables) and from its financing activities, including investments in government securities, deposits with banks and financial institutions, other short term investments, interest rate and currency derivative contracts and other financial instruments.

Credit risks related to receivables
Customer credit risk is managed by each business unit subject to the Group's established policy, procedures and controls relating to customer credit risk management. Credit limits are established for all customers based on internal or external rating criteria. Where customers are rated by an independent credit rating agency, these ratings are used to set credit limits. In circumstances where no independent credit rating exists, the credit quality of the customer is assessed based on an extensive credit rating scorecard. Outstanding customer receivables are regularly monitored and any credit concerns highlighted to senior management. High risk shipments to major customers are generally covered by letters of credit or other forms of credit insurance.

At 31 December 2015, the Group had approximately 74 customers (2014: 105 customers) that owed the Group more than US$5 million each and these balances accounted for approximately 75 per cent (2014: 77 per cent) of all receivables owing. There were 13 customers (2014: 22 customers) with balances greater than US$20 million accounting for just over 37 per cent (2014: just over 43 per cent) of total amounts receivable. Details of trade and other receivables past due but not impaired are provided in note 18.

The maximum exposure to credit risk at the reporting date is the carrying value of each class of financial assets (refer to table of financial assets and liabilities reported above). The Group does not hold collateral as security for any trade receivables.

Credit risk related to financial instruments and cash deposits
Credit risk from investments in government securities (primarily US Government) or money market funds and balances with banks and financial institutions is managed by Group Treasury in accordance with a Board approved policy. Investments of surplus funds are made only with approved counterparties who have been assigned specific credit limits beforehand based on specific assessment criteria. The counterparty credit framework and limits are reviewed by the Board at least annually. The limits are set to minimise the concentration of credit risk and therefore mitigate the potential for financial loss through counterparty failure.

The maximum credit risk exposure of the Group's financial assets at the balance sheet date is as follows:

	Note	**2015 US$m**	2014 US$m
Cash and cash equivalents	21	**9,366**	12,423
Trade and other receivables		**2,468**	3,727
Investments	20	**206**	287
Derivative assets	20	**606**	436
Total		**12,646**	16,873

(v) Liquidity and capital risk management
Management policy
The Group's overriding objective when managing capital is to safeguard the business as a going concern whilst maximising returns for shareholders. In a cyclical and capital intensive industry such as the mining industry, maintaining a strong balance sheet and a sound financial risk management framework are desirable to preserving financial flexibility and generating shareholder value through the cycle. In practice, this involves regular reviews by the board and senior management. These reviews take into account the Group's strategic priorities, economic and business conditions and opportunities that are identified to invest across all points of the commodities cycle, and focus on the dividend policy, and other forms of shareholder return whilst also striving to maintain a strong balance sheet. In February 2016, the Group announced a change in its dividend policy, moving from a progressive dividend policy to a dividend determined by, taking into account the results for the financial year, the outlook for the Group's major commodities, the Board's view of the long-term growth prospects of the business and the Group's objective of maintaining a strong balance sheet. The Board expects total cash returns to shareholders over the longer term to be in a range of 40% – 60% of underlying earnings in aggregate throughout the cycle. Acknowledging the cyclical nature of the industry in periods of strong earnings and cash generation it is the Board's intention to supplement the ordinary dividends with additional returns to shareholders. The resulting capital structure provides the Group with a high degree of financial flexibility at a low cost of capital.

To maintain a strong balance sheet, the Group considers various financial metrics including a target net gearing ratio of 20 to 30 per cent, the overall level of borrowings and their maturity profile, liquidity levels, total capital, cash flow, EBITDA and interest cover ratios either on a statutory reported basis or as expected to be adjusted by the credit rating agencies.

Total capital	**2015 US$m**	2014 US$m
Equity attributable to owners of Rio Tinto (see Group balance sheet)	**37,349**	46,285
Equity attributable to non-controlling interests (see Group balance sheet)	**6,779**	8,309
Net debt (note 24)	**13,783**	12,495
Total capital	**57,911**	67,089

Net debt is a measure used by management and the Board to manage the Group's capital structure and liquidity risks and is linked to all of the Group's value drivers. It is also used to manage the Group's interest rate risks and foreign exchange risks on borrowings and cash. Net debt is disclosed and defined in note 24. Net debt increased from US$12.5 billion at 31 December 2014 to US$13.8 billion at 31 December 2015 as operating cash inflows were more than offset by outflows relating to capital expenditure, the dividend and the share buy-back programme. At 31 December 2015 net debt to total capital was 24 per cent (2014: 19 per cent) and interest cover was 7 times (2014: 13 times).

30 Financial instruments and risk management continued

The unified credit status of the Group is maintained through cross guarantees whereby contractual obligations of Rio Tinto plc and Rio Tinto Limited are automatically guaranteed by the other. The table below summarises the credit ratings attributed to the Group as at 31 December.

	2015	2014
Long term rating	**A-/A3[(a)]**	A-/A3
Short term rating	**A-2/P-2**	A-2/P-2
Outlook	**Negative/ Stable[(a)]**	Stable/ Stable

(a) On 24 February 2016, the Group was downgraded to Baa1 with a negative outlook.

The Group has access to various forms of financing including its US Shelf Programme, European Debt Issuance Programme, Commercial Paper and credit facilities. The Group did not issue any listed debt in 2014 under the various finance programmes listed. In June 2015, under its US Shelf Programme, the Group issued a Rio Tinto Finance (USA) Limited US$1,200 million 3.75% bond due 2025. The proceeds were used to repurchase the Rio Tinto Finance (USA) Limited US$700 million 2.5% bond due 2016 and the Rio Tinto Finance (USA) Limited US$500 million 2.25% bond due 2016.

In November 2013, Rio Tinto Finance plc and Rio Tinto Finance Limited entered into facility agreements, as borrowers, for the aggregate amount of US$7.5 billion with a syndicate of banks. The facilities are guaranteed by Rio Tinto plc and Rio Tinto Limited. The facilities comprised a US$1,875 million three-year multi-currency revolving credit facility and a US$5,625 million five-year multi-currency revolving credit facility (including a US$ denominated same day access swing-line facility). Both facilities had two one-year extension options, the first of which was utilised in November 2014. In November 2015, the US$1,875 million and US$5,625 million facilities were amended and their maturities extended to November 2018 and November 2020 respectively with the two one-year extension options reinstated. The renewed extension options could be utilised in 2016 and/or 2017, subject to the agreement by the banks. The funds made available under the facility agreements may be used for the general corporate purposes of the Group.

Advances under the revolving facilities bear an interest rate per annum based on LIBOR (or EURIBOR, CDOR or BBSW in relation to any euro, Canadian dollar or Australian dollar loans respectively) plus a margin (which is dependent on the Group's long-term credit rating as determined by Moody's and Standard & Poor's and the level of drawdown). The facility agreements contain no financial covenants. At 31 December 2015, the facilities were undrawn.

In December 2015, Oyu Tolgoi LLC signed a $4.4 billion project finance facility. The facility consists of the following components: $0.8 billion 15 year A Loan at LIBOR plus 3.78% pre-completion and LIBOR plus 4.78% post completion; $0.9 billion 14 year Export Credit Agencies Loan at LIBOR plus 3.65% pre-completion and LIBOR plus 4.65% post-completion; $0.4 billion 13 year Export Credit Agencies Loan US Ex-Im at fixed rate of Commercial Interest Reference Rate based on US Treasury rates, determined at the time of disbursement; $0.7 billion 12 year MIGA Insured Loan at LIBOR plus 2.65% pre-completion and LIBOR plus 3.65% post-completion; and $1.6 billion 12 year B Loan at LIBOR plus 3.4% pre-completion, LIBOR plus 4.4% post-completion (includes $50 million 15 year loan at A Loan rate).

The facilities are provided and funded by international financial institutions and export credit agencies representing the governments of the United States, Canada and Australia, along with 15 commercial banks.

The Multilateral Investment Guarantee Agency (MIGA) provided political risk insurance for the commercial banks.

Draw down of the $4.4 billion facility by Oyu Tolgoi is subject to satisfaction of certain conditions precedent, and to approval by the boards of Rio Tinto, Turquoise Hill and Oyu Tolgoi. Steps prerequisite to the boards' approval comprise: updating the feasibility study, including the revised capital estimates; and securing all necessary permits for the development of the underground mine.

The parties have agreed a debt cap of $6 billion, providing potential for an additional $1.6 billion of Supplemental Debt in future.

A (c) Financial liability analysis

The table below analyses the Group's financial liabilities by relevant maturity groupings based on the remaining period from the balance sheet date to the contractual maturity date. As the amounts disclosed in the table are the contractual undiscounted cash flows, these balances will not necessarily agree with the amounts disclosed in the balance sheet.

At 31 December 2015

(Outflows) / inflows	Within 1 year or on demand US$m	Between 1 and 2 years US$m	Between 2 and 3 years US$m	Between 3 and 4 years US$m	Between 4 and 5 years US$m	After 5 years US$m	**Total US$m**
Non-derivative financial liabilities							
Trade and other payables	(4,967)	(406)	–	–	–	–	**(5,373)**
Borrowings before swaps	(2,266)	(1,889)	(3,462)	(1,538)	(1,945)	(12,318)	**(23,418)**
Expected future interest payments [(a)]	(884)	(867)	(837)	(628)	(561)	(4,789)	**(8,566)**
Other financial liabilities	(190)	(5)	–	–	–	–	**(195)**
Derivative financial liabilities [(b)]							
Derivatives related to net debt – net settled	30	30	30	30	29	28	**177**
Derivatives related to net debt – gross settled [(a)]:							
gross inflows	62	62	62	62	872	1,617	**2,737**
gross outflows	(65)	(65)	(65)	(65)	(1,039)	(1,824)	**(3,123)**
Derivatives not related to net debt – net settled	(29)	(6)	–	–	–	(2)	**(37)**
Derivatives not related to net debt – gross settled:							
gross inflows	22	–	–	–	–	–	**22**
gross outflows	(22)	–	–	–	–	–	**(22)**
Total	(8,309)	(3,146)	(4,272)	(2,139)	(2,644)	(17,288)	**(37,798)**

At 31 December 2014

(Outflows) / inflows	Within 1 year or on demand US$m	Between 1 and 2 years US$m	Between 2 and 3 years US$m	Between 3 and 4 years US$m	Between 4 and 5 years US$m	After 5 years US$m	Total US$m
Non-derivative financial liabilities							
Trade and other payables	(5,640)	(515)	–	–	–	–	**(6,155)**
Borrowings before swaps	(2,664)	(2,868)	(1,973)	(3,139)	(1,524)	(12,535)	**(24,703)**
Expected future interest payments [(a)]	(927)	(883)	(838)	(816)	(608)	(5,492)	**(9,564)**
Other financial liabilities	(49)	(67)	(3)	(1)	–	–	**(120)**
Derivative financial liabilities [(b)]							
Derivatives related to net debt – gross settled [(a)]:							
gross inflows	36	36	36	36	36	1,614	**1,794**
gross outflows	(28)	(28)	(28)	(28)	(28)	(1,705)	**(1,845)**
Derivatives not related to net debt – net settled	(11)	(8)	–	(1)	–	–	**(20)**
Derivatives not related to net debt – gross settled:							
gross inflows	423	–	–	–	–	–	**423**
gross outflows	(423)	–	–	–	–	–	**(423)**
Total	(9,283)	(4,333)	(2,806)	(3,949)	(2,124)	(18,118)	**(40,613)**

(a) Interest payments have been projected using interest rates applicable at the end of the applicable financial year. Where debt is subject to variable interest rates, future interest payments are subject to change in line with market rates.

(b) The maturity grouping is based on the earliest payment date.

(c) The maximum carrying value of borrowings repayable, after the impact of swaps, maturing in any financial year is US$3.3 billion (2014: US$3.3 billion).

Offsetting and enforceable master netting agreements

Financial assets and liabilities are offset and the net amount reported in the consolidated balance sheet when there is a legally enforceable right to offset the recognised amounts and there is an intention to settle on a net basis or realise the asset and settle the liability simultaneously. There were no material amounts offset in the balance sheet and no material enforceable master netting agreements were identified.

30 Financial instruments and risk management continued

B Derivative financial instruments

The Group's derivatives, including embedded derivatives, as at 31 December 2015, are summarised below:

	Total fair value			
	2015		2014	
Derivatives designated as hedges	**Asset US$m**	**Liability US$m**	Asset US$m	Liability US$m
Aluminium forward contracts embedded in electricity purchase contracts [a]	**5**	**–**	17	–
Interest rate swaps [b]	**189**	**(16)**	189	–
Cross currency interest rate swaps [c]	**–**	**(259)**	11	(54)
Total derivatives designated as hedges	**194**	**(275)**	217	(54)
Derivatives not designated as hedges	**US$m**	**US$m**	US$m	US$m
Currency forward contracts, options and swaps	**13**	**–**	–	(5)
Aluminium forward contracts [d]	**5**	**(22)**	13	(20)
Aluminium options embedded in electricity purchase contracts [a]	**16**	**(1)**	15	–
Aluminium forward contracts embedded in electricity purchase contracts [a]	**357**	**(2)**	182	–
Other embedded derivatives	**21**	**–**	9	–
Other commodity contracts	**–**	**(24)**	–	(2)
Total derivatives not designated as hedges	**412**	**(49)**	219	(27)
Total derivative instruments	**606**	**(324)**	436	(81)
Analysed by maturity:				
Less than 1 year	**78**	**(41)**	43	(14)
Between 1 and 5 years	**121**	**(144)**	102	(13)
More than 5 years	**407**	**(139)**	291	(54)
Total	**606**	**(324)**	436	(81)
Total net derivative instruments	**282**		355	

Reconciliation to balance sheet	**2015 US$m**	2014 US$m
– non-current assets (note 20)	**529**	393
– current assets (note 20)	**77**	43
– current liabilities (note 22)	**(41)**	(14)
– non-current liabilities (note 22)	**(283)**	(67)
Total net derivatives instruments, detailed above	**282**	355

(a) Aluminium embedded derivatives (forward contracts and options) are contained within certain aluminium smelter electricity purchase contracts. These contracts reduce the Group's margin exposure to movements in the aluminium price.

(b) The interest rate swaps are used to convert certain fixed rate borrowings to a floating rate. For further details, see note 22.

(c) The cross currency interest rate swaps are used to convert non US dollar denominated borrowings to either fixed or floating US dollar borrowings. For further details see note 22.

(d) The aluminium forward contracts are entered into to convert aluminium sales made at a fixed price to LME cash. In 2015, US$(6) million ineffective portion arising from cash flow hedges was recognised in the income statement (2014: US$15 million).

The aluminium forward contracts which were taken out to convert aluminium sales made at a fixed price to LME cash are not designated as hedges as they largely offset.

C Fair values

The carrying amounts and fair values of all of the Group's financial instruments which are not carried at an amount which approximates their fair value at 31 December 2015 and 31 December 2014 are shown in the following table. The fair values of the Group's cash and loans to equity accounted units approximate their carrying values as a result of their short maturity or because they carry floating rates of interest.

	31 December 2015		31 December 2014	
	Carrying value US$m	**Fair value US$m**	Carrying value US$m	Fair value US$m
Short term borrowings (note 22)	**(2,253)**	**(2,255)**	(2,664)	(2,711)
Medium and long term borrowings (note 22)	**(20,810)**	**(20,302)**	(22,411)	(23,657)

Borrowings with a carrying value of US$21.3 billion (2014: US$23.2 billion) relate to listed bonds with a fair value of US$20.8 billion (2014: US$24.5 billion) and are categorised as level 1 in the fair value hierarchy. The remaining borrowings have a fair value measured by discounting estimated cash flows with an applicable market quoted yield and are categorised as level 2 in the fair value hierarchy.

C (a) Valuation hierarchy

The table below shows the financial instruments carried at fair value by valuation method at 31 December 2015:

	Total US$m	Level 1 [a] US$m	Level 2 [b] US$m	Level 3 [c] US$m	Not held at fair value US$m
Assets					
Equity shares and quoted funds (note 20)	**157**	**87**	**7**	**10**	**53**
Other investments, including loans [d] (note 20)	**206**	**99**	**–**	**71**	**36**
Trade receivables [e]	**1,370**	**–**	**12**	**–**	**1,358**
	1,733	**186**	**19**	**81**	**1,447**
Derivatives [f]					
Forward contracts: designated as hedges (Section B)	**5**	**–**	**–**	**5**	**–**
Forward contracts and option contracts, not designated as hedges (Section B)	**363**	**–**	**(7)**	**370**	**–**
Derivatives related to net debt (Section B)	**(86)**	**–**	**(86)**	**–**	**–**
	2,015	**186**	**(74)**	**456**	**1,447**

The table below shows the financial instruments carried at fair value by valuation method at 31 December 2014:

	Total US$m	Level 1 [a] US$m	Level 2 [b] US$m	Level 3 [c] US$m	Not held at fair value US$m
Assets					
Equity shares and quoted funds (note 20)	199	56	85	12	46
Other investments, including loans [d] (note 20)	287	108	–	56	123
Trade receivables [e]	2,488	12	–	–	2,476
	2,974	176	85	68	2,645
Derivatives [f]					
Forward contracts: designated as hedges (Section B)	17	–	–	17	–
Forward contracts and option contracts, not designated as hedges (Section B)	192	(2)	(3)	197	–
Derivatives related to net debt (Section B)	146	–	146	–	–
	3,329	174	228	282	2,645

(a) Valuation is based on unadjusted quoted prices in active markets for identical financial instruments. This category includes listed equity shares and other quoted funds.

(b) Valuation is based on inputs that are observable for the financial instruments which includes quoted prices for similar instruments or identical instruments in markets which are not considered to be active, or inputs, either directly or indirectly based on observable market data.

(c) Valuation is based on inputs for the asset or liability that are not based on observable market data (unobservable inputs).

(d) Other investments, including loans, comprise: cash deposits in rehabilitation funds, government bonds and royalty amounts receivable. The royalty receivables are valued based on an estimate of forward sales subject to the royalty agreement.

(e) Trade receivables includes provisionally priced receivables relating to sales contracts where selling price is determined after delivery to the customer, based on the market price at the relevant quotation point stipulated in the contract. Revenue is recognised on provisionally priced sales based on the forward selling price for the period stipulated in the contract.

(f) Level 3 derivatives consist of derivatives embedded in electricity purchase contracts linked to the LME with terms expiring between 2016 and 2030 (2014: 2015 and 2030). The embedded derivatives are measured using discounted cash flows and option model valuation techniques. Long-term embedded derivatives with a fair value of US$370 million at 31 December 2015 (2014: US$196 million) are valued using significant unobservable inputs as the term of the derivative extends beyond the forward curve for aluminium.

Aluminium prices are flatlined beyond the market forward curve and increased by projected inflation up to the date of expiry of the contract. The range of market prices are US$2,044 per metric tonne in 2026 to US$2,242 in 2030 (2014: US$2,320 per metric tonne in 2025 to US$2,578 in 2030).

The other contracts with a fair value of US$5 million at 31 December 2015 (2014: US$18 million) are categorised as level three as the market premium assumptions used represent unobservable inputs.

(g) Interest rate and currency interest rate swaps are valued using applicable market quoted swap yield curves adjusted for relevant basis and credit default spreads. Currency interest rate swap valuations also use market quoted foreign exchange rates. A discounted cash flow approach is applied to the cash flows derived from the inputs to determine fair value.

(h) There were no transfers between Level 1 and Level 2, or between Level 2 and Level 3 in the year ended 31 December 2015 or the year ended 31 December 2014.

30 Financial instruments and risk management continued

C (b) Level 3 Financial assets and Financial liabilities

The table below shows the summary of changes in the fair value of the Group's Level 3 financial assets and financial liabilities for the year ended 31 December 2015 and 31 December 2014.

	31 December 2015 Level 3 financial assets and financial liabilities	31 December 2014 Level 3 financial assets and financial liabilities
Opening balance	**282**	461
Currency translation adjustments	**(43)**	(17)
Total realised gains or (losses) included in:		
– Net operating costs	**6**	(8)
Total unrealised gains included in:		
– Net operating costs	**196**	18
Total unrealised gains or (losses) transferred into other comprehensive income	**15**	(5)
Additions	**–**	8
Disposals/maturity of financial instruments	**–**	(175)
Closing balance	**456**	282
Total (losses)/gains for the year included in the income statement for assets and liabilities held at year end	**(15)**	(11)

Sensitivity analysis in respect of Level 3 derivatives

Forward contracts and options whose carrying value are valued using unobservable inputs are calculated using appropriate discounted cashflow and option model valuation techniques. The most significant of these assumptions relate to long term pricing wherein internal pricing assumptions are used after the ten year LME curve. A ten per cent increase in long term metal pricing assumptions would result in a US$38 million (31 December 2014: US$39 million) decrease in carrying value. A ten per cent decrease in long term metal pricing assumptions would result in a US$39 million (31 December 2014: US$71 million) increase in carrying value.

31 Contingencies and commitments

	2015 US$m	2014 US$m
Capital commitments excluding the Group's share of Joint Venture Capital Commitments		
Within 1 year	**710**	1,838
Between 1 and 3 years	**98**	96
Between 3 and 5 years	**2**	23
After 5 years	**24**	30
Total	**834**	1,987
Group's share of Joint Venture Capital Commitments		
Within 1 year	**300**	782
Between 1 and 3 years	**57**	331
Total	**357**	1,113

Unrecognised commitments to contribute funding or resources to joint ventures

The Group has a commitment to purchase and market a portion (in excess of the Group's ownership interest) of the output of Sohar Aluminium Company L.C.C., an aluminium smelter in which the Group is a joint venturer. The Group immediately sells the purchased products to third parties.

For Sohar Aluminium Company L.C.C. the Group, along with the other joint venturers, has made various commitments to provide shareholder funding as required, subject to approved thresholds.

In 2014, Minera Escondida Limitada held a shareholder line of credit for US$225 million (Rio Tinto share) which was undrawn at 31 December 2014. This line of credit matured during the year ended 31 December 2015.

Operating leases

The aggregate amount of minimum lease payments under non-cancellable operating leases are as follows:

	2015 US$m	2014 US$m
Within 1 year	**400**	429
Between 1 and 3 years	**590**	690
Between 3 and 5 years	**443**	460
After 5 years	**745**	766
	2,178	2,345

Purchase obligations

The aggregate amount of future payment commitments under purchase obligations outstanding at 31 December was:

	2015 US$m	2014 US$m
Within 1 year	**2,677**	2,912
Between 1 and 2 years	**2,269**	2,434
Between 2 and 3 years	**1,856**	2,026
Between 3 and 4 years	**1,519**	1,660
Between 4 and 5 years	**1,346**	1,479
After 5 years	**12,945**	19,572
	22,612	30,083

Purchase obligations are agreements to purchase goods or services that are enforceable and legally binding and specify all significant terms, including: fixed or minimum quantities to be purchased or consumed; fixed, minimum or variable price provisions; and the approximate timing of the transactions.

Purchase obligations for goods primarily relate to purchases of raw materials and consumables and purchase obligations for services primarily relate to charges for use of infrastructure, commitments to purchase power and freight contracts. These goods and services are expected to be used in the business. To the extent that this changes a provision for onerous obligations may be made as described in note 1(i).

Purchases from joint arrangements or associates are included to the extent that the quantity purchased is in excess of Rio Tinto's ownership interest in the entity. However, purchase obligations exclude contracted purchases of bauxite, alumina and aluminium from joint arrangements and associates and contracted purchases of alumina from third parties as the purchases are made for commercial reasons and the Group is, overall, a net seller of these commodities.

In addition, as explained above, the Group has a commitment to purchase and market a portion (in excess of the Group's ownership interest) of the output of Sohar Aluminium Company L.L.C.

	2015 US$m	2014 US$m
Contingent liabilities (subsidiaries and joint operations)		
Indemnities and other performance guarantees [(a)] [(b)]	**226**	239

(a) Indemnities and other performance guarantees represent the potential outflow of funds from the Group for the satisfaction of obligations including those under contractual arrangements (for example undertakings related to supplier agreements) not provided for in the balance sheet, where the likelihood of the guarantees or indemnities being called is assessed as possible rather than probable or remote.

(b) There were no material contingent liabilities arising in relation to the Group's joint ventures and associates.

Marketing of iron ore is undertaken in the Singapore Commercial Centre by Rio Tinto Iron Ore Asia Pte Ltd (RTIOA), which is remunerated on an arm's length basis by the Group's iron ore product group. The arrangements are under review by the Australian Tax Office (ATO). Rio Tinto considers the arrangements to be in accordance with transfer pricing law, and will therefore vigorously defend its position in the event of any ATO challenge.

The Group is subject to certain legal proceedings, claims, complaints and investigations arising out of the ordinary course of business. Legal proceedings include, but are not limited to, breach of contract, breach of environmental, competition, securities and health and safety laws. The Group may not be insured fully, or at all, in respect of such risks. The Group cannot predict the outcome of individual legal actions. The Group may settle litigation or regulatory proceedings prior to a final judgment or determination of liability. The Group may do so to avoid the cost, management efforts or negative business, regulatory or reputational consequences of continuing to contest liability, even when they believe they have valid defences to liability. The Group believes that no material loss to the Group is expected to result from these legal proceedings, claims, complaints and investigations.

Guarantees by parent companies

Rio Tinto plc and Rio Tinto Limited have, jointly and severally, fully and unconditionally guaranteed the following securities issued by the following 100 per cent owned finance subsidiaries: US$17.3 billion (31 December 2014: US$18.5 billion) Rio Tinto Finance (USA) Limited and Rio Tinto Finance (USA) plc Bonds with maturity dates up to 2042; and US$2.1 billion (31 December 2014: US$2.3 billion) on the European Debt Issuance Programme. In addition, Rio Tinto Finance plc and Rio Tinto Finance Limited have entered into facility arrangements for an aggregate amount of US$7.5 billion (31 December 2014: US$7.5 billion). The facilities are guaranteed by Rio Tinto plc and Rio Tinto Limited.

Contingent assets

The Group has, from time to time various insurance claims outstanding with reinsurers. These include a claim relating to the Manefay slide at Rio Tinto Kennecott in April 2013. An interim progress payment was received on this claim in 2013 and a second in 2015. Further receipts are considered probable but the amount cannot currently be reliably estimated.

32 Average number of employees

	Subsidiaries and joint operations			Equity accounted units (Rio Tinto share)			Group total		
	2015	2014	2013	**2015**	2014	2013	**2015**	2014	2013
The principal locations of employment were:									
Australia and New Zealand	**22,125**	23,447	24,740	**863**	711	749	**22,988**	24,158	25,489
Canada	**11,113**	12,187	12,830	**–**	–	–	**11,113**	12,187	12,830
UK [(a)]	**542**	649	780	**–**	–	–	**542**	649	780
Europe [(a)]	**2,312**	2,850	3,430	**–**	88	2,427	**2,312**	2,938	5,857
Africa	**5,651**	5,699	6,787	**1,271**	1,560	1,505	**6,922**	7,259	8,292
US	**3,439**	3,503	4,039	**–**	–	285	**3,439**	3,503	4,324
Mongolia	**2,647**	3,212	3,289	**–**	–	–	**2,647**	3,212	3,289
Indonesia	**2,871**	2,959	2,467	**–**	–	–	**2,871**	2,959	2,467
South America	**192**	356	511	**1,317**	1,509	1,409	**1,509**	1,865	1,920
Other countries [(b)]	**595**	1,045	980	**–**	–	103	**595**	1,045	1,083
	51,487	55,907	59,853	**3,451**	3,868	6,478	**54,938**	59,775	66,331

(a) 2014 and 2013 comparative numbers are adjusted to conform with the 2015 presentation of Europe and the UK separately.

(b) "Other countries" primarily includes employees in the Middle East (excluding Oman), India, Singapore and other countries in Asia which are not shown separately in the table above. For the year ended 31 December 2015, the average number of employees in Singapore was 212 and the average number of employees in India was 232.

Employee numbers, which represent the average for the year, include 100 per cent of employees of subsidiary companies. Employee numbers for joint operations and equity accounted units are proportional to the Group's interest under contractual agreements. Average employee numbers include a part-year effect for companies acquired or disposed of during the year.

Part-time employees are included on a full-time-equivalent basis. Temporary employees are included in employee numbers.

People employed by contractors are not included.

33 Principal subsidiaries

At 31 December 2015

Company and country of incorporation/ operation	Principal activities	Class of shares held	Proportion of class held (%)	Group interest (%)	Non-controlling interest(%)
Australia					
Argyle Diamonds Limited	Mining and processing of diamonds	Ordinary	100	100	–
Coal & Allied Industries Limited [a]	Coal mining	Ordinary	80	80	20
Dampier Salt Limited	Salt production	Ordinary	68.36	68.36	31.64
Energy Resources of Australia Ltd	Uranium mining	Ordinary	68.39	68.39	31.61
Hamersley Iron Pty Limited	Iron ore mining	Ordinary	100	100	–
North Mining Limited [c]	Iron ore mining	Ordinary	100	100	–
Queensland Coal Pty Limited [b]	Coal mining	Ordinary	100	100	–
Rio Tinto Aluminium (Holdings) Limited	Bauxite mining; alumina production; primary aluminium smelting	Ordinary	100	100	–
Robe River Mining Co Pty Ltd [c]	Iron ore mining	Class A Class B	40 73.61	60	40
Brazil					
Alcan Alumina Ltda. [d]	Alumina production and bauxite mining	Quota	100	100	–
Canada					
Rio Tinto Canada Uranium Corporation	Uranium projects	Common	100	100	–
Iron Ore Company of Canada Inc. [e]	Iron ore mining; iron ore pellets	Common	58.72	58.72	41.28
Rio Tinto Fer et Titane Inc.	Titanium dioxide feedstock; high purity iron and steel	Common	100	100	–
		Class B preference	100	100	–
		CAD 0.01 preferred	100	100	–
Rio Tinto Alcan Inc.	Bauxite mining; alumina refining; aluminium smelting	Common	100	100	–
		Class A, B, C	100	100	–
Rio Tinto Diamonds and Minerals Canada Holding Inc. [f]	Diamond mining and processing	Class P1 preferred	100	100	–
Guinea					
Simfer Jersey Limited [g]	Iron ore project	Ordinary	53	53	47
Madagascar					
QIT Madagascar Minerals SA [h]	Ilmenite mining	Common	80	80	15
		Investment certificates	100	100	
		Voting Certificates	80	80	20
Mongolia					
Turquoise Hill Resources Ltd (including Oyu Tolgoi LLC) [i]	Copper and gold mining	Common	50.79	50.79	49.21
Namibia					
Rössing Uranium Limited [j]	Uranium mining	B N$1 C N10c	71.22 70.59	68.62	31.38
South Africa					
Richards Bay Titanium (Proprietary) Limited [k]	Titanium dioxide/high purity iron production	B Ordinary	100	74	26
		B preference	100		
		Parent Preference	100		
Richards Bay Mining (Proprietary) Limited [k]	Ilmenite, rutile and zircon mining	B Ordinary	100	74	26
		B preference	100		
		Parent Preference	100		
United States of America					
Kennecott Holdings Corporation (including Kennecott Utah Copper, Kennecott Land and Kennecott Exploration)	Copper and gold mining, smelting and refining, land development and exploration activities	Common US$0.01	100	100	–
U.S. Borax Inc.	Mining, refining and marketing of borates	Common US$0.10	100	100	–

This list includes only those companies that have a more significant impact on the profit or assets of the Group. Refer to note 47 for a list of related undertakings.

The Group's principal subsidiaries are mostly held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

33 Principal subsidiaries continued

(a) Of the Group's 80 per cent interest in Coal & Allied Industries Limited, an indirect share of 4.29 per cent is held through its investment in an equity accounted unit. Coal & Allied forms part of the Rio Tinto Coal Australia business unit.

Through a series of intermediate companies, Coal & Allied held interests in Bengalla (40 per cent, pending completion of sale to New Hope Corporation which is anticipated to be in Q1 2016), Mount Thorley (80 per cent) and Warkworth (55.6 per cent) as at 31 December 2015. The Group's beneficial interests were therefore: Bengalla: 32 per cent; Mount Thorley: 64 per cent; Warkworth: 44.5 per cent. These are unincorporated arrangements that are not entities. The Group recognises its share of assets, liabilities, revenues and expenses relating to these arrangements. Coal & Allied also owns 100 per cent of Hunter Valley Operations.

In February 2016, the restructuring of the Coal and Allied group completed. As a result Rio Tinto now has a 100 per cent shareholding in Coal & Allied Industries Limited and its wholly-owned subsidiaries and in Hunter Valley Resources Pty Ltd. Mitsubishi is now a joint venture participant in the Hunter Valley Operations Joint Venture.

(b) Queensland Coal Pty Limited is the main legal entity that holds the Group's interests in Hail Creek (82 per cent), Blair Athol (71.2 per cent) and Kestrel (80 per cent). These are unincorporated arrangements that are not entities; the Group recognises its share of assets, liabilities, revenues and expenses relating to these arrangements. Queensland Coal forms part of the Rio Tinto Coal Australia business unit.

(c) Robe River Mining Co Pty Ltd (which is 60 per cent owned by the Group) holds a 30 per cent interest in Robe River Iron Associates (Robe River). North Mining Ltd (which is wholly owned by the Group) holds a 35 per cent interest in Robe River. Through these companies the Group recognises a 65 per cent share of the assets, liabilities, revenues and expenses of Robe River, with a 12 per cent non-controlling interest. The Group therefore has a 53 per cent beneficial interest in Robe River.

(d) Alcan Alumina Ltda holds the Group's 10 per cent interest in Consórcio De Alumínio Do Maranhão, a joint operation in which the Group participates but is not a joint operator. The Group recognises its share of assets, liabilities, revenues and expenses relating to this arrangement.

(e) Iron Ore Company of Canada Inc. is incorporated in the United States of America, but operates in Canada.

(f) Rio Tinto Diamonds and Minerals Canada Holdings Inc. is the legal entity that owns the Group's 60 per cent interest in the Diavik Diamond Mine (Diavik), an unincorporated arrangement that is not an entity. The Group recognises its share of assets, liabilities, revenue and expenses relating to this arrangement.

(g) Simfer Jersey Limited, a company incorporated in Jersey in which the Group has a 53 per cent interest, has an 87.88 per cent interest in Simfer S.A. the company that operates the Simandou mining project in Guinea. The Group therefore has a 46.58 per cent indirect interest in Simfer S.A. These entities are consolidated as subsidiaries and together referred to as the Simandou iron ore project.

(h) The Group's shareholding in QIT Madagascar Minerals SA carries an 80 per cent economic interest and 80 per cent of the total voting rights; a further 5 per cent economic interest is held through non-voting investment certificates to give an economic interest of 85 per cent. The non-controlling interests have a 15 per cent economic interest and 20 per cent of the total voting rights.

(i) The Group obtained a controlling interest in Turquoise Hill Resources Ltd (formerly Ivanhoe Mines Limited) on 24 January 2012. Ivanhoe was renamed Turquoise Hill Resources Ltd (Turquoise Hill) on 2 August 2012. The Group has a 50.79 per cent interest in Turquoise Hill, which holds a 66 per cent interest in Oyu Tolgoi (OT) which is subsidiary of Turquoise Hill. The Group therefore has a 33.5 per cent indirect interest in OT. Turquoise Hill is incorporated in Canada but operates principally in Mongolia.

(j) The Group's shareholding in Rössing Uranium Limited holds 35.57 per cent of the total voting rights; the non-controlling interests hold 64.43 per cent of the total voting rights. Rössing is consolidated by virtue of the Group's board control. The Government of Namibia has the ability to veto matters that are considered not to be in the interest of Namibia, this is considered to be a protective right. Rio Tinto therefore has control of Rössing and consolidates it as a subsidiary.

(k) Additional classes of shares issued by Richards Bay Titanium (Proprietary) Limited and Richards Bay Mining (Proprietary) Limited representing non-controlling interests are not shown. The Group's total legal and beneficial interest in Richards Bay Titanium (Proprietary) Limited and Richards Bay Mining (Proprietary) Limited is 74 per cent.

Summary financial information for subsidiaries that have non-controlling interests that are material to the Group

This summarised financial information is shown on a 100 per cent basis. It represents the amounts shown in the subsidiaries' financial statements prepared in accordance with IFRS under Group accounting policies, including fair value adjustments, and before intercompany eliminations.

	Iron Ore Company of Canada 2015 US$m	Iron Ore Company of Canada 2014 US$m	**Energy Resources of Australia[c] 2015 US$m**	Energy Resources of Australia[c] 2014 US$m	**Simandou[a][c] 2015 US$m**	Simandou[a] 2014 US$m	**Turquoise Hill[b] 2015 US$m**	Turquoise Hill[b] 2014 US$m
Revenue	**1,353**	1,696	**245**	345	**–**	–	**1,636**	1,765
Profit/(loss) after tax	**(12)**	222	**(412)**	(167)	**(1,955)**	(334)	**215**	(156)
– attributable to non-controlling interests	**(4)**	93	**(132)**	(54)	**(974)**	(171)	**76**	(164)
– attributable to Rio Tinto	**(8)**	129	**(280)**	(113)	**(981)**	(163)	**139**	8
Other comprehensive loss	**(341)**	(192)	**(21)**	(38)	**–**	–	**7**	(34)
Total comprehensive (loss)/income	**(353)**	30	**(433)**	(205)	**(1,955)**	(334)	**222**	(190)
Non-current assets	**2,325**	2,944	**89**	565	**–**	1,769	**7,712**	8,337
Current assets	**412**	442	**363**	372	**18**	53	**1,728**	1,382
Current liabilities	**(261)**	(332)	**(94)**	(75)	**(78)**	(36)	**(322)**	(409)
Non-current liabilities	**(724)**	(949)	**(355)**	(427)	**(19)**	(16)	**(167)**	(595)
Net assets	**1,752**	2,105	**3**	435	**(79)**	1,770	**8,951**	8,715
– attributable to non-controlling interests	**724**	871	**1**	138	**(44)**	877	**4,075**	4,010
– attributable to Rio Tinto	**1,028**	1,234	**2**	297	**(35)**	893	**4,876**	4,705
Cashflow from operations	**206**	506	**56**	(61)	**(59)**	(98)	**658**	864
Dividends paid to non-controlling interests	**–**	(120)	**–**	–	**–**	–	**–**	–

(a) These figures represent the consolidated position of both Simfer Jersey and Simfer S.A. which together form the Simandou Iron Ore project.

(b) Turquoise Hill Resources Ltd holds controlling interests in Oyu Tolgoi. Turquoise Hill's rights issue at the beginning of 2014 increased non-controlling interests by US$1,158 million.

(c) These include impairment adjustments recognised by Rio Tinto. Refer to note 6 on page 130 for further information.

	Robe River Mining Co Pty 2015 US$m	Robe River Mining Co Pty 2014 US$m	Other companies and eliminations [c] 2015 US$m	Other companies and eliminations [c] 2014 US$m	Robe River 2015 US$m	Robe River 2014 US$m
Revenue	**976**	1,687	**1,133**	1,968	**2,109**	3,655
Profit/(loss) after tax	**615**	766	**203**	1,036	**818**	1,802
– attributable to non-controlling interests	**176**	300	**–**	–	**176**	300
– attributable to Rio Tinto	**439**	466	**203**	1,036	**642**	1,502
Other comprehensive loss	**(107)**	(364)	**(578)**	(187)	**(685)**	(551)
Total comprehensive income/(loss)	**508**	402	**(375)**	849	**133**	1,251
Non-current assets	**2,935**	4,444	**4,154**	5,296	**7,089**	9,740
Current assets	**602**	73	**(10)**	86	**592**	159
Current liabilities	**(105)**	(112)	**(247)**	(271)	**(352)**	(383)
Non-current liabilities	**(60)**	(289)	**(2,120)**	(2,969)	**(2,180)**	(3,258)
Net assets	**3,372**	4,116	**1,777**	2,142	**5,149**	6,258
– attributable to no- controlling interests	**1,347**	1,620	**–**	–	**1,347**	1,620
– attributable to Rio Tinto	**2,025**	2,496	**1,777**	2,142	**3,802**	4,638
Cashflow from operations	**798**	1,438	**733**	1,578	**1,531**	3,016
Dividends paid to non-controlling interests	**(271)**	(181)	**–**	–	**(271)**	(181)

(c) "Other companies and eliminations" includes North Mining Limited, a wholly owned subsidiary of the Group which accounts for its interest in Robe River and goodwill of US$363 million (2014: US$409 million) that arose on acquisition of the Group's interest in Robe River. During 2015 the branch of North Mining Limited and the company were combined, in 2014 only the branch of North Mining Limited is presented.

34 Principal joint operations

Company and country of incorporation/operation	Principal activities	Group interest (%)
Australia		
Tomago Aluminium Joint Venture	Aluminium smelting	51.6
Kestrel [a]	Coal mining	80
Gladstone Power Station	Power generation	42.1
Hope Downs Joint Venture	Iron ore mining	50
Queensland Alumina Limited [b] [c]	Alumina production	80
New Zealand		
New Zealand Aluminium Smelters Limited [b] [c]	Aluminium smelting	79.4
Canada		
Alouette	Aluminium production	40
Indonesia		
Grasberg expansion [d]	Copper and gold mining	40
United States of America		
Pechiney Reynolds Quebec Inc [c] [e]	Aluminium smelting	50.3

This list includes only those joint operations that have a more significant impact on the profit or operating assets of the Group. Refer to note 47 for a list of related undertakings.

The Group's joint operations are held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

(a) Although the Group has an 80 per cent interest share in the Kestrel Joint Venture, decisions about activities that significantly affect the returns that are generated require agreement of both parties to the Joint Venture Agreement, giving rise to the joint control.

(b) Although the Group has a 79.4 per cent interest in New Zealand Aluminium Smelters Limited and an 80 per cent interest in Queensland Alumina Limited, decisions about activities that significantly affect the returns that are generated require agreement of both parties to the arrangements, giving rise to joint control.

(c) Queensland Alumina Limited, New Zealand Aluminium Smelters Limited and Pechiney Reynolds Quebec Inc. are joint arrangements that are primarily designed for the provision of output to the parties sharing joint control; this indicates that the parties have rights to substantially all the economic benefits of the assets. The liabilities of the arrangements are in substance satisfied by cash flows received from the parties; this dependence indicates that the parties effectively have obligations for the liabilities. It is these facts and circumstances that give rise to the classification for these entities as joint operations.

(d) Under the terms of a contractual agreement, Rio Tinto is entitled to 40 per cent of additional material mined as a consequence of expansions and developments of the Grasberg facilities since 1998.

(e) Pechiney Reynolds Quebec Inc. has a 50.1 per cent interest in the Aluminerie de Becancour aluminium smelter, which is located in Canada.

35 Principal joint ventures

At 31 December 2015

Company and country of incorporation/operation	Principal activities	Number of shares held	Class of shares held	Proportion of class held (%)	Group interest (%)
Chile					
Minera Escondida Limitada [a]	Copper mining and refining	–	–	30	30
Oman					
Sohar Aluminium Company L.L.C. [b]	Aluminium smelting/power generation	37,500	Ordinary	20	20

This list includes only those joint ventures that have a more significant impact on the profit or operating assets of the Group. Refer to note 47 for a list of related undertakings.

The Group's principal joint ventures are held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

(a) Although the Group has a 30 per cent interest in Minera Escondida Limitada, participant and management agreements provides for an Owners' Council whereby significant commercial and operational decisions about the relevant activities that significantly affect the returns that are generated in effect require the joint approval of both Rio Tinto and BHP Billiton (holders of a 57.5 per cent interest). It is therefore determined that Rio Tinto participates in joint control.

The year-end of Minera Escondida Limitada is 30 June. The amounts included in the consolidated financial statements of Rio Tinto are, however, based on accounts of Minera Escondida Limitada that are coterminous with those of the Group.

(b) Although the Group holds a 20 per cent interest in Sohar Aluminium Company L.L.C., decisions about relevant activities that significantly affect the returns that are generated require agreement of all parties to the arrangement. It is therefore determined that Rio Tinto participates in joint control.

Summary information for joint ventures that are material to the Group

This summarised financial information is shown on a 100 per cent basis. It represents the amounts shown in the joint ventures' financial statements prepared in accordance with IFRS under Group accounting policies, including fair value adjustments and amounts due to and from Rio Tinto.

	Minera Escondida Limitada [c] 2015 US$m	Minera Escondida Limitada [c] 2014 US$m	**Sohar Aluminium Company L.L.C. [c] 2015 US$m**	Sohar Aluminium Company L.L.C. [c] 2014 US$m	**Rio Tinto Benga (Mauritius) Limited [d] 2015 US$m**	Rio Tinto Benga (Mauritius) Limited 2014 US$m
Revenue	**6,184**	7,607	**665**	675	**–**	91
Depreciation and amortisation	**(977)**	(1,027)	**(135)**	(135)	**–**	–
Other operating costs	**(3,777)**	(3,237)	**(445)**	(450)	**–**	(220)
Operating profit/(loss)	**1,430**	3,343	**85**	90	**–**	(129)
Finance expense	**(20)**	(33)	**(20)**	(20)	**–**	(11)
Income tax	**(533)**	(1,237)	**5**	(5)	**–**	–
Profit/(loss) after tax	**877**	2,073	70	65	–	(140)
Total comprehensive income/(loss)	**877**	2,073	**70**	65	**–**	(140)
Non-current assets	**13,761**	12,093	**3,400**	3,515	**–**	–
Current assets	**2,177**	2,453	**255**	270	**–**	–
Current liabilities	**(2,303)**	(1,567)	**(240)**	(330)	**–**	–
Non-current liabilities	**(2,223)**	(2,170)	**(1,480)**	(1,590)	**–**	–
Net assets	**11,412**	10,809	**1,935**	1,865	**–**	–
Assets and liabilities above include:						
Cash and cash equivalents	**197**	263	**10**	15	**–**	–
Current financial liabilities	**(1,223)**	(203)	**(170)**	(260)	**–**	–
Non-current financial liabilities	**(1,200)**	(1,060)	**(1,320)**	(1,405)	**–**	–
Dividends received from joint venture (Rio Tinto share)	**401**	251	**–**	–	**–**	–

Reconciliation of the above amounts to the Investment recognised in the Group balance sheet

Group interest	30%	30%	20%	20%	(d)	(d)
Net assets	11,412	10,809	1,935	1,865	–	–
Group's ownership interest	3,424	3,243	387	373	–	–
Other adjustments	(11)	(6)	–	–	–	–
Carrying value of Group's interest	3,413	3,237	387	373	–	–

(c) In addition to its "Investment in equity accounted unit", the Group recognises deferred tax liabilities of US$582 million (2014: US$546 million) relating to tax on unremitted earnings.

(d) On 7 October 2014, Rio Tinto completed the sale of Rio Tinto Coal Mozambique, which comprises the Benga coal mine and other projects in the Tete province of Mozambique. See note 37.

36 Principal associates

At 31 December 2015

Company and country of incorporation/operation	Principal activities	Number of shares held	Class of shares held	Proportion of class held (%)	Group interest (%)
Australia					
Boyne Smelters Limited [a]	Aluminium smelting	153,679,560	Ordinary	59.4	59.4
Brasil					
Mineração Rio do Norte S.A. [b]	Bauxite mining	25,000,000	Ordinary	12.5	12
		47,000,000	Preferred	11.8	
United States of America					
Halco (Mining) Inc	(c)	4,500	Common	45	45

This list includes only those associates that have a more significant impact on the profit or operating assets of the Group. Refer to note 47 for a list of related undertakings.

The Group's principal associates are held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

(a) The parties that collectively control Boyne Smelters Limited do so through decisions that are determined on an aggregate voting interest that can be achieved by several combinations of the parties. Although each combination requires Rio Tinto's approval, this is not joint control as defined under IFRS 11. Rio Tinto is therefore determined to have significant influence over this company.

(b) Although the Group holds only 12 per cent of Mineraçao Rio do Norte S.A., it has representation on its board of directors and a consequent ability to participate in the financial and operating policy decisions. It is therefore determined that Rio Tinto has significant influence.

(c) Halco has a 51 per cent indirect interest in Compagnie des Bauxites de Guinée, a bauxite mine, the core assets of which are located in Guinea.

Summary information for associates that are material to the Group

This summarised financial information is shown on a 100 per cent basis. It represents the amounts shown in the associate's financial statements prepared in accordance with IFRS under Group accounting policies, including amounts due to and from Rio Tinto.

	Boyne Smelters Limited [d] 2015 US$m	Boyne Smelters Limited [d] 2014 US$m
Revenue	**(10)**	–
Profit after tax	**40**	1,072
Other comprehensive loss [e]	**(91)**	(82)
Total comprehensive (loss)/income	**(51)**	990
Non-current assets [f]	**1,525**	1,813
Current assets	**64**	86
Current liabilities	**(106)**	(108)
Non-current liabilities	**(1,069)**	(1,369)
Net assets	**414**	422

(d) Boyne Smelters Limited is a tolling operation; as such it is dependent on its participants for funding which is provided through cash calls. Rio Tinto Aluminium has made certain prepayments to Boyne for toll processing of alumina. These are charged to Group operating costs as processing takes place.

(e) "Other comprehensive loss" is net of amounts recognised by subsidiaries in relation to quasi equity loans.

(f) In 2014, a post-tax impairment reversal of US$589 million was recorded. See note 6.

Group interest	**59.4%**	59.4%
Net assets	**414**	422
Group's ownership interest	**246**	251
Loans to equity accounted units	**183**	228
Carrying value of Group's interest	**429**	479

36 Principal associates continued

Summary information for joint ventures and associates that are not individually material to the Group

	Joint ventures 2015 US$m	Joint ventures 2014 US$m	**Associates 2015 US$m**	Associates 2014 US$m
Carrying value of Group's interest	**10**	403	**702**	749
Profit after tax	**–**	16	**60**	30
Other comprehensive income/(loss)	**15**	(30)	**(43)**	(14)
Total comprehensive income/(loss)	**15**	(14)	**17**	16

37 Purchases and sales of subsidiaries, joint ventures, associates and other interests in businesses

Acquisitions

There were no material acquisitions during the years ended 31 December 2015, 2014 and 2013.

2015 disposals

On 23 April 2015, Turquoise Hill Resources Ltd completed the block sale of 48.7 million common shares in SouthGobi Resources Ltd and with further divestments has reduced its interest to below 20 per cent. As at 31 December 2015 Turquoise Hill Resources Ltd's interest in SouthGobi Resources Ltd is no longer consolidated as a subsidiary and has been classified as an available for sale investment.

On 17 June 2015, Rio Tinto disposed of its 77.8 per cent interest in Murowa Diamonds and 50 per cent interest in Sengwa Colliery Ltd (Sengwa) to RZ Murowa Holdings Limited.

Rio Tinto completed the sale of ECL to Fives on 9 July 2015 and the sale of Alesa to Groupe Reel on 24 November 2015.

Disposals in the cash flow statement are presented net of cash on disposal and after adjusting for working capital and other items as specified under the relevant sale agreements.

2014 disposals

On 29 May 2014, Rio Tinto completed the sale of its 50.1 per cent interest in the Clermont Joint Venture to GS Coal for US$1,015 million (before finalisation of net debt and working capital adjustments). The net assets and liabilities of Clermont were included within assets and liabilities of disposal groups held for sale in the Group balance sheet at 31 December 2013.

On 7 October 2014, Rio Tinto completed the sale of Rio Tinto Coal Mozambique, which comprises the Benga coal mine and other projects in the Tete province of Mozambique, to International Coal Ventures Private Limited for US$50 million (before net debt and working capital adjustments).

Rio Tinto completed the sale of its 50 per cent share in Søral to Norsk Hydro Aluminium ASA on 31 October 2014 and the sale of its 46.67 per cent share in Alucam to the Government of Cameroon on 31 December 2014.

On 26 May 2014, Rio Tinto and its Simandou project partners signed an Investment Framework with the Government of Guinea and agreed to transfer an equity interest in Simfer S.A., to the state. The arrangement allows the Government of Guinea to acquire equity interests of up to 25 per cent of Simfer S.A. at a discount to fair value, and a further 10 per cent at full fair value. Arrangements to transfer an interest in a subsidiary undertaking at a discount to fair value are considered to be a share-based payment. The discount provided or value given on the 25 per cent interest in Simfer S.A. was calculated in accordance with IFRS 2 "Share-based payment" as a loss of US$230 million.

The first tranche of shares comprising 7.5 per cent non-contributory shares was transferred free of charge to the Government of Guinea on 26 May 2014. A second tranche comprising 10 per cent Ordinary Contributory Shares may be acquired at any time for a pro rata share of historical mining cost. The third tranche of shares comprising 7.5 per cent non-contributory shares may be transferred at any time after 22 April 2016 free of charge. The remaining two tranches of 5 per cent ordinary contributing chares may be acquired by the Government of Guinea at market value at any time after 22 April 2026 and 22 April 2031 respectively.

2013 disposals

On 1 December 2013, Rio Tinto completed the sale of its 80 per cent interest in Northparkes Mine to China Molybdenum Co. Ltd for consideration of US$820 million.

On 23 May 2013, the initial public offering of Constellium (formerly Alcan Engineered Products) was launched, resulting in Rio Tinto reducing its holding from 36.6 per cent to 27.5 per cent. Rio Tinto subsequently divested the remainder of its holding in two further tranches. Total consideration from these transactions was US$671 million, inclusive of a special dividend and proceeds from sale of Rio Tinto's equity shareholding, which are included within dividends from equity accounted units and sales of financial assets respectively in the Group's cash flow statement.

On 31 July 2013 Rio Tinto completed the sale of its 57.7 per cent interest in Palabora Mining Company for US$373 million. The purchaser was a consortium comprising South African and Chinese entities led by the Industrial Development Corporation of South Africa and Hebei Iron & Steel Group.

Turquoise Hill Resources Ltd, a 50.8 per cent owned subsidiary of Rio Tinto, completed the sale of its 50 per cent interest in Altynalmas Gold and 57 per cent interest in Inova Resources Limited on 29 November 2013 and 1 November 2013 respectively. Sumeru Gold B.V. (consideration paid of US$ 235 million) and Shanxi Donghui Coal Coking & Chemicals Group Co. (consideration paid of US$81 million) were the respective buyers.

On 17 July 2013, Rio Tinto completed the sale of its 100 per cent interest in the Eagle nickel-copper project to Lundin Mining Corporation for consideration of US$315 million.

38 Directors' and key management remuneration

Aggregate remuneration, calculated in accordance with the UK Companies Act 2006, of the directors of the parent companies was as follows:

	2015 US$000	Restated 2014 US$000	Restated 2013 US$000
Emoluments	**10,590**	11,090	14,061
Long-term incentive plans	**2,118**	3,444	7,225
	12,708	14,534	21,286
Pension contributions: defined contribution plans	**52**	55	108
Gains made on exercise of share options	**1**	–	5,888

The Group defines key management personnel as the directors and members of the Executive Committee. The Executive Committee comprises the executive directors, product group chief executive officers and Group executives.

The aggregate remuneration incurred by Rio Tinto plc in respect of its directors was US$6,385,000 (2014: US$6,653,000; 2013: US$11,451,000). The aggregate pension contribution to defined contribution plans was US$52,000 (2014: US$55,000; 2013: US$44,000). The aggregate remuneration, including pension contributions and other retirement benefits, incurred by Rio Tinto Limited in respect of its directors was US$6,375,000 (2014: US$9,796,000; 2013: US$6,437,000). The aggregate pension contribution to defined contribution plans was US$nil (2014: US$nil; 2013: US$64,000).

During 2015, one director (2014: one; 2013: three) accrued retirement benefits under defined benefit arrangements, and one director (2014: one; 2013: two) accrued retirement benefits under defined contribution arrangements.

Emoluments included in the table above have been translated from local currency at the average exchange rate for the year with the exception of bonus payments which, together with amounts payable under long term incentive plans, have been translated at the year-end rate.

Detailed information concerning directors' remuneration, shareholdings and options is shown in the Remuneration report, including tables 1 to 3, on pages 70 to 104.

Aggregate compensation, representing the expense recognised under IFRS, as defined in note 1, of the Group's key management, including directors, was as follows:

	2015 US$000	2014 US$000	2013 US$000
Short-term employee benefits and costs	**25,616**	30,137	30,696
Post-employment benefits	**1,049**	1,449	2,741
Share-based payments	**17,566**	19,676	26,392
	44,231	51,262	59,829

The figures shown above include employment costs which comprise social security and accident premiums in Canada, the UK and US and payroll taxes in Australia paid by the employer as a direct additional cost of hire. In total, they amount to US$2,320,000 (2014: US$2,870,000; 2013: US$2,897,000) and although disclosed here, are not included in table 1 of the Remuneration report.

More detailed information concerning the remuneration of key management is shown in the Remuneration report, including tables 1 to 3 on pages 70 to 104.

39 Auditors' remuneration

	2015 US$m	2014 US$m	2013 US$m
Group Auditors' remuneration [a]			
Audit of the company	**4.3**	4.0	3.8
Audit of subsidiaries	**10.1**	10.7	11.5
Total audit	**14.4**	14.7	15.3
Audit related assurance services	**0.9**	1.1	1.2
Other assurance services [b]	**0.9**	1.0	3.0
Total assurance services	**1.8**	2.1	4.2
Tax compliance [c]	**0.5**	0.4	0.5
Tax advisory services [c]	**0.4**	0.5	0.4
Services related to corporate finance transactions not covered above			
– services in connection with bond issues/capital raising	**0.2**	0.1	0.4
– services in connection with divestment programme	**–**	–	0.5
Other non-audit services not covered above	**1.1**	0.3	0.4
Total non-audit services	**2.2**	1.3	2.2
	18.4	18.1	21.7
Audit fees payable to other accounting firms			
Audit of the financial statements of the Group's subsidiaries	**1.9**	2.7	3.0
Fees in respect of pension scheme audits	**0.2**	0.4	0.3
	2.1	3.1	3.3

(a) The remuneration payable to PwC, the Group Auditors, is approved by the Audit committee. The committee sets the policy for the award of non-audit work to the auditors and approves the nature and extent of such work, and the amount of the related fees, to ensure that independence is maintained. The fees disclosed above consolidate all payments made to member firms of PwC by the Companies and their subsidiaries, together with the Group's share of the payments made by joint operations. Non-audit services arise largely from assurance and/or regulation related work.

(b) Other assurance services are mainly related to carve-out financial statements and sustainability assurance.

(c) "Taxation services" includes tax compliance and advisory services. Tax compliance involves the review of returns for corporation, income, sales and excise taxes. Tax advisory services include advice on non-recurring acquisitions and disposals, advice on transfer pricing and advice on employee global mobility.

40 Related-party transactions

Information about material related-party transactions of the Rio Tinto Group is set out below:

Subsidiary companies and joint operations

Details of investments in principal subsidiary companies are disclosed in note 33. Information relating to joint operations can be found in note 34.

Equity accounted units

Transactions and balances with equity accounted units are summarised below. Purchases, trade and other receivables, and trade and other payables relate largely to amounts charged by equity accounted units for toll processing of alumina and purchasing of bauxite and aluminium. Sales relate largely to sales of alumina to equity accounted units for smelting into aluminium.

Income statement items	2015 US$m	2014 US$m	2013 US$m
Purchases from equity accounted units	**(1,249)**	(1,835)	(1,953)
Sales to equity accounted units	**307**	625	1,569
Cash flow statement items	**US$m**	US$m	US$m
Net funding of equity accounted units	**11**	(117)	(88)
Balance sheet items	**US$m**	US$m	US$m
Investments in equity accounted units (note 15) [a]	**4,941**	4,868	3,957
Loans to equity accounted units (note 20)	**42**	71	94
Loans from equity accounted units (note 22)	**(37)**	(52)	(86)
Trade and other receivables: amounts due from equity accounted units (note 18)	**315**	423	615
Trade and other payables: amounts due to equity accounted units (note 25)	**(231)**	(225)	(290)

(a) Investments in equity accounted units include quasi equity loans. Further information about investments in equity accounted units is set out in notes 35 and 36.

Pension funds

Information relating to pension fund arrangements is set out in note 45.

Directors and key management

Details of directors' and key management remuneration are set out in note 38 and in the Remuneration report on pages 70 to 104.

41 Exchange rates in US$

The principal exchange rates used in the preparation of the 2015 financial statements were:

	Full-year average			Year end		
	2015	2014	2013	**2015**	2014	2013
Sterling	**1.53**	1.65	1.56	**1.48**	1.56	1.65
Australian dollar	**0.75**	0.90	0.97	**0.73**	0.82	0.89
Canadian dollar	**0.78**	0.91	0.97	**0.72**	0.86	0.94
Euro	**1.11**	1.33	1.33	**1.09**	1.22	1.38
South African rand	**0.079**	0.092	0.104	**0.064**	0.086	0.096

42 Bougainville Copper Limited (BCL)

The Group owns 53.83 per cent of the issued share capital of BCL. Mining has been suspended at the Panguna mine since 1989. Safe access by company employees has not been possible since that time and an accurate assessment of the condition of the assets cannot therefore be made. Considerable funding would be required to recommence operations to the level which applied at the time of the mine's closure in 1989. An Order of Magnitude study completed by BCL in 2013 indicated an estimated capital requirement of US$5.2 billion to reopen the mine assuming all site infrastructure is replaced. Rio Tinto does not have control over BCL under IFRS, as defined in note 1, as it does not have the current ability to direct the activities that affect its returns, being the mining and sale of ore from the Panguna mine; it is therefore not a subsidiary.

In August 2014 the Group announced a strategic review of all options in relation to the 53.83 per cent stake in BCL. That review remains ongoing.

43 Events after the balance sheet date

On January 27, 2016 the Group announced it had reached a binding agreement for the sale of its Mount Pleasant thermal coal assets to MACH Energy Australia Pty Ltd for US$224 million plus royalties.

The agreement includes a payment on completion of US$83 million, two unconditional deferred payments of US$58 million respectively payable eight and 16 months from completion, a conditional payment of US$25 million, and royalties, payable quarterly at two per cent of gross FOB revenue for coal sold from the first 625 million tonnes of run of mine coal (equivalent to 474 million tonnes of marketable reserves) when prices exceed US$72 tonne. The proceeds of the sale will be used for general corporate purposes.

The restructure of Coal & Allied Industries Limited, which was announced on 30 September 2015, completed on 3 February 2016. The restructure involved the exchange of a 32.4 per cent interest in Hunter Valley Operations mine for a 100 per cent shareholding in Coal & Allied Industries Limited. As a 100 percent owner of Coal & Allied, Rio Tinto:

- holds a 67.6 per cent interest with management rights in the Hunter Valley Operations mine;
- holds interests of 80 per cent and 55.6 per cent respectively, with management rights, in the integrated Mount Thorley and Warkworth operations;
- holds a 100 per cent interest in the Mount Pleasant project (sale agreed); and
- holds 100 percent interest in Coal & Allied Limited's wholly owned subsidiaries and in Hunter Valley.

Mitsubishi is now a joint venture participant in the Hunter Valley Operations Joint Operation.

The sale of the Bengalla coal Joint Venture in Australia to New Hope Corporation Limited for consideration of A$865 million (before net debt and working capital adjustments) completed on 1 March 2016. As a result of Rio Tinto's assumption of 100 per cent of Coal & Allied, the Group will receive all the proceeds from the sale of Bengalla.

Except as disclosed above, no significant events were identified after the balance sheet date.

44 Share based payments

Rio Tinto plc and Rio Tinto Limited have a number of share-based incentive plans, which are described in detail in the remuneration report. These plans have been accounted for in accordance with the fair value recognition provisions of IFRS 2 "Share-based Payment".

The charge that has been recognised in the income statement for Rio Tinto's share-based incentive plans, and the related liability (for cash-settled plans), is set out in the table below.

	Charge recognised for the year			Liability at the end of the year	
	2015 US$m	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m
Equity-settled plans	**128**	152	142	**–**	–
Cash-settled plans	**–**	–	–	**1**	1
Total	**128**	152	142	**1**	1

44 Share-based payments continued

The main Rio Tinto plc and Rio Tinto Limited plans are as follows:

Share Savings Plans

Awards under these plans are settled in equity and accounted for accordingly. The fair value of each award on the day of grant was estimated using a lattice-based option valuation model, including allowance for the exercise price being at a discount to market price.

Awards are no longer granted under the Share Savings Plans as these plans were replaced by the Global Employee Share Plans in 2012. Charges will continue to be incurred until prior period awards have vested.

Share Option Plans

The Group has a policy of settling awards made under the Share Option Plans in equity, although the directors at their discretion can offer a cash alternative. The awards are accounted for in accordance with the requirements applying to equity-settled, share-based payment transactions. The performance conditions in relation to total shareholder return (TSR) have been incorporated in the measurement of fair value for these awards by modelling the correlation between Rio Tinto's TSR and that of the Euromoney Global Mining Index, formerly the HSBC Global Mining Index. The relationship between Rio Tinto's TSR and the index was simulated many thousands of times to derive a distribution which, in conjunction with the lattice-based option valuation model, was used to determine the fair value of the options.

Awards are no longer granted under the Share Option Plans as the long term incentive plan arrangements have been simplified and awards are now only made under the Performance Share Plans. All charges have been incurred as the remaining unvested awards vested during 2015.

UK Share Plan (formerly the Share Ownership Plan)

The fair values of Matching and Free Shares made by Rio Tinto plc are taken to be the market value of the shares on the date of purchase. These awards are settled in equity.

Performance Share Plans

Participants are generally assigned shares in settlement of their awards and therefore the awards are accounted for in accordance with the requirements applying to equity-settled share-based payment transactions.

For the awards or parts of awards with TSR performance conditions, the fair value of the awards was calculated using a Monte Carlo simulation model taking into account the TSR performance conditions. One-third of the awards issued since 2013 must satisfy an earnings target relative to ten global mining comparators for vesting. As this is a non-market related performance condition, under IFRS 2, the fair value recognised is reviewed at each accounting date based on the directors' expectations for the proportion vesting. As at 31 December 2015 it was assumed 100 per cent of awards subject to the condition would vest. Forfeitures prior to vesting are assumed at three per cent per annum of outstanding awards (2014: three per cent per annum).

Management Share Plans

The Management Share Plans were introduced in 2007 to provide conditional share-based awards to management. The vesting of these awards is dependent on service conditions being met. In general, the awards will be settled in equity, including the dividends accumulated from date of award to vesting. The awards are accounted for in accordance with the requirements applying to equity-settled share-based payment transactions.

The fair value of each award on the day of grant is equal to the share price on the day of grant less a small adjustment for the timing of dividends. Forfeitures prior to vesting are assumed at seven per cent per annum of outstanding awards (2014: seven per cent per annum).

Bonus Deferral Plans

The Bonus Deferral Plans were originally introduced in 2009 for the mandatory deferral of the 2008 bonuses for executive directors, product group executives and for other executives. Additional Bonus Deferral Awards have been made each year since 2011 (made in respect of the 2010 bonus) for the mandatory deferral of 50 per cent of the bonuses for executive directors and product group executives and 25 per cent of the bonuses for other executives.

The vesting of these awards is dependent only on service conditions being met. In general, the awards will be settled in equity including the dividends accumulated from date of award to vesting. The awards are accounted for in accordance with the requirements applying to equity-settled share-based payment transactions. The fair value of each award on the day of grant is equal to the share price on the day of grant less a small adjustment for the timing of dividends vesting. Forfeitures prior to vesting are assumed at three per cent per annum of outstanding awards (2014: three per cent per annum).

Global Employee Share Plans

The Global Employee Share Plans were introduced in 2012. The Companies provide matching shares for each share purchased. The vesting of these matching awards is dependent on service conditions being met. These awards are settled in equity. The fair value of each matching share on the day of grant is equal to the share price on the date of purchase. Forfeitures prior to vesting are assumed at five per cent per annum of outstanding awards (2014: five per cent per annum).

Summary of options outstanding

A summary of the status of the Companies' equity-settled share option plans (Share Savings Plans and Share Option Plans) at 31 December 2015 is presented below.

Options outstanding at 31 December 2015	Number	Weighted average exercise price per option £/A$	Weighted average remaining contractual life Years	Aggregate intrinsic value 2015 US$m
Rio Tinto plc Share Savings Plan (exercise price £24 – £29)	53,375	£ 28.06	1.1	–
Rio Tinto Limited Share Savings Plan (exercise price A$55 – A$60)	141,782	A$56.97	1.1	–
Rio Tinto plc Share Option Plan (exercise price £16 – £43)	756,276	£ 31.82	4.7	1
Rio Tinto Limited Share Option Plan (exercise price A$33 – A$77)	371,353	A$54.37	2.7	1
	1,322,786			2

As at 31 December 2014 there were 2,798,923 options outstanding with an aggregate intrinsic value of US$16 million.

Options exercisable at 31 December 2015				
Rio Tinto plc Share Option Plan (exercise price £16 – £43)	756,276	£ 31.82	4.7	1
Rio Tinto Limited Share Option Plan (exercise price A$33 – A$77)	371,353	A$54.37	2.7	1
	1,127,629			2

As at 31 December 2015 and 31 December 2014, there were no options exercisable under either the Rio Tinto plc or the Rio Tinto Limited Share Savings Plans.

The Management Share Plans, Performance Share Plans, Bonus Deferral Plans, Global Employee Share Plans and UK Share Plan together represent 99 per cent (2014: 93 per cent) of the total IFRS 2 charge for Rio Tinto plc and Rio Tinto Limited plans in 2015.

Performance Share Plans

	Rio Tinto plc awards				Rio Tinto Limited awards			
	2015 Number	**Weighted average fair value at grant date 2015 £**	2014 Number	Weighted average fair value at grant date 2014 £	**2015 Number**	**Weighted average fair value at grant date 2015 A$**	2014 Number	Weighted average fair value at grant date 2014 A$
Non-vested shares at 1 January	**2,928,001**	**24.05**	3,161,952	27.91	**2,024,876**	**45.87**	2,023,519	53.29
Awarded	**912,883**	**19.59**	950,148	22.73	**523,259**	**39.28**	626,072	44.40
Forfeited	**(171,310)**	**20.04**	(230,496)	20.98	**(80,207)**	**39.44**	(127,726)	40.31
Failed performance conditions	**(175,554)**	**31.17**	(233,736)	36.33	**(109,808)**	**62.04**	(124,431)	75.65
Vested	**(505,566)**	**31.19**	(719,867)	36.27	**(309,297)**	**62.03**	(372,558)	75.66
Non-vested shares at 31 December	**2,988,454**	**21.29**	2,928,001	24.05	**2,048,823**	**41.13**	2,024,876	45.87

	2015 Number	**Weighted average share price 2015 £**	2014 Number	Weighted average share price 2014 £	**2015 Number**	**Weighted average share price 2015 A$**	2014 Number	Weighted average share price 2014 A$
Vested awards settled in shares during the year	**481,360**	**29.44**	719,867	33.24	**288,803**	**58.59**	355,548	65.98
Vested awards settled in cash during the year	**24,206**	**29.44**	–	–	**20,494**	**58.59**	17,010	65.98

In addition to the equity-settled awards shown above, there were 4,053 Rio Tinto plc cash-settled awards outstanding at 31 December 2015 (2014:1,261 Rio Tinto plc cash-settled awards outstanding). The total liability for these awards at 31 December 2015 was less than US$1 million (2014: less than US$1 million).

Management Share Plans, Bonus Deferral Plans, Global Employee Share Plans and UK Share Plan (combined)

	Rio Tinto plc awards				Rio Tinto Limited awards			
	2015 Number	**Weighted average fair value at grant date 2015 £**	2014 Number	Weighted average fair value at grant date 2014 £	**2015 Number**	**Weighted average fair value at grant date 2015 A$**	2014 Number	Weighted average fair value at grant date 2014 A$
Non-vested awards at 1 January	**2,747,346**	**31.31**	2,277,219	32.72	**2,579,081**	**59.83**	2,058,902	61.64
Awarded	**1,452,429**	**28.15**	1,420,588	31.87	**1,352,526**	**56.37**	1,357,091	61.74
Forfeited	**(239,018)**	**29.41**	(191,039)	30.67	**(200,278)**	**57.48**	(206,134)	58.86
Vested	**(749,030)**	**32.51**	(759,422)	36.70	**(737,933)**	**61.19**	(630,778)	70.93
Non-vested shares at 31 December	**3,211,727**	**29.70**	2,747,346	30.89	**2,993,396**	**58.09**	2,579,081	59.83
Comprising of:								
– Management Share Plan	**1,778,043**	**29.62**	1,807,727	32.16	**1,629,390**	**58.09**	1,638,119	59.46
– Bonus Deferral Plan	**274,965**	**29.99**	202,651	33.58	**211,341**	**59.78**	199,724	58.24
– Global Employee Share Plan	**1,078,327**	**29.72**	693,230	31.57	**1,152,665**	**57.79**	741,238	61.08
– UK Share Plan	**80,392**	**30.17**	43,738	31.82				

	2015 Number	**Weighted average fair value at grant date 2015 £**	2014 Number	Weighted average fair value at grant date 2014 £	**2015 Number**	**Weighted average fair value at grant date 2015 A$**	2014 Number	Weighted average fair value at grant date 2014 A$
Vested awards settled in shares during the year (including dividend shares applied on vesting)								
– Management Share Plan	**633,690**	**27.14**	631,359	31.84	**564,679**	**53.44**	461,835	63.70
– Bonus Deferral Plan	**126,997**	**22.57**	144,916	29.44	**121,205**	**45.21**	128,528	58.48
– Global Employee Share Plan	**68,422**	**24.91**	42,910	31.10	**76,446**	**52.93**	32,780	60.70
– UK Share Plan	**4,687**	**25.25**	4,096	32.77				

In addition to the equity-settled awards shown above, there were 26,576 Rio Tinto plc and 7,684 Rio Tinto Limited cash-settled awards outstanding at 31 December 2015 (2014: 16,985 Rio Tinto plc cash-settled awards outstanding). The total liability for these awards at 31 December 2015 was less than US$1 million (2014: less than US$1 million).

45 Post-retirement benefits

Description of plans

The Group operates a number of pension and post-retirement healthcare plans around the world. Some of these plans are defined contribution and some are defined benefit, with assets held in separate trusts, foundations and similar entities.

Defined benefit pension and post-retirement healthcare plans expose the Group to a number of risks:

Uncertainty in benefit payments	The value of the Group's liabilities for post-retirement benefits will ultimately depend on the amount of benefits paid out. This in turn will depend on the level of future pay increases, the level of inflation (for those benefits that are subject to some form of inflation protection) and how long individuals live.
Volatility in asset values	The Group is exposed to future movements in the values of assets held in pension plans to meet future benefit payments.
Uncertainty in cash funding	Movements in the values of the obligations or assets may result in the Group being required to provide higher levels of cash funding, although changes in the level of cash required can often be spread over a number of years. In some countries control over the rate of cash funding or over the investment policy for pension assets might rest to some extent with a trustee body or other body that is not under the Group's direct control. In addition the Group is also exposed to adverse changes in pension regulation.

For these reasons the Group has a policy of moving away from defined benefit pension provision and towards defined contribution arrangements instead. The defined benefit pension plans for salaried employees are closed to new entrants in almost all countries. For unionised employees, some plans remain open.

The Group does not usually participate in multi-employer plans in which the risks are shared with other companies using those plans. The Group's participation in such plans is immaterial and consequently no detailed disclosures are provided in this note.

Pension plans

The majority of the Group's defined benefit pension obligations are in Canada, the UK, the US, Switzerland and the Eurozone.

In Canada the benefits for salaried staff are generally linked to final average pay and are closed to new entrants. Benefits for bargaining employees are reviewed in negotiation with unions and are typically either linked to final average pay or to a flat monetary amount per year of service. Some of these plans have been closed to new entrants but some remain open at present. During 2015 agreement was reached with the unions to close the largest plan to new entrants with effect from dates in 2016 and 2017. New employees will instead join an arrangement which is defined contribution from the Group's perspective, with any required additional funding being provided by employees. The plans are subject to the regulatory requirements that apply to Canadian pension plans in the relevant provinces and territories (predominantly Quebec). Pension Committees are responsible for ensuring that the plans operate in a manner that is compliant with the relevant regulations. The Pension Committees generally have a number of members appointed by the sponsor and a number appointed by the plan participants. In some cases there is also an independent Committee member.

The defined benefit sections of the UK arrangements are linked to final pay and are closed to new members. New employees are admitted to defined contribution sections. The plans are subject to the regulatory requirements that apply to UK pension plans. Trustees are responsible for ensuring that the plans operate in a manner that is compliant with UK regulations. Trustee boards have a number of directors appointed by the sponsor and a number appointed by the plan participants. In some cases there is also an independent trustee director.

A number of defined benefit pension plans are sponsored by the US entities. Benefits for salaried staff are generally linked to final average pay and closed to new entrants, while benefits for bargaining employees are reviewed in negotiation with unions and are typically a flat monetary amount per year of service. A Benefits Governance Committee is responsible for ensuring that the plans are compliant with US regulations. Members of that Committee are appointed by the sponsor.

In Europe, there are defined benefit plans in Switzerland, the Netherlands, Germany and France. The largest single plan is in Switzerland and provides benefits linked to final average pay. The Swiss plan is overseen by a Foundation Board which is responsible for ensuring that the plan complies with Swiss regulations. Foundation Board members are appointed by the plan sponsor, by employees and by retirees.

In Australia, the main arrangements are principally defined contribution in nature but there are sections providing defined benefits linked to final pay, typically paid in lump sum form. The defined benefit sections are closed to new entrants.

The Group also operates a number of unfunded defined benefit plans, which are included in the figures below.

Post-retirement healthcare plans

Certain subsidiaries of the Group, mainly in the US and Canada, provide health and life insurance benefits to retired employees and in some cases to their beneficiaries and covered dependants. Eligibility for cover is dependent upon certain age and service criteria. These arrangements are generally unfunded, and are included in the figures below.

Plan assets

The assets of the pension plans are invested predominantly in a diversified range of equities, bonds and property. Consequently, the funding level of the pension plans is affected by movements in the level of equity markets and also by movements in interest rates. The Group monitors its exposure to changes in interest rates and equity markets and also measures its balance sheet pension risk using a value at risk approach. These measures are considered when deciding whether significant changes in investment strategy are required. Asset-liability studies are conducted on a periodic basis for the main pension plans to determine the optimal investment mix bearing in mind the Group's tolerance for risk, the risk tolerance of the local sponsor companies and the views of the pension committees and trustee boards who are legally responsible for the investments of the plans. In Canada, the UK and Switzerland the Group works with the trustees to ensure that the investment policy adopted is consistent with the Group's tolerance for risk. In the US the Group has direct control over the investment policy, subject to the local investment regulations.

The proportions of the total fair value of assets in the pension plans for each asset class at the balance sheet date were:

	2015		2014	
Equities	***37.7%***		*39.1%*	
– Quoted		**33.3%**		35.4%
– Private		**4.4%**		3.7%
Bonds	***48.0%***		*46.9%*	
– Government fixed income		**13.5%**		13.6%
– Government inflation-linked		**12.8%**		11.8%
– Corporate and other publicly quoted		**20.8%**		20.7%
– Private		**0.9%**		0.8%
Property	***10.8%***		*10.1%*	
– Quoted property funds		**6.5%**		6.0%
– Unquoted property funds		**4.3%**		4.0%
– Directly held property		**0.0%**		0.1%
Qualifying insurance policies	***0.6%***		*0.5%*	
Cash & other	***2.9%***		*3.4%*	
	100.0%		*100.0%*	

The assets of the plans are managed on a day-to-day basis by external specialist fund managers. These managers may invest in the Group's securities subject to limits imposed by the relevant fiduciary committees and local legislation. The approximate total holding of Group securities within the plans is US$23 million (2014: US$22 million).

The holdings of quoted equities are invested either in pooled funds or segregated accounts held in the name of the relevant pension funds. These equity portfolios are well diversified in terms of the geographic distribution and market sectors.

The holdings of government bonds are generally invested in the debt of the country in which a pension plan is situated. Corporate and other quoted bonds are usually of investment grade. Private debt is mainly in North America.

The quoted property funds are invested in a diversified range of properties.

The holdings of Cash & other are predominantly cash and short-term money market instruments.

Investments in private equity, private debt, and property are less liquid than the other investment classes listed above and therefore the Group's investment in those asset classes is restricted to a level that does not endanger the liquidity of the pension plans.

The Group does not currently utilise derivatives to manage risk in its pension plans. However, fund managers may use derivatives to hedge currency movements within their portfolios and, in the case of bond managers, to take positions that could be taken using direct holdings of bonds but more efficiently.

Maturity of defined benefit obligations

An approximate analysis of the maturity of the obligations is given in the table below:

	Pension benefits	Other benefits	**2015 Total %**	2014 Total %	2013 Total %
Proportion relating to current employees	22%	21%	**22%**	25%	25%
Proportion relating to former employees not yet retired	12%	2%	**11%**	11%	11%
Proportion relating to retirees	66%	77%	**67%**	64%	64%
Total	100%	100%	**100%**	100%	100%
Average duration of obligations (years)	13.5	12.6	**13.4**	13.9	13.3

Geographical distribution of defined benefit obligations

An approximate analysis of the geographic distribution of the obligations is given in the table below:

	Pension benefits	Other benefits	**2015 Total %**	2014 Total %	2013 Total %
Canada	44%	44%	**44%**	46%	45%
UK	31%	2%	**29%**	27%	27%
US	13%	53%	**15%**	15%	14%
Switzerland	6%	0%	**6%**	5%	6%
Eurozone	4%	0%	**4%**	4%	5%
Australia	1%	0%	**1%**	2%	2%
Other	1%	1%	**1%**	1%	1%
Total	100%	100%	**100%**	100%	100%

45 Post-retirement benefits continued

Total expense recognised in the income statement

	Pension benefits	Other benefits	**2015 Total US$m**	2014 Total US$m	2013 Total US$m
Current employer service cost for defined benefit plans	(173)	(11)	**(184)**	(196)	(284)
Past service income	116	28	**144**	66	1
Curtailment gains/(losses)	5	8	**13**	(1)	44
Settlement gains	11	–	**11**	22	2
Net interest on net defined benefit liability	(77)	(36)	**(113)**	(133)	(209)
Non-investment expenses paid from the plans	(21)	–	**(21)**	(19)	(22)
Total defined benefit expense	(139)	(11)	**(150)**	(261)	(468)
Current employer service cost for defined contribution and industry-wide plans	(287)	(2)	**(289)**	(329)	(337)
Total expense recognised in the income statement	(426)	(13)	**(439)**	(590)	(805)

The above expense amounts are included as an employee cost within net operating costs. In 2015, US$nil (pre-tax) of curtailment and settlement gains have been excluded from underlying earnings (2014: US$2 million, 2013: US$21 million, both relating to divestments).

The curtailments shown in the table above relate primarily to headcount reductions at various operations and divestments during 2015 and previous years. The settlement gains in 2015, 2014 and 2013 relate mainly to an exercise in the US in which deferred vested participants were offered a one-time lump sum payment in place of their future pension payments. The pension and other benefits past service income in 2015 relate to design changes in Canada and to changes to post-retirement medical plans in the US. The past service income during 2014 relates to design changes to post-retirement medical plans in the US.

Total amount recognised in other comprehensive income before tax

	2015 US$m	2014 US$m	2013 US$m
Actuarial gains/(losses)	**548**	(1,853)	1,092
Return on assets (net of interest on assets)	**79**	1,127	1,212
Loss on application of asset ceiling	**(8)**	(9)	(44)
Total gain/(loss) recognised in other comprehensive income	**619**	(735)	2,260

Amounts recognised in the balance sheet

The following amounts were measured in accordance with IAS 19 at 31 December:

	Pension benefits	Other benefits	**2015 Total US$m**	2014 Total US$m
Total fair value of plan assets	13,642	–	**13,642**	15,219
Present value of obligations – funded	(14,443)	–	**(14,443)**	(16,869)
Present value of obligations – unfunded	(818)	(862)	**(1,680)**	(2,030)
Present value of obligations – total	(15,261)	(862)	**(16,123)**	(18,899)
Effect of asset ceiling	(49)	–	**(49)**	(53)
Net deficit to be shown in the balance sheet	(1,668)	(862)	**(2,530)**	(3,733)
Comprising:				
– Deficits	(2,260)	(862)	**(3,122)**	(4,086)
– Surpluses	592	–	**592**	353
Net deficits on pension plans	(1,668)	–	**(1,668)**	(2,686)
Unfunded post-retirement healthcare obligation	–	(862)	**(862)**	(1,047)

The surplus amounts shown above are included in the balance sheet as Trade and other receivables. See note 18.

Deficits are shown in the balance sheet within Provisions (including post-retirement benefits). See note 26.

Funding policy and contributions to plans

The Group reviews the funding position of its major pension plans on a regular basis and considers whether to provide funding above the minimum level required in each country. In Canada and the US the minimum level is prescribed by legislation. In the UK and Switzerland the minimum is negotiated with the local trustee or foundation in accordance with the funding guidance issued by the local regulators. In deciding whether to provide funding above the minimum level the Group takes into account other possible uses of cash within the Group, the tax situation of the local sponsoring entity and any strategic advantage that the Group might obtain by accelerating contributions. The Group does not generally pre-fund post-retirement healthcare arrangements.

	Pension benefits	Other benefits	**2015 Total US$m**	2014 Total US$m	2013 Total US$m
Contributions to defined benefit plans	270	58	**328**	353	734
Contributions to defined contribution plans	270	2	**272**	310	317
Contributions to industry-wide plans	17	–	**17**	19	20
Total	557	60	**617**	682	1,071

Contributions to defined benefit pension plans are kept under regular review and actual contributions will be determined in line with the Group's wider financing strategy, taking into account relevant minimum funding requirements. As contributions to many plans are reviewed on at least an annual basis, the contributions for 2016 and subsequent years cannot be determined precisely in advance. Contributions to defined benefit pension plans for 2016 are estimated to be around US$280 million but may be higher or lower than this. Healthcare plans are generally unfunded and contributions for future years will be equal to benefit payments net of participant contributions. The Group's contributions are expected to be similar to the amounts paid in 2015.

Movements in the net defined benefit liability

A summary of the movement in the net defined benefit liability is shown in the first table below. The subsequent tables provide a more detailed analysis of the movements in the present value of the obligations, the fair value of assets and the effect of the asset ceiling.

The amounts shown below include, where appropriate, 100 per cent of the costs, contributions, gains and losses in respect of employees who participate in the plans and who are employed in associates and joint arrangements. Consequently, the costs, contributions, gains and losses may not correspond directly to the amounts disclosed above in respect of the Group. Defined contribution plans and industry-wide plans are excluded from the movements below.

	Pension benefits	Other benefits	**2015 Total US$m**	2014 Total US$m
Change in the net defined benefit liability				
Net defined benefit liability at the start of the year	(2,686)	(1,047)	**(3,733)**	(3,309)
Amounts recognised in Income	(139)	(11)	**(150)**	(261)
Amounts recognised in Other comprehensive income	562	57	**619**	(735)
Employer contributions	270	58	**328**	353
Arrangements divested	25	–	**25**	13
Currency exchange rate movements	300	81	**381**	206
Net defined benefit liability at the end of the year	(1,668)	(862)	**(2,530)**	(3,733)

	Pension benefits	Other benefits	**2015 Total US$m**	2014 Total US$m
Change in present value of obligation				
Present value of obligation at the start of the year	(17,852)	(1,047)	**(18,899)**	(18,792)
Current employer service costs	(173)	(11)	**(184)**	(196)
Past service income	116	28	**144**	66
Curtailments	5	8	**13**	(1)
Settlements	52	–	**52**	326
Interest on obligation	(579)	(36)	**(615)**	(783)
Contributions by plan participants	(25)	(3)	**(28)**	(37)
Benefits paid	934	61	**995**	1,042
Experience gain	77	30	**107**	56
Changes in financial assumptions gain/(loss)	423	23	**446**	(1,718)
Changes in demographic assumptions (loss)/gain	(9)	4	**(5)**	(191)
Arrangements divested	46	–	**46**	58
Currency exchange rate gain	1,724	81	**1,805**	1,271
Present value of obligation at the end of the year	(15,261)	(862)	**(16,123)**	(18,899)

	Pension benefits	Other benefits	**2015 Total US$m**	2014 Total US$m
Change in plan assets				
Fair value of plan assets at the start of the year	15,219	–	**15,219**	15,527
Settlements	(41)	–	**(41)**	(304)
Interest on assets	506	–	**506**	655
Contributions by plan participants	25	3	**28**	37
Contributions by employer	270	58	**328**	353
Benefits paid	(934)	(61)	**(995)**	(1,042)
Non-investment expenses	(21)	–	**(21)**	(19)
Return on plan assets (net of interest on assets)	79	–	**79**	1,127
Arrangements divested	(21)	–	**(21)**	(45)
Currency exchange rate loss	(1,440)	–	**(1,440)**	(1,070)
Fair value of plan assets at the end of the year	13,642	–	**13,642**	15,219

45 Post-retirement benefits continued

	Pension benefits	Other benefits	**2015 Total US$m**	2014 Total US$m
Change in the effect of the asset ceiling				
Effect of the asset ceiling at the start of the year	(53)	–	**(53)**	(44)
Interest on the effect of the asset ceiling	(4)	–	**(4)**	(5)
Movement in the effect of the asset ceiling	(8)	–	**(8)**	(9)
Currency exchange rate gain	16	–	**16**	5
Effect of the asset ceiling at the end of the year	(49)	–	**(49)**	(53)

In determining the extent to which the asset ceiling has an effect, the Group considers the funding legislation in each country and the rules specific to each pension plan. The calculation takes into account any minimum funding requirements that may be applicable to the plan, whether any reduction in future Group contributions is available, and whether a refund of surplus may be available. In considering whether any refund of surplus is available the Group considers the powers of trustee boards and similar bodies to augment or wind up a plan. Where such powers are unilateral, the Group does not consider a refund to be available at the end of the life of a plan. Where the plan rules and legislation both permit the employer to take a refund of surplus, the asset ceiling may have no effect, although it may be the case that a refund will only be available many years in the future.

Main assumptions (rates per annum)

The main assumptions for the valuations of the plans under IAS 19 are set out below:

	Canada	UK	US	Switzerland	Eurozone	Australia	Other (mainly Africa)[a]
At 31 December 2015							
Discount rate	3.9%	3.7%	4.2%	0.8%	2.1%	4.0%	10.7%
Inflation[b]	1.7%	3.0%	2.1%	1.1%	1.7%	2.1%	8.5%
Rate of increase in pensions	0.4%	2.6%	–	0.0%	1.6%	2.1%	8.5%
Rate of increase in salaries	3.0%	3.7%	3.6%	2.1%	2.3%	4.0%	10.5%
At 31 December 2014							
Discount rate	3.9%	3.4%	3.8%	0.9%	1.8%	2.7%	9.0%
Inflation[b]	1.8%	3.0%	2.1%	1.3%	1.7%	2.1%	7.1%
Rate of increase in pensions	0.7%	2.6%	–	0.0%	1.5%	2.1%	7.1%
Rate of increase in salaries	3.1%	3.8%	3.6%	2.3%	2.1%	4.0%	9.1%

(a) The assumptions vary by location for the "Other" plans. Assumptions shown are for Southern Africa.

(b) The inflation assumption shown for the UK is for the Retail Price Index. The assumption for the Consumer Price Index at 31 December 2015 was 2.0 per cent (2014: 2.0 per cent).

The main financial assumptions used for the healthcare plans, which are predominantly in the US and Canada, were: discount rate: 4.1 per cent (2014: 3.9 per cent); medical trend rate: 8.4 per cent reducing to 5.1 per cent by the year 2023 broadly on a straight line basis (2014: 6.7 per cent, reducing to 5.1 per cent by the year 2022); claims costs based on individual company experience.

For both the pension and healthcare arrangements the post-retirement mortality assumptions allow for future improvements in longevity. The mortality tables used imply that a man aged 60 at the balance sheet date has a weighted average expected future lifetime of 26 years (2014: 26 years) and that a man aged 60 in 2035 would have a weighted average expected future lifetime of 28 years (2014: 28 years).

Sensitivity

The values reported for the defined benefit obligations are sensitive to the actuarial assumptions used for projecting future benefit payments and discounting those payments. In order to estimate the sensitivity of the obligations to changes in assumptions, we calculate what the obligations would be if we were to make small changes to each of the key assumptions in isolation. The difference between this figure and the figure calculated using our stated assumptions is an indication of the sensitivity to changes in each assumption. The results of this sensitivity analysis are summarised in the table below. Note that this approach is valid for small changes in the assumptions but will be less accurate for larger changes in the assumptions. The sensitivity to inflation includes the impact on pension increases, which are generally linked to inflation where they are granted.

Assumption	Change in assumption	2015 Approximate (increase)/decrease in obligations Pensions US$m	2015 Approximate (increase)/decrease in obligations Other US$m	2014 Approximate (increase)/decrease in obligations Pensions US$m	2014 Approximate (increase)/decrease in obligations Other US$m
Discount rate	increase of 0.5 percentage points	**960**	**50**	1,166	63
	decrease of 0.5 percentage points	**(1,025)**	**(54)**	(1,250)	(68)
Inflation	increase of 0.5 percentage points	**(505)**	**(17)**	(653)	(23)
	decrease of 0.5 percentage points	**481**	**14**	620	20
Salary increases	increase of 0.5 percentage points	**(77)**	**(2)**	(100)	(2)
	decrease of 0.5 percentage points	**75**	**2**	97	2
Demographic – allowance for future improvements in longevity	Participants assumed to have the mortality rates of individuals who are one year older	**435**	**15**	477	18
	Participants assumed to have the mortality rates of individuals who are one year younger	**(435)**	**(15)**	(477)	(18)
Medical costs trend rates	increase of 1.0 percentage points	**–**	**(31)**	–	(41)
	decrease of 1.0 percentage points	**–**	**26**	–	35

Information on the sensitivity of the Group's earnings to the main assumptions is set out in note 1 (Critical accounting policies and estimates section (x)) on page 124.

46 Rio Tinto Limited parent company disclosures

As at 31 December	2015 A$m	2014 A$m
Assets		
Current assets	**6,034**	16,523
Non-current assets	**11,525**	11,302
Total assets	**17,559**	27,825
Liabilities		
Current liabilities	**(616)**	(8,230)
Non-current liabilities	**(4,833)**	(38)
Total liabilities	**(5,449)**	(8,268)
Net assets	**12,110**	19,557
Shareholders' equity		
Share capital	**4,004**	4,113
Other reserves	**373**	377
Retained earnings	**7,733**	15,067
Total equity	**12,110**	19,557
Profit of the parent company	**6,532**	9,121
Total comprehensive income of the parent company	**6,532**	9,122

Prepared under Australian Accounting Standards (AAS). In relation to Rio Tinto Limited there are no significant measurement differences between AAS and IFRS as defined in note 1.

Rio Tinto Limited guarantees

Rio Tinto Limited provides a number of guarantees in respect of Group companies.

Rio Tinto plc and Rio Tinto Limited have jointly guaranteed the Group's external listed debt under the US Shelf Programme, European Debt Issuance Programme and Commercial Paper Programme which totalled A$26.6 billion at 31 December 2015 (31 December 2014: A$25.4 billion); in addition these entities also jointly guarantee the Group's undrawn credit facility which was A$10.3 billion at 31 December 2015 (31 December 2014: A$9.1 billion).

Rio Tinto Limited has guaranteed external debt held by Rio Tinto Group entities which totalled A$0.1 billion at 31 December 2015 (31 December 2014: A$0.1 billion) and provided guarantees in respect of certain derivative contracts which were in a liability position of A$18 million at 31 December 2015 (31 December 2014: A$6 million).

In addition, Rio Tinto Limited has provided a guarantee of certain obligations of Rio Tinto Finance Limited, a wholly owned subsidiary.

Pursuant to the DLC Merger, both Rio Tinto plc and Rio Tinto Limited issued deed poll guarantees by which each company guaranteed contractual obligations incurred by the other or guaranteed by the other.

47 Related undertakings

The following tables outline the Group's subsidiaries, associated undertakings and joint ventures as defined in Regulation 7 of the UK Companies Act 2006. All subsidiaries are included in the Group consolidation.

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
1043802 Ontario Ltd; – Canada	CAD Ordinary shares	100
46106 YUKON INC; – Canada	CAD Common shares	100
46117 YUKON INC.; Canada	CAD Common shares	100
	CAD Preferred shares	100
535630 YUKON INC.; Canada	CAD Common shares	100
	CAD Preferred shares	100
7999674 CANADA INC.; Canada	CAD Common shares	100
9230556 CANADA INC.; Canada	CAD Common shares	100
	CAD Preferred shares	100
9539549 CANADA INC.; Canada	US$ Common shares	100
AGM Holding Company Pte Ltd; Singapore	US$ Ordinary shares	100
Alcan Alumina Ltda.; Brazil	BRL1.00 Quota shares	100
Alcan Aluminium UK Limited; United Kingdom	£1.00 Ordinary shares	100
Alcan Asia Limited; Hong Kong	HKD Ordinary shares	100
Alcan Betriebs- und Verwaltungsgesellschaft GmbH; Germany	€51.13 Ordinary shares	100
Alcan Chemicals Limited; United Kingdom	£1.00 Ordinary shares	100
Alcan Composites Brasil Ltda; Brazil	BRL0.01 Ordinary shares	100
Alcan Corporation; United States	US$0.01 Ordinary shares	100
Alcan Farms Limited; United Kingdom	£1.00 Ordinary shares	100
Alcan Finances USA LLC; United States	US$1,000.00 Ordinary shares	100
Alcan Gove Development Pty Limited; Australia	AUD Ordinary shares	100
Alcan Gove Pty Limited; Australia	AUD Class A Shares	100
	AUD Class B Shares	100
Alcan Gove Superannuation Pty Limited; Australia	AUD Ordinary shares	100
Alcan Holdings Australia Pty Limited; Australia	AUD Class A Shares	100
	AUD Ordinary shares	100
Alcan Holdings Europe B.V.; Netherlands	€455.00 Ordinary shares	100
Alcan Holdings Nederland B.V.; Netherlands	€4,555.00 Ordinary shares	100
Alcan Holdings Switzerland AG (SA/Ltd.); Switzerland	CHF0.01 Registered Shares	100
Alcan International Network U.S.A. Inc.; United States	US$ Ordinary shares	100
Alcan Lebensmittelverpackungen GmbH; Germany	€51.12918 Ordinary shares	100
Alcan Management Services (Shanghai) Co., Ltd.; China	US$ Ordinary shares	100
Alcan Management Services Canada Limited/Societe de Services de Gestion Alcan Canada Limitee; Canada	CAD Ordinary shares	100
Alcan Northern Territory Alumina Pty Limited; Australia	AUD Ordinary shares	100
Alcan Packaging Canada Limited; Canada	CAD0.11 Ordinary shares	100
Alcan Packaging Mühltal Gmbh & Co. KG; Germany	€51.129188 Ordinary shares	100
Alcan Primary Metal Australia Pty Ltd; Australia	AUD Ordinary shares	100
Alcan Primary Products Company LLC; United States	US$ Units shares	100
Alcan Primary Products Corporation; United States	US$0.01 Ordinary shares	100
Alcan Realty Limited/Societe Immobiliere Alcan Limitee; Canada	CAD Ordinary shares	100
Alcan South Pacific Pty Ltd; Australia	AUD Ordinary shares	100
Alcan Trading AG (SA/Ltd.); Switzerland	CHF1,000.00 Registered shares	100
Aluminium & Chemie Rotterdam B.V.; Netherlands	€4,555.00 Ordinary shares	65.8
Aluminium Dunkerque; France	€16.00 Ordinary shares	100
Aluminium Pechiney; France	€16.00 Ordinary shares	100
Aluminum Company of Canada Limited/Aluminium du Canada Limitee; Canada	CAD Ordinary shares	100
Alusuisse Servicios S.A., Panama; Panama	PAB1.00 Ordinary shares	100
Alusuisse Servicios S.A., Venezuela; Venezuela, Bolivarian Republic of	VEB1.00 Ordinary shares	100
AML Exploration Pty Limited; Australia	AUD Ordinary shares	100
AML Properties Pty Ltd; Australia	AUD Ordinary shares	100
Anglesey Aluminium Limited; United Kingdom	£1.00 Ordinary shares	100

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Anglesey Aluminium Metal Limited; United Kingdom	£1.00 Ordinary shares	100
AP Service; France	€15.00 Ordinary shares	100
Aquatic Holdings (Mauritius) Limited; Mauritius	US$1.00 Ordinary shares	100
Argyle Diamond Mines Pty Limited; Australia	AUD Ordinary shares	100
Argyle Diamonds (2013) Ltd; Australia	AUD Ordinary shares	100
Argyle Diamonds Limited; Australia [a]	AUD Class A shares	100
	AUD Class B Shares	100
Ashton Canada Pty Limited; Australia	AUD Ordinary shares	100
Ashton Mining Pty Ltd; Australia	AUD Ordinary shares	100
Ashton Nominees Pty Limited; Australia	AUD Ordinary shares	100
Asia Gold Mongolia LLC; Mongolia	MNT1,250.00 Common shares	100
Asia Naran Bulag LLC; Mongolia	MNT1,000.00 Common shares	100
Australian Coal Holdings Pty. Limited; Australia [a]	AUD A shares	100
Australian Coal Resources Limited; Australia	AUD Ordinary shares	100
Australian Mining & Smelting Pty Ltd; Australia [a]	AUD Ordinary shares	100
Balkhash Saryshagan LLP; Kazakhstan [c]	–	–
Baume Pty. Limited; Australia [a]	AUD Ordinary shares	100
Beasley River Management Pty Limited; Australia	AUD Ordinary shares	100
Beasley River Marketing Pty Ltd; Australia	AUD A Class Shares	100
Beasley River Mining Pty Limited; Australia	AUD Ordinary shares	100
Bektau B.V.; Netherlands	€200.00 Ordinary shares	75
Black Hill Land Pty Ltd; Australia	AUD Ordinary shares	100
Blair Athol Coal Pty. Ltd.; Australia	AUD Ordinary shares	100
	AUD Ordinary shares	100
	AUD Ordinary shares	100
Blair Athol Joint Venture; Australia [c]	–	–
Borax España, S.A.; Spain	€150.00 Ordinary shares	100
Borax Europe Limited; United Kingdom	£0.25 Ordinary shares	100
Borax Francais; France	€2.75 Ordinary shares	100
Borax Malaysia Sdn Bhd; Malaysia	RM1.00 Ordinary shares	100
Borax Rotterdam N.V.; Netherlands	€453.78 Ordinary shares	100
Bougainville Copper Foundation Ltd; Papua New Guinea	PGK1.00 Ordinary shares	100
Bougainville Copper Limited; Papua New Guinea	PGK1.00 Ordinary shares	53.8
Boyne Smelters Limited; Australia	AUD A1 Class shares	100
	AUD A2 Class shares	100
	AUD B1 Class shares	100
British Alcan Aluminium Plc; United Kingdom	£1.00 Ordinary shares	100
British Alcan Overseas Investments Limited; United Kingdom	£1.00 Ordinary shares	100
Canning Resources Pty Limited; Australia [a]	AUD Ordinary shares	100
Cape Bougainville Joint Venture; Australia [c]		–
Capricorn Diamonds Investments Pty Limited; Australia	AUD Ordinary shares	100
Carbone Savoie; France	€7.70 Ordinary shares	100
Carol Lake Company Ltd.; Canada	CAD100.00 Ordinary shares	100
Carrier Holdings Limited; Mauritius	US$1.00 Management Share shares	100
	US$1.00 Ordinary shares	100
Catherine Hill Bay Land Pty Ltd; Australia	AUD Ordinary shares	100
Cathjoh Holdings Pty Limited; Australia	AUD Ordinary shares	100
Champlain Reinsurance Company Ltd.; Switzerland	CHF1.23 Registered Shares	100
Channar Finance Limited; Australia	AUD Class B shares	100
Channar Financial Services Pty Ltd; Australia	AUD Ordinary shares	100
Channar Management Services Pty Limited; Australia	AUD Ordinary shares	100
Channar Mining Pty Ltd; Australia	AUD Ordinary shares	100
Channar Security Pty Limited; Australia	AUD Ordinary shares	100

47 Related undertakings continued

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Chlor Alkali Unit Pte Ltd; Singapore	SGD1.00 Ordinary (SGD) shares	100
	US$1.00 Ordinary (USD) shares	68.4
CIA. Inmobiliaria e Inversiones Cosmos S.A.C.; Peru	PEN1,000.00 Ordinary shares	100
CNA Bengalla Investments Pty Limited; Australia	AUD1.00 Ordinary shares	100
CNA Bengalla Pty Limited; Australia	AUD Ordinary shares	100
CNA Investments (UK) Pty Limited; Australia	AUD Ordinary shares	100
CNA Resources Holdings Pty Limited; Australia	AUD "A" Ordinary shares	100
	AUD "B" Ordinary shares	100
CNA Resources Limited; Australia	AUD "A" Ordinary shares	100
	AUD "B" Ordinary shares	100
CNA Sub Holdings Pty Limited; Australia	AUD Ordinary shares	100
CNA UK Limited; United Kingdom	US$0.01 Ordinary Bearer shares	100
CNA Warkworth Australasia Pty Limited; Australia	AUD Ordinary shares	100
CNA Warkworth Pty Ltd; Australia	AUD Ordinary shares	100
Coal & Allied Industries Limited; Australia	AUD Ordinary shares	89.8
Coal & Allied Mining Services Pty Limited; Australia	AUD Ordinary shares	100
Coal & Allied Operations Pty Ltd; Australia	AUD Ordinary shares	100
Compagnie Générale D'électrolyse Du Palais; France	€0.94 Ordinary shares	100
Compania de Transmision Sierraoriente S.A.C.; Peru	PEN1,000.00 Ordinary shares	100
Corporation De Pêche Ste-Marguerite Inc.; Canada	CAD10.00 Ordinary shares	96.8
CRA Exploration (India) Private Limited; India	INR10.00 Ordinary shares	99.9
CRA Investments Pty. Limited; Australia [a]	AUD Ordinary shares	100
CRA Pty Ltd; Australia [a]	AUD Ordinary shares	100
Dampier Salt Ltd; Australia	AUD Ordinary ($1.00257) shares	68.4
	AUD Ordinary ($1.88 on 31/01/2013) shares	68.4
Darex Capital, Inc.; Panama	US$0.01 Par Value One Cent shares	100
Daybreak Development LLC; United States	US$0.01 Common shares	100
Daybreak Property Holdings LLC; United States [c]	–	–
Daybreak Secondary Water Distribution Company; United States	US$0.01 Common shares	51.2
Daybreak Water Company; United States	US$0.01 Class A Common shares	100
	US$0.01 Class B Common shares	2.5
Daybreak Water Holding LLC; United States	US$0.01 Common shares	100
DB Medical I LLC; United States	US$ Units shares	100
DBVC1 LLC; United States [c]	–	–
Diamond Producers Association Limited ; United Kingdom [d]	–	–
Diavik Diamond Mines (2012) Inc.; Canada	CAD Common shares	100
Dolphin Properties Pty. Ltd.; Australia	AUD Ordinary shares	100
East Kalimantan Coal Pte. Ltd; Singapore [a]	SGD1.00 ordinary shares	100
	US$1.00 Ordinary shares	100
Eastland Management Inc.; United States	US$1.00 Common shares	100
Electric Power Generation Limited; New Zealand [a]	NZD1.00 Ordinary shares	100
Emirates Energy Limited; United Kingdom	US$1.00 Ordinary shares	100
Energy Resources of Australia Ltd; Australia	AUD A Class Ordinary shares	68.4
Falcon Insurance Ltd; Malta [a]	US$1.00 Class "A" Ordinary shares	100
	US$1.00 Class "B" shares	100
Flambeau Mining Company; United States	US$0.01 Common shares	100
Fondation Rio Tinto; Guinea [c]	–	–
France Aluminium Recyclage Sa; France	€15.00 Ordinary shares	60
Fundsprops Pty. Limited; Australia [a]	AUD Ordinary shares	100
Gava Exploration Limited Liability Company; Uzbekistan [c]	–	–
Gladstone Infrastructure Pty Ltd – Australia	AUD Class G Redeemable Preference shares	100
	AUD Ordinary shares	100

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Gove Aluminium Ltd; Australia	AUD A Non Redeemable Preferece shares	100
	AUD A Redeemable Preference Shares	100
	AUD Ordinary shares	100
Gove Joint Venture (the); Australia [c]	–	–
GPS Energy Pty Limited; Australia	AUD Ordinary shares	100
GPS Nominee Pty Limited; Australia	AUD Ordinary shares	100
GPS Power Pty. Limited; Australia	AUD Ordinary shares	100
Green Mountain Mining Venture; United States [c]	–	–
Gulf Power Company / La Compagnie Gulf Power; Canada	CAD100.00 Ordinary shares	100
Gumala Advisory Company Pty Ltd; Australia	AUD Ordinary shares	51
Gwandalan Land Pty Ltd; Australia	AUD Ordinary shares	100
Hail Creek Coal Pty Ltd; Australia	AUD Ordinary shares	100
Hail Creek Marketing Pty Ltd; Australia	AUD Ordinary shares	82
Hamersley Associated Investments Pty Limited; Australia	AUD Ordinary shares	100
Hamersley Exploration Pty Limited; Australia	AUD Ordinary shares	100
Hamersley HMS Pty Ltd; Australia	AUD Ordinary shares	100
Hamersley Holdings Limited; Australia [a]	AUD Ordinary shares	100
	AUD Ordinary shares	100
Hamersley Iron – Yandi Pty Limited; Australia [a]	AUD Class B Shares	100
	AUD Class C shares	100
	AUD Ordinary shares	100
Hamersley Iron Pty Limited; Australia	AUD Ordinary shares	100
Hamersley Resources Limited; Australia	AUD Ordinary shares	100
	AUD Z Class Ordinary shares	100
Hamersley WA Pty Ltd; Australia	AUD Ordinary shares	100
Henlopen Manufacturing Co., Inc.; United States	US$100.00 Ordinary shares	100
Heruga Exploration LLC; Mongolia	MNT12,500.00 Common shares	100
High Purity Iron Inc.; United States	US$1.00 Common Shares	100
HImet Corporation Pty Limited; Australia [a]	AUD Ordinary shares	100
HIsmelt (Operations) Pty Ltd; Australia	AUD Ordinary shares	100
HIsmelt Corporation Pty Limited; Australia	AUD A Class shares	100
Howmet Insurance Company, Inc.; United States	US$1.00 Ordinary shares	100
HV Operations Pty Ltd; Australia	AUD Ordinary shares	100
HVO Coal Sales Pty Ltd; Australia	AUD Ordinary shares	100
IAL Holdings Singapore Pte Ltd; Singapore	US$ Ordinary shares	100
IEA Coal Research Limited; United Kingdom	£1.00 Ordinary shares	100
IEA Environmental Projects Limited; United Kingdom	£1.00 Ordinary shares	100
IGP Holding Company Ltd; Virgin Islands, British	USD Ordinary shares	100
Industrias Metalicas Castello S.A.; Spain	€6.01 Ordinary shares	100
Integrity Land and Cattle LLC; United States	US$ Units shares	100
Iron Ore Company of Canada; United States	US$1,000.00 Series A shares	91.4
	US$1,000.00 Series E shares	100
	US$1,000.00 Series F shares	100
Itallumina Srl; Italy	€1.00 Quotas shares	100
Johcath Holdings Pty Limited; Australia	AUD Ordinary shares	100
Juna Station Pty Ltd; Australia	AUD Ordinary shares	100
Kalamah Pty Ltd; Australia	AUD Ordinary shares	100
Kalimantan Gold Pty Limited; Australia	AUD Ordinary shares	100
Kalteng Pty. Ltd; Australia [a]	AUD A Class Ordinary shares	100
	AUD Class B (Fully Paid $1.00 13/01/2003) shares	100
	AUD Class B (Paid to $0.12 02/09/2005) shares	100
	AUD Ordinary shares	100
Kelian Investment Limited; Virgin Islands, British [c]	–	–
Kelian Pty. Limited; Australia	AUD Ordinary shares	100
Kembla Coal & Coke Pty. Limited; Australia	AUD Ordinary shares	100

47 Related undertakings continued

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Kennecott Barneys Canyon Mining Company; United States	US$0.01 Common shares	100
Kennecott Exploration Company; United States	US$0.01 Common shares	100
Kennecott Exploration Mexico, S.A. de C.V.; Mexico	MXN1,000.00 Ordinary shares	100
Kennecott Holdings Corporation; United States	US$0.01 Common shares	100
Kennecott Land Company; United States	US$0.01 Common shares	100
Kennecott Land Investment Company LLC; United States [c]	–	–
Kennecott Management Services Company; United States	US$0.01 Common shares	100
Kennecott Molybdenum Company; United States	US$0.01 Common shares	100
Kennecott Nevada Copper Company; United States	US$0.01 Common shares	100
Kennecott Ridgeway Mining Company; United States	US$1.00 Common shares	100
Kennecott Royalty Company; United States	US$100.00 Common shares	100
Kennecott Services Company; United States	US$0.01 Common shares	100
Kennecott Uranium Company; United States	US$0.01 Common shares	100
Kennecott Utah Copper LLC; United States	US$ Units shares	100
Kennecott Water Distribution LLC; United States	US$ Ordinary shares	100
Kestrel Coal Pty Limited; Australia	AUD Ordinary shares	100
Kestrel Coal Sales Pty Limited; Australia	AUD Ordinary shares	100
Kirganik LLC; Russian Federation [c]	–	–
Korgantas LLP; Kazakhstan [c]	–	–
Kutaibar Holdings Pty Ltd; Australia [a]	AUD Ordinary shares	100
Lao Sanxai Minerals Company Limited; Lao People's Democratic Republic	US$1.00 Ordinary shares	70
Lawson Mardon Flexible Limited; United Kingdom	£1.00 Ordinary shares	100
Lawson Mardon Smith Brothers Ltd.; United Kingdom	£1.00 Ordinary shares	100
Lazurnoe Limited Liability Company; Russian Federation [c]	–	–
Lower Hunter Land Holdings Pty Ltd; Australia	AUD Ordinary shares	100
Magma Arizona Railroad Company; United States	US$100.00 Common shares	99.9
Malmikaivos Oy; Finland	€168.18793 Ordinary shares	100
Metallwerke Refonda AG; Switzerland	CHF125.00 Bearer shares	100
Metals & Minerals Insurance Pte. Limited; Singapore	SGD Ordinary shares	100
	SGD Redeemable Preference Shares	100
Miller Pohang Coal Co Pty Ltd; Australia	AUD Ordinary shares	100
Minera Kennecott, S.A. de C.V.; Mexico	MXN1.00 Series "B" shares	100
Minera Tinyacclla SA; Peru	PEN1.00 Ordinary shares	99.9
Minmi Land Pty Ltd; Australia	AUD Ordinary shares	100
Mitchell Plateau Bauxite Co. Pty. Limited; Australia	AUD Ordinary shares	100
Mitchell Plateau Joint Venture; Australia [c]	–	–
Mongolian Gas and Exploration LLC; Mongolia	US$1.00 Common shares	100
Mount Bruce Mining Pty Limited; Australia	AUD Ordinary shares	100
Mount Thorley Co Venture; Australia [c]	–	–
Mount Thorley Coal Loading Ltd; Australia	AUD Ordinary shares	72.2
Mount Thorley Operations Pty Limited; Australia	AUD Ordinary shares	100
Movele SARL	US$ Ordinary shares	100
	US$ Preferred shares	100
Mutamba Mineral Sands S.A.; Mozambique	MZN100.00 Ordinary shares	100
Namoi Valley Coal Pty. Limited; Australia	AUD Class B shares	100
	AUD Ordinary shares	100
NBH Pty Ltd; Australia	AUD Ordinary shares	100
Nhulunbuy Corporation Limited Australia [c]	–	–
Nords Wharf Land Pty Ltd; Australia	AUD Ordinary shares	100
Norgold Pty Limited; Australia	AUD Ordinary shares	100
	AUD Redeemable Preference shares	100

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
North Gold (W.A.) Pty Ltd; Australia	AUD Ordinary shares	100
	AUD Redeemable Preference shares	100
North Insurances Pty. Ltd.; Australia	AUD Ordinary shares	100
North IOC (Bermuda) Holdings Limited; Bermuda	US$1.00 Ordinary shares	100
North IOC (Bermuda) Limited; Bermuda	US$143.641269 Class A Ordinary Shares (US$143.64126903)	100
	US$1.00 Ordinary (US$1.00) shares	100
	US$100,000.00 Preferred Shares (US$100,000)	100
North IOC Holdings Pty Ltd; Australia	AUD Ordinary shares	100
North Limited; Australia	AUD Ordinary shares	100
North Mining Limited; Australia	AUD Ordinary shares	100
	AUD Redeemable Preference shares	100
Northern (Rhondda) Collieries Pty Ltd; Australia	AUD Ordinary shares	100
Novacoal Australia Pty. Limited; Australia	AUD Ordinary shares	100
Nozalela Mineral Sands (Pty) Ltd; South Africa	ZAR1.00 Ordinary shares	100
Oaklands Coal Pty. Limited; Australia	AUD Ordinary shares	100
Olkhovoe LLC; Russian Federation [c]	–	–
Orian Holding Corp; Virgin Islands, British	US$1.00 Common shares	100
Oyu Tolgoi Netherlands BV; Netherlands	€100.00 Ordinary shares	100
Pacific Aluminium (New Zealand) Limited; New Zealand	NZD1.00 Ordinary shares	100
Pacific Aluminium Bell Bay Sales Pty Limited; Australia	AUD Ordinary shares	100
Pacific Aluminium Pty. Limited; Australia [a]	AUD Ordinary shares	100
Pacific Aluminium Services Pty Limited; Australia	AUD Ordinary shares	100
Pacific Coast Mines, Inc.; United States	US$1.00 Common shares	100
Pacific Resource Investments Limited; Cayman Islands [a]	US$1.00 Ordinary shares	100
Pandrew Pty Ltd; Australia	AUD Ordinary shares	100
Pechiney Aviatube Limited; United Kingdom	£1.00 Ordinary shares	100
Pechiney Bâtiment; France	€15.00 Ordinary shares	100
Pechiney Bécancour, Inc.; United States	US$1.00 Ordinary shares	100
Pechiney Cast Plate, Inc.; United States	US$1.00 Ordinary shares	100
Pechiney Consolidated Australia Pty Limited; Australia	US$1.00 Ordinary shares	100
	US$1.00 Preference Shares	100
Pechiney Dis Ticaret Limited Sirketi; Turkey	TRY25.00 Ordinary shares	100
Pechiney Holdings, Inc.; United States	US$1.00 Ordinary shares	100
Pechiney Metals LLC; United States [c]	–	–
Pechiney Philippines Inc.; Philippines	PHP10.00 Ordinary shares	99.9
Pechiney Plastic Packaging (Canada) Inc.; Canada	CAD1.00 Ordinary shares	100
Pechiney Plastic Packaging, Inc.; United States	US$ Ordinary shares	100
Pechiney Resources Pty. Limited; Australia	AUD Ordinary shares	100
Pechiney Sales Corporation; United States	US$1.00 Ordinary shares	100
Pechiney Servicios; Venezuela, Bolivarian Republic of	VEB1,000.00 Ordinary shares	100
Pechiney Vénézuela, S.A.; Venezuela, Bolivarian Republic of	VEB1,000.00 A shares	100
	VEB10,000.00 B shares	100
Peko Exploration Pty Ltd.; Australia	AUD Ordinary shares	100
Peko-Wallsend Pty Ltd; Australia	AUD Ordinary shares	100
Pilbara Iron Company (Services) Pty Ltd; Australia	AUD Ordinary shares	100
Pilbara Iron Pty Ltd; Australia	AUD Ordinary shares	100
Project Generation Group Pty Ltd; Australia [a]	AUD Ordinary shares	100
PSZ Pty Limited; Australia	AUD Ordinary shares	100
PT Alcan Packaging Flexipack; Indonesia	IDR1,000,000.00 Ordinary shares	100
PT Hutan Lindung Kelian Lestari; Indonesia	IDR9,803.00 Ordinary shares	99
PT Kelian Equatorial Mining; Indonesia	IDR1,080.00 Ordinary shares	90
PT Mitra Sumbawa Minerals; Indonesia	US$1.00 Ordinary shares	90
PT Rikit Alas Minerals; Indonesia	US$1.00 Ordinary shares	90
PT Rio Tinto Consultants; Indonesia	US$1.00 Ordinary shares	100

47 Related undertakings continued

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
PT Rio Tinto Exploration; Indonesia	US$1.00 Ordinary shares	100
PT Rio Tinto Indonesia; Indonesia	US$1.00 Ordinary shares	100
PT Rio Tinto Irja; Indonesia	US$1.00 Ordinary shares	100
QIT Madagascar Minerals Ltd; Bermuda	US$1.00 Ordinary shares	100
QIT Madagascar Minerals SA; Madagascar	US$10.00 Certificats d'investissement shares	100
	US$10.00 Common Shares	80
QMP Metal Powders (Suzhou) Ltd; China	US$1.00 Ordinary shares	100
Quebec North Shore and Labrador Railway Company / Compagnie de Chemin de Fer du Littoral Nord de Quebec et du Labrador Inc.; Canada	CAD27.59 Ordinary shares	100
Queensland Coal Pty. Limited; Australia	AUD Ordinary shares	100
Química e Metalúrgica Mequital Ltda.; Brazil	BRL Ordinary shares	100
R.W. Miller (Holdings) Limited; Australia	AUD Ordinary shares	100
Ranges Management Company Pty Ltd; Australia	AUD Ordinary shares	100
Ranges Mining Pty Ltd; Australia	AUD Ordinary shares	100
Resolution Copper Company; United States	US$0.01 Common shares	100
Resolution Copper Mining LLC; United States [c]	-	–
Richards Bay Mining (Proprietary) Limited; South Africa	ZAR0.01 B Ordinary shares	99.9
	ZAR0.01 B Preference shares	100
	ZAR0.01 BHP Billiton Preference shares	100
Richards Bay Mining Holdings (Proprietary) Limited; South Africa	ZAR1.00 A Ordinary shares	100
	ZAR1.00 B Ordinary shares	100
Richards Bay Prefco (Pty) Ltd; South Africa	ZAR0.01 Prefence shares	100
Richards Bay Titanium (Proprietary) Limited; South Africa	ZAR0.01 B Ordinary shares	100
	ZAR0.01 B Preference shares	100
	ZAR0.01 BHP Billiton Preference shares	100
Richards Bay Titanium Holdings (Proprietary) Limited; South Africa	ZAR1.00 A Ordinary shares	100
	ZAR1.00 B Ordinary shares	100
Rio de Contas Desenvolvimentos Minerais Ltda; Brazil	BRL Quota shares	100
Rio Sava Exploration DOO; Serbia [c]	-	–
Rio Tinto (Commercial Paper) Limited; Australia [a]	AUD Ordinary shares	100
Rio Tinto (Hong Kong) Ltd; Hong Kong	HKD Ordinary shares	100
Rio Tinto (Mauritius) Pty Limited; Mauritius	US$1.00 Ordinary shares	100
Rio Tinto Advisory Services Pty Limited; Australia	AUD Ordinary shares	100
Rio Tinto Alcan Fund Inc.; Canada	CAD Ordinary shares	100
Rio Tinto Alcan Iceland Ltd; Iceland	ISK1.00 Registered shares	100
Rio Tinto Alcan Inc.; Canada	CAD COMMON shares	100
Rio Tinto Alcan International Ltd. / Rio Tinto Alcan International Ltee; Canada	CAD Common shares	100
Rio Tinto Alcan Middle East DMCC; United Arab Emirates	AED1,000.00 Ordinary shares	100
Rio Tinto Alcan Technology Pty Ltd; Australia	AUD1.00 Ordinary shares	100
Rio Tinto Almazpoisk LLC; Russian Federation [c]	-	–
Rio Tinto Aluminium (Bell Bay) Limited; Australia	AUD 7.5% Cumulative Preference shares	100
	AUD Ordinary shares	100
Rio Tinto Aluminium (Holdings) Limited; Australia	AUD Ordinary shares	100
	AUD Ordinary shares	100
Rio Tinto Aluminium Limited; Australia	AUD Ordinary shares	100
	AUD Ordinary shares	100
Rio Tinto America Holdings Inc.; United States	US$0.01 Class A Common shares	100
	US$100.00 Series A Preferred Stock shares	100
Rio Tinto America Inc.; United States	US$100.00 Common shares	100
Rio Tinto Asia Ltd; Hong Kong	HKD Ordinary shares	100
Rio Tinto Asia Pty. Limited.; Australia [a]	AUD Class A shares	100
	AUD Ordinary shares	100

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Rio Tinto AuM Company; United States	US$0.01 Common shares	100
Rio Tinto Australian Holdings Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto Bahia Holdings Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Base Metals Pty. Limited; Australia [a]	AUD Ordinary shares	100
Rio Tinto Brazilian Holdings Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto Brazilian Investments Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto Canada Diamond Exploration Inc.; Canada	CAD Common shares	100
Rio Tinto Canada Diamond Operation Management Inc.; Canada	CAD Common shares	100
Rio Tinto Canada Inc; Canada	CAD Class B Shares	100
	CAD Class C Shares	100
	CAD Class D Shares	100
	CAD Class J shares	100
Rio Tinto Canada Management Inc./ Rio Tinto Gestion Canada Inc.; Canada	CAD Common Shares	100
	CAD Preferred shares	100
Rio Tinto Canada Uranium Corporation; Canada	CAD Common shares	100
Rio Tinto Charters Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Coal (Clermont) Pty Ltd; Australia	AUD Ordinary shares	100
Rio Tinto Coal (NSW) Pty Limited; Australia	AUD Ordinary Fully Paid Share shares	100
Rio Tinto Coal Australia Pty Limited; Australia	AUD Ordinary shares	100
Rio Tinto Coal Investments Pty Limited; Australia	AUD Ordinary shares	100
Rio Tinto Coal NSW Holdings Limited; Australia [a]	AUD Ordinary shares	100
Rio Tinto Congo RDC SARL; Congo, The Democratic Republic of the	US$200.00 Ordinary shares	100
Rio Tinto Desenvolvimentos Minerais LTDA.; Brazil	BRL Quotas shares	100
Rio Tinto Diamonds and Minerals Canada Holding Inc.; Canada	CAD Class A (dividend rights) shares	100
	CAD Class B shares	100
	CAD Class C (voting rights) shares	100
	CAD Class P1 Preferred shares	100
Rio Tinto Diamonds Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Diamonds Netherlands B.V.; Netherlands	€500.00 Ordinary shares	100
Rio Tinto Diamonds NV; Belgium	€ Ordinary shares	100
Rio Tinto Eastern Investments B.V.; Netherlands	€453.78 Ordinary shares	100
Rio Tinto Energy America Inc.; United States	US$0.01 Common shares	100
Rio Tinto Energy Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Escondida Limited; Bermuda	US$1.00 Ordinary shares	100
Rio Tinto European Holdings Limited; United Kingdom [b]	£1.00 Ordinary shares	100
Rio Tinto Exploration (Asia) Holdings Pte. Ltd.; Singapore	US$1.00 Ordinary shares	100
Rio Tinto Exploration (PNG) Limited; Papua New Guinea [a]	PGK1.00 Ordinary shares	100
Rio Tinto Exploration and Mining (India) Private Limited; India	INR10.00 Ordinary shares	100
Rio Tinto Exploration Canada Inc.; Canada	CAD Class A shares	100
	CAD Class B shares	100
	CAD Class C shares	100
	CAD Class D shares	100
	CAD Class E Preferred shares	100
Rio Tinto Exploration DRC Orientale Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Exploration Gabon SA; Gabon	XAF10,000.00 Ordinary shares	100
Rio Tinto Exploration India Private Limited; India	INR10.00 Ordinary shares	100
Rio Tinto Exploration Kazakhstan LLP; Kazakhstan [c]	–	–

47 Related undertakings continued

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Rio Tinto Exploration Pty Limited; Australia [a]	AUD Class B shares	100
	AUD Class C shares	100
	AUD Class C Shares	100
	AUD Ordinary shares	100
Rio Tinto Exploration Zambia Limited; Zambia	ZMW1.00 Ordinary shares	100
Rio Tinto Fer et Titane Inc.; Canada	CAD Class B Preference shares	100
	CAD Common shares	100
	CAD0.01 Preferred Shares	100
Rio Tinto FH Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Finance (USA) Limited; Australia [a]	AUD Ordinary shares	100
Rio Tinto Finance (USA) plc; United Kingdom	£1.00 Ordinary Shares	100
Rio Tinto Finance Canada Inc./ Finances Rio Tinto Canada Inc.; Canada	CAD Ordinary shares	100
Rio Tinto Finance Limited; Australia [a]	AUD Ordinary shares	100
Rio Tinto Finance plc; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto France S.A.S.; France	€15.25 Ordinary shares	100
Rio Tinto Global Employment Company Pte. Ltd.; Singapore	US$1.00 Ordinary shares	100
Rio Tinto Guinée S.A.; Guinea	GNF100,000.00 Ordinary shares	100
Rio Tinto Holdings Jersey Limited; Jersey [b]	US$1.00 Ordinary shares	100
Rio Tinto Holdings LLC; Mongolia	MNT20,000.00 Ordinary shares	100
Rio Tinto Hydrogen Energy Australia Pty Limited; Australia [a]	AUD Ordinary shares	100
Rio Tinto Hydrogen Energy LLC; United States [c]	–	–
Rio Tinto ICT Limited; Cyprus	US$10.00 Class 'A' Ordinary shares	100
Rio Tinto India Private Limited; India	INR10.00 Ordinary shares	100
Rio Tinto Indonesian Holdings Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto International Holdings Limited; United Kingdom [b]	£1.00 Ordinary shares	100
Rio Tinto International Trading (Shanghai) Co Ltd; China	US$1.00 Ordinary shares	100
Rio Tinto Investments Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Investments One Pty Limited; Australia	AUD Ordinary shares	100
Rio Tinto Investments Two Pty Limited; Australia	AUD Ordinary shares	100
Rio Tinto Iron & Titanium GmbH; Germany [c]	–	–
Rio Tinto Iron & Titanium Holdings GmbH; Germany [c]	–	–
Rio Tinto Iron & Titanium Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Iron and Titanium Canada Inc. / Rio Tinto Fer et Titane Canada Inc.; Canada	CAD Common shares	100
Rio Tinto Iron Ore Asia Pte Ltd; Singapore	US$1.00 Ordinary shares	100
Rio Tinto Iron Ore Atlantic Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Iron Ore Europe S.A.S.; France	€100.00 Ordinary shares	100
Rio Tinto Iron Ore Trading China Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Japan Ltd; Japan	JPY500.00 Ordinary shares	100
Rio Tinto Jersey Holdings 2010 Limited; Jersey	US$ Ordinary shares	100
Rio Tinto Korea Ltd; Korea, Republic of	KRW10,000.00 Ordinary shares	100
Rio Tinto Logistic Services Pty Ltd; Australia [a]	AUD Ordinary shares	100
Rio Tinto London Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Management Services South Africa (Proprietary) Ltd; South Africa	ZAR2.00 Ordinary shares	100
Rio Tinto Marketing Pte. Ltd.; Singapore	SGD1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto Marketing Services Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Medical Plan Trustees Limited; United Kingdom	£1.00 Ordinary shares	100

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Rio Tinto Metals Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto Minera Peru Limitada SAC; Peru	PEN100.00 Ordinary shares	100
Rio Tinto Mineracao do Brasil Ltda; Brazil	BRL1.00 Quotas shares	100
Rio Tinto Minerals Asia Pte Ltd; Singapore	SGD1.00 Ordinary SGD shares	100
	US$1.00 Ordinary USD shares	100
Rio Tinto Minerals Development Limited; United Kingdom	£0.25 Ordinary shares	100
Rio Tinto Minerals Inc.; United States	US$0.01 Common shares	100
Rio Tinto Mining and Exploration Inc.; United States	US$1.00 Common shares	100
Rio Tinto Mining and Exploration Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Mining and Exploration S.A.C.; Peru	PEN0.50 Ordinary shares	100
Rio Tinto Namibian Holdings Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Nickel Company; United States	US$0.01 Common shares	100
Rio Tinto Nominees Limited; United Kingdom	£1.00 Ordinary shares	100
Rio Tinto Orissa Mining Private Ltd; India	INR100.00 Ordinary shares	51
Rio Tinto OT Management Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Overseas Holdings Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto Pension Investments Limited; United Kingdom [b]	£1.00 Ordinary shares	100
Rio Tinto Peru Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto PNG Limited; Papua New Guinea [a]	PGK1.00 Ordinary shares	100
Rio Tinto Potash Management Inc. / Rio Tinto Potasse Management Inc.; Canada	CAD Common shares	100
Rio Tinto Procurement (Singapore) Pte Ltd; Singapore	US$1.00 Ordinary shares	100
Rio Tinto Pte Ltd; Singapore	SGD1.00 Ordinary shares	100
	SGD1.00 Preference Shares	100
Rio Tinto Saskatchewan Management Inc.; Canada	CAD Common shares	100
Rio Tinto Saskatchewan Potash Holdings General Partner Inc.; Canada	CAD Common shares	100
Rio Tinto Saskatchewan Potash Holdings Limited Partnership; Canada [c]	–	–
Rio Tinto Services Inc.; United States	US$0.01 Common shares	100
Rio Tinto Services Limited; Australia [a]	AUD Class Z shares	100
	AUD Ordinary shares	100
Rio Tinto Severo Zapad Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Shared Services Pty Limited; Australia	AUD Ordinary shares	100
Rio Tinto Shipping (Asia) Pte. Ltd.; Singapore	US$1.00 Ordinary shares	100
Rio Tinto Shipping Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Shipping Pty. Limited.; Australia [a]	AUD Ordinary shares	100
Rio Tinto Simfer UK Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Singapore Holdings Pte Ltd; Singapore	SGD1.00 Ordinary SGD shares	100
	US$ Ordinary USD shares	100
Rio Tinto Sohar Logistics LLC; Oman	OMR1.00 Ordinary shares	70
Rio Tinto South East Asia Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Rio Tinto Staff Fund Pty Limited; Australia [a]	AUD Ordinary shares	100
Rio Tinto Sulawesi Holdings Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Technological Resources Inc.; United States	US$0.01 Common shares	100
Rio Tinto Technological Resources UK Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Trading (Shanghai) Co., Ltd.; China	US$ Capital Contribution shares	100
Rio Tinto Uranium Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Uranium Services Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Vostok Limited; United Kingdom	US$1.00 Ordinary shares	100
Rio Tinto Western Holdings Limited; United Kingdom	£1.00 Ordinary shares	100
	US$1.00 Ordinary shares	100
Riversdale Anthracite Colliery (Proprietary) Ltd; South Africa	ZAR2.00 Ordinary shares	74

47 Related undertakings continued

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Riversdale Connections (Proprietary) Ltd; South Africa	ZAR1.00 Ordinary shares	100
Riversdale Holdings (Proprietary) Ltd; South Africa	ZAR1.00 Ordinary shares	100
Robe River Limited; Australia	AUD Ordinary shares	100
Robe River Mining Co. Pty. Ltd.; Australia	AUD A shares	40
	AUD B shares	76.4
Rocklea Station Pty Ltd; Australia	AUD Ordinary shares	100
Rössing Uranium Limited; Namibia	NAD1.00 "B" Shares	71.2
	NAD0.10 "C" Shares	70.6
RTA AAL Australia Limited; Australia	AUD Ordinary shares	100
	AUD Ordinary shares	100
	AUD Ordinary shares	100
	AUD Ordinary 1 shares	100
RTA Boyne Limited; Australia	AUD Ordinary shares	100
RTA Holdco 1 Limited; United Kingdom	US$0.0001 Ordinary shares	100
RTA Holdco 4 Limited; United Kingdom	US$1.00 Ordinary shares	100
	US$0.732815 Ordinary shares	100
RTA Holdco 7 Limited; United Kingdom	US$0.001 Class A Preference Shares	100
	US$1.00 Ordinary Shares	100
RTA Holdco 8 Limited; United Kingdom	US$0.001 Class A Preference shares	100
	US$1.00 Ordinary shares	100
RTA Holdco Australia 1 Pty Ltd; Australia	AUD Ordinary shares	100
	AUD Ordinary shares	100
	AUD Ordinary shares	100
	AUD Ordinary shares	100
	AUD Ordinary shares	100
RTA Holdco Australia 3 Pty Ltd; Australia	AUD Ordinary shares	100
RTA Holdco Australia 5 Pty Ltd; Australia	AUD Ordinary shares	100
RTA Holdco Australia 6 Pty Ltd; Australia	AUD Ordinary shares	100
	AUD Ordinary shares	100
RTA Pacific Pty Limited; Australia	AUD Ordinary shares	100
	AUD Ordinary shares	100
RTA Resources Pty Limited; Australia	AUD Ordinary shares	100
RTA Sales Pty Ltd; Australia	AUD Class A shares	100
	AUD Class B shares	100
RTA Smelter Development Pty Limited; Australia	AUD Ordinary shares	100
RTA Weipa Pty Ltd; Australia	AUD Ordinary shares	100
RTA Yarwun Pty Ltd; Australia	AUD Ordinary shares	100
RTAlcan 1 LLC; United States	US$ Class A Preferred shares	100
	US$ Common shares	100
RTAlcan 2 LLC; United States	US$ Common shares	100
RTAlcan 3 LLC; United States	US$ Common shares	100
RTLDS Aus Pty. Ltd; Australia [a]	AUD Ordinary shares	100
RTLDS UK Limited; United Kingdom	£1.00 Ordinary shares	100
RTMDC LLC; Mongolia	MNT1,240.00 Common shares	100
RTPDS Aus Pty Ltd; Australia	AUD Ordinary shares	100
Saryarka B.V.; Netherlands	€200.00 Ordinary shares	75
Savoie Services Y.K.; Japan	JPY50,000.00 Ordinary shares	100
Scheuch Unterstuetzungskasse GmbH; Germany	€51.129 Ordinary shares	100
SGLS LLC; Mongolia	MNT10,000.00 Common shares	100
Simfer Jersey Finance 1 Ltd; Jersey	US$ Ordinary shares	100
Simfer Jersey Finance 2 Ltd; Jersey	US$ Ordinary shares	53
Simfer Jersey Limited; Jersey	US$ Ordinary shares	53
Simfer Jersey Nominee Limited; United Kingdom	£1.00 Ordinary shares	100
SIMFER S.A.; Guinea	GNF100,000.00 Ordinary shares	87.9
Singapore Metals Pte. Ltd.; Singapore	US$ Ordinary shares	100
Skeleton Coast Diamonds Limited; Namibia	NAD2.00 Ordinary shares	100
Skymont Corporation; United States	US$ Common shares	100

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Société De Financement Des Risques Industriels; Luxembourg	€ Ordinary shares	100
Société D'entreprises, Carrières Et Mines De L'Esterel; France	€9.33 Ordinary shares	100
Société Générale de Recherches et d'exploitations Minières; France	€0.02 Ordinary shares	100
Société Immobilière Alpes Provence; France	€15.00 Ordinary shares	100
Société Minière Et De Participations Guinée-Alusuisse*; Guinea [c]	–	–
Société Port D'Ehoala S.A.; Madagascar	US$100.00 Ordinary shares	99.9
Sohio Western Mining Company; United States	US$100.00 common shares	100
Southern Copper Pty. Limited; Australia	AUD A shares	100
	AUD B shares	100
	AUD Non Cumulative Redeemable Preference shares	100
	AUD Ordinary shares	100
Spinacia Holdings Limited; Cyprus	€1.00 Ordinary shares	100
Swift Current Land & Cattle LLC; United States [c]	–	–
Swiss Aluminium Australia Limited; Australia	AUD Ordinary shares	100
	AUD Stock Unit Shares A	100
	AUD Stock Unit Shares B	100
	AUD Stock Unit Shares C	100
TBAC Limited; United Kingdom	£1.00 Ordinary shares	100
Technological Resources Pty. Limited; Australia [a]	AUD A shares	100
	AUD B shares	100
The Barrier Corporation (Vic.) Pty. Limited; Australia [a]	AUD Ordinary shares	100
The Kelian Community and Forest Protection Trust; Singapore [c]	–	–
The Pyrites Company, Inc.; United States	US$1.00 Common shares	100
The Roberval and Saguenay Railway Company/ La Compagnie du Chemin de Fer Roberval Saguenay; Canada	CAD100.00 Ordinary shares	100
	CAD100.00 Preference shares 6% Non-Cumulative	100
The Zinc Corporation Pty Ltd; Australia	AUD Ordinary shares	100
	AUD Z Class Ordinary shares	100
Thos. W. Ward Limited; United Kingdom	£0.25 Ordinary shares	100
THR Aruba Holdings LLC A.V.V.; Aruba	US$1.00 Common shares	100
THR Delaware Holdings, LLC; United States [c]	–	–
THR Kharmagtai Pte Ltd.; Singapore	US$ Ordinary shares	100
THR MINES (BC) LTD.; Canada	CAD Common shares	100
	US$ Common shares	100
THR Mines Services Co. Ltd.; Canada	CAD Common shares	100
THR Mongolia Development Inc.; Virgin Islands, British	US$1.00 Common shares	100
THR OYU TOLGOI LTD.; Virgin Islands, British	US$1.00 Ordinary shares	100
THR Ulaan Pte. Ltd.; Singapore	US$ Ordinary shares	100
Three Crowns Insurance Company Limited; Bermuda	£1.00 Common shares	100
Tinto Holdings Australia Pty. Limited; Australia	AUD A shares	100
	AUD Ordinary shares	100
Tisand (Proprietary) Limited; South Africa	ZAR1.00 A Ordinary shares	100
	ZAR1.00 B Ordinary shares	100
	ZAR1,000.00 Cumulative Preference Shares	100
Tomago Aluminium Company Pty Limited; Australia	AUD Class A Shares	51.6
Trans Territory Pipeline Pty Limited; Australia	AUD Ordinary shares	100
Turquoise Hill Netherlands Cooperatif UA; Netherlands	US$ COOP share shares	100
Turquoise Hill Resources Limited Luxembourg Branch; Luxembourg [c]	–	–
Turquoise Hill Resources Ltd.; Canada	CAD Common shares	50.8
Turquoise Hill Resources Philippines Inc.; Philippines	PHP100.00 Common shares	99.9
Turquoise Hill Resources Singapore Pte Ltd.; Singapore	SGD1.00 Common shares	100
U.S. Borax Inc.; United States	US$0.10 Common shares	100
Union Creek Ranch LLC; United States [c]	–	–
Union Générale Industrielle Africaine; Morocco	MAD100.00 Ordinary shares	100
Victoria Technology Inc.; United States [a]	US$1.00 Ordinary shares	100

47 Related undertakings continued

Subsidiaries Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Vostin Pty. Limited; Australia [a]	AUD Ordinary shares	100
Waste Solutions and Recycling LLC; United States	US$ Units shares	100
West Kutai Foundation Limited; Singapore [c]	–	–
Wimmera Industrial Minerals Pty. Limited; Australia [a]	AUD Ordinary shares	100
Winchester South Development Company Proprietary Limited; Australia	AUD Ordinary shares	100
Wyoming Coal Resources Company; United States	US$0.01 Common shares	100
Yalleen Pastoral Co Pty Ltd; Australia	AUD Ordinary shares	63.7
Zululand Anthracite Colliery (Proprietary) Ltd; South Africa	ZAR1.00 Ordinary shares	74
Zululand Titanium (Pty) Ltd; South Africa	ZAR1.00 Ordinary shares	100

Associated undertakings (equity accounted entities) Name of undertaking and country of incorporation	Share class	% of share class held by Group companies
Alufluor AB; Sweden	SEK1,000.00 Ordinary shares	50
Bengalla Coal Sales Co Pty Ltd; Australia	AUD Ordinary shares	40
Bengalla Mining Company Pty Ltd; Australia	AUD Ordinary shares	40
CanPacific Potash Inc.; Canada [e]	–	–
Channar Investment Nominee Pty Limited; Australia	AUD Ordinary shares	100
Chinalco Rio Tinto Exploration Co. Ltd; China	CNY1.00 Capital Contribution (Ordinary shares)	49
Dalrymple Bay Coal Terminal Pty Ltd; Australia	AUD Ordinary (AUD0.18 paid on 25/06/1981) shares	32.1
DB Trail Crossing, LLC; United States [e]	–	–
Develor Enterprises Limited; Cyprus	€1.71 Ordinary shares	50
Empresa de Mineracao Finesa Ltda.; Brazil	BRL Quotas shares	49
Enarotali Gold Project Limited; Jersey	£0.001 Ordinary shares	25
Fabrica De Plasticos Mycsa, S.A.; Venezuela, Bolivarian Republic of	VEF1.00 Common shares	49
Global Hubco BV; Netherlands	€1.00 Ordinary shares	33.3
Halco (Mining) Inc.; United States	US$100.00 Ordinary shares	45
Half-Tide Marine Pty Ltd; Australia	AUD Ordinary shares	48.6
Hope Downs Marketing Company Pty Ltd; Australia	AUD A Class shares	100
Hunter Valley Resources Pty Ltd; Australia	AUD A Class Shares	100
Hydrogen Energy International LLC; United States [e]	–	–
Leichhardt Coal Pty Limited; Australia	AUD Ordinary shares	44.7
Minera Escondida Ltda; Chile [e]	–	–
Mineracao Tabuleiro Ltda; Brazil	BRL Quotas shares	48
Northern Land Company Ltd; Canada	CAD1.00 Ordinary shares	50
Oyu Tolgoi LLC; Mongolia	MNT10,000.00 Common shares	66
Port Waratah Coal Services Ltd; Australia	AUD Ordinary shares	66.9
Procivis Savoie; France	€19.00 Ordinary shares	22.1
Rightship Pty Ltd; Australia	AUD Ordinary shares	33.3
Sohar Aluminium Co. L.L.C.; Oman	OMR1.00 Ordinary shares	20
Warkworth Coal Sales Ltd; Australia	AUD Ordinary shares	55.5
Warkworth Mining Limited; Australia	AUD Ordinary shares	55.5
Warkworth Pastoral Co Pty Ltd; Australia	AUD Ordinary shares	55.5
Warkworth Tailings Treatment Pty Ltd; Australia	AUD Ordinary shares	55.5

Joint Ventures (proportionately consolidated entities) Name of undertaking and country of operation	Address of principal place of business	Capital % owned by Group
Aluminerie Alouette Inc.; Canada	400, Chemin de la Pointe-Noire, C.P. 1650, Sept-Îles Québec G4R 5M9, Canada	40
Aluminerie De Bécancour, Inc.; Canada	5555 Pierre Thibault Street, PO 30, Becancour, Quebec G0X 1B, Canada	25.2
Bao-HI Ranges Joint Venture; Australia	Level 22, 152-158 St Georges Terrace, Perth WA 6000, Australia	54
Bengalla Joint Venture; Australia	123 Albert Street, Brisbane QLD 4000, Australia	32
Channar Mining Joint Venture; Australia	Level 22, 152-158 St Georges Terrace, Perth WA 6000, Australia	60
Consórcio de Alumínio do Maranhão; Brazil	Av. Engenheiro Emiliano Macieira, KM18, Estiva, 65095-604, Sao Luis, Maranhao, Brazil	10
Diavik Joint Venture; Canada	P.O. Box 2498, 5007-50th Avenue, Yellowknife NT X1A 2P8, Canada	60
Gladstone Power Station Joint Venture; Australia	NRG Gladstone Operating Service, Gladstone Power Station, Gladstone QLD 4680, Australia	42.1
Grasberg Joint Venture; Indonesia	Jl Mandala Raya Selatan, No.1 Kuala Kencana, Timika, Irian Jaya, 98663, Indonesia	40
Hail Creek Joint Venture; Australia	123 Albert Street, Brisbane QLD 4000, Australia	82
Hope Downs Joint Venture; Australia	Level 22, 152-158 St Georges Terrace, Perth WA 6000, Australia	50
Kestrel Joint Venture; Australia	123 Albert Street, Brisbane QLD 4000, Australia	80
New Zealand Aluminium Smelters Ltd; New Zealand	Level 6, 109 Featherston Street, Wellington, 6011, New Zealand	79.4
Pechiney Reynolds Quebec, Inc.; United States	8770 West Bryn Mawr Avenue, Chicago, Illinois 60631-3657, U.S.A.	50.2
Queensland Alumina Limited; Australia	Plant Operations Building, Parsons Point, Gladstone QLD 4680, Australia	80
Robe River Iron Associates Joint Venture; Australia	Level 27, Central Park, 152-158 St. Georges Terrace, PERTH WA 6850, Australia	57.1
Robe River Ore Sales Pty. Ltd.; Australia	Level 27, Central Park, 152-158 St. Georges Terrace, PERTH WA 6000, Australia	57.1
Tomago Aluminium Joint Venture; Australia	638 Tomago Road, NSW 2324, Tomago, Australia	51.6
Warkworth Joint Venture; Australia	123 Albert Street, Brisbane QLD 4000, Australia	44.5
Winchester South Joint Venture; Australia	123 Albert Street, Brisbane QLD 4000, Australia	75
Winter Road Joint Venture; Canada	P.O. Box 2498, 5007-50th Avenue, Yellowknife NT X1A 2P8, Canada	33.3
Yarraloola Pastoral Co; Australia	Level 27, Central Park, 152-158 St. Georges Terrace, PERTH WA 6850, Australia	57.1

(a) Directly held by Rio Tinto Limited.
(b) Directly held by Rio Tinto plc.
(c) Group ownership is held through an interest in capital. The entity has no classes of shares.
(d) Company limited by guarantee.
(e) Group ownership in the associate is held through an interest in capital. The entity has no classes of shares.
(f) All joint ventures are governed by a joint venture agreement.

Rio Tinto plc

Company balance sheet

As at 31 December	Note	2015 US$m	2014 US$m
Fixed assets			
Investments	B	**36,180**	36,139
		36,180	36,139
Current assets			
Amounts owed by subsidiaries	C	**883**	940
Cash at bank and in hand		**4**	3
		887	943
Creditors – amounts falling due within one year			
Amounts owed to subsidiaries	D	**(12,079)**	(11,922)
Dividends payable		**(18)**	(17)
		(12,097)	(11,939)
Net current liabilities		**(11,210)**	(10,996)
Total assets less current liabilities		**24,970**	25,143
Net assets		**24,970**	25,143
Capital and reserves			
Called up share capital	E	**224**	230
Share premium account		**4,300**	4,288
Other reserves	F	**11,988**	11,982
Profit and loss account		**8,458**	8,643
Equity shareholders' funds		**24,970**	25,143

The Rio Tinto plc company balance sheet has been prepared in accordance with Financial Reporting Standard 101 "Reduced Disclosure Framework" (FRS 101). Note A explains the principal accounting policies.

Profit after tax and total comprehensive income for the year amounted to US$2,863 million (2014: US$4,821 million). As permitted by section 408 of the UK Companies Act 2006, no profit and loss account for the Rio Tinto plc parent company is shown.

The Rio Tinto plc company balance sheet, profit and loss account and the related notes were approved by the directors on 2 March 2016 and the balance sheet is signed on their behalf by

Jan du Plessis
Chairman

Sam Walsh AO
Chief executive

Chris Lynch
Chief financial officer

Rio Tinto plc

Registered number: 719885

Company statement of changes in equity

Year ended 31 December 2015	Share capital US$m	Share premium account US$m	Other reserves US$m	Profit and loss account US$m	Total equity US$m
Opening balance	**230**	**4,288**	**11,982**	**8,643**	**25,143**
Profit for the financial year (comprehensive income)	**–**	**–**	**–**	**2,863**	**2,863**
Dividends	**–**	**–**	**–**	**(3,119)**	**(3,119)**
Proceeds from issue of shares	**–**	**12**	**–**	**1**	**13**
Share buy-back	**(6)**	**–**	**6**	**–**	**–**
Share-based payments	**–**	**–**	**–**	**70**	**70**
Total	**224**	**4,300**	**11,988**	**8,458**	**24,970**

Year ended 31 December 2014	Share Capital US$m	Share premium account US$m	Other reserves US$m	Profit and loss account US$m	Total equity US$m
Opening balance	230	4,269	11,982	6,599	23,080
Profit for the financial year (comprehensive income)	–	–	–	4,821	4,821
Dividends	–	–	–	(2,857)	(2,857)
Proceeds from issue of shares	–	19	–	3	22
Share-based payments	–	–	–	77	77
Total	230	4,288	11,982	8,643	25,143

A Principal accounting policies

a. Basis of preparation

Rio Tinto plc has transitioned from the previously extant UK Generally Accepted Accounting Practice (UK GAAP) to Financial Reporting Standard 101 "Reduced disclosure framework", (FRS 101), for all periods presented. There were no measurement or recognition adjustments for the Company on the adoption of FRS 101.

The Rio Tinto plc company financial statements have been prepared using the historical cost convention, as modified by the revaluation of certain financial liabilities and in accordance with the UK Companies Act 2006. The financial statements have been prepared on a going concern basis.

The accounting policies set out below have been applied consistently to all periods presented in these financial statements. The following exemptions available under FRS 101 have been applied:

- Paragraphs 45(b) and 46 to 52 of IFRS 2, "Share-based payment" (details of the number and weighted average exercise prices of share options, and how the fair value of goods and services received was determined.)
- Paragraphs 91-99 of IFRS 13 "Fair value measurement" (disclosure of valuation techniques and inputs used for fair value measurement of assets and liabilities).
- IFRS 7 "Financial Instruments: Disclosures".
- Paragraph 38 of IAS 1 "Presentation of financial statements", comparative information requirements in respect of Paragraph 79(a)(iv) of IAS 1.
- The following paragraphs of IAS 1 "Presentation of financial statements":
  - 10(d) (statement of cash flows);
  - 16 (statement of compliance with all IFRS);
  - 38A (requirement for minimum of two primary statements, including cash flow statements);
  - 38B-D (additional comparative information);
  - 111 (cash flow statement information); and
  - 134-136 (capital management disclosures).
- IAS 7 "Statement of cash flows".
- Paragraph 30 and 31 of IAS 8 "Accounting policies, changes in accounting estimates and errors" (requirement for the disclosure of information when an entity has not applied a new IFRS that has been issued and is not yet effective).
- Paragraph 17 of IAS 24 "Related party disclosures" (key management compensation).
- The requirements of IAS 24, "Related party disclosures" to disclose related-party transactions entered into between two or more members of a group.

b. Judgments in applying accounting policies and key sources of estimation uncertainty

The preparation of the financial statements requires management to make assumptions, judgments and estimates and to use judgment in applying accounting policies and making critical accounting estimates. These judgments, estimates and assumptions are based on management's best knowledge of the relevant facts and circumstances, having regard to previous experience, but actual results may differ materially from the amounts included in the financial statements.

The key area of judgment that has the most significant effect on the amounts recognised in the financial statements is the review for impairment of investment carrying values.

c. Currency translation

Items included in the financial statements are measured using the currency of the primary economic environment in which the Company operates (the functional currency). The financial statements are presented in US dollars, which is the Company's functional and presentation currency. Transactions denominated in other currencies, including the issue of shares, are translated into the functional currency using the exchange rates prevailing at the date of the transaction.

Foreign exchange gains and losses resulting from the settlement of such transactions, and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies, are recognised in the profit and loss account.

Exchange rates used are consistent with the rates used by the Group as disclosed in the consolidated financial statements (note 41).

d. Investments

Fixed asset investments are valued at cost less accumulated impairment losses. Investments are reviewed for impairment if events or changes in circumstances indicate that the carrying amount may not be recoverable.

e. Financial guarantees

Financial guarantees are recognised initially at fair value. Subsequently, the liability is measured at the higher of the best estimate of the expenditure required to settle the present obligation and the amount initially recognised less cumulative amortisation.

f. Share-based payments

The Company operates a number of share-based payment plans for Group employees, the details of which are included in the consolidated financial statements (note 44). The fair value of the Company's share plans is recognised as an addition to the cost of the investment in the subsidiary in which the relevant employees work over the expected vesting period, with a corresponding entry to the profit and loss account reserve. Payments received from the Company's subsidiaries in respect of these share-based payments are recognised as a reduction in the cost of the investment. The Company uses fair values provided by independent actuaries calculated using either a lattice-based option valuation model or a Monte Carlo simulation model. The fair value of the share plans is determined at the date of grant, taking into account any market-based vesting conditions attached to the award.

Non-market based vesting conditions (eg earnings per share targets) are taken into account in estimating the number of awards likely to vest. The estimate of the number of awards likely to vest is reviewed at each balance sheet date up to the vesting date, at which point the estimate is adjusted to reflect the actual awards issued. No adjustment is made after the vesting date even if the awards are forfeited or not exercised.

g. Dividend income

Dividend income is recognised when the right to receive payment is established.

h. Treasury shares

The consideration paid for shares repurchased by the Company and held as treasury shares is recognised as a reduction in shareholders' funds through the profit and loss account.

B Fixed assets

	2015 US$m	2014 US$m
Investments in Group companies:		
At 1 January	**36,139**	36,107
Additions	**70**	78
Other adjustments	**(29)**	(46)
At 31 December	**36,180**	36,139

At 31 December 2015 the Company had the following principal subsidiaries:

Company	Principal activity	Country of incorporation	Percentage shareholding
Rio Tinto International Holdings Limited	Holding company	UK	100
Rio Tinto European Holdings Limited	Holding company	UK	100

In accordance with Section 409 of the UK Companies Act 2006, a full list of related undertakings is disclosed in the consolidated financial statements (note 47).

C Amounts owed by subsidiaries

Amounts owed by subsidiaries includes US$833 million (31 December 2014: US$922 million), which is subject to interest based on LIBOR, is unsecured and repayable on demand.

D Amounts owed to subsidiaries

Amounts owed to subsidiaries include US$11,970 million (31 December 2014: US$11,887 million) which is subject to interest rates based on LIBOR, is unsecured and repayable on demand.

E Share capital

	2015 US$m	2014 US$m
Issued and fully paid up share capital of 10p each [(a)]		
At 1 January	**230**	230
Ordinary shares purchased and cancelled [(b)]	**(6)**	–
At 31 December	**224**	230

(a) 21,709 new shares (2014: 971 new shares) were issued during the year and 789,887 shares (2014: 1,450,659 shares) were reissued from treasury pursuant to share plans.

(b) During the year 40,912,881 shares (2014: nil) were purchased from Rio Tinto Limited and immediately cancelled.

F Other reserves

Other reserves include US$11,936 million which represents the difference between the nominal value and issue price of the shares issued arising from Rio Tinto plc's rights issue completed in July 2009.

G Guarantees

Rio Tinto plc provides a number of guarantees in respect of Group companies.

Rio Tinto plc and Rio Tinto Limited have jointly guaranteed the Group's external listed debt under the US Shelf Programme, European Debt Issuance Programme and Commercial Paper Programme which totalled US$19.4 billion at 31 December 2015 (31 December 2014: US$20.8 billion). In addition, these entities also jointly guarantee the Group's undrawn credit facility which was US$7.5 billion at 31 December 2015 (31 December 2014: US$7.5 billion). Rio Tinto plc has provided guarantees in respect of certain derivative contracts that are in a liability position of US$275 million at 31 December 2015 (31 December 2014: US$55 million). The fair value of financial guarantees has been determined as US$nil (31 December 2014: US$nil).

Rio Tinto plc has provided a number of guarantees in relation to various pension funds. Subject to certain conditions, Rio Tinto plc would pay any contributions due from Group companies participating in these funds in the event that the companies fail to meet their contribution requirements. The guarantees were not called upon in 2015. The aggregate of company contributions to these plans in 2015 was US$107 million (2014: US$65 million).

Other guarantees issued by Rio Tinto plc in relation to Rio Tinto Group entities as at 31 December 2015 amount to US$328 million (31 December 2014: US$439 million). Included within this balance is US$59 million (31 December 2014: US$59 million) in relation to non-wholly owned subsidiaries.

Pursuant to the DLC Merger, both Rio Tinto plc and Rio Tinto Limited issued deed poll guarantees by which each company guaranteed contractual obligations incurred by the other or guaranteed by the other.

Rio Tinto financial information by business unit

	Rio Tinto interest %	Gross revenue[a] for the year ended 31 December			EBITDA[b] for the year ended 31 December			Net earnings[c] for the year ended 31 December		
		2015 US$m	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m
Iron Ore										
Pilbara	[d]	**13,886**	21,482	23,633	**7,730**	13,701	16,511	**4,013**	7,956	9,568
Iron Ore Company of Canada	58.7	**1,353**	1,696	2,258	**197**	516	927	**12**	144	305
Product group operations		**15,239**	23,178	25,891	**7,927**	14,217	17,438	**4,025**	8,100	9,873
Evaluation projects/other		**66**	103	103	**(55)**	27	4	**(73)**	7	(15)
		15,305	23,281	25,994	**7,872**	14,244	17,442	**3,952**	8,107	9,858
Aluminium	[e]									
Bauxite		**2,057**	1,956	2,012	**937**	752	765	**542**	429	377
Alumina		**2,145**	2,158	2,090	**(47)**	(54)	(226)	**(187)**	(209)	(265)
Intersegment		**(849)**	(834)	(739)	**–**	–	–	**–**	–	–
Bauxite & Alumina		**3,353**	3,280	3,363	**890**	698	539	**355**	220	112
Primary Metal		**4,931**	5,867	5,771	**1,245**	1,604	976	**446**	629	200
Pacific Aluminium		**2,254**	2,483	2,348	**408**	524	252	**147**	291	126
Intersegment & Other		**(1,876)**	(2,087)	(2,087)	**132**	(43)	8	**92**	(6)	15
Integrated operations		**8,662**	9,543	9,395	**2,675**	2,783	1,775	**1,040**	1,134	453
Other product group items		**1,374**	2,373	2,866	**(76)**	36	32	**(50)**	26	28
Product group operations		**10,036**	11,916	12,261	**2,599**	2,819	1,807	**990**	1,160	481
Evaluation projects/other		**81**	207	202	**143**	111	87	**128**	88	76
		10,117	12,123	12,463	**2,742**	2,930	1,894	**1,118**	1,248	557
Copper & Coal										
Rio Tinto Kennecott	100.0	**1,403**	2,186	2,194	**437**	958	840	**44**	523	428
Escondida	30.0	**1,855**	2,282	2,566	**760**	1,292	1,453	**281**	612	777
Grasberg joint venture	[f]	**–**	49	39	**(17)**	6	2	**(34)**	(17)	(21)
Oyu Tolgoi & Turquoise Hill	[g]	**1,636**	1,765	237	**501**	366	(345)	**57**	(20)	(164)
Palabora	[h]	**–**	–	526	**–**	–	105	**–**	–	42
Northparkes	[h]	**–**	–	351	**–**	–	227	**–**	–	141
Copper Operations		**4,894**	6,282	5,913	**1,681**	2,622	2,282	**348**	1,098	1,203
Copper Evaluation projects/other	[i]	**–**	–	–	**(186)**	(231)	(350)	**(111)**	(147)	(232)
Total Copper		**4,894**	6,282	5,913	**1,495**	2,391	1,932	**237**	951	971
Rio Tinto Coal Australia	[j]	**2,757**	3,560	4,413	**497**	450	1,041	**48**	21	367
Rio Tinto Coal Mozambique	[k]	**–**	59	88	**–**	(96)	(114)	**–**	(93)	(142)
Coal Operations		**2,757**	3,619	4,501	**497**	354	927	**48**	(72)	225
Coal Evaluation projects/other		**54**	48	–	**(5)**	(5)	(85)	**(3)**	(11)	(68)
Total Coal	[q]	**2,811**	3,667	4,501	**492**	349	842	**45**	(83)	157
Other product group items		**–**	8	20	**(19)**	(58)	(207)	**(8)**	(37)	(163)
		7,705	9,957	10,434	**1,968**	2,682	2,567	**274**	831	965
Diamonds & Minerals										
Diamonds	[l]	**698**	901	852	**293**	315	257	**79**	104	53
Rio Tinto Iron & Titanium	[m]	**1,571**	2,168	2,251	**435**	689	728	**116**	248	264
Rio Tinto Minerals		**624**	675	657	**178**	212	205	**103**	121	131
Dampier Salt	68.4	**306**	398	404	**71**	67	43	**24**	18	7
Uranium	[q]	**474**	633	936	**1**	(77)	119	**(42)**	(117)	(85)
Product group operations		**3,673**	4,775	5,100	**978**	1,206	1,352	**280**	374	370
Simandou iron ore project		**–**	–	–	**(87)**	(97)	(71)	**(41)**	(55)	(43)
Evaluation projects/other		**1**	8	29	**(58)**	(64)	(110)	**(50)**	(50)	(90)
		3,674	4,783	5,129	**833**	1,045	1,171	**189**	269	237
Other Operations	[n]	**13**	241	1,761	**(81)**	(287)	(398)	**(88)**	(240)	(279)
Intersegment transactions		**(29)**	(344)	(1,182)	**–**	–	(4)	**–**	–	(4)
Product group total		**36,785**	50,041	54,599	**13,334**	20,614	22,672	**5,445**	10,215	11,334

	Rio Tinto interest %	Gross revenue[a] for the year ended 31 December			EBITDA[b] for the year ended 31 December			Net earnings[c] for the year ended 31 December		
		2015 US$m	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m
Other items					**(546)**	(755)	(995)	**(375)**	(593)	(730)
Exploration and evaluation					**(167)**	(194)	(168)	**(141)**	(156)	(145)
Net interest								**(389)**	(161)	(242)
Underlying EBITDA/earnings					**12,621**	19,665	21,509	**4,540**	9,305	10,217
Items excluded from underlying EBITDA/ earnings		**(1)**	–	(24)	**(563)**	(825)	(556)	**(5,406)**	(2,778)	(6,552)
EBITDA/net (loss)/earnings					**12,058**	18,840	20,953	**(866)**	6,527	3,665
Reconciliation to Group income statement										
Share of equity accounted unit sales and intra-subsidiary/equity accounted units sales		**(1,955)**	(2,377)	(3,404)						
Depreciation & amortisation in subsidiaries excluding capitalised depreciation					**(4,553)**	(4,828)	(4,470)			
Impairment charges, net of reversals					**(2,791)**	(221)	(7,545)			
Depreciation & amortisation in equity accounted units					**(462)**	(472)	(401)			
Taxation and finance items in equity accounted units					**(276)**	(759)	(625)			
Consolidated sales revenue/Profit on ordinary activities before finance items and tax		**34,829**	47,664	51,171	**3,976**	12,560	7,912			

Rio Tinto financial information by business unit
continued

	Rio Tinto interest %	Capital expenditure [o] for the year ended 31 December			Depreciation & amortisation for the year ended 31 December			Operating assets [p] as at			Employees for the year ended 31 December		
		2015 US$m	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m	**2015 Number**	2014 Number	2013 Number
Iron Ore													
Pilbara	[d]	**1,608**	4,038	6,480	**1,744**	1,789	1,461	**16,848**	19,524	19,498	**11,097**	12,032	12,143
Iron Ore Company of Canada	58.7	**118**	173	334	**162**	164	166	**1,155**	1,460	1,553	**2,316**	2,580	2,620
Other		**–**	–	–	**–**	–	–	**2**	3	11	**–**	–	18
		1,726	4,211	6,814	**1,906**	1,953	1,627	**18,005**	20,987	21,062	**13,413**	14,612	14,781
Aluminium	[e]												
Bauxite		**159**	122	144	**112**	126	130	**1,050**	1,366	1,454	**2,603**	2,613	2,525
Alumina		**158**	166	166	**207**	212	232	**2,698**	3,166	3,609	**2,287**	2,228	2,163
Bauxite & Alumina		**317**	288	310	**319**	338	362	**3,748**	4,532	5,063	**4,890**	4,841	4,688
Primary Metal		**1,249**	1,781	1,767	**629**	692	666	**10,326**	11,455	12,165	**7,980**	9,270	10,414
Pacific Aluminium		**126**	129	134	**212**	135	109	**1,198**	1,421	405	**2,339**	2,395	2,377
Intersegment and Other		**(10)**	(177)	15	**12**	15	14	**677**	889	1,181	**210**	311	318
Integrated Operations		**1,682**	2,021	2,226	**1,172**	1,180	1,151	**15,949**	18,297	18,814	**15,419**	16,817	17,797
Copper & Coal													
Rio Tinto Kennecott	100.0	**408**	642	783	**344**	324	296	**2,442**	2,603	2,634	**1,793**	1,976	2,093
Escondida	30.0	**770**	947	947	**293**	308	216	**3,485**	2,999	2,524	**1,159**	1,344	1,248
Grasberg joint venture	[f]	**179**	193	176	**43**	36	38	**1,016**	878	761	**2,868**	2,955	2,441
Oyu Tolgoi & Turquoise Hill	[g]	**92**	166	768	**416**	379	379	**3,597**	3,933	6,010	**2,798**	3,255	3,472
Palabora	[h]	**–**	–	18	**–**	–	–	**–**	–	–	**–**	–	1,145
Northparkes	[h]	**–**	–	18	**–**	–	25	**–**	–	–	**–**	–	269
Copper Operations		**1,449**	1,948	2,710	**1,096**	1,047	954	**10,540**	10,413	11,929	**8,618**	9,530	10,668
Copper Evaluation projects/ other	[i]	**3**	10	103	**4**	4	8	**153**	168	141	**158**	310	505
Total Copper		**1,452**	1,958	2,813	**1,100**	1,051	962	**10,693**	10,581	12,070	**8,776**	9,840	11,173
Rio Tinto Coal Australia	[j]	**108**	165	547	**336**	406	486	**2,137**	3,099	3,945	**3,157**	3,187	3,826
Rio Tinto Coal Mozambique	[k]	**–**	2	32	**–**	–	28	**–**	7	119	**–**	183	263
Coal Operations		**108**	167	579	**336**	406	514	**2,137**	3,106	4,064	**3,157**	3,370	4,089
Coal other		**4**	3	–	**5**	7	–	**2**	19	–	**809**	698	–
Total Coal	[q]	**112**	170	579	**341**	413	514	**2,139**	3,125	4,064	**3,966**	4,068	4,089
		1,564	2,128	3,392	**1,441**	1,464	1,476	**12,832**	13,706	16,134	**12,742**	13,908	15,262
Diamonds & Minerals													
Diamonds	[l]	**124**	148	319	**159**	168	168	**857**	1,124	1,279	**1,118**	1,268	1,255
Rio Tinto Iron & Titanium	[m]	**150**	185	274	**194**	233	264	**3,554**	4,424	4,859	**4,507**	4,787	4,955
Rio Tinto Minerals		**28**	69	115	**45**	41	36	**585**	650	669	**987**	1,024	1,110
Dampier Salt	68.4	**14**	21	28	**22**	28	29	**140**	193	228	**394**	479	512
Uranium	[q]	**39**	54	153	**65**	135	252	**(216)**	151	247	**1,329**	1,243	1,654
Simandou iron ore project		**91**	85	273	**1**	14	14	**(10)**	864	808	**912**	958	1,011
Other		**–**	–	–	**2**	–	2	**279**	571	618	**114**	109	123
		446	562	1,162	**488**	619	765	**5,189**	7,977	8,708	**9,361**	9,868	10,620
Other Operations	[n]	**(36)**	(56)	278	**32**	34	67	**(14)**	418	544	**296**	845	3,887
Product group total		**5,382**	8,866	13,872	**5,039**	5,250	5,086	**51,961**	61,385	65,262	**51,231**	56,050	62,347
Intersegment transactions								**242**	238	276			
Net assets/(liabilities) of disposal groups held for sale	[r]	**–**	–	–	**–**	–	–	**182**	(48)	771	**–**	–	–
Other items		**65**	(416)	145	**68**	82	106	**(1,253)**	(2,784)	(2,352)	**3,657**	3,725	3,984
Less: equity accounted units		**(859)**	(1,032)	(1,073)	**(462)**	(472)	(401)						
Total		**4,588**	7,418	12,944	**4,645**	4,860	4,791	**51,132**	58,791	63,957	**54,888**	59,775	66,331

	Rio Tinto interest %	Capital expenditure [o] for the year ended 31 December			Depreciation & amortisation for the year ended 31 December			Operating assets [p] as at			Employees for the year ended 31 December		
		2015 US$m	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m	**2015 US$m**	2014 US$m	2013 US$m	**2015 Number**	2014 Number	2013 Number
Add back: Proceeds from disposal of property, plant and equipment		**97**	744	57									
Total capital expenditure per cash flow statement		**4,685**	8,162	13,001									
Less: Net debt								**(13,783)**	(12,495)	(18,055)			
Less: EAU funded balances excluded from net debt								**–**	(11)	(16)			
Equity attributable to owners of Rio Tinto								**37,349**	46,285	45,886			

Notes to financial information by business unit

Business units are classified according to the Group's management structure. Where presentational revisions are made, comparative amounts are adjusted accordingly.

a) Gross sales revenue includes the sales revenue of equity accounted units (after adjusting for sales to subsidiaries) in addition to consolidated sales. Consolidated sales revenue includes subsidiary sales to equity accounted units which are not included in gross sales revenue.

b) EBITDA of subsidiaries and the Group's share of EBITDA relating to equity accounted units represents profit before: tax, net finance items, depreciation and amortisation charged to the income statement in the period. Underlying EBITDA excludes the same items that are excluded from underlying earnings.

c) Represents profit after tax for the period attributable to the owners of the Rio Tinto Group. Business unit earnings are stated before finance items but after the amortisation of discount related to provisions. Earnings attributed to business units do not include amounts that are excluded in arriving at underlying earnings.

d) Pilbara represents the Group's 100 per cent holding in Hamersley and 65 per cent holding of Robe River Iron Associates. 30 per cent of Robe River Iron Associates is held through a 60 per cent owned subsidiary and therefore the Group's net beneficial interest is 53 per cent.

e) Presented on an integrated operations basis splitting activities between Bauxite & Alumina, Primary Metal, Pacific Aluminium and Other integrated operations (which in total reflect the results of the integrated production of aluminium) and Other product group items, which relate to other commercial activities.

f) Under the terms of a contractual agreement, Rio Tinto is entitled to 40 per cent of material mined as a consequence of expansions and developments of the Grasberg facilities since 1998.

g) Rio Tinto's interest in Oyu Tolgoi is held indirectly through its 50.8 per cent investment in Turquoise Hill Resources Ltd (TRQ) which in turn owns 66 per cent of Oyu Tolgoi LLC, which owns the Oyu Tolgoi copper-gold mine. As at 31 December 2015 the principal asset of TRQ was its interest in Oyu Tolgoi LLC. As at 31 December 2014, TRQ's investment in SouthGobi Resources Ltd was classified as an asset held for sale. On 23 April 2015, TRQ completed the block sale of 48.7 million common shares in SouthGobi Resources and with further divestments has reduced its interest to below 20 per cent. As at 31 December 2015 TRQ's interest in SouthGobi Resources Ltd is no longer consolidated as a subsidiary and has been classified as an available for sale investment.

h) Rio Tinto completed the divestment of its 57.7 per cent interest in Palabora Mining Company on 31 July 2013 and of its 80 per cent interest in the Northparkes mine on 1 December 2013.

i) In the 2014 Annual report, Copper Evaluation projects/other included the results of TRQ. As at 31 December 2015 the principal asset of TRQ was its interest in Oyu Tolgoi LLC and, as such, has been shown combined with Oyu Tolgoi. The 2014 and 2013 comparative periods have been restated to be shown on a consistent basis.

j) Includes Rio Tinto's 80 per cent interest in Coal & Allied, through which Rio Tinto held its beneficial interests in Bengalla, Mount Thorley and Warkworth of 32 per cent, 64 per cent and 44.5 per cent respectively. In February 2016, the restructuring of the Coal and Allied group completed. As a result, Rio Tinto now has a 100 per cent shareholding in Coal & Allied Industries Limited and its wholly-owned subsidiaries and in Hunter Valley Resources Pty Ltd. Mitsubishi is now a joint venture participant in the Hunter Valley Operations Joint Venture.

k) On 7 October 2014, Rio Tinto disposed of its interest in Rio Tinto Coal Mozambique (RTCM), including its interests in the Benga project, a 65:35 joint venture with Tata Steel Limited. Zululand Anthracite Colliery (ZAC), which was retained, is reported within Coal Evaluation projects/other. In February 2016, Rio Tinto signed an agreement to dispose of its interest in ZAC.

l) Includes Rio Tinto's interests in Argyle (100 per cent) and Diavik (60 per cent). Murowa (77.8 per cent) was included until its disposal to RZ Murowa Holdings Limited.

m) Includes Rio Tinto's interests in Rio Tinto Fer et Titane (100 per cent), QIT Madagascar Minerals (80 per cent) and Richards Bay Minerals (attributable interest of 74 per cent).

n) Other Operations include Rio Tinto's 100 per cent interest in the Gove alumina refinery and Rio Tinto Marine.

o) Capital expenditure comprises the net cash outflow on purchases less disposals of property, plant and equipment, capitalised evaluation costs and purchases less disposals of other intangible assets. The details provided include 100 per cent of subsidiaries' capital expenditure and Rio Tinto's share of the capital expenditure of joint operations and equity accounted units.

p) Operating assets of subsidiaries comprise net assets excluding post-retirement assets and liabilities, net of tax, and are before deducting net debt. Operating assets are stated after deduction of non-controlling interests, which are calculated by reference to the net assets of the relevant companies (ie inclusive of such companies' debt and amounts due to or from Rio Tinto Group companies).

q) In 2015 the Energy product group as presented in previous periods was split with the coal assets taken to the newly formed Copper & Coal product group and the uranium assets to the Diamonds & Minerals product group.

r) Assets and liabilities held for sale at 31 December 2015 comprise Rio Tinto's interests in the Blair Athol coal project, Carbone Savoie, Bengalla, and Molybdenum Autoclave Process assets.

Assets and liabilities held for sale as at 31 December 2014 comprised Rio Tinto's interests in the Blair Athol coal project and SouthGobi Resources Ltd.

Australian Corporations Act – summary of ASIC relief

Pursuant to section 340 of the Corporations Act 2001 (Corporations Act), the Australian Securities and Investments Commission issued an order dated 14 December 2015 that granted relief to Rio Tinto Limited from certain requirements of the Corporations Act in relation to the Company's financial statements and associated reports. The order essentially continues the relief that has applied to Rio Tinto Limited since the formation of the Group's dual listed companies (DLC) structure in 1995. The order applies to Rio Tinto Limited's financial reporting obligations for the financial years and half-years ending between 31 December 2015 and 30 June 2020.

In essence, instead of being required under the Corporations Act to prepare consolidated financial statements covering only itself and its controlled entities, the order allows Rio Tinto Limited to prepare consolidated financial statements in which it, Rio Tinto plc and their respective controlled entities are treated as a single economic entity. In addition, those consolidated financial statements are to be prepared:

- in accordance with the principles and requirements of International Financial Reporting Standards as adopted by the European Union (EU IFRS) rather than the Australian Accounting Standards (AAS) (except for one limited instance in the case of any concise report), and in accordance with UK financial reporting obligations generally;
- on the basis that the transitional provisions of International Financial Reporting Standard 1, First-time Adoption of International Financial Reporting Standards, should be applied using the combined financial statements previously prepared for Rio Tinto Limited, Rio Tinto plc and their respective controlled entities under Generally Accepted Accounting Principles in the United Kingdom, under which the DLC Merger between Rio Tinto Limited and Rio Tinto plc was accounted for using "merger", rather than "acquisition", accounting (reflecting that neither Rio Tinto Limited nor Rio Tinto plc was acquired by, or is controlled by, the other; and meaning that the existing carrying amounts, rather than fair values, of assets and liabilities at the time of the DLC Merger were used to measure those assets and liabilities at formation);
- on the basis that Rio Tinto Limited and Rio Tinto plc are a single company (with their respective shareholders being the shareholders in that single company); and
- with a reconciliation, from EU IFRS to AAS, of the following amounts: consolidated loss/profit for the financial year, total consolidated comprehensive loss/income for the financial year and total consolidated equity at the end of the financial year (see page 112).

Those consolidated financial statements must also be audited in relation to their compliance with relevant Australian and UK requirements. Rio Tinto Limited must also prepare a Directors' report which satisfies the content requirements of the Corporations Act (applied on the basis that for these purposes the consolidated entity is the Group, and the consolidated financial statements cover the Group). This includes a Remuneration report (see pages 70 to 104) prepared in accordance with the requirements of the Corporations Act.

Rio Tinto Limited is also required to comply generally with the lodgement and distribution requirements of the Corporations Act (including timing requirements) in relation to those consolidated financial statements (including any concise financial statements), the Auditor's report and the Directors' report. The Corporations Act also requires that a non-binding resolution to adopt the Remuneration report be voted on by shareholders at the Company's annual general meeting.

Rio Tinto Limited is not required to prepare separate consolidated financial statements solely for it and its controlled entities. Rio Tinto Limited is also not required to prepare and lodge parent entity financial statements for itself in respect of each relevant financial year.

Rio Tinto Limited must, however, in accordance with the Corporations Act include in the consolidated financial statements for the Group, as a note, various parent entity information regarding Rio Tinto Limited (including in relation to assets, liabilities, shareholders' equity, profit and loss, income, guarantees, contingent liabilities, and contractual commitments) prepared in accordance with AAS (see page 175).

Directors' declaration

Directors' statement of responsibilities in relation to the Group financial statements, Rio Tinto plc financial statements and Rio Tinto Limited financial statements

The directors are responsible for preparing the Annual report, the Remuneration report and the financial statements in accordance with applicable law and regulations.

UK and Australian company law requires the directors to prepare financial statements for each financial year. Under UK law the directors have elected to prepare the Group financial statements in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and the Rio Tinto plc financial statements in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law), including FRS 101 "Reduced disclosure framework".

Under Australian law, the directors are also required to prepare certain Rio Tinto Limited parent company financial statements in accordance with Australian Accounting Standards (AAS). In preparing the Group financial statements, the directors have also elected to comply with IFRSs, issued by the International Accounting Standards Board (IASB).

Under UK and Australian company law the directors must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the Group and the companies as at the end of the financial year, and of the profit or loss of the companies and Group for the period (as applicable).

In preparing these financial statements, the directors are required to:

- select suitable accounting policies and apply them consistently;
- make judgments and estimates that are reasonable and prudent;
- state whether IFRSs as adopted by the European Union, applicable UK Accounting Standards and AAS have been followed, subject to any material departures disclosed and explained in the Group and parent company financial statements respectively; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Group and the companies will continue in business.

The directors are responsible for keeping adequate accounting records that are sufficient to show and explain the transactions of the companies and the Group and disclose with reasonable accuracy at any time the financial position of the companies and the Group and enable them to ensure that:

- the Group financial statements comply with the UK Companies Act 2006, the Australian Corporations Act 2001 as amended by the Australian Securities and Investments Commission Order dated 14 December 2015 and Article 4 of the IAS Regulation;
- the Rio Tinto plc financial statements comply with the UK Companies Act 2006;
- the Rio Tinto Limited parent company disclosures comply with the Corporations Act as amended by the Australian Securities and Investments Commission Order dated 14 December 2015; and
- the Remuneration Report complies with the UK Companies Act 2006 and the Corporations Act 2001 as amended by the Australian Securities and Investments Commission Order dated 14 December 2015.

The directors are also responsible for safeguarding the assets of the Companies and the Group 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 Group's website. Legislation governing the preparation and dissemination of financial statements may differ between jurisdictions in which the Group reports.

Each of the current directors, whose names and function are listed on pages 51 to 53 in the Governance section, confirm that, to the best of their knowledge:

- the Rio Tinto Group financial statements and notes, which have been prepared in accordance with IFRS as adopted by the EU, the Corporations Act 2001 as amended by the Australian Securities and Investments Commission Order dated 14 December 2015, the UK Companies Act 2006 and Article 4 of the IAS Regulation, give a true and fair view of the assets, liabilities, financial position and loss of the Group;
- the Rio Tinto plc financial statements and notes, which have been prepared in accordance with United Kingdom Generally Accepted Accounting Practice give a true and fair view of the assets, liabilities, financial position and profit of the company;
- the Rio Tinto Limited parent company disclosures, which have been prepared in accordance with Australian Accounting Standards (AAS) and Corporations Act 2001 as amended by the Australian Securities and Investments Commission Order dated 14 December 2015 give a true and fair view of the assets, liabilities, financial position and profit of the company;
- the Strategic report section of the Annual report include a fair review of the development and performance of the business and the position of the Group, together with a description of the principal risks and uncertainties that it faces; and
- there are reasonable grounds to believe that each of the Rio Tinto Group, Rio Tinto plc and Rio Tinto Limited will be able to pay its debts as and when they become due and payable.

The directors have been given the declarations by the chief executive and chief financial officer required by section 295A of the Corporations Act 2001 as amended by the Australian Securities and Investments Commission Order dated 14 December 2015.

Disclosure of information to auditors

The directors in office at the date of this report have each confirmed that:

- so far as he or she is aware, there is no relevant audit information of which the Group's auditors are unaware; and
- he or she has taken all the steps that he or she ought to have taken as a director to make himself or herself aware of any relevant audit information and to establish that the Group's auditors are aware of that information.

This declaration is made in accordance with a resolution of the board.

Jan du Plessis
Chairman

Sam Walsh AO
Chief executive

Chris Lynch
Chief financial officer

Auditor's independence declaration

As lead auditor for the audit of Rio Tinto Limited for the year ended 31 December 2015, I declare that to the best of my knowledge and belief, there have been:

(a) no contraventions of the auditor independence requirements of the *Corporations Act 2001* in relation to the audit; and

(b) no contraventions of any applicable code of professional conduct in relation to the audit.

This declaration is in respect of Rio Tinto Limited and the entities it controlled during the period.

Paul Bendall
Partner
PricewaterhouseCoopers

Melbourne

2 March 2016

Liability limited by a scheme approved under Professional Standards Legislation

Independent auditors' report of PricewaterhouseCoopers LLP to the members of Rio Tinto plc and PricewaterhouseCoopers to the members of Rio Tinto Limited

For the purpose of this report, the terms "we" and "our" denote PricewaterhouseCoopers LLP in relation to UK legal, professional and regulatory responsibilities and reporting obligations to the members of Rio Tinto plc and PricewaterhouseCoopers in relation to Australian legal, professional and regulatory responsibilities and reporting obligations to the members of Rio Tinto Limited. The Group financial statements, as defined below, consolidate the accounts of Rio Tinto plc and Rio Tinto Limited and their respective subsidiaries ("the Group") and include the Group's share of joint arrangements and associates.

The relevant legislation governing the companies is the United Kingdom Companies Act 2006 for Rio Tinto plc and the Corporations Act 2001 as amended by the ASIC order dated 14 December 2015 (the "ASIC Order") for Rio Tinto Limited.

Report on the financial statements and the financial report

Opinion of PricewaterhouseCoopers LLP on the financial statements to the members of Rio Tinto plc

In our opinion:

- the financial statements, defined below, give a true and fair view of the state of the Group's and of Rio Tinto plc's affairs as at 31 December 2015 and of the Group's loss and cash flows for the year then ended;
- the Group financial statements have been properly prepared in accordance with International Financial Reporting Standards ("IFRSs") as adopted by the European Union;
- the Rio Tinto plc company financial statements have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- the financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

Separate opinion of PricewaterhouseCoopers LLP in relation to IFRSs as issued by the International Accounting Standards Board ("IASB")

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

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

Opinion of PricewaterhouseCoopers on the financial report to the members of Rio Tinto Limited

In our opinion:

- the financial report, as defined below, is in accordance with the Corporations Act 2001 as amended by the ASIC Order, including:
  - i. giving a true and fair view of the Group's financial position as at 31 December 2015 and of its performance for the year ended on that date;
  - ii. complying with Australian Accounting Standards (including Australian Accounting Interpretations) and the Corporations Regulations 2001; and
- the Group financial statements also comply with IFRSs as disclosed in note 1.

What we have audited

The Rio Tinto Group financial statements, included within the Annual report and Accounts (the "Annual report"), comprise:

- the Group balance sheet as at 31 December 2015;
- the Group income statement and statement of comprehensive income for the year then ended;
- the Group cash flow statement for the year then ended;
- the Group statement of changes in equity for the year then ended;
- notes 1 – 45 and 47 to the Group financial statements, which include a summary of significant accounting policies and other explanatory information;
- the outline of dual listed companies structure and basis of financial statements (page 112); and
- the Rio Tinto financial information by business unit.

The Rio Tinto plc company financial statements, included within the Annual report, comprise:

- the Rio Tinto plc company balance sheet as at 31 December 2015; and
- notes A-G to the Rio Tinto plc financial statements, which include a summary of significant accounting policies and other explanatory information.

The Group's financial statements and the Rio Tinto plc company financial statements are referred to in this report as the "financial statements".

PricewaterhouseCoopers LLP has audited the Group financial statements and the Rio Tinto plc company financial statements for the year ended 31 December 2015.

PricewaterhouseCoopers has audited the Reconciliation with Australian Accounting Standards, the Directors' remuneration report included in the Directors' report and the financial report for 31 December 2015. The financial report, included within the Annual report, comprises the Group financial statements, Note 46 "Rio Tinto Limited parent company disclosures" and the Directors' declaration on page 200.

Certain required disclosures have been presented elsewhere in the Annual report rather than in the notes to the financial statements and the financial report. These are cross-referenced from the financial statements and the financial report and are identified as audited.

The financial reporting framework that has been applied in the preparation of the Group financial statements is applicable law in the United Kingdom, applicable law in Australia as amended by the ASIC Order (described in the Annual report under the heading "Australian Corporations Act – Summary of ASIC relief") and IFRSs as adopted by the European Union and as issued by the IASB.

The financial reporting framework that has been applied in the preparation of the Rio Tinto plc company financial statements is United Kingdom Accounting Standards, comprising FRS 101, "Reduced Disclosure Framework", and applicable law (United Kingdom Generally Accepted Accounting Practice).

All currency references are to the United States Dollar, unless otherwise stated.

Our audit approach

Rio Tinto's principal activities are minerals and metals exploration, development, production and processing. The Group operates through four product groups and 84 business units.

Overview

Materiality	Overall Group materiality: $300 million (2014: $600 million), which represents 5% of profit before tax adjusted for items excluded from underlying earnings (as defined in note 2 to the Group financial statements). The lower materiality in 2015 reflects the lower underlying profitability of the Group, principally due to the significant fall in commodity prices.
Scope	We identified two business units (2014: three) which, in our view, required an audit of their complete financial information, due to their financial significance to the Group. Those business units were Pilbara (previously audited separately as Hamersley Iron and Robe River) and Escondida. Specific audit procedures on certain balances and transactions were performed at a further 17 business units (2014: 14), which comprised 12 (2014: 6) operating business units and 5 (2014: 8) central business units, such as treasury entities. As a consequence of the lower Group materiality we brought additional business units into scope and performed extended audit procedures at in-scope business units to maintain appropriate audit coverage.
Areas of focus	– We assessed the risks of material misstatement in the financial statements and determined that they remain consistent with 2014. – Impairment assessments (including indicators of impairment and impairment reversal), with a particular focus on goodwill (Roughrider), property, plant and equipment (Energy Resources of Australia and Oyu Tolgoi) and exploration and evaluation assets (Simandou and Roughrider). – Provisions for uncertain tax positions. – Provisions for close-down, restoration and environmental obligations. – Defined benefit pension plan surpluses and deficits. – Impact of ongoing finance transformation, including shared services transition, on the control environment.

The scope of our audit and our areas of focus

We conducted our audit in accordance with International Standards on Auditing (UK and Ireland) ("ISAs (UK & Ireland)") and Australian Auditing Standards ("ASAs").

We designed our audit by determining materiality and assessing the risks of material misstatement in the financial statements. In particular, we looked at where the directors made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls, including evaluating whether there was evidence of bias by the directors that represented a risk of material misstatement due to fraud.

The risks of material misstatement that had the greatest effect on our audit, including the allocation of our resources and effort, are identified as "areas of focus" in the table below. We have also set out how we tailored our audit to address these specific areas in order to provide an opinion on the financial statements as a whole, and any comments we make on the results of our procedures should be read in this context. This is not a complete list of all risks identified by our audit.

Area of focus	How our audit addressed the area of focus
Impairment/reversal of impairment assessment Rio Tinto has goodwill of $892 million, indefinite-lived intangible assets of $1,655 million, property, plant and equipment of $61,057 million, and exploration and evaluation assets of $706 million as at 31 December 2015, contained within 47 cash generating units ("CGUs"). Impairment charges to each of these asset categories have been recognised in prior periods. In 2015 a pre-tax impairment charge of $2,791 million was recognised, which primarily related to goodwill, intangible assets and property, plant and equipment. All CGUs containing goodwill and indefinite-lived intangible assets must be tested for impairment on an annual basis. Management must also determine the recoverable amount for other assets including property, plant and equipment and evaluation and exploration assets when impairment or impairment reversal indicators are identified. For the CGUs which contain Rio Tinto's goodwill, indefinite-lived intangible assets, property, plant and equipment, and exploration and evaluation assets, the determination of recoverable amount, being the higher of value-in-use and fair value less costs to dispose, requires judgement on the part of management in both identifying and then valuing the relevant CGUs. Recoverable amounts are based on management's view of key variables and market conditions such as future commodity prices, the timing and approval of future capital and operating expenditure, and the most appropriate discount rate. As well as considering indicators of impairment, management must determine whether any indicators of reversal of previous impairments are apparent for assets other than goodwill. Due to the decrease in commodity prices during the year, impairment reversals were only considered in a limited number of cases. No impairment reversals were recognised.	For all material goodwill balances, indefinite-lived intangible assets, property, plant and equipment, and exploration and evaluation assets we undertook the following: – We satisfied ourselves as to the appropriateness of management's identification of the Group's CGUs and the continued satisfactory operation of the Group's controls over the impairment assessment process. – We evaluated management's assessment of impairment indicators, as well as indicators of impairment reversal, including the conclusions reached. – With the support of our valuation specialists, we benchmarked key market related assumptions in management's valuation models used to determine recoverable amount, including future commodity prices, foreign exchange rates and discount rates, against external data. – We verified the mathematical accuracy of management's valuation models and agreed relevant data, including assumptions on timing and future capital and operating expenditure, to the latest Life of Mine/production plans and budgets.

Independent auditors' report of PricewaterhouseCoopers LLP to the members of Rio Tinto plc and PricewaterhouseCoopers to the members of Rio Tinto Limited
continued

Area of focus	How our audit addressed the area of focus
In relation to specific projects or business units we noted the following: Roughrider – in late 2015 the Group finalised an Order of Magnitude study for the Roughrider uranium project. Taking into account Rio Tinto's updated view of the development concept and geological model, a pre-tax impairment charge of $116 million was recognised against goodwill, and a further $113 million against evaluation and exploration assets. Energy Resources of Australia ("ERA") – in June 2015 Rio Tinto announced that it supported ERA's decision not to proceed with the Final Feasibility Study of the Ranger 3 Deeps project. Rio Tinto also announced that it did not support any further study or future development of Ranger 3 Deeps due to the project's economic challenges. As a result, at 30 June 2015 Rio Tinto recognised a pre-tax impairment charge of $260 million, predominantly related to property, plant and equipment. Oyu Tolgoi – this project has progressed during 2015, including the agreement of project-specific financing for the underground development phase. However, forecast copper prices, to which the recoverable amount is sensitive, have declined. Management conducted an assessment of the recoverable amount of the Oyu Tolgoi CGU as described in Note 1(i) "Principal accounting policies" (Depreciation and impairment) utilising those forecast copper prices and a project-specific discount rate. Simandou – completion of bankable feasibility studies for the mine, port infrastructure and rail infrastructure to support the Simandou project was delayed in 2015 due to the Ebola epidemic in West Africa. Draft separate feasibility studies for the mine, port and rail were issued in December 2015 with the final integrated feasibility study due in May 2016. Due to current market conditions and uncertainty over infrastructure ownership and funding Rio Tinto recognised a pre-tax impairment charge of $2,039 million, predominantly related to exploration and evaluation assets and property, plant and equipment. Refer to note 6 for management's conclusions and the Audit Committee's views set out on page 59.	In addition to our overall response to impairment risk described above, we performed additional procedures on certain projects or business units as follows: – Roughrider – assessed the outcome of management's recently completed Order of Magnitude study, which included a revised geological model and an updated market outlook.; – ERA – checked management's decision not to continue to support ERA's Ranger 3 Deeps project through Rio Tinto board and committee meeting minutes and public announcements.; – Oyu Tolgoi – read the Underground Mine Development and Financing Plan and independently assessed management's project-specific discount rate, considering the terms of the project finance agreement signed in 2015. We also satisfied ourselves as to the appropriateness of the copper price assumptions used in management's impairment model.; and – Simandou – understood the key findings from the draft bankable feasibility studies and discussed these with management responsible for the project, considered management's assessment of external indicators of value for the project and considered the judgements taken by management in determining the impairment charge. We validated the appropriateness of the related disclosures in note 6 to the financial statements, including the sensitivities provided with respect to Oyu Tolgoi.
Close-down, restoration and environmental obligations Rio Tinto has provisions for close-down, restoration and environmental obligations of $8,426 million as at 31 December 2015. The calculation of these provisions requires management judgement in estimating the quantum and timing of future costs, particularly given the unique nature of each site, the long timescales involved and the potential associated obligations. These calculations also require management to determine an appropriate rate to discount these future costs back to their net present value. The judgement required to estimate such costs is further compounded by the fact that there has been limited restoration and rehabilitation activity and historical precedent against which to benchmark estimates of future costs. Management reviews the close-down, restoration and environment obligations on a semi-annual basis, using experts to provide support in its assessment where appropriate. This review incorporates the effects of any changes in local regulations and management's anticipated approach to restoration and rehabilitation. Refer to note 26 and the Audit Committee's views set out on page 59.	We assessed management's process for the review of provisions, and performed detailed testing of the 31 December 2015 provision for five business units. For the remaining business units, including legacy operations, we assessed provision movements in the year relating to close-down, restoration and environmental obligations to check they were consistent with our understanding of the asset and associated remediation plans. As part of our detailed testing of the cost estimates prepared by management for the five business units selected, we established the existence of legal and/or constructive obligations with respect to the restoration and rehabilitation for each business unit to assess the appropriateness of the intended method of restoration and rehabilitation and associated cost estimate. We also considered the competence and objectivity of management's experts, whether internal or external to Rio Tinto, who produced the cost estimates. We validated the accuracy of calculations and the appropriateness of the discount rate using our valuations specialists.
Provisions for uncertain tax positions The Group operates across a large number of jurisdictions and is subject to periodic challenges by local tax authorities on a range of tax matters during the normal course of business, including transfer pricing, indirect taxes and transaction related tax matters. As at 31 December 2015, the Group has current and non-current taxes payable of $430 million. Where the amount of tax payable is uncertain, Rio Tinto establishes provisions based on management's judgement of the probable amount of the liability. Refer to notes 17 and 31, and the Audit Committee's views set out on page 59.	We assessed management's process for identifying uncertain tax positions and the related accounting policy of provisioning for tax exposures. We used our tax specialists to gain an understanding of the current status of tax assessments and investigations and to monitor developments in ongoing disputes. We read recent rulings and correspondence with local tax authorities, as well as external advice received by the Group where relevant, to satisfy ourselves that the tax provisions had been appropriately recorded or adjusted to reflect the latest external developments.

Area of focus	How our audit addressed the area of focus
Defined benefit pension plan surpluses and deficits The Group has approximately 60 defined benefit pension plans. The total fair value of plan assets is $13,642 million, and the total present value of obligations is $15,261 million, which are both significant in the context of the overall balance sheet of the Group. The valuation of the pension liabilities requires judgement in determining appropriate assumptions such as salary increases, mortality rates, discount rates, inflation levels and the impact of any changes in individual pension plans. Movements in these assumptions can have a material impact on the determination of the liability. Management uses external actuaries to assist in assessing these assumptions. Judgement is also involved in the measurement of the fair value of certain pension assets. Refer to notes 26 and 45 and the Audit Committee's views set out on page 59.	We used our actuarial specialists to satisfy ourselves that the assumptions used in calculating the pension plan liabilities, including salary increases and mortality rate assumptions, were consistent with the specifics of each plan and, where applicable, with relevant national and industry benchmarks. We also verified that the discount and inflation rates used in the valuation of the pension liabilities were consistent with our internally developed benchmarks and in line with other companies' recent external reporting. For pension plan assets, we obtained third party confirmations of ownership and third party valuations of individual pension assets. We re-performed a sample of the valuations independently, for example testing the valuation of marketable securities to index prices as at 31 December 2015, recalculating valuations based on observable inputs and using our specialists to help us assess other individual asset values, whose value is not determined based on observable market inputs, such as property.

Finance transformation – Shared services transition
The shared services transition element of Rio Tinto's Finance transformation programme includes the centralisation and outsourcing of certain back office finance activities (excluding key controls) to third-party providers. The programme commenced in 2014 and is expected to complete in 2016. The largest business units had fully transitioned by the end of 2015.
 	
Certain of the activities being transitioned were previously undertaken in Rio Tinto's own shared services centres. A number of additional business unit finance processes have also been transitioned in 2015.
 	
This centralisation of finance processes and the associated transfer of responsibilities created a risk of loss of knowledge which could adversely affect the controls, or allow control gaps to emerge, during the transition period. There is also a risk that controls over financial reporting, which rely on those activities that have been, or are to be, transitioned may not be designed and/or operate effectively.
 	
Refer to the Audit Committee's views set out on page 59.
	We updated our understanding of the Group's shared services transition plans, including the timing of business unit transitions and the extent of activities being transferred.
	
	We assessed the implementation of management's plans through the following:
	
	– Assessing the design effectiveness of internal controls over financial reporting in the processes impacted at both the Group and business unit levels.
	– Testing the operating effectiveness of key controls which operate within Rio Tinto's retained organisation.
	– In respect of third-party outsourced service providers:
	  – Evaluating the 'Statements of Works' governing the service level agreements with Rio Tinto and the associated key performance indicators.
	  – Visiting the outsourced shared service centres to understand the structure, roles, responsibilities and the outsourced service provider's knowledge and understanding of the transitioned processes and procedures. This provided evidence that key controls still remained within Rio Tinto's retained organisation.
	  – Obtaining a report from independent third parties on the Service Organisation Controls performed in accordance with the Statement on Standards for Attestation Engagements (SSAE) No. 16. This provided evidence about the operating effectiveness of governance and entity level controls operated by the outsourced service providers.

How we tailored the audit scope

As the Group engagement team, we tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the geographic structure of the Group, the accounting processes and controls, and the industry in which the Group operates.

Following the reorganisation of the former Energy product group in February 2015, the Group is organised into four product groups – Aluminium, Copper & Coal, Diamonds & Minerals, and Iron Ore – all of which are supported by centralised functions. Each product group is made up of a number of operating businesses which represent separate business units. The Group financial statements are a consolidation of business units, comprising the Group's operating businesses and centralised functions. Based on this, we determined the appropriate business units to perform work over based on factors such as the size of the balances, the areas of focus as noted above and known accounting matters, and to include unpredictability in our audit procedures.

In establishing the overall approach to the Group audit, we determined the type of work that needed to be performed at business units by us, as the Group engagement team, or component auditors from either other PwC network firms or non-PwC firms operating under our instruction. In 2015, we identified two business units (2014: three) which, in our view, required an audit of their complete financial information, due to their financial significance to the Group. Those business units were Pilbara (previously considered as separate Hamersley Iron and Robe River business units, with both subject to full scope audits) and Escondida. Specific audit procedures on certain balances and transactions were performed at a further 17 business units (2014: 14), primarily to ensure appropriate audit coverage. This increase resulted from the reduction in our overall materiality from $600 million to $300 million as explained below. As we seek to vary our audit procedures each year to ensure an element of unpredictability, two smaller business units (2014: two) were included in our Group audit scope for 2015. With the reduction in materiality we extended certain of our procedures at in-scope business units when compared with those undertaken during the comparative period. We also performed work centrally on IT general controls, journals, taxation, pensions and treasury, and on the shared services transition as noted above. Together, the central and operating business units at which work was performed by the Group engagement team and component auditors accounted for 83% of consolidated revenue, 82% of consolidated underlying profit before tax and 84% of consolidated total assets. At the Group level, we also carried out analytical and other procedures on the business units not covered by the procedures described above.

Independent auditors' report of PricewaterhouseCoopers LLP to the members of Rio Tinto plc and PricewaterhouseCoopers to the members of Rio Tinto Limited
continued

Where work was performed by component auditors, we determined the level of involvement we needed to have in the audit work at those business units to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the Group financial statements as a whole.

We issued formal, written instructions to all component auditors setting out the audit work to be performed by each of them and maintained regular communication with the component auditors throughout the audit cycle. These interactions included attending component clearance meetings and holding regular conference calls, as well as reviewing and assessing matters reported. The Group engagement team also reviewed certain audit working papers of the component auditors of Pilbara, Escondida, Rio Tinto Aluminium and Turquoise Hill Resources.

In addition, senior members of the Group engagement team visited component teams across all four product groups in Canada, Australia, the United States of America, Chile, Mongolia, and Singapore. These visits included meetings with local management and with the component auditors, and typically operating site tours.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and to evaluate the effect of misstatements, both individually and on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

Overall Group materiality	$300 million (2014: $600 million). This reflects the lower profitability of the Group, principally due to the significant fall in commodity prices.
How we determined it	Consistent with the prior year, 5% of profit before tax adjusted for items excluded from underlying earnings (as defined in note 2 to the financial statements).
Rationale for benchmark applied	We consider an adjusted measure to be one of the principal considerations for members in assessing the recurring financial performance of the Group as it best represents results from continuing operations.
Component materiality	For each component in our audit scope, we allocated a materiality that was less than our overall Group materiality. The range of materiality allocated to each component was between $100 million and $250 million.

We agreed with the Audit Committee that we would report to them misstatements identified during our audit above $30 million (2014: $50 million) as well as misstatements below that amount that, in our view, warranted reporting for qualitative reasons.

Going concern

Under the Listing Rules we are required to review the directors' statement, set out on page 105, in relation to going concern. We have nothing to report having performed our review.

Under ISAs (UK & Ireland) we are also required to report to you if we have anything material to add or to draw attention to in relation to the directors' statement about whether they considered it appropriate to adopt the going concern basis in preparing the financial statements. We have nothing material to add or to draw attention to.

As noted in the directors' statement, the directors have concluded that it is appropriate to adopt the going concern basis in preparing the financial statements. The going concern basis presumes that the Group and Parent Companies (Rio Tinto plc and Rio Tinto Limited) have adequate resources to remain in operation, and that the directors intend them to do so, for at least one year from the date the financial statements were signed.

As part of our audit we have concluded that the directors' use of the going concern basis is appropriate. However, because not all future events or conditions can be predicted, these statements are not a guarantee as to the Group's and Parent Companies' ability to continue as a going concern.

Other required reporting – PricewaterhouseCoopers LLP

Consistency of other information

Companies Act 2006 opinion

In our opinion, the information given in the Strategic report and the Directors' report for the financial year for which the financial statements are prepared is consistent with the financial statements.

ISAs (UK & Ireland) reporting

Under ISAs (UK & 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 and Rio Tinto plc acquired in the course of performing our audit; or – otherwise misleading.	We have no exceptions to report arising from this responsibility.
The statement given by the directors on page 66, in accordance with provision C.1.1 of the UK Corporate Governance Code ("the Code"), that they consider the Annual report taken as a whole to be fair, balanced and understandable and provides the information necessary for members to assess the Group's and Rio Tinto plc's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and Rio Tinto plc acquired in the course of performing our audit.	We have no exceptions to report arising from this responsibility.
The section of the Annual report on page 59, as required by provision C.3.8 of the Code, describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee.	We have no exceptions to report arising from this responsibility.

The directors' assessment of the prospects of the Group and of the principal risks that would threaten the solvency or liquidity of the Group

Under ISAs (UK & Ireland) we are required to report to you if we have anything material to add or to draw attention to in relation to:

– the directors' confirmation on page 64 of the Annual report, in accordance with provision C.2.1 of the Code, 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.	We have nothing material to add or to draw attention to.
– the disclosures in the Annual report that describe those risks and explain how they are being managed or mitigated.	We have nothing material to add or to draw attention to.
– the directors' explanation on page 15 of the Annual report, in accordance with provision C.2.2 of the Code, 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 have nothing material to add or to draw attention to.

Under the Listing Rules we are required to review the directors' statement that they have carried out a robust assessment of the principal risks facing the Group and the directors' statement in relation to the longer-term viability of the Group, set out on page 15. Our review was substantially less in scope than an audit and only consisted of making enquiries and considering the directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the Code; and considering whether the statements are consistent with the knowledge acquired by us in the course of performing our audit. We have nothing to report having performed our review.

Adequacy of accounting records and information and explanations received

Under the Companies Act 2006 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
- adequate accounting records have not been kept by Rio Tinto plc, or returns adequate for our audit have not been received from branches not visited by us; or
- the Rio Tinto plc financial statements and the part of the Directors' remuneration report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Directors' remuneration

Directors' remuneration report – Companies Act 2006 opinion

In our opinion, the part of the Directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

Other Companies Act 2006 reporting

Under the Companies Act 2006 we are required to report to you if, in our opinion, certain disclosures of directors' remuneration specified by law are not made. We have no exceptions to report arising from this responsibility.

Corporate governance statement

Under the Listing Rules we are required to review the part of the Corporate Governance Statement relating to ten further provisions of the Code. We have nothing to report having performed our review.

Other required reporting – PricewaterhouseCoopers

Directors' remuneration

Directors' remuneration report – Corporations Act 2001 opinion

Under the Corporations Act 2001 (in respect of Rio Tinto Limited) we are required to express an opinion on the Directors' remuneration report included in the Directors' report, based on our audit conducted in accordance with Australian Auditing Standards. The directors of Rio Tinto Limited are responsible for the preparation and presentation of the Remuneration report in accordance with section 300A of the Corporations Act 2001 as amended by the ASIC Order.

In our opinion, the Remuneration report included in the accompanying Annual report complies with the requirements of section 300A of the Corporations Act 2001 as amended by the ASIC Order.

Independence

In conducting our audit, we have complied with the independence requirements of the Corporations Act 2001.

Responsibilities for the financial statements, the financial report and the audit

Our responsibilities and those of the directors

As explained more fully in the Directors' statement of responsibilities set out on page 200, the directors are responsible for the preparation of the financial statements and the financial report and for being satisfied that they give a true and fair view, and for such internal control as the directors determine is necessary to enable the preparation of the financial report that is free from material misstatement, whether due to fraud or error.

Our responsibility is to audit and express an opinion on the financial statements and financial report in accordance with applicable law and ISAs (UK & Ireland) and Australian Auditing Standards respectively. Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors and relevant ethical requirements relating to audit engagements in Australia.

This report, including the opinions, has been prepared for and only for the members of Rio Tinto plc and Rio Tinto Limited as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 (in respect of Rio Tinto plc) and the Corporations Act 2001 as amended by the ASIC Order (in respect of Rio Tinto Limited) and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

What an audit of financial statements involves

An audit involves obtaining evidence about the amounts and disclosures in the financial statements and the financial report sufficient to give reasonable assurance that these 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 and the Parent Companies' circumstances and have been consistently applied and adequately disclosed;

Independent auditors' report of PricewaterhouseCoopers LLP to the members of Rio Tinto plc and PricewaterhouseCoopers to the members of Rio Tinto Limited
continued

- the reasonableness of significant accounting estimates made by the directors; and
- the overall presentation of the financial statements and the financial report.

The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the financial statements and the financial report whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entities' preparation and fair presentation of the financial statements and the financial report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entities' internal control.

We primarily focus our work in these areas by assessing the directors' judgements against available evidence, forming our own judgements, and evaluating the disclosures in the financial statements and the financial report.

We test and examine information, using sampling and other auditing techniques, to the extent we consider necessary to provide a reasonable basis for us to draw conclusions. We obtain audit evidence through testing the effectiveness of controls, substantive procedures or a combination of both.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

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 the audited financial report 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.

Richard Hughes (Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
London, United Kingdom

2 March 2016

Paul Bendall Partner
for and on behalf of PricewaterhouseCoopers
Chartered Accountants and Statutory Auditors
Melbourne, Australia

2 March 2016

(a) The maintenance and integrity of the Rio Tinto Group website is the responsibility of the directors; the work carried out by the auditors does not involve consideration of these matters and, accordingly, the auditors accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website.

(b) Legislation in the United Kingdom and Australia governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

Financial summary 2006-2015

US$m	2006	2007	2008	2009	2010	2011	2012	2013	2014	**2015**
Gross sales revenue[a]	25,440	33,518	56,905	42,734	59,008	65,298	55,597	54,575	50,041	**36,784**
Share of equity accounted units' sales revenue and items excluded from underlying earnings	(2,975)	(3,818)	(4,044)	(2,472)	(3,837)	(4,769)	(4,655)	(3,404)	(2,377)	**(1,955)**
Consolidated sales revenue	22,465	29,700	52,861	40,262	55,171	60,529	50,942	51,171	47,664	**34,829**
Underlying profit before interest and tax (PBIT)	9,912	10,517	17,683	9,843	21,128	23,662	13,467	16,039	13,851	**7,310**
Finance costs[b]	(193)	(570)	(1,706)	(1,058)	(909)	(759)	(616)	(794)	(967)	**(1,076)**
Exchange differences and derivatives[c]	83	253	(322)	528	529	2	695	(3,362)	(2,021)	**(3,458)**
Other exclusions from underlying earnings	438	(364)	(6,477)	(1,453)	(257)	(9,633)	(15,977)	(8,378)	(1,311)	**(3,502)**
(Loss)/proft before tax (PBT)	10,240	9,836	9,178	7,860	20,491	13,272	(2,431)	3,505	9,552	**(726)**
Tax on exclusions	(357)	60	988	(91)	42	135	2,896	2,642	423	**567**
Tax on underlying PBT	(2,016)	(2,150)	(4,730)	(1,985)	(5,338)	(6,607)	(3,485)	(5,068)	(3,476)	**(1,560)**
Loss after tax from discontinued operations	–	–	(827)	(449)	(97)	(10)	(7)	–	–	**–**
Attributable to non-controlling interests	(429)	(434)	(933)	(463)	(860)	(955)	(1)	2,586	28	**853**
Net (loss)/earnings	7,438	7,312	3,676	4,872	14,238	5,835	(3,028)	3,665	6,527	**(866)**
Underlying/adjusted earnings[d]	7,338	7,443	10,303	6,298	13,987	15,572	9,269	10,217	9,305	**4,540**
(Loss)/earnings per share (basic) – continuing operations[e]	456.2c	464.9c	286.8c	301.7c	731.0c	303.9c	(163.4)c	198.4c	353.1c	**(47.5)c**
Underlying earnings per share (basic) – continuing operations[e]	450.1c	473.2c	656.2c	357.1c	713.3c	809.7c	501.3c	553.1c	503.4c	**248.8c**
Dividends per share: declared for year[f]										
Rio Tinto shareholders (US cents)	85.07c	111.23c	111.22c	45.00c	108.00c	145.00c	167.00c	192.00c	215.00c	**215.00c**
Rio Tinto plc (pence)	44.22p	56.20p	67.49p	28.84p	67.35p	90.47p	106.77p	120.10p	134.88p	**143.13p**
Rio Tinto Limited (Aus. cents)	110.69c	125.72c	146.22c	51.56c	111.21c	134.01c	160.18c	213.14c	256.07c	**296.80c**
Net assets										
Fixed assets[g]	25,803	75,888	67,651	72,706	83,895	91,529	90,580	81,554	80,669	**70,226**
Other assets less liabilities	3,026	11,609	8,469	10,078	4,394	1,632	8,478	8,224	4,596	**4,037**
Provisions (including deferred tax)	(7,007)	(16,013)	(14,987)	(17,998)	(19,706)	(25,935)	(22,126)	(18,221)	(18,176)	**(16,352)**
Net debt	(2,437)	(45,191)	(38,672)	(18,861)	(4,071)	(8,342)	(19,192)	(18,055)	(12,495)	**(13,783)**
Non-controlling interests	(1,153)	(1,521)	(1,823)	(2,094)	(6,265)	(6,685)	(11,187)	(7,616)	(8,309)	**(6,779)**
Equity attributable to owners of Rio Tinto	18,232	24,772	20,638	43,831	58,247	52,199	46,553	45,886	46,285	**37,349**
Capital expenditure[h]	(3,992)	(5,000)	(8,574)	(5,388)	(4,591)	(12,573)	(17,615)	(13,001)	(8,162)	**(4,685)**
Acquisitions	(303)	(37,539)	(9)	(396)	(907)	(4,156)	(1,335)	4	–	**(3)**
Disposals	24	13	2,572	2,424	3,800	386	251	1,896	887	**(38)**
Net cash generated from operating activities[i]	7,803	8,491	14,883	9,212	18,277	20,235	9,430	15,078	14,286	**9,383**
Cash flows before financing activities[j]	3,714	(34,251)	8,702	5,855	16,566	3,245	(8,813)	4,132	7,783	**4,783**
Ratios										
Operating margin[k]	42%	34%	32%	24%	37%	37%	25%	30%	28%	**20%**
Net debt to total capital[l]	11%	63%	63%	29%	6%	12%	25%	25%	19%	**24%**
Underlying earnings: owners' equity[m]	44%	35%	45%	20%	27%	28%	19%	22%	20%	**11%**
Interest cover[n]	89	20	10	9	27	27	13	13	13	**7**

(a) Gross sales revenue includes 100 per cent of subsidiaries' sales revenue and the Group's share of the sales revenue of equity accounts units (after adjusting for sales to subsidiaries).

Financial summary 2006-2015
continued

(b) Finance costs include net interest and amortisation of discount.

(c) Under IFRS, as defined in note 1, certain gains and losses on currency exchange and on revaluation of derivatives are included in the Group's net (loss)/earnings. These items are excluded from underlying earnings.

(d) Underlying earnings is an additional measure of earnings, which is reported by Rio Tinto with its IFRS (as defined in note 1) results to provide greater understanding of the underlying business performance of its operations. It is defined in note 2 to the financial statements. Underlying profit before interest and tax (PBIT) is similar to underlying earnings except that it is stated before tax and interest.

(e) 2009 earnings per share from continuing operations and underlying earnings per share have been calculated using a number of shares which reflects the discounted price of the July 2009 rights issues (the bonus factor). 2006 to 2008 comparatives have been restated accordingly.

(f) Dividends per share are the amounts declared in respect of each financial year. These usually include an interim dividend paid in the year, and a final dividend paid after the end of the year. The special dividend of 90 US cents per share paid in 2006 is not included in the table. 2005 to 2008 ordinary dividends per share have been restated using a number of shares which reflects the discounted price of the July 2009 rights issues (the bonus factor).

(g) Fixed assets include property, plant and equipment, intangible assets, goodwill, and investments in, and long-term loans to, equity accounted units.

(h) Capital expenditure is presented gross, before taking into account any disposals of property, plant and equipment.

(i) Net cash generated from operating activities represents the cash generated by the Group's consolidated operations, after payment of interest, taxes, and dividends to non-controlling interests in subsidiaries.

(j) Cash flow before financing activities is stated before deducting dividends payable to owners of Rio Tinto.

(k) Operating margin is the percentage of underlying PBIT, after excluding tax on equity accounted units, to gross sales revenue.

(l) Total capital comprises equity attributable to owners of Rio Tinto plus net debt and non-controlling interests.

(m) Underlying earnings: owners' equity represents underlying earnings expressed as a percentage of the mean of opening and closing equity attributable to owners of Rio Tinto.

(n) Interest cover represents the number of times interest payable less receivable (excluding the amortisation of discount but including capitalised interest) is covered by underlying operating profit, less amortisation of discount, plus dividends from equity accounted units. Underlying operating profit is similar to underlying earnings but is stated before tax, interest and share of profit after tax of equity accounted units.

Summary financial data in Australian dollars, sterling and US dollars

2015 A$m	2014 A$m	2015 £m	2014 £m		2015 US$m	2014 US$m
48,878	55,430	**24,063**	30,367	Gross sales revenue	**36,784**	50,041
46,281	52,797	**22,784**	28,925	Consolidated sales revenue	**34,829**	47,664
(965)	10,581	**(475)**	5,797	(Loss)/profit before tax from continuing operations	**(726)**	9,552
(2,284)	7,199	**(1,124)**	3,944	(Loss)/profit for the year from continuing operations	**(1,719)**	6,499
(1,151)	7,230	**(567)**	3,961	Net (loss)/earnings attributable to Rio Tinto shareholders	**(866)**	6,527
6,033	10,307	**2,970**	5,647	Underlying earnings [(a)]	**4,540**	9,305
(63.1)c	391.1c	**(31.0)p**	214.3p	Basic (loss)/earnings per ordinary share [(b)]	**(47.5)c**	353.1c
330.6c	557.6c	**162.8p**	305.5p	Basic underlying earnings per ordinary share [(a)(b)]	**248.8c**	503.4c
				Dividends per share to Rio Tinto shareholders [(c)]		
297.89c	223.23c	**146.90p**	122.72p	– paid	**226.5c**	204.5c
151.89c	152.98c	**74.21p**	77.98p	– proposed	**107.5c**	119.0c
6,356	8,621	**3,129**	4,723	Cash flow before financing activities	**4,783**	7,783
(18,924)	(15,243)	**(9,294)**	(8,026)	Net debt	**(13,783)**	(12,495)
51,280	56,463	**25,184**	29,729	Equity attributable to Rio Tinto shareholders	**37,349**	46,285

(a) Underlying earnings exclude net impairment and other charges of US$5,406 million (2014 charges: of US$2,778 million), which are analysed on page 127.

(b) Basic (loss)/earnings per ordinary share and basic underlying earnings per ordinary share do not recognise the dilution resulting from share options on issue.

(c) The Australian dollar and sterling amounts are based on the US dollar amounts, retranslated at average or closing rates as appropriate, except for the dividends which are the actual amounts.

The financial data above has been extracted from the financial information set out on pages 107 to 189.

Contents

Production, reserves and operations

Metals and minerals production	213
Ore reserves	217
Mineral resources	221
Competent Persons	226
Mines and production facilities	228

Metals and minerals production

	Rio Tinto % share (a)	2015 Production Total	2015 Production Rio Tinto share	2014 Production Total	2014 Production Rio Tinto share	2013 Production Total	2013 Production Rio Tinto share
ALUMINA ('000 tonnes)							
Jonquière (Vaudreuil) (Canada) (b)	100.0	**1,449**	**1,449**	1,444	1,444	1,439	1,439
Jonquière (Vaudreuil) specialty plant (Canada)	100.0	**110**	**110**	108	108	103	103
Queensland Alumina (Australia)	80.0	**3,747**	**2,997**	3,568	2,854	3,384	2,707
São Luis (Alumar) (Brazil)	10.0	**3,667**	**367**	3,639	364	3,425	343
Yarwun (Australia)	100.0	**2,864**	**2,864**	2,688	2,688	2,446	2,446
			7,788		7,458		7,037
Other Aluminium							
Gove Refinery (Australia) (c)	100.0	**–**	**–**	676	676	2,270	2,270
					676		2,270
Rio Tinto total			**7,788**		8,134		9,307
ALUMINIUM ('000 tonnes)							
Alma (Canada)	100.0	**466**	**466**	455	455	440	440
Alouette (Sept-Îles) (Canada)	40.0	**606**	**242**	583	233	582	233
Alucam (Edéa) (Cameroon) (d)	–	**–**	**–**	93	43	75	35
Arvida (Canada)	100.0	**173**	**173**	173	173	175	175
Arvida AP60 (Canada) (e)	100.0	**59**	**59**	59	59	9	9
Bécancour (Canada)	25.1	**437**	**109**	446	112	435	109
Bell Bay (Australia)	100.0	**191**	**191**	188	188	187	187
Boyne Island (Australia)	59.4	**579**	**344**	553	328	561	333
Dunkerque (France)	100.0	**275**	**275**	270	270	258	258
Grande-Baie (Canada)	100.0	**221**	**221**	222	222	224	224
ISAL (Reykjavik) (Iceland)	100.0	**201**	**201**	206	206	197	197
Kitimat (Canada)	100.0	**110**	**110**	125	125	172	172
Laterrière (Canada)	100.0	**244**	**244**	244	244	239	239
Lochaber (UK)	100.0	**47**	**47**	42	42	44	44
Saint-Jean-de-Maurienne (France) (f)	–	**–**	**–**	–	–	85	85
Shawinigan (Canada) (g)	100.0	**–**	**–**	–	–	74	74
Sohar (Oman)	20.0	**377**	**75**	364	73	354	71
SØRAL (Husnes) (Norway) (h)	–	**–**	**–**	76	38	89	45
Tiwai Point (New Zealand)	79.4	**333**	**265**	327	260	324	257
Tomago (Australia)	51.6	**579**	**299**	561	289	545	281
			3,322		3,361		3,468
Other Aluminium							
Sebree (US) (i)	–	**–**	**–**	–	–	87	87
							87
Rio Tinto total			**3,322**		3,361		3,555

See notes 216

Metals and minerals production
continued

	Rio Tinto % share (a)	2015 Production Total	2015 Production Rio Tinto share	2014 Production Total	2014 Production Rio Tinto share	2013 Production Total	2013 Production Rio Tinto share
BAUXITE ('000 tonnes)							
Gove (Australia)	100.0	**7,497**	**7,497**	6,528	6,528	8,029	8,029
Porto Trombetas (MRN) (Brazil)	12.0	**16,162**	**1,939**	16,376	1,965	15,729	1,887
Sangaredi (Guinea)	23.0 (j)	**14,615**	**6,577**	15,803	7,111	15,437	6,947
Weipa (Australia)	100.0	**27,663**	**27,663**	26,266	26,266	26,341	26,341
Rio Tinto total			**43,677**		41,871		43,204
BORATES ('000 tonnes) (k)							
Rio Tinto Minerals – Boron (US)	100.0	**476**	**476**	508	508	495	495
Rio Tinto total			**476**		508		495
COAL (hard coking) ('000 tonnes)							
Rio Tinto Coal Australia							
Hail Creek Coal (Australia)	82.0	**6,218**	**5,099**	6,492	5,324	6,839	5,608
Kestrel Coal (Australia)	80.0	**3,450**	**2,760**	2,163	1,730	2,553	2,043
Total Australian hard coking coal			**7,859**		7,054		7,651
Rio Tinto Coal Mozambique							
Benga (l)	–	**–**	**–**	641	416	867	564
Rio Tinto total hard coking coal			**7,859**		7,471		8,214
COAL (semi-soft coking) ('000 tonnes)							
Rio Tinto Coal Australia							
Hunter Valley (Australia)	80.0	**2,966**	**2,373**	1,935	1,548	2,634	2,107
Mount Thorley (Australia)	64.0	**1,398**	**895**	1,952	1,250	1,846	1,182
Warkworth (Australia)	44.5	**853**	**380**	933	415	1,281	569
Rio Tinto total semi-soft coking coal			**3,647**		3,213		3,859
COAL (thermal) ('000 tonnes)							
Rio Tinto Coal Australia							
Bengalla (Australia) (m)	32.0	**8,319**	**2,662**	8,558	2,739	8,232	2,634
Clermont (Australia) (n)	–	**–**	**–**	4,832	2,421	11,782	5,903
Hail Creek Coal (Australia) (o)	82.0	**3,245**	**2,661**	2,304	1,890	191	157
Hunter Valley (Australia)	80.0	**10,048**	**8,039**	11,924	9,539	11,002	8,802
Kestrel Coal (Australia)	80.0	**637**	**509**	564	451	463	371
Mount Thorley (Australia)	64.0	**2,815**	**1,802**	2,241	1,434	2,357	1,508
Warkworth (Australia)	44.5	**6,663**	**2,965**	6,803	3,027	6,995	3,110
Total Australian thermal coal			**18,638**		21,501		22,485
Rio Tinto Coal Mozambique							
Benga (l)	–	**–**	**–**	593	385	754	490
Rio Tinto total thermal coal			**18,638**		21,886		22,975

See notes 216

	Rio Tinto % share (a)	2015 Production Total	2015 Production Rio Tinto share	2014 Production Total	2014 Production Rio Tinto share	2013 Production Total	2013 Production Rio Tinto share
COPPER (mined) ('000 tonnes)							
Bingham Canyon (US)	100.0	**92.0**	**92.0**	204.3	204.3	211.0	211.0
Escondida (Chile)	30.0	**1,148.8**	**344.7**	1,137.6	341.3	1,121.5	336.5
Grasberg – Joint Venture (Indonesia) (p) (q)	40.0	**0.0**	**0.0**	19.2	7.7	15.7	6.3
Northparkes (Australia) (r)	–	**–**	**–**	–	–	50.6	40.4
Oyu Tolgoi (Mongolia) (s)	33.5	**202.2**	**67.8**	148.4	49.8	76.7	25.7
Palabora (South Africa) (t)	–	**–**	**–**	–	–	22.2	11.6
Rio Tinto total			**504.4**		603.1		631.5
COPPER (refined) ('000 tonnes)							
Escondida (Chile)	30.0	**326.3**	**97.9**	301.5	90.5	305.3	91.6
Rio Tinto Kennecott (US)	100.0	**115.2**	**115.2**	204.1	204.1	193.6	193.6
Palabora (South Africa) (t)	–	**–**	**–**	–	–	25.8	14.9
Rio Tinto total			**213.0**		294.6		300.1
DIAMONDS ('000 carats)							
Argyle (Australia)	100.0	**13,472**	**13,472**	9,188	9,188	11,359	11,359
Diavik (Canada)	60.0	**6,406**	**3,843**	7,233	4,340	7,243	4,346
Murowa (Zimbabwe) (u)	–	**99**	**77**	442	344	414	322
Rio Tinto total			**17,392**		13,872		16,027
GOLD (mined) ('000 ounces)							
Barneys Canyon (US)	100.0	**0.0**	**0.0**	0.4	0.4	0.4	0.4
Bingham Canyon (US)	100.0	**130.8**	**130.8**	259.8	259.8	206.7	206.7
Escondida (Chile)	30.0	**88.5**	**26.6**	90.1	27.0	94.2	28.3
Grasberg – Joint Venture (Indonesia) (p) (q)	40.0	**0.0**	**0.0**	5.6	2.3	0.0	0.0
Northparkes (Australia) (r)	–	**–**	**–**	–	–	61.6	49.3
Oyu Tolgoi (Mongolia) (s)	33.5	**653.4**	**219.0**	588.7	197.3	157.0	52.6
Palabora (South Africa) (t)	–	**–**	**–**	–	–	5.5	3.1
Rio Tinto total			**376.4**		486.8		340.4
GOLD (refined) ('000 ounces)							
Rio Tinto Kennecott (US)	100.0	**179.0**	**179.0**	252.2	252.2	192.3	192.3
IRON ORE ('000 tonnes)							
Hamersley mines (Australia)	(v)	**189,421**	**189,421**	163,163	163,163	143,347	143,347
Hamersley – Channar (Australia)	60.0	**10,561**	**6,337**	10,913	6,548	11,047	6,628
Hope Downs (Australia)	50.0	**44,745**	**22,373**	42,715	21,358	33,788	16,894
Iron Ore Company of Canada (Canada)	58.7	**17,691**	**10,388**	14,775	8,676	15,368	9,024
Robe River – Pannawonica (Australia)	53.0	**32,482**	**17,216**	34,535	18,304	33,308	17,654
Robe River – West Angelas (Australia)	53.0	**32,665**	**17,313**	29,264	15,510	29,093	15,419
Rio Tinto total			**263,048**		233,557		208,966
MOLYBDENUM ('000 tonnes)							
Bingham Canyon (US)	100.0	**7.6**	**7.6**	11.5	11.5	5.7	5.7

See notes 216

Metals and minerals production
continued

	Rio Tinto % share (a)	2015 Production Total	2015 Production Rio Tinto share	2014 Production Total	2014 Production Rio Tinto share	2013 Production Total	2013 Production Rio Tinto share
SALT ('000 tonnes)							
Dampier Salt (Australia)	68.4	**8,103**	**5,539**	9,938	6,793	9,841	6,728
SILVER (mined) ('000 ounces)							
Bingham Canyon (US)	100.0	**1,458**	**1,458**	2,935	2,935	2,876	2,876
Escondida (Chile)	30.0	**4,812**	**1,443**	4,883	1,465	4,032	1,210
Grasberg – Joint Venture (Indonesia) (p) (q)	40.0	**0**	**0**	0	0	0	0
Oyu Tolgoi (Mongolia) (s)	33.5	**1,223**	**410**	893	299	489	164
Others	–	**0**	**0**	0	0	687	515
Rio Tinto total			**3,311**		4,699		4,765
SILVER (refined) ('000 ounces)							
Rio Tinto Kennecott (US)	100.0	**1,843**	**1,843**	2,811	2,811	2,158	2,158
TITANIUM DIOXIDE SLAG ('000 tonnes)							
Rio Tinto Iron & Titanium (Canada/South Africa) (w)	100.0	**1,089**	**1,089**	1,443	1,443	1,622	1,622
URANIUM ('000 lbs U_3O_8)							
Energy Resources of Australia (Australia) (x)	68.4	**4,421**	**3,023**	2,569	1,757	6,525	4,462
Rössing (Namibia) (x)	68.6	**2,747**	**1,884**	3,401	2,333	5,312	3,643
Rio Tinto total			**4,907**		4,089		8,105

Notes:

Mine production figures for metals refer to the total quantity of metal produced in concentrates, leach liquor or doré bullion irrespective of whether these products are then refined on site, except for the data for bauxite and iron ore which can represent production of marketable quantities of ore plus concentrates and pellets. Production figures are sometimes more precise than the rounded numbers shown, hence small differences may result from calculation of Rio Tinto share of production.

(a) Rio Tinto percentage share, shown above, is as at the end of 2015. The footnotes below include all ownership changes over the three years. The Rio Tinto share varies at individual mines and refineries in the "others" category and thus no value is shown.

(b) Jonquière's (Vaudreuil's) production shows smelter grade alumina only and excludes hydrate produced and used for specialty alumina.

(c) The curtailment of production at the Gove refinery was completed on 28 May 2014.

(d) Rio Tinto sold its 46.7 per cent interest in the Alucam (Edéa) smelter with an effective date of 31 December 2014. Production data are shown up to that date.

(e) Rio Tinto started production at the Arvida AP60 Technology Centre in the fourth quarter of 2013.

(f) Rio Tinto sold its 100 per cent interest in the Saint-Jean-de-Maurienne smelter with an effective date of 16 December 2013. Production data are shown up to that date.

(g) The Shawinigan smelter ceased production on 29 November 2013.

(h) Rio Tinto sold its 50 per cent interest in the SØRAL (Husnes) smelter with an effective date of 31 October 2014. Production data are shown up to that date.

(i) Rio Tinto sold its 100 per cent interest in the Sebree aluminium smelter with an effective date of 1 June 2013. Production data are shown up to that date.

(j) Rio Tinto has a 22.95 per cent shareholding in the Sangaredi mine but benefits from 45.0 per cent of production.

(k) Borate quantities are expressed as B_2O_3.

(l) Rio Tinto completed the sale of Rio Tinto Coal Mozambique and its 65 per cent interest in the Benga mine with an effective date of 7 October 2014. Production data are shown up to that date.

(m) On 30 September 2015, Rio Tinto announced that it had reached a binding agreement for the sale of its interest in the Bengalla Joint Venture.

(n) Rio Tinto sold its 50.1 per cent interest in the Clermont mine with an effective date of 29 May 2014. Production data are shown up to that date.

(o) Hail Creek commenced production of thermal coal from a processing plant by-product stream following completion of a successful trial in the third quarter of 2013.

(p) Through a joint venture agreement with Freeport-McMoRan (FCX), Rio Tinto is entitled to 40 per cent of additional material mined as a consequence of expansions and developments of the Grasberg facilities since 1998. Total production reflects the quantities attributable to the joint venture.

(q) Production from Grasberg did not exceed the metal attributable to PT Freeport Indonesia per the joint venture agreement for the year 2015. Accordingly, Rio Tinto's share of joint venture production of copper, gold and silver was zero for the year 2015.

(r) Rio Tinto sold its 80 per cent interest in Northparkes with an effective date of 1 December 2013. Production data are shown up to that date.

(s) Rio Tinto owns a 33.52 per cent indirect interest in Oyu Tolgoi through its 50.79 per cent interest in Turquoise Hill Resources Ltd. Production included in the table is from 1 May 2013.

(t) The sale of Rio Tinto's 57.7 per cent interest in Palabora Mining Company was completed on 31 July 2013. Production data have been reported up to 30 June 2013.

(u) Rio Tinto sold its 77.8 per cent interest in Murowa Diamonds with an effective date of 17 June 2015. Production data are shown up to that date.

(v) Includes 100 per cent of production from Paraburdoo, Mt Tom Price, Marandoo, Yandicoogina, Brockman, Nammuldi and the Eastern Range mines. Whilst Rio Tinto owns 54 per cent of the Eastern Range mine, under the terms of the joint venture agreement, Hamersley Iron manages the operation and is obliged to purchase all mine production from the joint venture and therefore all of the production is included in Rio Tinto's share of production.

(w) Quantities comprise 100 per cent of Rio Tinto Fer et Titane and Rio Tinto's share of Richards Bay Minerals' production. Ilmenite mined in Madagascar is being processed in Canada.

(x) ERA and Rössing report drummed U_3O_8.

Ore reserves

Ore Reserves and Mineral Resources for Rio Tinto managed operations are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2012 (the JORC Code) as required by the Australian Securities Exchange (ASX). Codes or guidelines similar to JORC with only minor regional variations have been adopted in South Africa, Canada, the US, Chile, Peru, the Philippines, the UK, Ireland and Europe. Together these Codes represent current best practice for reporting Ore Reserves and Mineral Resources.

The JORC Code envisages the use of reasonable investment assumptions, including the use of projected long-term commodity prices, in calculating Ore Reserve estimates. However, for US reporting, the US Securities and Exchange Commission requires historical price data to be used. For this reason, some Ore Reserves reported to the SEC in the Form 20-F may differ from those reported below.

Ore Reserve and Mineral Resource information in the tables below is based on information compiled by Competent Persons (as defined by JORC), most of whom are full time employees of Rio Tinto or related companies. Each has had a minimum of five years' relevant estimation experience and is a member of a recognised professional body whose members are bound by a professional code of ethics. Each Competent Person consents to the inclusion in this report of information they have provided in the form and context in which it appears. Competent Persons responsible for the estimates are listed on pages 226 and 227, by operation, along with their professional affiliation, employer and accountability for Ore Reserves and/or Mineral Resources. Where operations are not managed by Rio Tinto, the Ore Reserves are published as received from the managing company. The Ore Reserve figures in the following tables are as of 31 December 2015. Summary data for year end 2014 are shown for comparison. Metric units are used throughout. The figures used to calculate Rio Tinto's share of Ore Reserves are often more precise than the rounded numbers shown in the tables, hence small differences might result if the calculations are repeated using the tabulated figures.

	Type of mine (a)	Proved ore reserves at end 2015		Probable ore reserves at end 2015		Total ore reserves 2015 compared with 2014				Rio Tinto share	
		Tonnage	Grade	Tonnage	Grade	**2015**	2014	**2015**	2014	Interest %	**Recoverable mineral**
BAUXITE (b)		millions of tonnes	% Al_2O_3	millions of tonnes	% Al_2O_3	**millions of tonnes**	millions of tonnes	**% Al_2O_3**	% Al_2O_3		**millions of tonnes**
Reserves at operating mines											
Gove (Australia)	O/P	131	49.4	14	49.1	**145**	146	**49.4**	49.4	100.0	**145**
Porto Trombetas (MRN) (Brazil) (c)	O/P	56	49.4	20	49.9	**76**	94	**49.5**	49.5	12.0	**9**
Sangaredi (Guinea) (d)	O/P	104	48.8	267	48.4	**372**	278	**48.5**	49.4	23.0	**85**
Weipa (Australia)	O/P	512	51.8	1,090	52.5	**1,601**	1,485	**52.3**	52.5	100.0	**1,601**
Total											**1,841**

											Marketable product
BORATES (e)		millions of tonnes		millions of tonnes		**millions of tonnes**	millions of tonnes				**millions of tonnes**
Reserves at operating mine											
Rio Tinto Minerals – Boron (US)	O/P	11		12		**23**	22			100.0	**23**

		Coal type (f)	Reserves: Proved	Reserves: Probable at end 2015	Marketable reserves: Proved	Marketable reserves: Probable at end 2015	Marketable reserves: **Total 2015**	Marketable reserves: Total 2014	Marketable coal quality: **Calorific value MJ/kg** (h)	Marketable coal quality: Sulphur content % (h)	Average % yield to give marketable reserves		**Marketable reserves**
COAL (g)			millions of tonnes	millions of tonnes	millions of tonnes	millions of tonnes	**millions of tonnes**	millions of tonnes	**Calorific value MJ/kg** (h)	Sulphur content % (h)			**millions of tonnes**
Reserves at operating mines													
Rio Tinto Coal Australia													
Bengalla (i)	O/C	SC	152	106	123	86	**208**	217	**27.40**	0.50	81	32.0	**67**
Hail Creek (j)	O/C	SC + MC	82	171	63	103	**165**	85	**25.74**	0.35	65	82.0	**136**
Hunter Valley Operations (k)	O/C	SC + MC	684	206	484	144	**629**	404	**27.50**	0.54	71	80.0	**503**
Kestrel Coal	U/G	SC + MC	31	95	27	79	**106**	110	**31.60**	0.59	84	80.0	**85**
Mount Thorley Operations (l)	O/C	SC + MC	15	5	9	3	**13**	18	**29.94**	0.44	62	64.0	**8**
Warkworth (m)	O/C	SC + MC	178	153	116	100	**217**	226	**29.82**	0.45	65	44.5	**96**
Total													**894**
Other undeveloped reserves (n)													
Rio Tinto Coal Australia													
Mount Pleasant (o)	O/C	SC		625		474	**474**	474	**27.24**	0.50	76	80.0	**379**

See notes 220

Ore reserves
continued

	Type of mine (a)	Proved ore reserves at end 2015 Tonnage	Proved ore reserves at end 2015 Grade	Probable ore reserves at end 2015 Tonnage	Probable ore reserves at end 2015 Grade	Total ore reserves 2015 compared with 2014 Tonnage 2015	Tonnage 2014	Grade 2015	Grade 2014	Average mill recovery %	Interest %	Rio Tinto share Recoverable metal
COPPER		millions of tonnes	% Cu	millions of tonnes	% Cu	**millions of tonnes**	millions of tonnes	**% Cu**	% Cu			**millions of tonnes**
Reserves at operating mines												
Bingham Canyon (US)	O/P	439	0.48	251	0.40	**690**	693	**0.45**	0.45	88	100.0	**2.723**
Escondida (Chile)												
– sulphide (p)	O/P	3,711	0.73	1,893	0.56	**5,604**	5,109	**0.67**	0.69	82	30.0	**9.277**
– sulphide leach (p)	O/P	1,858	0.46	763	0.41	**2,622**	2,220	**0.44**	0.43	31	30.0	**1.064**
– oxide	O/P	86	0.81	38	0.63	**125**	133	**0.75**	0.74	65	30.0	**0.182**
Grasberg (Indonesia)	O/P + U/G	776	1.21	1,354	0.96	**2,130**	2,269	**1.05**	1.02	89	(q)	**6.653**
Oyu Tolgoi (Mongolia)												
– Oyut open pit	O/P	353	0.54	598	0.39	**951**	995	**0.45**	0.45	78	33.5	**1.114**
– Oyut stockpiles (r)		35	0.42			**35**	26	**0.42**	0.37	85	33.5	**0.043**
Total												**21.056**
Reserves at development projects												
Oyu Tolgoi (Mongolia)												
– Hugo Dummett North	U/G			464	1.66	**464**	464	**1.66**	1.66	92	33.5	**2.371**
– Hugo Dummett North Extension	U/G			35	1.59	**35**	35	**1.59**	1.59	92	30.0	**0.153**
Total												**2.524**
												Recoverable diamonds
DIAMONDS (b)		millions of tonnes	carats per tonne	millions of tonnes	carats per tonne	**millions of tonnes**	millions of tonnes	**carats per tonne**	carats per tonne			**millions of carats**
Reserves at operating mines												
Argyle (Australia) (s)	U/G			35	2.4	**35**	41	**2.4**	2.4		100.0	**83.1**
Diavik (Canada) (t)	O/P + U/G	11	3.0	8	2.7	**19**	18	**2.8**	2.9		60.0	**31.7**
Murowa (Zimbabwe) (u)	O/P					**–**	4	**–**	1		–	**–**
Total												**114.8**
												Recoverable metal
GOLD		millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	**millions of tonnes**	millions of tonnes	**grammes per tonne**	grammes per tonne			**millions of ounces**
Reserves at operating mines												
Bingham Canyon (US)	O/P	439	0.19	251	0.17	**690**	693	**0.18**	0.18	67	100.0	**2.675**
Grasberg (Indonesia)	O/P + U/G	776	1.03	1,354	0.76	**2,130**	2,269	**0.86**	0.83	67	(q)	**11.778**
Oyu Tolgoi (Mongolia)												
– Oyut open pit	O/P	353	0.35	598	0.23	**951**	995	**0.28**	0.29	69	33.5	**1.971**
– Oyut stockpiles (r)		35	0.21			**35**	26	**0.21**	0.23	78	33.5	**0.064**
Total												**16.488**
Reserves at development projects												
Oyu Tolgoi (Mongolia)												
– Hugo Dummett North	U/G			464	0.34	**464**	464	**0.34**	0.34	83	33.5	**1.408**
– Hugo Dummett North Extension	U/G			35	0.55	**35**	35	**0.55**	0.55	84	30.0	**0.156**
Total												**1.564**

See notes 220

	Type of mine (a)	Proved ore reserves at end 2015 Tonnage	Grade	Probable ore reserves at end 2015 Tonnage	Grade	Total ore reserves 2015 compared with 2014 Tonnage 2015	Tonnage 2014	Grade 2015	Grade 2014	Average mill recovery %	Interest %	Rio Tinto share Marketable product
IRON ORE (b) (v)		millions of tonnes	% Fe	millions of tonnes	% Fe	**millions of tonnes**	millions of tonnes	**% Fe**	% Fe			**millions of tonnes**
Reserves at operating mines												
Hamersley Iron (Australia)												
– Brockman 2 (Brockman ore) (w)	O/P	47	62.5	46	62.1	**93**	62	**62.3**	62.8		100.0	**93**
– Brockman 4 (Brockman ore) (x)	O/P	310	62.3	155	60.4	**465**	516	**61.7**	61.9		100.0	**465**
– Marandoo (Marra Mamba ore)	O/P	175	63.4	12	61.8	**187**	193	**63.3**	63.3		100.0	**187**
– Mt Tom Price (Brockman ore)	O/P	10	63.0	34	64.5	**44**	46	**64.1**	63.8		100.0	**44**
– Mt Tom Price (Marra Mamba ore)	O/P	8	61.0	1	58.1	**9**	9	**60.8**	60.8		100.0	**9**
– Nammuldi (Marra Mamba ore)	O/P	66	62.9	104	62.2	**170**	164	**62.4**	62.6		100.0	**170**
– Paraburdoo (Brockman ore)	O/P	8	61.7	7	63.6	**15**	16	**62.6**	62.7		100.0	**15**
– Silvergrass East (Marra Mamba ore) (y)	O/P	114	62.6	44	59.5	**157**	146	**61.7**	62.1		100.0	**157**
– Western Turner Syncline (Brockman ore)	O/P	210	62.4	79	61.1	**289**	319	**62.1**	62.1		100.0	**289**
– Yandicoogina (Pisolite ore HG) (z)	O/P	637	58.5	4	58.8	**642**	247	**58.5**	58.7		100.0	**642**
Channar JV (Australia)												
– Brockman ore (aa)	O/P	15	62.3	32	61.6	**47**	60	**61.8**	62.0		60.0	**28**
Eastern Range JV (Australia)												
– Brockman ore	O/P	45	62.0	12	60.5	**57**	59	**61.7**	62.0		54.0	**31**
Hope Downs JV (Australia)												
– Hope Downs 1 (Marra Mamba ore)	O/P	3	61.4	193	61.6	**196**	212	**61.6**	61.6		50.0	**98**
– Hope Downs 4 (Brockman ore)	O/P	60	63.0	95	63.2	**154**	154	**63.1**	63.1		50.0	**77**
Robe River JV (Australia)												
– Pannawonica (Pisolite ore) (bb)	O/P	110	57.2	84	56.4	**194**	216	**56.8**	56.8		53.0	**103**
– West Angelas (Marra Mamba ore) (cc)	O/P	153	62.0	55	60.0	**209**	185	**61.4**	61.5		53.0	**111**
Iron Ore Company of Canada (Canada) (dd)	O/P	259	65.0	316	65.0	**575**	556	**65.0**	65.0		58.7	**337**
Total												**2,856**
Reserves at development projects												
Hamersley Iron (Australia)												
– Koodaideri (Brockman ore)	O/P	253	62.1	198	61.5	**452**	467	**61.8**	61.8		100.0	**452**
– Turee Central (Brockman ore)	O/P	72	62.0	6	61.4	**78**	78	**61.9**	61.9		100.0	**78**
Simandou (Guinea) (ee)	O/P			1,844	65.5	**1,844**	1,844	**65.5**	65.5		46.6	**859**
Total												**1,388**
												Recoverable metal
MOLYBDENUM		millions of tonnes	% Mo	millions of tonnes	% Mo	**millions of tonnes**	millions of tonnes	**% Mo**	% Mo			**millions of tonnes**
Reserves at operating mine												
Bingham Canyon (US) (ff)	O/P	439	0.039	251	0.024	**690**	693	**0.034**	0.036	65	100.0	**0.151**
SILVER		millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	**millions of tonnes**	millions of tonnes	**grammes per tonne**	grammes per tonne			**millions of ounces**
Reserves at operating mines												
Bingham Canyon (US)	O/P	439	2.09	251	2.09	**690**	693	**2.09**	2.04	67	100.0	**31.089**
Grasberg (Indonesia)	O/P + U/G	776	4.67	1,354	4.36	**2,130**	2,269	**4.47**	4.32	70	(q)	**76.367**
Oyu Tolgoi (Mongolia)												
– Oyut open pit	O/P	353	1.40	598	1.11	**951**	995	**1.22**	1.23	75	33.5	**9.326**
– Oyut stockpiles (r)		35	0.74			**35**	26	**0.74**	0.35	81	33.5	**0.229**
Total												**117.011**
Reserves at development projects												
Oyu Tolgoi (Mongolia)												
– Hugo Dummett North	U/G			464	3.37	**464**	464	**3.37**	3.37	86	33.5	**14.579**
– Hugo Dummett North Extension	U/G			35	3.72	**35**	35	**3.72**	3.72	86	30.0	**1.079**
Total												**15.657**

See notes 220

Ore reserves
continued

	Type of mine (a)	Proved ore reserves at end 2015 Tonnage	Proved ore reserves at end 2015 Grade	Probable ore reserves at end 2015 Tonnage	Probable ore reserves at end 2015 Grade	Total ore reserves 2015 compared with 2014 2015 Tonnage	Total ore reserves 2015 compared with 2014 2014 Tonnage	Total ore reserves 2015 compared with 2014 2015 Grade	Total ore reserves 2015 compared with 2014 2014 Grade	Average mill recovery %	Interest %	Rio Tinto share Marketable product
TITANIUM DIOXIDE FEEDSTOCK (gg)		millions of tonnes	% Ti minerals	millions of tonnes	% Ti minerals	**millions of tonnes**	millions of tonnes	**% Ti minerals**	% Ti minerals			**millions of tonnes**
Reserves at operating mines												
QMM (Madagascar)	D/O	454	3.5	15	3.5	**469**	483	**3.5**	3.7		80.0	**6.0**
RBM (South Africa)	D/O	1,067	2.1	698	2.5	**1,765**	1,847	**2.3**	2.3		74.0	**13.1**
RTFT (Canada) (hh)	O/P			115	83.1	**115**	121	**83.1**	83.9		100.0	**37.8**
Total												**56.9**
												Recoverable metal
URANIUM		millions of tonnes	% U_3O_8	millions of tonnes	% U_3O_8	**millions of tonnes**	millions of tonnes	**% U_3O_8**	% U_3O_8			**millions of tonnes**
Reserves at operating mines												
Energy Resources of Australia (Australia)												
– Ranger #3 stockpiles (ii)				12	0.086	**12**	5.0	**0.086**	0.123	83	68.4	**0.006**
Rössing SJ (Namibia)	O/P	21	0.032	95	0.035	**116**	121	**0.035**	0.034	82	68.6	**0.023**
Total												**0.028**
												Marketable product
ZIRCON		millions of tonnes	% Zircon	millions of tonnes	% Zircon	**millions of tonnes**	millions of tonnes	**% Zircon**	% Zircon			**millions of tonnes**
Reserves at operating mines												
QMM (Madagascar)	D/O	454	0.2	15	0.2	**469**	483	**0.2**	0.2		80.0	**0.4**
RBM (South Africa)	D/O	1,067	0.3	698	0.4	**1,765**	1,847	**0.3**	0.3		74.0	**3.3**
Total												**3.7**

Notes:

(a) Type of mine: O/P = open pit, O/C = open cut, U/G = underground, D/O = dredging operation.

(b) Reserves of bauxite, diamonds and iron ore are shown as recoverable Reserves of marketable product after accounting for all mining and processing losses. Mill recoveries are therefore not shown.

(c) Reserves tonnes decreased at Porto Trombetas (MRN) as a result of mine production.

(d) Reserves tonnes increased at Sangaredi as a result of lowering of the cut-off grade following updated technical and economic studies.

(e) Reserves of borates are expressed in terms of marketable product (B_2O_3) after all mining and processing losses.

(f) Coal type: SC: steam/thermal coal, MC: metallurgical/coking coal.

(g) For coal, the yield factors shown reflect the impact of further processing, where necessary, to provide marketable coal.

(h) Coals have been analysed on an "air dried" moisture basis in accordance with Australian Standards and gross calorific value and sulphur content are reported here on that basis. Marketable Reserves tonnages are reported on a product moisture basis.

(i) On 30 September 2015, Rio Tinto announced that it had reached a binding agreement for the sale of its interest in the Bengalla Joint Venture.

(j) The completion of technical and economic studies has resulted in an increase in the Hail Creek Reserves tonnes. This work included the development of a new life of mine design and schedule. A JORC table 1 in support of this change will be released to the market contemporaneously with the release of this Annual report and can be viewed at riotinto.com/factsheets/JORC.

(k) A re-optimisation of the Hunter Valley Operations Resource was undertaken during 2015, following completion of an updated Resource model. This work included the development of a new life of mine design and schedule and resulted in an increase in the Hunter Valley Operations Reserves tonnes. A JORC table 1 in support of this change will be released to the market contemporaneously with the release of this Annual report and can be viewed at riotinto.com/factsheets/JORC.

(l) Mount Thorley Operations Reserves tonnes decreased following mine production and pit design changes.

(m) Following the Planning Assessment Commission determination which approved the Mount Thorley Warkworth continuation projects, the current Warkworth mine design and Reserves were confirmed on 30 November 2015.

(n) The term "other undeveloped reserves" is used here to describe material that is economically viable on the basis of technical and economic studies but for which mining and processing permits may have yet to be requested or obtained. There is a reasonable, but not absolute, certainty that the necessary permits will be issued and that mining can proceed when required.

(o) On 27 January 2016, Rio Tinto announced that it had reached a binding agreement for the sale of its Mount Pleasant thermal coal assets.

(p) The increase in the Escondida – sulphide and sulphide leach Reserves tonnes is due to the conversion of Resources to Reserves following substantial additional drilling. This increase was released to the market by BHP Billiton on 25 August 2015.

(q) Under the terms of a joint venture agreement between Rio Tinto and FCX, Rio Tinto is entitled to a direct 40 per cent share in Reserves discovered after 31 December 1994 and it is this entitlement that is shown.

(r) The variation in Oyut stockpiles Reserves tonnes and grade follows mine production.

(s) Argyle Reserves tonnes decreased following mine production and are based on a nominal 1 millimetre lower cut-off size and a final re-crushing size of 8 millimetres.

(t) Diavik Reserves are based on a nominal 1 millimetre lower cut-off size and a final re-crushing size of 5 millimetres.

(u) Rio Tinto sold its 77.8 per cent interest in Murowa Diamonds with an effective date of 17 June 2015.

(v) Australian and Guinean iron ore Reserves tonnes are reported on a dry weight basis.

(w) Hamersley Iron Brockman 2 (Brockman ore) Reserves tonnes increased due to the inclusion of additional pits, updated geological models and cut-off grade changes. A JORC table 1 in support of this change will be released to the market contemporaneously with the release of this Annual report and can be viewed at riotinto.com/factsheets/JORC.

(x) Hamersley Iron Brockman 4 (Brockman ore) Reserves tonnes decreased due to production depletion and schedule updates.

(y) Silvergrass East is reported under operating mines for the first time following commencement of production.

(z) Hamersley Iron Yandicoogina (Pisolite ore HG) Reserves tonnes increased due to the inclusion of additional pits. A JORC table 1 in support of this change will be released to the market contemporaneously with the release of this Annual report and can be viewed at riotinto.com/factsheets/JORC.

(aa) Channar JV Brockman ore Reserves tonnes decreased due to production depletion and updated models.

(bb) Robe River JV Pannawonica (Pisolite ore) Reserves tonnes decreased due to production depletion and pit design modifications.

(cc) Robe River JV West Angelas (Marra Mamba ore) Reserves tonnes increased due to the addition of a new pit, updated geological models and pit design modifications. A JORC table 1 in support of this change will be released to the market contemporaneously with the release of this Annual report and can be viewed at riotinto.com/factsheets/JORC.

(dd) Reserves at Iron Ore Company of Canada are reported as marketable product (58 per cent pellets and 42 per cent concentrate for sale) at a natural moisture content of two per cent. The marketable product is derived from mined material comprising 637 million dry tonnes at 38.3 per cent iron (Proved) and 792 million dry tonnes at 37.8 per cent iron (Probable) using process recovery factors derived from current IOC concentrating and pellet operations.

(ee) As noted on page 37, an impairment charge of US$1,118 million (net of non-controlling interests and tax) was announced in respect of Simandou in February 2016. These reserves remain technically and economically viable notwithstanding the impairment. The project will be reviewed in the months following the completion of the BFS scheduled to be submitted to the Government of Guinea in May 2016.

(ff) Bingham Canyon Reserves molybdenum grades interpolated from exploration drilling assays have been factored based on a long reconciliation history to blast hole and mill samples.

(gg) The marketable product (TiO_2 slag) is shown after all mining and processing losses. The Reserves are expressed as in situ tonnes.

(hh) Development of RTFT Reserves beyond 2026 requires permitting and commissioning of a new waste dump by 2023. The feasibility study and permitting process to support this dump is scheduled for completion in late 2016 and is designed to support full extraction of reserves to 2060, including all associated water management infrastructure.

(ii) The variation in Ranger #3 stockpiles Reserves tonnes and grade results from the inclusion of additional low grade stockpile ore in the mine schedule.

Mineral resources

As required by the Australian Securities Exchange, the following tables contain details of other mineralisation that has a reasonable prospect of being economically extracted in the future but which is not yet classified as Proved or Probable Ore Reserves. This material is defined as Mineral Resources under the JORC Code. Estimates of such material are based largely on geological information with only preliminary consideration of mining, economic and other factors. While in the judgment of the Competent Person there are realistic expectations that all or part of the Mineral Resources will eventually become Proved or Probable Ore Reserves, there is no guarantee that this will occur as the result depends on further technical and economic studies and prevailing economic conditions in the future. As in the case of Ore Reserves, managed operations' estimates are completed using or testing against Rio Tinto long-term pricing and market forecasts/scenarios. Mineral Resources are stated as additional to the Ore Reserves reported earlier. Where operations are not managed by Rio Tinto, the Mineral Resources are published as received from the managing company. Where new project Mineral Resources or Ore Reserves are footnoted as being reported for the first time, additional information about them can be viewed on the Rio Tinto website.

	Likely mining method (a)	Measured resources at end 2015		Indicated resources at end 2015		Inferred resources at end 2015		Total resources 2015 compared with 2014				Rio Tinto interest %
		Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage		Grade		
								2015	2014	**2015**	2014	
BAUXITE		millions of tonnes	% Al_2O_3	millions of tonnes	% Al_2O_3	millions of tonnes	% Al_2O_3	**millions of tonnes**	millions of tonnes	**% Al_2O_3**	% Al_2O_3	
Gove (Australia) (b)	O/P	12	48.9	30	49.4	4	50.1	**46**	52	**49.3**	49.4	100.0
Porto Trombetas (MRN) (Brazil)	O/P	293	49.6	40	48.9	134	49.9	**468**	468	**49.6**	49.6	12.0
Sangaredi (Guinea)	O/P	41	44.9	5,053	47.3	644	46.4	**5,738**	5,687	**47.2**	47.1	23.0
Weipa (Australia) (c)	O/P	85	51.8	1,017	51.8	448	51.9	**1,549**	1,905	**51.8**	51.5	100.0
BORATES (d)		millions of tonnes		millions of tonnes		millions of tonnes		**millions of tonnes**	millions of tonnes			
Jadar (Serbia)	U/G					18		**18**	18			100.0

		Coal type (e)	Coal resources at end 2015					
			Measured	Indicated	Inferred	**2015**	2014	
COAL (f)			millions of tonnes	millions of tonnes	millions of tonnes	**millions of tonnes**	millions of tonnes	
Rio Tinto Coal Australia								
Bengalla (g)	O/C + U/G	SC + MC	57	49	80	**187**	187	32.0
Blair Athol (h)	O/C	SC	10	0.2		**10**	10	71.2
Hail Creek (i) (j)	O/C + U/G	SC + MC	103	440	48	**591**	172	82.0
Hunter Valley Operations (i) (k)	O/C + U/G	SC + MC	348	571	912	**1,831**	1,373	80.0
Kestrel Coal (i) (l)	U/G	SC + MC	1	205	100	**306**	142	80.0
Lake Elphinstone	O/C	SC + MC		120	42	**162**	162	82.0
Mount Pleasant (m)	O/C + U/G	SC + MC	97	217	257	**571**	571	80.0
Mount Robert (i) (n)	O/C	SC + MC			31	**31**	–	82.0
Mount Thorley Operations	O/C + U/G	SC + MC	1	20	94	**114**	113	64.0
Oaklands	O/C	SC	596	584	90	**1,270**	1,270	80.0
Valeria	O/C	SC		698	64	**762**	762	71.2
Warkworth (i) (o)	O/C + U/G	SC + MC	6	125	481	**613**	475	44.5
Winchester South (i) (p)	O/C	MC	78	146	132	**356**	192	75.0

See notes 225

Mineral resources
continued

	Likely mining method (a)	Measured resources at end 2015		Indicated resources at end 2015		Inferred resources at end 2015		Total resources 2015 compared with 2014				Rio Tinto interest
		Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage		Grade		
								2015	2014	**2015**	2014	%
COPPER		millions of tonnes	% Cu	millions of tonnes	% Cu	millions of tonnes	% Cu	**millions of tonnes**	millions of tonnes	**% Cu**	% Cu	
Bingham Canyon (US)												
– Open Pit (q)	O/P	40	0.30	26	0.26	5	0.21	**71**	80	**0.28**	0.27	100.0
– North Rim Skarn	U/G	1	3.50	9	3.60	10	3.70	**20**	20	**3.65**	3.65	100.0
Escondida (Chile)												
– Chimborazo – sulphide	O/P			139	0.50	84	0.60	**223**	223	**0.54**	0.54	30.0
– Escondida – sulphide	O/P	140	0.64	473	0.44	10,040	0.50	**10,653**	10,683	**0.50**	0.51	30.0
– Escondida – mixed	O/P	13	0.76	4	0.48	60	0.43	**77**	77	**0.49**	0.44	30.0
– Escondida – oxide (r)	O/P	23	0.60	1	0.61	25	0.55	**49**	65	**0.57**	0.56	30.0
– Pampa Escondida – sulphide	O/P	294	0.53	1,150	0.55	6,000	0.43	**7,444**	7,444	**0.45**	0.45	30.0
– Pinta Verde – sulphide	O/P			23	0.50	37	0.45	**60**	60	**0.47**	0.47	30.0
– Pinta Verde – oxide	O/P	109	0.60	64	0.53	15	0.54	**188**	188	**0.57**	0.57	30.0
Grasberg (Indonesia) (s)	O/P + U/G	414	0.81	1,793	0.70	98	0.53	**2,304**	2,567	**0.71**	0.66	(t)
La Granja (Peru)	O/P			130	0.85	4,190	0.50	**4,320**	4,320	**0.51**	0.51	100.0
Oyu Tolgoi (Mongolia)												
– Heruga ETG	U/G					1,700	0.39	**1,700**	1,700	**0.39**	0.39	30.0
– Heruga OT	U/G					117	0.41	**117**	117	**0.41**	0.41	33.5
– Hugo Dummett North	U/G	41	1.56	365	1.15	807	0.77	**1,213**	1,213	**0.91**	0.91	33.5
– Hugo Dummett North Extension	U/G			89	1.57	173	0.99	**263**	263	**1.19**	1.19	30.0
– Hugo Dummett South	U/G					839	0.77	**839**	839	**0.77**	0.77	33.5
– Oyut Open Pit	O/P	12	0.39	90	0.34	388	0.29	**491**	491	**0.30**	0.30	33.5
– Oyut Underground	U/G	14	0.40	94	0.35	158	0.39	**265**	265	**0.38**	0.38	33.5
Resolution (US)	U/G					1,766	1.51	**1,766**	1,766	**1.51**	1.51	55.0
DIAMONDS		millions of tonnes	carats per tonne	millions of tonnes	carats per tonne	millions of tonnes	carats per tonne	**millions of tonnes**	millions of tonnes	**carats per tonne**	carats per tonne	
Argyle (Australia)												
– AK1 pipe (u)	O/P + U/G	11	3.5	26	3.3	6	3.6	**44**	40	**3.4**	3.6	100.0
Bunder (India) (v)	O/P					44	0.7	**44**	47	**0.7**	0.7	100.0
Diavik (Canada) (w)	O/P + U/G			0.4	2.6	1.8	2.8	**2.2**	3.5	**2.7**	2.6	60.0
Murowa (Zimbabwe) (x)	O/P							**–**	4.6	**–**	0.3	–
GOLD		millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	**millions of tonnes**	millions of tonnes	**grammes per tonne**	grammes per tonne	
Bingham Canyon (US)												
– Open Pit (q)	O/P	40	0.18	26	0.15	5	0.17	**71**	80	**0.17**	0.16	100.0
– North Rim Skarn	U/G	1	2.10	9	1.70	10	1.50	**20**	20	**1.62**	1.62	100.0
Escondida (Chile)												
– Pampa Escondida – sulphide	O/P	294	0.07	1,150	0.10	6,000	0.04	**7,444**	7,444	**0.05**	0.05	30.0
Grasberg (Indonesia) (s)	O/P + U/G	414	0.69	1,793	0.61	98	0.46	**2,304**	2,567	**0.62**	0.59	(t)
Oyu Tolgoi (Mongolia)												
– Heruga ETG	U/G					1,700	0.37	**1,700**	1,700	**0.37**	0.37	30.0
– Heruga OT	U/G					117	0.29	**117**	117	**0.29**	0.29	33.5
– Hugo Dummett North	U/G	41	0.41	365	0.30	807	0.27	**1,213**	1,213	**0.28**	0.28	33.5
– Hugo Dummett North Extension	U/G			89	0.53	173	0.35	**263**	263	**0.41**	0.41	30.0
– Hugo Dummett South	U/G					839	0.07	**839**	839	**0.07**	0.07	33.5
– Oyut Open Pit	O/P	12	0.36	90	0.23	388	0.16	**491**	491	**0.18**	0.18	33.5
– Oyut Underground	U/G	14	0.77	94	0.59	158	0.32	**265**	265	**0.44**	0.44	33.5

See notes 225

	Likely mining method (a)	Measured resources at end 2015		Indicated resources at end 2015		Inferred resources at end 2015		Total resources 2015 compared with 2014				Rio Tinto interest %
		Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage		Grade		
								2015	2014	**2015**	2014	
IRON ORE (y)		millions of tonnes	% Fe	millions of tonnes	% Fe	millions of tonnes	% Fe	**millions of tonnes**	millions of tonnes	**% Fe**	% Fe	
Hamersley Iron (Australia)												
– Brockman	O/P	489	62.5	677	62.4	1,913	61.9	**3,079**	2,998	**62.1**	62.0	100.0
– Brockman Process Ore	O/P	340	57.5	208	57.3	632	57.3	**1,180**	1,137	**57.4**	57.4	100.0
– Marra Mamba	O/P	303	61.6	460	61.6	834	61.5	**1,597**	1,468	**61.6**	61.8	100.0
– Detrital	O/P	3	63.4	150	60.7	517	61.2	**670**	642	**61.1**	61.2	100.0
– Channel Iron Deposit (z)	O/P	574	56.8	98	58.1	2,319	57.3	**2,991**	3,358	**57.3**	57.2	100.0
Channar JV (Australia)												
– Brockman (aa)	O/P	34	61.8	13	61.8	1	61.6	**48**	60	**61.8**	61.8	60.0
– Brockman Process Ore	O/P	20	58.0	7	58.0			**27**	28	**58.0**	58.0	60.0
Eastern Range JV (Australia)												
– Brockman (bb)	O/P	13	61.7	4	61.5	7	61.7	**24**	31	**61.7**	61.9	54.0
– Brockman Process Ore (cc)	O/P	19	57.3	3	57.2	2	57.9	**24**	30	**57.3**	57.3	54.0
Hope Downs JV (Australia)												
– Brockman	O/P	21	61.6	110	62.1	440	62.3	**571**	540	**62.3**	62.3	50.0
– Brockman Process Ore	O/P	52	56.8	94	56.9	202	56.5	**348**	341	**56.6**	56.7	50.0
– Marra Mamba	O/P	71	62.8	120	61.2	205	61.7	**396**	395	**61.7**	61.9	50.0
– Detrital (dd)	O/P	26	59.2	14	59.4	30	59.5	**70**	53	**59.4**	59.4	50.0
Rhodes Ridge JV (Australia)												
– Brockman	O/P			565	63.9	1,476	62.5	**2,041**	2,041	**62.9**	62.9	50.0
– Brockman Process Ore	O/P			176	57.6	460	56.5	**636**	636	**56.8**	56.8	50.0
– Marra Mamba	O/P			404	62.4	2,042	62.0	**2,446**	2,316	**62.0**	62.1	50.0
– Detrital	O/P			65	60.5	226	60.1	**291**	291	**60.2**	60.2	50.0
Robe JV (Australia)												
– Brockman	O/P					50	61.8	**50**	46	**61.8**	61.9	53.0
– Brockman Process Ore	O/P					32	57.0	**32**	32	**57.0**	57.0	53.0
– Marra Mamba	O/P	121	61.8	154	61.3	254	61.7	**529**	579	**61.6**	61.6	53.0
– Detrital	O/P			6	59.6	94	60.6	**100**	98	**60.6**	60.6	53.0
– Channel Iron Deposit	O/P	212	56.7	1,743	58.3	2,575	55.6	**4,530**	4,273	**56.7**	56.8	53.0
Iron Ore Company of Canada (Canada) (ee)	O/P	393	38.9	1,497	37.6	871	36.9	**2,762**	2,706	**37.6**	37.8	58.7
Simandou (Guinea) (ff)	O/P	5	67.1	107	64.3	723	65.1	**835**	835	**65.0**	65.0	46.6
LITHIUM		millions of tonnes	% Li_2O	millions of tonnes	% Li_2O	millions of tonnes	% Li_2O	**millions of tonnes**	millions of tonnes	**% Li_2O**	% Li_2O	
Jadar (Serbia)	U/G					117	1.8	**117**	117	**1.8**	1.8	100.0

See notes 225

Mineral resources
continued

	Likely mining method (a)	Measured resources at end 2015 Tonnage	Measured resources at end 2015 Grade	Indicated resources at end 2015 Tonnage	Indicated resources at end 2015 Grade	Inferred resources at end 2015 Tonnage	Inferred resources at end 2015 Grade	Total resources 2015 compared with 2014 Tonnage 2015	Tonnage 2014	Grade 2015	Grade 2014	Rio Tinto interest %
MOLYBDENUM		millions of tonnes	% Mo	millions of tonnes	% Mo	millions of tonnes	% Mo	**millions of tonnes**	millions of tonnes	**% Mo**	% Mo	
Bingham Canyon (US)												
– Open Pit (gg)	O/P	40	0.063	26	0.077	5	0.011	**71**	80	**0.064**	0.058	100.0
Oyu Tolgoi (Mongolia)												
– Heruga ETG	U/G					1,700	0.011	**1,700**	1,700	**0.011**	0.011	30.0
– Heruga OT	U/G					117	0.011	**117**	117	**0.011**	0.011	33.5
Resolution (US)	U/G					1,766	0.035	**1,766**	1,766	**0.035**	0.035	55.0
SILVER		millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	**millions of tonnes**	millions of tonnes	**grammes per tonne**	grammes per tonne	
Bingham Canyon (US)												
– Open Pit (q)	O/P	40	1.60	26	1.50	5	2.22	**71**	80	**1.61**	1.54	100.0
– North Rim Skarn	U/G	1	20.00	9	21.00	10	21.00	**20**	20	**20.95**	20.95	100.0
Grasberg (Indonesia) (s)	O/P + U/G	414	3.55	1,793	3.47	98	2.49	**2,304**	2,567	**3.44**	3.55	(t)
Oyu Tolgoi (Mongolia)												
– Heruga ETG	U/G					1,700	1.39	**1,700**	1,700	**1.39**	1.39	30.0
– Heruga OT	U/G					117	1.56	**117**	117	**1.56**	1.56	33.5
– Hugo Dummett North	U/G	41	3.71	365	2.84	807	2.34	**1,213**	1,213	**2.54**	2.54	33.5
– Hugo Dummett North Extension	U/G			89	4.07	173	2.72	**263**	263	**3.18**	3.18	30.0
– Hugo Dummett South	U/G					839	1.78	**839**	839	**1.78**	1.78	33.5
– Oyut Open Pit	O/P	12	1.21	90	1.06	388	0.87	**491**	491	**0.91**	0.91	33.5
– Oyut Underground	U/G	14	1.16	94	1.19	158	0.86	**265**	265	**0.99**	0.99	33.5
TITANIUM DIOXIDE FEEDSTOCK		millions of tonnes	% Ti minerals	millions of tonnes	% Ti minerals	millions of tonnes	% Ti minerals	**millions of tonnes**	millions of tonnes	**% Ti minerals**	% Ti minerals	
QMM (Madagascar)	D/O	16	2.4	1,109	4.2	186	3.2	**1,311**	1,351	**4.0**	4.0	80.0
RBM (South Africa)	D/O + O/P			16	15.8			**16**	17	**15.8**	15.3	74.0
RTFT (Canada)	O/P			11	84.9			**11**	11	**84.9**	84.9	100.0
URANIUM		millions of tonnes	% U_3O_8	millions of tonnes	% U_3O_8	millions of tonnes	% U_3O_8	**millions of tonnes**	millions of tonnes	**% U_3O_8**	% U_3O_8	
Energy Resources of Australia (Australia)												
– Jabiluka	U/G	1.2	0.887	14	0.520	10	0.545	**25**	25	**0.547**	0.547	68.4
– Ranger #3 Deeps (hh)	U/G	3.7	0.272	10	0.218	5.4	0.203	**20**	13	**0.224**	0.277	68.4
– Ranger #3 stockpiles (ii)				31	0.039			**31**	38	**0.039**	0.047	68.4
Rössing (Namibia)												
– Rössing SJ (jj)	O/P	8.8	0.025	90	0.023	4.5	0.021	**103**	135	**0.023**	0.023	68.6
– Rössing Z20	O/P			87	0.028	115	0.026	**202**	202	**0.027**	0.027	68.6
ZIRCON		millions of tonnes	% Zircon	millions of tonnes	% Zircon	millions of tonnes	% Zircon	**millions of tonnes**	millions of tonnes	**% Zircon**	% Zircon	
QMM (Madagascar)	D/O	16	0.1	1,109	0.3	186	0.3	**1,311**	1,351	**0.3**	0.3	80.0
RBM (South Africa)	D/O + O/P			16	8.7			**16**	17	**8.7**	8.5	74.0

See notes 225

Notes:

(a) Likely mining method: O/P = open pit; O/C = open cut; U/G = underground; D/O = dredging operation.

(b) Gove Resources tonnes decreased following conversion of Resources to Reserves.

(c) Weipa Resources tonnes decreased following updated technical and economic studies and conversion of Resources to Reserves.

(d) Borates Resources are reported as in situ B_2O_3, rather than marketable product as in Reserves.

(e) Coal type: SC = steam/thermal coal, MC = metallurgical/coking coal.

(f) Rio Tinto reports coal Resources on an in situ moisture basis.

(g) On 30 September 2015, Rio Tinto announced that it had reached a binding agreement for the sale of its interest in the Bengalla Joint Venture.

(h) Blair Athol closed in the last quarter of 2012. Divestment efforts continue in parallel with preparation for rehabilitation.

(i) Hail Creek, Hunter Valley Operations, Kestrel, Mount Robert, Warkworth and Winchester South have had material Resources changes since previous publication. A JORC table 1 in support of these changes will be released to the market contemporaneously with the release of this Annual report and can be viewed at riotinto.com/factsheets/JORC.

(j) The increase in Resources tonnes at Hail Creek follows the completion of a Pre-feasibility study.

(k) Resources tonnes increased at Hunter Valley Operations following technical and economic studies.

(l) Resources tonnes increased at Kestrel Coal following re-evaluation of the recoverable coal footprint for a potential underground development in addition to technical and economic studies. Kestrel West is now reported under Kestrel Coal.

(m) On 27 January 2016, Rio Tinto announced that it had reached a binding agreement for the sale of its Mount Pleasant thermal coal assets.

(n) Mount Robert Resources are reported for the first time following technical and economic studies.

(o) Resources tonnes increased at Warkworth following re-evaluation of the recoverable coal footprint for a potential underground development.

(p) Resources tonnes increased at Winchester South following technical and economic studies.

(q) Bingham Canyon Open Pit Resources tonnes decreased following production depletion, schedule subtractions and conversion of Resources to Reserves.

(r) The decrease in Escondida – oxide Resources tonnes is due to a revised estimate based on additional drilling.

(s) The reduction of Resources tonnes at Grasberg follows a revision of cut-off grades.

(t) Under the terms of a joint venture agreement between Rio Tinto and FCX, Rio Tinto is entitled to a direct 40 per cent share in Resources discovered after 31 December 1994.

(u) Some coarse tailings material was added to the AK1 pipe Resources following technical and economic studies. Argyle Resources are based on a nominal 0.5 millimetre lower cut- off size and a final re-crushing size of 6 millimetres.

(v) Bunder Resources are based on a nominal 1 millimetre lower cut-off size and a final re-crushing size of 6 millimetres.

(w) Diavik Resources are based on a nominal 1 millimetre lower cut-off size and a final re-crushing size of 5 millimetres. Resources tonnes have decreased following conversion of Resources to Reserves.

(x) Rio Tinto sold its 77.8 per cent interest in Murowa Diamonds with an effective date of 17 June 2015.

(y) Australian and Guinean iron ore Resources tonnes are reported on a dry weight basis.

(z) Hamersley Iron Channel Iron Deposit Resources tonnes have decreased as a result of conversion of Resources to Reserves.

(aa) Channar JV Brockman Resources tonnes have decreased as a result of additional drilling and updated geological models.

(bb) Eastern Range JV Brockman Resources tonnes have decreased as a result of additional drilling and updated geological models.

(cc) Eastern Range JV Brockman Process Ore Resources tonnes have decreased as a result of additional drilling and updated geological models.

(dd) Hope Downs Detrital Resources tonnes have increased as a result of additional drilling and updated geological models.

(ee) Resources at Iron Ore Company of Canada are reported on an in-situ dry basis and are estimated to produce marketable product (58 per cent pellets and 42 per cent concentrate for sale) at a natural moisture content of two per cent of 158 million tonnes at 65 per cent iron (Measured), 584 million tonnes at 65 per cent iron (Indicated) and 338 million dry tonnes at 65 per cent iron (Inferred) using process recovery factors derived from current IOC concentrating and pellet operations.

(ff) As noted on page 37, an impairment charge of US$1,118 million (net of non-controlling interests and tax) was announced in respect of Simandou in February 2016.

(gg) Bingham Canyon Open Pit Resources tonnes decreased and molybdenum grade increased following production depletion, schedule subtractions and conversion of Resources to Reserves. Molybdenum grades interpolated from exploration drilling assays have been factored based on a long reconciliation history to blast hole and mill samples.

(hh) Ranger #3 Deeps Resources tonnes increased and grade decreased following an updated resource estimate, as released to the market by Energy Resources of Australia on 10 July 2015.

(ii) Ranger #3 stockpiles Resources tonnes and grade decreased following mining depletion and conversion of Resources to Reserves.

(jj) Rössing SJ Resources tonnes decreased following a pit re-design based on updated technical and economic studies.

Mineral resources and ore reserves corporate governance

Rio Tinto has established a governance process supporting the generation and publication of Mineral Resources and Ore Reserves, which includes a series of structures and processes independent of the operational reporting through business units and product groups.

The Audit Committee has in its remit the governance of resources and reserves. This includes an annual review of Mineral Resources and Ore Reserves at a Group level, as well as review of findings and progress from the Group Resources and Reserves internal audit programme within the regular meeting schedule.

Rio Tinto also has an Ore Reserves Steering Committee (ORSC), which meets at least quarterly, chaired by the Group executive, Technology & Innovation, and comprises senior representatives from technical, financial, governance and business groups within the Group. The ORSC role includes oversight of the appointment of Competent Persons nominated by the business units, review of Exploration results, Mineral Resources or Ore Reserve data prior to public reporting and development of Group Resource and Reserves standards and guidance.

The Resource and Reserve internal audit programme is conducted by independent external consulting personnel in a programme managed by Group Audit & Assurance with the assistance of the ORSC. In 2015, seven internal audits were completed. Material findings are reported outside of the product group reporting line to the Audit Committee , and all reports and action plans are reviewed by the ORSC for alignment to internal and external reporting standards.

Mineral Resources and Ore Reserves from externally managed operations, where Rio Tinto holds a minority share, are reported as received from the managing entity. Figures from Rio Tinto managed operations are the responsibility of the managing directors of the business units and estimates are carried out by Competent Persons as defined by JORC.

Rio Tinto has continued the development of internal systems and controls in order to meet JORC (2012) compliance in all external reporting including the preparation of all reported data by Competent Persons as members of The Australasian Institute of Mining and Metallurgy (The AusIMM), Australian Institute of Geoscientists (AIG) or recognised professional organisations (RPOs). JORC Table 1 reports for new or materially upgraded significant deposits are released to market by Rio Tinto and are also available on the Group's website. JORC Table 1 and NI 43-101 technical reports generated by non-managed units or joint venture partners are referenced within the reporting footnotes with the location and initial reporting date identified.

As well as the establishment of an enhanced governance process, there have been a number of process improvements and training initiatives introduced by the ORSC over recent years, including a web-based group reporting and sign-off database, annual internal Competent Person reports and Competent Person development and training.

Competent Persons

Primary commodity	Name	Association (a)	Employer	Accountability	Deposits
BAUXITE					
	L McAndrew	AusIMM	Rio Tinto	Reserve	Gove, Weipa
	J Bower	AusIMM		Resource	
	J-F Durand-Smet	EuroGeol	CBG Consultant	Reserve	Sangaredi
	G Girouard	AusIMM	Compagnie des Bauxites de Guinée	Resource	
	C J da Silva	AusIMM	Mineração Rio do Norte	Reserve	Trombetas
	M A H Monteiro	AusIMM		Resource	
BORATES					
	B Griffiths	SME	Rio Tinto	Reserve	Rio Tinto Minerals – Boron
	R Torres	AusIMM		Resource	
COAL					
	G Doyle	AusIMM	Rio Tinto	Resource and Reserve	Rio Tinto Coal Australia (RTCA) – Blair Athol, Hunter Valley Operations, Mount Robert, Mount Thorley Operations, Warkworth
	A Prentice	AusIMM		Reserve	RTCA – Bengalla
	J O'Connell	AusIMM		Reserve	RTCA – Mount Pleasant
	M Hillard	AusIMM		Reserve	RTCA – Hail Creek
	L Mildon	AusIMM		Reserve	RTCA – Kestrel
	R Ruddock	AusIMM		Resource	RTCA – Bengalla, Hail Creek, Hunter Valley Operations, Kestrel, Kestrel West, Lake Elphinstone, Mount Robert, Mount Pleasant, Mount Thorley Operations, Oaklands, Valeria, Warkworth, Winchester South
COPPER					
	C Hehnke	AusIMM	Rio Tinto	Resource	Resolution (c)
	A Issel	APGO	Freeport-McMoRan Inc	Resource and Reserve	PT Freeport – Grasberg (b) (d)
	G MacDonald	SME		Resource and Reserve	
	J Dudley	AusIMM	Rio Tinto	Reserve	Oyu Tolgoi (b) (c) (d)
	R Singh	AusIMM		Reserve	
	O Togtokhbayar	AusIMM		Resource	
	J Vickery	AusIMM	Rio Tinto	Resource and Reserve	Kennecott Utah Copper (b) (c) (d)
	N Armstrong	AusIMM		Reserve	
	G Austin	AusIMM		Resource	
	R Hayes	AusIMM		Resource	
	K Schroeder	AusIMM		Resource	
	P Rodriguez	AusIMM		Resource	
	P Sandoval	AusIMM	Minera Escondida Ltda.	Reserve	Escondida
	L Soto	AusIMM		Resource	Escondida, Pampa Escondida – sulphide (b), Pinta Verde
	M Cortes	AusIMM		Resource	
	L Vaccia	AusIMM		Resource	Escondida – Chimborazo – sulphide
	P Salazar	AusIMM	Rio Tinto	Resource	La Granja

Primary commodity	Name	Association (a)	Employer	Accountability	Deposits
DIAMONDS					
	S Brennan	AusIMM	Rio Tinto	Resource and Reserve	Argyle Diamonds
	D Ford	AIG		Resource and Reserve	
	M Rayner	AusIMM		Resource and Reserve	
	M Rayner	AusIMM	Rio Tinto	Resource	Bunder
	K Thompson	NAPEGG	Rio Tinto	Resource and Reserve	Diavik
	C Yip	AusIMM		Resource and Reserve	
IRON ORE					
	R Taylor	AusIMM	Rio Tinto	Reserve	Simandou – Oueleba, Pic de Fon
	M Franks	AusIMM	AMEC Foster Wheeler	Resource	
	T Leriche	PEGNL	Rio Tinto	Resource and Reserve	Iron Ore Company of Canada
	R Williams	PEGNL		Reserve	
	B Wallace	PEGNL		Resource	
	R Way	PEGNL		Resource	
	C Tabb	AusIMM	Rio Tinto	Reserve	Rio Tinto Iron Ore – Hamersley, Channar, Eastern Range, Hope Downs, Robe
	A Do	AusIMM		Reserve	
	P Savory	AusIMM	Rio Tinto	Resource	Rio Tinto Iron Ore – Hamersley, Channar, Eastern Range, Hope Downs, Rhodes Ridge, Robe
	B Sommerville	AusIMM		Resource	
LITHIUM					
	J Garcia	EuroGeol	Rio Tinto	Resource	Rio Tinto Minerals – Jadar (e)
TITANIUM DIOXIDE FEEDSTOCK					
	J Dumouchel	APEGGA	Rio Tinto	Resource	QIT Madagascar Minerals (f), Rio Tinto Fer et Titane – Havre-Saint-Pierre
	P De Kock	SAIMM	Rio Tinto	Reserve	QIT Madagascar Minerals (f)
	J Cyr	OIQ	Rio Tinto	Reserve	Rio Tinto Fer et Titane – Havre-Saint-Pierre
	Y Bourque	OIQ		Resource	
	T Daling	SAIMM	Rio Tinto	Reserve	Richards Bay Minerals (f)
	J Nel	SACNASP		Resource	
URANIUM					
	W-D Wieland	SAIMM	Rio Tinto	Reserve	Rössing
	T Murasiki	SAIMM		Resource	
	S Pevely	AusIMM	Rio Tinto	Resource and Reserve	Energy Resources of Australia – Ranger 3, Jabiluka

(a) AusIMM: Australasian Institute of Mining and Metallurgy; AIG: Australasian Institute of Geoscientists; EuroGeol: European Geologist member of the European Federation of Geologists, APGO: Association of Professional Geoscientists of Ontario; SAIMM: South African Institute of Mining and Metallurgy; SME: Society of Mining, Metallurgy and Exploration; AIPG: American Institute of Professional Geologists; NAPEGG: Association of Professional Engineers; Geologists and Geophysicists of the Northwest Territories; PEGNL: Professional Engineers and Geoscientists Newfoundland and Labrador; APEGGA: Association of Professional Engineers, Geologists and Geophysicists of Alberta; OIQ: Ordre des Ingénieurs du Québec; SACNASP: South African Council for Natural Scientific Professions.

(b) Includes gold.

(c) Includes molybdenum.

(d) Includes silver.

(e) Includes borates.

(f) Includes zircon.

Mines and production facilities

Group mines as at 31 December 2015

(Rio Tinto's interest 100 per cent unless otherwise shown)

Mine	Location	Access	Title/lease
ALUMINIUM			
Bauxite			
CBG Sangaredi (22.95%)	Sangaredi, Guinea	Road, air and port	Mining concession expires in 2040.
Gove	Gove, Northern Territory, Australia	Road, air and port	All leases were renewed in 2011 for a further period of 42 years. The residue disposal area is leased from the Arnhem Land Aboriginal Land Trust. The Northern Territory government is the lessor of the balance of the leases; however, on expiry of the 42-year renewed term, the land subject of the balances of the leases will all vest to the Arnhem Land Aboriginal Land Trust.
MRN Porto Trombetas (12%)	Porto Trombetas, Para, Brazil	Air and port	Mining concession granted under the Brazilian mining code with no expiration date.
Weipa/Ely	Weipa, Queensland, Australia	Road, air and port	The Queensland Government Comalco (ML7024) lease expires in 2042 with an option of a 21-year extension, then two years' notice of termination; the Queensland Government Alcan lease (ML7031) expires in 2048 with a 21-year right of renewal with a two-year notice period.
COPPER & COAL			
Copper			
Escondida (30%)	Atacama Desert, Chile	Pipeline and road to deep sea port at Coloso; road and rail	Rights conferred by Government under Chilean Mining Code.
Grasberg joint venture (40% share of production above specified levels)	Papua, Indonesia	Pipeline, road and port	Indonesian Government Contracts of Work expire in 2021 with option of two ten-year extensions.
Rio Tinto Kennecott Bingham Canyon	Near Salt Lake City, Utah, US	Pipeline, road and rail	Owned.
Oyu Tolgoi (51% of Turquoise Hill Resources Ltd. which owns 66% of Oyu Tolgoi LLC)	Gobi Desert, Mongolia	Air and road	Three mining licences are held by Oyu Tolgoi LLC and two further licences are held in joint venture with Entrée Gold LLC. The licence term under the Minerals Law of Mongolia is 30 years with two 20-year extensions. First renewals are due in 2033 and 2039 for the Oyu Tolgoi and Entrée Gold licences respectively.
Coal			
Rio Tinto Coal Australia Bengalla (32%) Hail Creek (82%) Hunter Valley Operations (80%) Kestrel (80%) Mount Thorley Operations (64%) Warkworth (44.46%)	New South Wales and Queensland, Australia	Road, rail, conveyor and port	Leases granted by respective state governments. Please refer to page 34 for an update on the ownership changes since 31 December 2015.
Zululand Anthracite Colliery (Pty) Ltd (74%)	Mahlabatini district, KwaZulu-Natal, South Africa	Road, rail and port	Okhukho Reserve no. 14376 over mineral leases 1, 2 and 6 awarded to ZAC as a new order mining right no. 46/2007 on 10 April 2007, expiry date 9 April 2027. Protocol number 1461/2010, an extended mining right over the remainder of reserve no. 20, no. 15840 and portions 10, 11 and 12 of Reserve 12 no. 15832, awarded 11 November 2010 and valid through to 10 November 2030.

History	Type of mine	Power source
Bauxite mining commenced in 1973. Shareholders are 51% Halco and 49% Government of Guinea. The Rio Tinto interest in 45 per cent of Halco was first acquired in 2004. Rated production capacity is 13.5 million tonnes per annum and actual annual production in 2015 was 14.8 million tonnes on a dry basis. Rio Tinto currently benefits from approximately 45 per cent of the mine's production. In 2013, CBG signed a contract with Abu Dhabi state-owned investment fund Mubadala to supply up to 4.9 million tonnes of bauxite per annum from December 2017. CBG has been examining possible expansion of its mine, processing plant and associated infrastructure to increase production capacity from 13.5 to 18.5 million tonnes per annum by 2018, as well as studying other expansion options.	Open cut	On-site generation (fuel oil)
Bauxite mining commenced in 1970, feeding both the Gove refinery and export market, capped at two million tonnes per annum. Bauxite export ceased in 2006 with feed intended for the expanded Gove refinery. Bauxite exports recommenced in 2008 and will increase in the coming years following the curtailment of the refinery production in 2014. Current annual production capacity is 8 million tonnes on a dry basis.	Open cut	On-site generation (diesel)
Mineral extraction commenced in 1979. Initial production capacity 3.4 million tonnes annually. From 2003, production capacity up to 16.3 million tonnes per year on a dry basis. Capital structure currently: Vale (40%), BHP Billiton (14.8%), Rio Tinto (12%), CBA (10%), Alcoa/Abalco (18.2%), and Norsk Hydro (5%).	Open cut	On-site generation (diesel)
Bauxite mining commenced in 1961 at Weipa. Major upgrade completed in 1998. Rio Tinto interest increased from 72.4% to 100% in 2000. In 1997, Ely Bauxite Mining Project Agreement signed with local Aboriginal land owners. Bauxite Mining and Exchange Agreement signed in 1998 with Comalco to allow for extraction of ore at Ely. The Western Cape Communities Co-Existence Agreement, an Indigenous Land Use Agreement, was signed in 2001. In 2004 a mine expansion was completed at Weipa that lifted annual capacity to 21.5 million tonnes on a dry basis. Mining commenced on the adjacent Ely mining lease in 2006, in accordance with the 1998 agreement with Alcan (first ore extracted at Ely in 2007). A second shiploader to increase the shipping capability was commissioned in 2006 at Weipa. Annual production capacity has now reached 28 million tonnes.	Open cut	On-site generation (diesel) supplemented by a solar generation facility
Production started in 1990 and expanded in phases to 2002 when the new concentrator was completed; production from Norte started in 2005 and the sulphide leach produced the first cathode during 2006.	Open pit	Supplied from SING grid under various contracts with local generating companies
Joint venture interest acquired 1995. Capacity expanded to over 200,000 tonnes of ore per day in 1998. Addition of underground production of more than 35,000 tonnes per day in 2003. Expansion to 50,000 tonnes per day in mid-2007 and to 80,000 tonnes in 2010.	Open pit and underground	Long-term contract with US-Indonesian consortium operated purpose-built coal-fired generating station
Interest acquired in 1989. In 2012, the pushback of the south wall commenced, extending the mine life from 2018 to 2030.	Open pit	On-site generation supplemented by long-term contracts with Rocky Mountain Power
Oyu Tolgoi was first discovered in 1996. Construction began in late 2009 after signing of an Investment Agreement with the Government of Mongolia, and first concentrate was produced in 2012. First sales of concentrate were made to Chinese customers in 2013.	Open pit and underground	Grid power from China and supplementary diesel power generation site
Kestrel Mine in Queensland, Rio Tinto Coal Australia's sole underground mine, was acquired and recommissioned in 1999, and Hail Creek Mine in Queensland was officially opened in 2003. Blair Athol Mine ceased operations in 2012. Rio Tinto completed the privatisation of Coal & Allied during 2011, which was owned 80/20 with Mitsubishi Development until 3 February 2016, when Rio Tinto assumed 100 per cent ownership of Coal & Allied. This followed the completion of a change to the ownership structure which saw Mitsubishi Development move from a 20 per cent interest in Coal & Allied to a direct 32 per cent holding in the Hunter Valley Operations mine.	Open cut and underground	State-owned grid
Operations commenced at Zululand Anthracite Colliery (Pty) Ltd on 13 August 1984. Rio Tinto took ownership of the mine in 2011. Zululand Anthracite Colliery became a Rio Tinto fully managed company as from 2014.	Underground anthracite mine, with five active shafts	Eskom grid, with diesel generator back-up

Mines and production facilities
continued

Group mines as at 31 December 2015 continued

(Rio Tinto's interest 100 per cent unless otherwise shown)

Mine	Location	Access	Title/lease
DIAMONDS & MINERALS			
Diamonds			
Argyle Diamonds	Kimberley Ranges, Western Australia	Road and air	Mining tenement held under Diamond (Argyle Diamond Mines Joint Venture) Agreement Act 1981; lease extended for 21 years from 2004 with option to renew.
Diavik (60%)	Northwest Territories (NWT), Canada	Air, ice road in winter	Mining leases from NWT Government, expiring in 2017 and 2018 with options to renew.
Industrial minerals			
Dampier Salt (68.4%)	Dampier, Lake MacLeod and Port Hedland, Western Australia	Road and port	State agreements (mining leases) expiring in 2034 at Dampier, 2018 at Port Hedland and 2021 at Lake MacLeod, with options to renew at the latter two sites.
Rio Tinto Minerals – Boron	California, US	Road and rail	Owned.
Rio Tinto Fer et Titane Lac Tio	Havre-Saint-Pierre, Quebec, Canada	Rail and port (St Lawrence River)	Mining covered by two concessions granted by Quebec State in 1949 and 1951 which, subject to certain Mining Act restrictions, confer rights and obligations of an owner.
QIT Madagascar Minerals (80%)	Fort-Dauphin, Madagascar	Road and port	Mining lease granted by central government.
Richards Bay Minerals (74%)	Richards Bay, KwaZulu-Natal, South Africa	Rail, road and port	Mineral rights for Reserve 4 and Reserve 10 issued by South African State and converted to new order mining rights from 9 May 2012. Mining rights run until 8 May 2041 for both lease areas.
Uranium			
Energy Resources of Australia (68.4%) Ranger	Northern Territory, Australia	Road, rail and port	Mining tenure granted by Federal Government.
Rössing Uranium (68.6%)	Erongo Region, Namibia	Rail, road and port	Mining licence granted by Namibian State.
IRON ORE			
Hamersley Iron Brockman 2 Brockman 4 Marandoo Mount Tom Price Nammuldi Paraburdoo Western Turner Syncline Yandicoogina Channar (60%) Eastern Range (54%)	Hamersley Ranges, Western Australia	Railway and port (owned by Hamersley Iron and operated by Pilbara Iron)	Agreements for life of mine with Government of Western Australia.
Hope Downs 1 (50% mine, 100% infrastructure)	Pilbara region, Western Australia	Railway (owned by Hamersley Iron and operated by Pilbara Iron)	Agreements for life of mine with Government of Western Australia.
Hope Downs 4 (50% mine, 100% infrastructure)	Pilbara region, Western Australia	Railway (owned by Hamersley Iron and operated by Pilbara Iron)	Agreements for life of mine with Government of Western Australia
Iron Ore Company of Canada (IOC) (58.7%)	Labrador City, Province of Labrador and Newfoundland	Railway and port facilities in Sept-Îles, Quebec (owned and operated by IOC)	Sublease with the Labrador Iron Ore Royalty Corporation which has lease agreements with the Government of Newfoundland and Labrador that are due to be renewed in 2020 and 2022.
Robe River Iron Associates (53%) Mesa J Mesa A West Angelas	Pilbara region, Western Australia	Railway and port (owned by Robe River and operated by Pilbara Iron)	Agreements for life of mine with Government of Western Australia.

History	Type of mine	Power source
Interest increased from 59.7% following purchase of Ashton Mining in 2000. Underground mine project approved in 2005 to extend mine life to 2020.	Underground (previously open pit)	Long-term contract with Ord Hydro Consortium and on-site generation
Deposits discovered 1994-1995. Construction approved 2000. Diamond production started 2003. Second dike closed off in 2005 for mining of additional orebody. The underground mine started production in 2010, ramping up to full production in 2013.	Underground (previously open pit)	On-site diesel generators; installed capacity 44MW and 9.2MW of wind capacity
Construction of the Dampier field started in 1969; first shipment in 1972. Lake MacLeod was acquired in 1978 as an operating field. Port Hedland was acquired in 2001 as an operating field.	Solar evaporation of seawater (Dampier and Port Hedland) and underground brine (Lake MacLeod); extraction of gypsum from surface of Lake MacLeod	Dampier supply from Hamersley Iron Pty Ltd; Lake MacLeod from Western Power and on-site generation units; Port Hedland from Western Power
Deposit discovered in 1925 and acquired by Rio Tinto in 1967.	Open pit	On-site co-generation units and local power grid
Production started 1950; interest acquired in 1989.	Open pit	Long-term contract with Hydro-Québec
Exploration project started in 1986; construction approved 2005. Ilmenite and zirsil production started 2008. QMM intends to extract ilmenite and zirsil from heavy mineral sands over an area of about 6,000 hectares along the coast over the next 40 years.	Mineral sand dredging	On-site heavy fuel oil generators
Production started 1977; initial interest acquired 1989. Fifth mining plant commissioned in 2000. One mining plant decommissioned in 2008. In September 2012, Rio Tinto doubled its holding in Richards Bay Minerals to 74 per cent following the acquisition of BHP Billiton's entire interests.	Dune sand dredging	Contract with ESKOM
Mining commenced 1981. Interest acquired through acquisition of North 2000. Open pit mining ended 2012, since when ERA has been processing ore stockpiles.	Stockpile	On-site diesel generation
Production began in 1976.	Open pit	Supplied by NamPower via grid network
Mount Tom Price began operations in 1966, followed by Paraburdoo in 1974. In the 1990s, Channar, Brockman 2, Marandoo and Yandicoogina achieved first ore. Annual capacity increased to 68 million tonnes during the 1990s and has more than doubled in the past 25 years. Since 2000, Eastern Ranges, Nammuldi, Brockman 4 and Western Turner Syncline have joined the network of Hamersley Iron mines. The brownfield mine expansion at such sites as Paraburdoo, Brockman 2, Nammuldi and Yandicoogina will enable production to meet expanded port and rail capacity in the coming years.	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron
Joint venture between Rio Tinto and Hancock Prospecting. Construction of Stage 1 to 22 million tonnes per annum commenced 2006 and first production occurred 2007. Stage 2 to 30 million tonnes per annum completed 2009.	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron
Joint venture between Rio Tinto and Hancock Prospecting. Construction of wet plant processing to 15 million tonnes per annum commenced 2011 and first production occurred 2013.	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron
Interest acquired in 2000 through North. Current operation began in 1962 and has processed over one billion tonnes of crude ore since. Annual capacity 23.3 million tonnes of concentrate of which 12.5 million tonnes can be pelletised.	Open pit	Supplied by Newfoundland Hydro
First shipment in 1972 from Robe Valley. Interest acquired in 2000 through North. First ore was shipped from West Angelas in 2002. In 2014, total production of the Robe River Iron Associates joint venture was 64 million tonnes.	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron

Mines and production facilities
continued

Group smelters and refineries

(Rio Tinto's interest 100 per cent unless otherwise shown)

Smelter/refinery	Location	Title/lease	Plant type/product	Capacity as of 31 December 2015 (based on 100% ownership)
ALUMINIUM				
Alma	Alma, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium rod, t-foundry, molten metal, high purity, remelt	466,000 tonnes per year aluminium
Alouette (40%)	Sept-Îles, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium high purity, remelt	606,000 tonnes per year aluminium
Arvida	Saguenay, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium billet, molten metal, remelt	176,000 tonnes per year aluminium
Arvida AP60	Saguenay, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium high purity, remelt	60,000 tonnes per year aluminium
Bécancour (25.1%)	Bécancour, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium slab, billet, t-foundry, remelt, molten metal	446,000 tonnes per year aluminium
Bell Bay	Bell Bay, Northern Tasmania, Australia	100% freehold	Aluminium smelter producing aluminium slab, molten metal, small form and t-foundry, remelt	195,000 tonnes per year aluminium
Boyne Smelters (59.4%)	Boyne Island, Queensland, Australia	100% freehold	Aluminium smelter producing aluminium billet, EC grade, small form and t-foundry, remelt	584,000 tonnes per year aluminium
Dunkerque	Dunkerque, France	100% freehold	Aluminium smelter producing aluminium slab, small form foundry, remelt	282,000 tonnes per year aluminium
Grande-Baie	Saguenay, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium slab, molten metal, high purity, remelt	225,000 tonnes per year aluminium
ISAL	Reykjavik, Iceland	100% freehold	Aluminium smelter producing aluminium remelt, billet	205,000 tonnes per year aluminium
Jonquière (Vaudreuil)	Jonquière, Quebec, Canada	100% freehold	Refinery producing specialty alumina and smelter grade alumina	1,559,000 tonnes per year alumina
Kitimat (a)	Kitimat, British Columbia, Canada	100% freehold	Aluminium smelter producing aluminium slab, remelt, high purity	420,000 tonnes per year aluminium
Laterrière	Saguenay, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium slab, remelt, molten metal	244,000 tonnes per year aluminium
Lochaber	Fort William, Scotland, UK	100% freehold	Aluminium smelter producing aluminium slab, remelt	47,000 tonnes per year aluminium
Queensland Alumina (80%)	Gladstone, Queensland, Australia	73.3% freehold; 26.7% leasehold (of which more than 80% expires in 2026 and after)	Refinery producing alumina	3,950,000 tonnes per year alumina
São Luis (Alumar) (10%)	São Luis, Maranhão, Brazil	100% freehold	Refinery producing alumina	3,667,000 tonnes per year alumina
Sohar (20%)	Sohar, Oman	100% leasehold (expiring 2039)	Aluminium smelter producing aluminium, high purity, remelt	377,000 tonnes per year aluminium
Tiwai Point (New Zealand Aluminium Smelters) (79.4%)	Invercargill, Southland, New Zealand	19.6% freehold; 80.4% leasehold (expiring in 2029 and use of certain Crown land)	Aluminium smelter producing aluminium billet, slab, small form foundry, high purity, remelt	365,000 tonnes per year aluminium
Tomago (51.6%)	Tomago, New South Wales, Australia	100% freehold	Aluminium smelter producing aluminium billet, slab, remelt	580,000 tonnes per year aluminium
Yarwun	Gladstone, Queensland, Australia	97% freehold. 3% leasehold (expiring 2101 and after)	Refinery producing alumina	3,100,000 tonnes per year alumina

Smelter/refinery	Location	Title/lease	Plant type/product	Capacity as of 31 December 2015 (based on 100% ownership)
OTHER ALUMINIUM				
Gove	Gove, Northern Territory, Australia	100% leasehold. All leases were renewed in 2011 for a further period of 42 years. The residue disposal area is leased from the Arnhem Land Aboriginal Land Trust. The Northern Territory government is the lessor of the balance of the leases; however, on expiry of the 42-year renewed term, the land subject of the balances of the leases will all vest to the Arnhem Land Aboriginal Land Trust.	Refinery producing alumina	2,650,000 tonnes per year alumina. The Group curtailed production at Gove as of May 2014.
COPPER & COAL				
Rio Tinto Kennecott	Magna, Salt Lake City, Utah, US	100% freehold	Flash smelting furnace/Flash convertor furnace copper refinery	335,000 tonnes per year refined copper
DIAMONDS & MINERALS				
Boron	California, US	100% freehold	Borates refinery	576,000 tonnes per year boric oxide
Rio Tinto Fer et Titane Sorel Plant	Sorel-Tracy, Quebec, Canada	100% freehold	Ilmenite smelter	1,300,000 tonnes per year titanium dioxide slag, 1,000,000 tonnes per year iron
Richards Bay Minerals (74%)	Richards Bay, South Africa	100% freehold	Ilmenite smelter	1,050,000 tonnes per year titanium dioxide slag, 565,000 tonnes per year iron
IRON ORE				
IOC Pellet Plant (58.7%)	Labrador City, Newfoundland and Labrador, Canada	100% leaseholds (expiring in 2020, 2022 and 2025 with rights of renewal for further terms of 30 years)	Pellet induration furnaces producing multiple iron ore pellet types	12.5 million tonnes per year pellet

Note:

(a) Kitimat has started to ramp up towards nameplate capacity of 420,000 tonnes (a more than 48 per cent increase over previous nameplate capacity), which is expected to be achieved in early 2016.

Mines and production facilities
continued

Information on Group power plants

(Rio Tinto's interest 100 per cent unless otherwise shown)

Power plant	Location	Title/lease	Plant type/product	Capacity as of 31 December 2015 (based on 100% ownership)
ALUMINIUM				
Gladstone power station (42%)	Gladstone, Queensland, Australia	100% freehold	Thermal power station	1,680MW
Gove power station	Nhulunbuy, Northern Territory, Australia	100% leasehold	Diesel generation	24MW
Highlands power stations	Lochaber, Kinlochleven, UK	100% freehold	Hydroelectric power	105MW
Kemano powerstation	Kemano, British Columbia, Canada	100% freehold	Hydroelectric power	865MW
Quebec power stations	Saguenay, Quebec, Canada (Chute-à-Caron, Chute-à-la-Savane, Chute-des-Passes, Chute-du-Diable, Isle-Maligne, Shipshaw)	100% freehold (certain facilities leased from Quebec Government until 2058 puruant to Peribonka Lease)	Hydroelectric power	3,147MW
Yarwun alumina refinery co-generation plant	Gladstone, Queensland, Australia	100% freehold	Gas turbine and heat recovery steam generator	160MW
Weipa power stations and solar generation facility	Lorim Point, Andoom, and Weipa	100% leasehold	Diesel generation supplemented by solar generation facility	38MW
COPPER & COAL				
Rio Tinto Kennecott power stations	Salt Lake City, Utah, US	100% freehold	Thermal power station Steam turbine running off waste heat boilers at the copper smelter Combined heat and power plant supplying steam to the copper refinery	175MW 31.8MW 6.2MW

Power plant	Location	Title/lease	Plant type/product	Capacity as of 31 December 2015 (based on 100% ownership)
DIAMONDS & MINERALS				
Boron co-generation plant	Boron, California, US	100% freehold	Co-generation uses natural gas to generate steam and electricity, used to run Boron's refining operations	48MW
Energy Resources of Australia (Rio Tinto: 68.4%)	Ranger Mine, Jabiru, Northern Territory, Australia	Lease	Five diesel generator sets rated at 5.1MW; one diesel generator set rated at 1.9MW; four diesel generator sets rated at 2MW	35.4MW
IRON ORE				
IOC power station	Sept Îles, Quebec, Canada	Statutory grant	Hydroelectric power	22MW
Paraburdoo power station	Paraburdoo, Western Australia, Australia	Lease	Three LM6000PC gas-fired turbines One Frame5 dual-fuel turbine	138MW
Yurralyi Maya power station (Rio Tinto: 84.2%)	Dampier, Western Australia, Australia	Miscellaneous licence	Four LM6000PD gas-fired turbines One LM6000PF gas-fired turbine (duel fuel potential)	200MW

Shareholder information

Organisational structure

The Rio Tinto Group consists of Rio Tinto plc, which is registered in England and Wales under company number 719885, and is listed on the London Stock Exchange, and Rio Tinto Limited, which is registered in Australia under ABN 96 004 458 404, and is listed on the Australian Securities Exchange.

Rio Tinto is headquartered in London and has a corporate office in Melbourne.

Rio Tinto plc has a sponsored ADR facility and the underlying shares are registered with the US Securities and Exchange Commission and are listed on the New York Stock Exchange.

Nomenclature and financial data

Rio Tinto plc and Rio Tinto Limited operate together and are referred to in this report as Rio Tinto, the Rio Tinto Group or, more simply, the Group. These collective expressions are used for convenience only, since both Companies, and the individual companies in which they directly or indirectly own investments, are separate and distinct legal entities. "Limited", "plc", "Pty", "Inc.", "Limitada", "L.L.C.", "A.S." or "SA" have generally been omitted from Group company names, except to distinguish between Rio Tinto plc and Rio Tinto Limited. Financial data in US dollars (US$) is derived from, and should be read in conjunction with, the 2015 financial statements. In general, financial data in pounds sterling (£) and Australian dollars (A$) have been translated from the consolidated financial statements and have been provided solely for convenience; exceptions arise where data can be extracted directly from source records. Certain key information has been provided in all three currencies in the 2015 financial statements.

History

Rio Tinto plc was incorporated on 30 March 1962 (then called The Rio Tinto- Zinc Corporation Limited (RTZ)) and was formed by the merger of The Rio Tinto Company Limited and The Consolidated Zinc Corporation Limited. The Rio Tinto Company was incorporated in 1873 to reopen ancient copper workings in Spain. The Consolidated Zinc Corporation Limited's origins trace back to the Australian mining industry in the early twentieth century. Operating out of Broken Hill in New South Wales, it came to prominence with the mining of silver, lead and zinc deposits and later expanded into lead and zinc smelting.

Rio Tinto Limited was incorporated on 17 December 1959 (then called The Rio Tinto Mining Company of Australia Limited) and in 1962 the Australian interests of The Consolidated Zinc Corporation Limited and The Rio Tinto Company Limited were merged to form Conzinc Riotinto of Australia Limited as a limited liability company under the laws of the State of Victoria, Australia. In 1980, Conzinc Riotinto of Australia Limited changed its name to CRA Limited.

Between 1962 and 1995, both RTZ and CRA discovered important mineral deposits, developed major mining projects and also grew through acquisition.

RTZ and CRA began operating in 1995 through a dual listed companies structure. In 1997, RTZ became Rio Tinto plc and CRA became Rio Tinto Limited.

Dual listed companies structure

In 1995, Rio Tinto shareholders approved the terms of the dual listed companies merger (the DLC structure) which was designed to place the shareholders of both Companies in substantially the same position as if they held shares in a single entity owning all of the assets of both Companies.

Following the approval of the DLC structure, both Companies entered into a DLC Merger Sharing Agreement (the Sharing Agreement) through which each Company agreed to ensure that the businesses of Rio Tinto plc and Rio Tinto Limited are managed on a unified basis, to ensure that the boards of directors of each Company are the same, and to give effect to certain arrangements designed to provide shareholders of each Company with a common economic interest in the DLC structure.

In order to achieve this third objective, the Sharing Agreement provided for the ratio of dividend, voting and capital distribution rights attached to each Rio Tinto plc share and to each Rio Tinto Limited share to be fixed in an Equalisation Ratio which has remained unchanged at 1:1. The Sharing Agreement has provided for this ratio to be revised in special circumstances where, for example, certain modifications are made to the share capital of one Company, such as rights issues, bonus issues, share splits and share consolidations, but not to the share capital of the other. Outside these specified circumstances, the Equalisation Ratio can only be altered with the approval of shareholders under the Class Rights Action approval procedure described under Voting rights below. In addition, any adjustments are required to be confirmed by the Group's external auditors.

Consistent with the creation of the DLC structure, directors of each Company seek to act in the best interests of Rio Tinto as a whole. The Class Rights Action approval procedure is intended to deal with instances where there may be a conflict of interest between the shareholders of each Company.

To ensure that the boards of both Companies are identical, resolutions to appoint or remove directors must be put to shareholders of both Companies as a joint electorate (as Joint Decisions as described under Voting rights). It is a requirement of the constitution of each Company that a person can only be a director of one Company if that person is also a director of the other Company. So, for example, if a person was removed as a director of Rio Tinto plc, he or she would also cease to be a director of Rio Tinto Limited.

One consequence of the DLC merger is that Rio Tinto is subject to a wide range of laws, rules and regulatory review across multiple jurisdictions. Where these rules differ, Rio Tinto, as a Group, aims to comply with the strictest applicable level.

Dividend arrangements

The Sharing Agreement provides for dividends paid on Rio Tinto plc and Rio Tinto Limited shares to be equalised on a net cash basis, that is without taking into account any associated tax credits. Dividends are determined in US dollars and are then, except for ADR holders, translated and paid in sterling and Australian dollars. The Companies are also required to announce and pay their dividends and other distributions as close in time to each other as possible.

In the unlikely event that one Company did not have sufficient distributable reserves to pay the equalised dividend or the equalised capital distribution, it would be entitled to receive a top-up payment from the other relevant Company. The top-up payment could be made as a dividend on the DLC Dividend Share, or by way of a contractual payment.

If the payment of an equalised dividend would contravene the law applicable to one of the Companies they may depart from the Equalisation Ratio. However, should such a departure occur, the relevant Company will put aside reserves to be held for payment on the relevant shares at a later date.

Rio Tinto shareholders have no direct rights to enforce the dividend equalisation provisions of the Sharing Agreement.

The DLC Dividend Shares can also be utilised to provide the Group with flexibility for internal funds management by allowing dividends to be paid between the Companies and their subsidiaries.

Voting arrangements

In principle, the Sharing Agreement provides for the shareholders of Rio Tinto plc and Rio Tinto Limited to vote as a joint electorate on all matters which affect shareholders of both Companies in similar ways. These are referred to as Joint Decisions. Such Joint Decisions include the creation of new classes of share capital, the appointment or removal of directors and auditors and the receiving of the annual financial statements. All shareholder resolutions including Joint Decisions are voted on a poll.

The Sharing Agreement also provides for the protection of shareholders of each Company by requiring their separate approval for decisions that do not affect the shareholders of both Companies equally. Matters requiring this approval procedure are referred to as Class Rights Actions and are voted on a poll. For example, fundamental elements of the DLC structure cannot be changed unless approved separately by shareholders of both Companies under the Class Rights Action approval procedure.

Exceptions to these principles can arise in situations such as where legislation requires the separate approval of a decision by the appropriate majority of shareholders in one Company, and approval of the matter by shareholders of the other Company is not required.

Where a matter has been expressly categorised as either a Joint Decision or a Class Rights Action, the directors do not have the power to change that categorisation. If a matter falls within both categories, it is treated as a Class Rights Action. In addition, the directors can determine that matters not expressly listed in either category should be put to shareholders for their approval under either procedure.

To facilitate the joint voting arrangements, each Company has entered into shareholder voting agreements. Each Company has issued a Special Voting Share to a special purpose company held in trust for shareholders by a common Trustee.

Rio Tinto plc has issued its Special Voting Share (RTP Special Voting Share) to RTL Shareholder SVC and Rio Tinto Limited has issued its Special Voting Share (RTL Special Voting Share) to RTP Shareholder SVC. The total number of votes cast on Joint Decisions by the shareholders of one Company are voted at the parallel meeting of the other Company. The role of these special purpose companies in achieving this is described below.

In exceptional circumstances, certain shareholders of the Companies can be excluded from voting at the respective Company's general meetings because they have acquired shares in one Company in excess of a given threshold without making an offer for all the shares in the other Company. If this should occur, the votes cast by these excluded shareholders will be disregarded.

Following the Companies' general meetings the overall results of the voting are announced to the stock exchanges, to the media and published on the Rio Tinto website.

At a Rio Tinto plc shareholders' meeting at which a Joint Decision is considered, each Rio Tinto plc share carries one vote and the holder of its Special Voting Share has one vote for each vote cast by the public shareholders of Rio Tinto Limited in their parallel meeting. The holder of the Special Voting Share is required to vote strictly, and only, in accordance with the votes cast by public shareholders for and against the equivalent resolution at the parallel Rio Tinto Limited shareholders' meeting.

The holders of Rio Tinto Limited ordinary shares do not actually hold any voting shares in Rio Tinto plc by virtue of their holding in Rio Tinto Limited and cannot enforce the voting arrangements relating to the Special Voting Share.

At a Rio Tinto Limited shareholders' meeting at which a Joint Decision is considered, each Rio Tinto Limited share carries one vote and the holder of its Special Voting Share will have one vote for each vote cast by the public shareholders of Rio Tinto plc in their parallel meeting. The holder of the Special Voting Share is required to vote strictly, and only, in accordance with the votes cast for and against the equivalent resolution at the parallel Rio Tinto plc shareholders' meeting.

The holders of Rio Tinto plc ordinary shares do not actually hold any voting shares in Rio Tinto Limited by virtue of their holding in Rio Tinto plc and cannot enforce the voting arrangements relating to the Special Voting Share.

Capital distribution arrangements

If either of the Companies goes into liquidation, the Sharing Agreement provides for a valuation to be made of the surplus assets of both Companies. If the surplus assets available for distribution by one Company on each of the shares held by its shareholders exceed the surplus assets available for distribution by the other Company on each of the shares held by its shareholders, then an equalising payment between the two Companies shall be made, to the extent permitted by applicable law, such that the amount available for distribution on each share held by shareholders of each Company conforms to the Equalisation Ratio. The objective is to ensure that the shareholders of both Companies have equivalent entitlements to the assets of the combined Group on a per share basis, taking account of the Equalisation Ratio.

The Sharing Agreement does not grant any enforceable rights to the shareholders of either Company upon liquidation of a Company.

Limitations on ownership of shares and merger obligations

The laws and regulations of the UK and Australia impose restrictions and obligations on persons who control interests in publicly listed companies in excess of defined thresholds that, under certain circumstances, include obligations to make a public offer for all of the outstanding issued shares of the relevant company. The threshold applicable to Rio Tinto plc under UK law and regulations is 30 per cent and to Rio Tinto Limited under Australian law and regulations is 20 per cent (on a standalone basis or, taking into account only Rio Tinto plc interests, on a Joint Decision basis).

As part of the DLC merger, the Articles of Association of Rio Tinto plc and the Constitution of Rio Tinto Limited were amended with the intention of extending these laws and regulations to the combined enterprise and, in particular, to ensure that a person cannot exercise control over one Company without having made offers to the public shareholders of both Companies.

It is consistent with the creation of the single economic enterprise, and the equal treatment of the two sets of shareholders, that these laws and regulations should operate in this way. The Articles of Association of Rio Tinto plc and the Constitution of Rio Tinto Limited impose restrictions on any person who controls, directly or indirectly, 20 per cent or more of the votes on a Joint Decision. If, however, such a person only has an interest in either Rio Tinto Limited or Rio Tinto plc, the restrictions will only apply if they control, directly or indirectly, 30 per cent or more of the votes at that Company's general meetings.

If one of the thresholds specified above is breached, subject to certain limited exceptions and notification by the relevant Company, such persons may not attend or vote at general meetings of the relevant Company, may not receive dividends or other distributions from the relevant Company and may be divested of their interest by the directors of the relevant Company. These restrictions continue to apply until such persons have either made a public offer for all of the publicly held shares of the other Company, or have reduced their controlling interest below the thresholds specified, or have acquired through a permitted means at least 50 per cent of the publicly held shares of each Company.

These provisions are designed to ensure that offers for the publicly held shares of both Companies would be required in order to avoid the restrictions set out above, even if the interests which breach the thresholds are only held in one of the Companies. The directors do not have the discretion to exempt a person from the operation of these rules.

Under the Sharing Agreement, the Companies agree to co-operate to enforce the above restrictions contained in their Articles of Association and Constitution.

Guarantees

In 1995 each Company entered into a Deed Poll Guarantee in favour of creditors of the other Company. Pursuant to the Deed Poll Guarantees, each Company guaranteed the contractual obligations of the other Company and the obligations of other persons which are guaranteed by the other Company, subject to certain limited exceptions. Beneficiaries under the Deed Poll Guarantees may make demands upon the guarantor thereunder without first having recourse to the Company or persons whose obligations are being guaranteed. The obligations of the guarantor under each Deed Poll Guarantee expire upon termination of the Sharing Agreement and under other limited circumstances, but only in respect of obligations arising after such termination and, in the case of other limited circumstances, the publication and expiry of due notice. The shareholders of the Companies cannot enforce the provisions of the Deed Poll Guarantees in relation to their interest in the shares of the other Company.

Shareholder information
continued

Markets

Rio Tinto plc

The principal market for Rio Tinto plc shares is the London Stock Exchange with the shares trading through the Stock Exchange Electronic Trading Service (SETS) system.

Rio Tinto plc American depositary receipts are listed on the New York Stock Exchange. Further details relating to Rio Tinto plc American depositary receipts are available in Rio Tinto's Annual report on Form 20-F.

Rio Tinto Limited

Rio Tinto Limited shares are listed on the Australian Securities Exchange (ASX).

The ASX is the principal trading market for Rio Tinto Limited shares. The ASX is a national stock exchange with an automated trading system.

Share ownership

Substantial shareholders

Under the UK Disclosure and Transparency Rules and the Australian Corporations Act, any shareholder of Rio Tinto plc with voting rights of three per cent or more, or any person with voting power of five per cent or more in Rio Tinto Limited, is required to provide the relevant companies with notice.

The shareholders who have provided such, or an equivalent, notice as of 15 February 2016 are:

Rio Tinto plc	Date of notice	Number of shares	Percentage of issued share capital
AXA S.A.	29 Jan 2008	48,493,873	4.86
BlackRock Inc.	4 Dec 2009	127,744,871	8.38
Shining Prospect Pte. Ltd	13 Mar 2012	182,550,329	12.7
The Capital Group Companies, Inc.	3 April 2014	55,307,243	3.91
The Capital Group Companies, Inc.	24 Feb 2015	56,647,518	4.01
The Capital Group Companies, Inc.	17 Sep 2015	54,763,331	3.93
The Capital Group Companies, Inc.	9 Oct 2015	55,867,795	4.02
Shining Prospect Pte. Ltd	26 Jan 2016	182,550,329	13.1
Rio Tinto Limited			
Shining Prospect Pte. Ltd	10 June 2009	see footnote (a)	see footnote (a)
BlackRock Inc	24 Mar 2015	22,161,984	5.13
BlackRock Inc	13 April 2015	see footnote (b)	see footnote (b)
BlackRock Inc	30 Oct 2015	see footnote (c)	see footnote (c)

(a) In its substantial holding notice filed on 10 June 2009 Shining Prospect Pte. Ltd, a Singapore-based entity owned by Chinalco (Aluminium Corporation of China) disclosed a holding of 182,550,329 Rio Tinto plc shares which, at that time, through the operation of the Australian Corporations Act as modified, gave these entities and their associates voting power of 9.3 per cent in the Rio Tinto Group on a Joint Decision matter, making them substantial shareholders of Rio Tinto Limited, as well as of Rio Tinto plc. Rio Tinto plc has subsequently, by notice dated 26 January 2016, disclosed that Shining Prospect Pte. Ltd's holding of 182,550,329 Rio Tinto plc shares gave these entities and their associates voting power of 13.1 per cent in Rio Tinto plc, which in turn would give these entities and their associates voting power of 10.1 per cent in the Rio Tinto Group on a Joint Decision Matter.

(b) In its substantial holding notice filed on 13 April 2015, BlackRock Inc and its associates disclosed a holding of 120,174,604 shares in Rio Tinto plc and 22,330,443 shares in Rio Tinto Limited. Through the operation of the Australian Corporations Act as modified, these interests gave BlackRock Inc and its associates voting power of 7.7 per cent in the Rio Tinto Group on a Joint Decision matter, making them substantial shareholders of Rio Tinto Limited, as well as of Rio Tinto plc.

(c) By subsequent notice dated 30 October 2015 BlackRock Inc and its associates disclosed that they no longer held a relevant interest in 5 per cent or more of Rio Tinto Limited's issued capital.

As far as is known, Rio Tinto plc and Rio Tinto Limited are not directly or indirectly owned or controlled by another corporation or by any government or natural person. Rio Tinto is not aware of any arrangement which may result in a change in control. No shareholder possesses voting rights that differ from those attaching to Rio Tinto plc's and Rio Tinto Limited's securities.

As of 15 February 2016, the total amount of the Group's voting securities owned by the directors in Rio Tinto plc was 90,034 ordinary shares of 10p each or ADRs and in Rio Tinto Limited was 205,388 ordinary shares, in aggregate representing less than one per cent of the Group's total number of shares in issue.

Analysis of ordinary shareholders

As at 15 February 2016	Rio Tinto plc No. of accounts	%	Shares	%	Rio Tinto Limited No. of accounts	%	Shares	%
1 to 1,000 shares	32,561	76.47	10,539,914	0.77	**160,014**	**83.38**	**47,437,846**	**11.18**
1,001 to 5,000 shares	7,860	18.46	15,613,622	1.14	**28,515**	**14.86**	**57,171,126**	**13.48**
5,001 to 10,000 shares	706	1.65	4,917,260	0.36	**2,275**	**1.19**	**15,775,701**	**3.72**
10,001 to 25,000 shares	407	0.96	6,370,525	0.46	**863**	**0.45**	**12,704,647**	**3.00**
25,001 to 125,000 shares	486	1.14	29,962,167	2.18	**187**	**0.10**	**8,388,811**	**1.98**
125,001 to 250,000 shares	165	0.39	29,263,689	2.13	**17**	**0.01**	**3,094,350**	**0.73**
250,001 to 1,250,000 shares	267	0.63	148,594,918	10.81	**25**	**0.01**	**14,586,615**	**3.44**
1,250,001 to 2,500,000 shares	56	0.13	98,764,192	7.19	**4**	**0.00**	**7,099,028**	**1.67**
2,500,001 shares and over [a]	71	0.17	1,030,030,042[b]	74.96	**10**	**0.01**	**257,934,288**	**60.81**
			1,374,056,329[c]	100.00			**424,192,412[d]**	**100.00**
Number of holdings less than marketable parcel of A$500					**6,555**			

(a) Excludes shares held in Treasury.

(b) This includes 116,136,119 shares held in the name of a nominee on the share register. The shares are listed on the NYSE in the form of ADRs.

(c) The total issued share capital is made up of 1,384,496,455 publicly held shares; of which 10,440,126 shares are held in Treasury.

(d) Publicly held shares in Rio Tinto Limited.

Twenty largest registered shareholders

In accordance with the ASX Listing Rules, below are the names of the 20 largest registered holders of Rio Tinto Limited shares and the number of shares and the percentage of issued capital each holds as at 15 February 2016:

Rio Tinto Limited	Number of shares	Percentage of issued share capital
HSBC Custody Nominees (Australia) Limited	93,147,007	**21.96**
J. P. Morgan Nominees Australia Limited	74,935,815	**17.67**
National Nominees Limited	38,405,986	**9.05**
Citicorp Nominees Pty Limited	21,019,827	**4.96**
BNP Paribas Noms Pty Ltd (DRP)	10,356,104	**2.44**
Citicorp Nominees Pty Limited (Colonial First State Inv A/C)	6,193,139	**1.46**
BNP Paribas Nominees Pty Ltd (Agency Lending DRP A/C)	4,750,214	**1.12**
Australian Foundation Investment Company Limited	3,651,753	**0.86**
HSBC Custody Nominees (Australia) Limited (NT-Comnwlth Super Corp A/C)	2,963,704	**0.70**
Argo Investments Limited	2,510,739	**0.59**
AMP Life Limited	2,291,564	**0.54**
UBS Wealth Management Australia Nominees Pty Ltd	1,697,680	**0.40**
UBS Nominees Pty Ltd	1,689,825	**0.40**
Computershare Trustees Jey Ltd (RE 3000086 A/C)	1,419,959	**0.33**
RBC Investor Services Australia Nominees Pty Limited (PI Pooled A/C)	1,219,856	**0.29**
Computershare Trustees Jey Ltd (RE 3000091 A/C)	1,176,763	**0.28**
National Nominees Limited (DB A/C)	955,275	**0.23**
Australian United Investment Company Limited	950,000	**0.22**
Navigator Australia Ltd (MLC Investment Sett A/C)	818,580	**0.19**
RBC Investor Services Australia Nominees Pty Limited (MBA A/C)	732,201	**0.17**

Large registered shareholders are nominees who hold securities on behalf of beneficial shareholders.

Dividends

Both Companies have paid dividends on their ordinary shares every year since incorporation in 1962. The process by which Rio Tinto shareholders receive dividends is explained under the description of the DLC structure on page 236.

Dividend policy

In February 2016, the board revised the dividend policy. The former progressive dividend policy was honoured in respect of the final dividend declared for 2015. The new policy set out below was adopted.

At the end of each financial period, the board will determine an appropriate total level of ordinary dividend per share, taking into account the results for the financial year, the outlook for our major commodities, the board's view of the long-term growth prospects of the business and the Company's objective of maintaining a strong balance sheet. The intention is that the balance between the interim and final dividend is weighted to the final dividend.

The board expects total cash returns to shareholders over the longer term to be in a range of 40 to 60 per cent of underlying earnings in aggregate through the cycle.

The board is committed to maintaining an appropriate balance between cash returns to shareholders and investment in the business, with the intention of maximising shareholder value.

Acknowledging the cyclical nature of the industry, in periods of strong earnings and cash generation, it is the board's intention to supplement the ordinary dividends with additional returns to shareholders.

Dividend determination

The majority of our sales are transacted in US dollars, making this the most appropriate measure for our global business performance. It is our main reporting currency and, consequently, the natural currency for dividend determination. Dividends determined in US dollars are translated at exchange rates prevailing two days prior to the declaration and payable in sterling by Rio Tinto plc and in Australian dollars by Rio Tinto Limited.

On request, shareholders of Rio Tinto plc can elect to receive dividends in Australian dollars and Rio Tinto Limited shareholders can elect to receive dividends in pounds sterling. If such an election is made, the dividend amounts received will be calculated by converting the declared dividend using the exchange rates applicable to sterling and Australian dollars five days prior to the dividend payment date.

Shareholders who wish to receive their dividends in any other currencies should contact the Companies' share registrars, who offer payment services in other currencies, subject to a fee.

2015 dividends

The 2015 interim and final dividends were determined at 107.5 US cents and at 107.5 US cents per share respectively and the applicable conversion rates for the interim and final dividend were US$1.55975 and US$1.44850 to the pound sterling and US$0.74185 and US$0.70775 to the Australian dollar respectively. For those Rio Tinto plc shareholders who elected to receive their interim dividend in Australian dollars the applicable conversion rate was A$2.1671 and for Rio Tinto Limited shareholders who elected to receive their dividend in sterling the applicable conversion rate was £0.46145.

Final dividends of 74.21 pence or 151.89 Australian cents per share will be paid on 7 April 2016. For those Rio Tinto plc shareholders requesting the 2015 final dividend be paid in Australian dollars, those holders of Rio Tinto plc ADRs (each representing one share) and those Rio Tinto Limited shareholders requesting the 2015 final dividend be paid in pounds sterling, the applicable conversion rates will be announced on 31 March 2016.

Dividend reinvestment plan (DRP)

Rio Tinto offers a DRP to registered shareholders, which provides the opportunity to use cash dividends to purchase Rio Tinto shares in the market. Due to local legislation the DRP cannot be extended to shareholders in the US, Canada and certain other countries.

Material contracts

Articles of Association and Constitution, and DLC Sharing Agreement

As explained on pages 236 to 237, under the terms of the DLC structure the shareholders of Rio Tinto plc and of Rio Tinto Limited entered into certain contractual arrangements which are designed to place the shareholders of both Companies in substantially the same position as if they held shares in a single entity which owned all of the assets of both Companies. Generally, and as far as is permitted by the UK Companies Act and the Australian Corporations Act and ASX Listing Rules, this principle is reflected in the Articles of Association of Rio Tinto plc and in the Constitution of Rio Tinto Limited. The summaries below include descriptions of material rights of the shareholders of both Rio Tinto plc and Rio Tinto Limited.

Objects

At the 2009 annual general meetings, shareholders of Rio Tinto plc and Rio Tinto Limited approved amendments to the constitutional documents whereby the object clauses were removed to allow the Companies to have the widest possible scope of activities.

Directors

Under Rio Tinto plc's Articles of Association, a director may not vote in respect of any proposal in which he or she, or any other person connected with him or her, has any interest, other than by virtue of his or her interests in shares or debentures or other securities of, or otherwise in or through, the Company, except in certain prescribed circumstances, including in respect of resolutions:

- indemnifying him or her or a third party in respect of obligations incurred by the director on behalf of, or for the benefit of, the Company, or in respect of obligations of the Company, for which the director has assumed responsibility under an indemnity, security or guarantee;
- relating to an offer of securities in which he or she may be interested as a holder of securities or as an underwriter;
- concerning another body corporate in which the director is beneficially interested in less than one per cent of the issued shares of any class of shares of such a body corporate;
- relating to an employee benefit in which the director will share equally with other employees;
- relating to liability insurance that the Company is empowered to purchase for the benefit of directors of the Company in respect of actions undertaken as directors (or officers) of the Company; and
- concerning the giving of indemnities in favour of directors or the funding of expenditure by directors to defend criminal, civil or regulatory proceedings or actions against a director.

Under Rio Tinto Limited's Constitution, except where a director is constrained by Australian law, a director may be present at a meeting of the board while a matter in which the director has a material personal interest is being considered and may vote in respect of that matter.

The directors are empowered to exercise all the powers of the Companies to borrow money, to charge any property or business of the Companies or all, or any, of their uncalled capital and to issue debentures or give any other security for a debt, liability or obligation of the Companies or of any other person. The directors shall restrict the borrowings of Rio Tinto plc to the limitation that the aggregate amount of all moneys borrowed by the Company and its subsidiaries shall not exceed an amount equal to one and one half times the Companies' share capital plus aggregate reserves unless sanctioned by an ordinary resolution of the Company.

Directors are not required to hold any shares of either Company by way of qualification. The Remuneration Report on pages 79 and 86 provides information on shareholding policies relating to executive and non-executive directors. Please refer to the Corporate governance section on pages 55 to 56 for information on the appointment of directors.

Rights attaching to shares

Under English law, dividends on shares may only be paid out of profits available for

distribution, as determined in accordance with generally accepted accounting principles and by the relevant law. Shareholders are entitled to receive such dividends as may be declared by the directors. The directors may also pay shareholders such interim dividends as appear to them to be justified by the financial position of the Group.

Under the Australian Corporations Act, dividends on shares may only be paid if the company's assets exceed its liabilities immediately before the dividend is declared and the excess is sufficient for the payment of the dividend, the payment of the dividend is fair and reasonable to the Company's shareholders as a whole, and the payment of the dividend does not materially prejudice the Company's ability to pay its creditors. Any Rio Tinto plc dividend unclaimed after 12 years from the date the dividend was declared, or became due for payment, will be forfeited and returned to the Company. Any Rio Tinto Limited dividend unclaimed may be invested or otherwise used by the board for the benefit of the Company until claimed or otherwise disposed of according to Australian law. Rio Tinto Limited is governed by Victorian unclaimed monies legislation, which requires the Company to pay to the State Revenue Office any unclaimed dividend payments of A$ 20 or more that at 1 March each year have remained unclaimed for over 12 months.

Voting

Voting at any general meeting of shareholders on a resolution on which the holder of the Special Voting Share is entitled to vote shall be decided by a poll, and any other resolution shall be decided by a show of hands unless a poll has been duly demanded. On a show of hands, every shareholder who is present in person or by proxy or other duly authorised representative and is entitled to vote has one vote regardless of the number of shares held. The holder of the Special Voting Share is not entitled to vote on a show of hands. On a poll, every shareholder who is present in person or by proxy or other duly authorised representative and is entitled to vote has one vote for every ordinary share for which he or she is the holder and, in the case of Joint Decisions, the holder of the Special Voting Share has one vote for each vote cast in respect of the publicly held shares of the other Company.

A poll may be demanded by any of the following:

- the chairman of the meeting;
- at least five shareholders entitled to vote on the resolution;
- any shareholder or shareholders representing in the aggregate not less than one tenth (Rio Tinto plc) or one 20th (Rio Tinto Limited) of the total voting rights of all shareholders entitled to vote on the resolution;
- any shareholder or shareholders holding Rio Tinto plc shares conferring a right to vote at the meeting on which there have been paid-up sums in the aggregate equal to not less than one tenth of the total sum paid up on all the shares conferring that right; or
- the holder of the Special Voting Share of either Company.

A proxy form will be treated as giving the proxy the authority to demand a poll, or to join others in demanding one.

The necessary quorum for a Rio Tinto plc general meeting is three members present (in person or by proxy or other duly authorised representative) and entitled to vote, and for a Rio Tinto Limited general meeting is two members present (in person or by proxy or other duly authorised representative).

Matters are transacted at general meetings by the proposing and passing of resolutions as:

- ordinary resolutions, which require the affirmative vote of a majority of the votes of those persons voting at a meeting at which there is a quorum, for example the election of directors; and
- special resolutions, which require the affirmative vote of not less than three-fourths of the persons voting at a meeting at which there is a quorum, for example amending the Articles of Association of Rio Tinto plc or the Constitution of Rio Tinto Limited.

The Sharing Agreement further classifies resolutions as "Joint Decisions" and "Class Rights Actions" as explained under Voting arrangements on page 235.

Annual general meetings must be convened with 21 days' written notice for Rio Tinto plc and with 28 days' notice for Rio Tinto Limited. In accordance with the authority granted by shareholders at the Rio Tinto plc annual general meeting on 16 April 2015, other meetings of Rio Tinto plc may be convened with 14 days' written notice for the passing of a special resolution and with 14 days' notice for any other resolution, depending on the nature of the business to be transacted. All meetings of Rio Tinto Limited require 28 days' notice. In calculating the period of notice the days of delivery or receipt of the notice and the date of the meeting are not included. Among other things, the notice must specify the nature of the business to be transacted.

Variation of rights

If, at any time, the share capital is divided into different classes of shares, the rights attached to any class may be varied, subject to the provisions of the relevant legislation, with the consent in writing of holders of three-fourths in value of the shares of that class or upon the adoption of an extraordinary resolution passed at a separate meeting of the holders of the shares of that class. At every such separate meeting, all of the provisions of the Articles of Association and Constitution relating to proceedings at a general meeting apply, except that the quorum for Rio Tinto plc should be two or more persons who hold or represent by proxy not less than one-third in nominal value of the issued shares of the class.

Rights upon a winding-up

Except as the shareholders have agreed or may otherwise agree, upon a winding-up, the balance of assets available for distribution:

- after the payment of all creditors including certain preferential creditors, whether statutorily preferred creditors or normal creditors; and
- subject to any special rights attaching to any class of shares.

is to be distributed among the holders of ordinary shares according to the amounts paid-up on the shares held by them. This distribution is generally to be made in cash. A liquidator may, however, upon the adoption of a special resolution of the shareholders, divide among the shareholders the whole or any part of the assets in specie or kind.

The Sharing Agreement further sets out further arrangements relating to the distribution of assets of each of the Companies in the event of a liquidation as explained on page 237.

Facility agreement

Details of the Group's US$7.5 billion multi-currency committed revolving credit facilities are set out in note 30 to the 2015 financial statements.

Exchange controls and foreign investment

Rio Tinto plc

There are no UK foreign exchange controls or other UK restrictions on the import or export of capital or on the payment of dividends to non-resident holders of Rio Tinto plc shares or that materially affect the conduct of Rio Tinto plc's operations. It should be noted, however, that various sanctions, laws, regulations or conventions may restrict the import or export of capital by, or the payment of dividends to, non-resident holders of Rio Tinto plc shares. There are no restrictions under Rio Tinto plc's Articles of Association or under UK law that limit the right of non-resident owners to hold or vote Rio Tinto plc shares. However, certain of the provisions of the Australian Foreign Acquisitions and Takeovers Act 1975 described below also apply to the acquisition by non-Australian persons of interests in securities of Rio Tinto plc.

Rio Tinto Limited

Under current Australian legislation, permission is not required for the movement of funds into or out of Australia. However, there is a prohibition on, or in some cases the specific prior approval of the Department of Foreign Affairs and Trade or Minister for Foreign Affairs must be obtained for, certain payments or other dealings connected with countries or parties identified with terrorism, or to whom United Nations or autonomous Australian sanctions apply.

Rio Tinto Limited may be required to deduct withholding tax from foreign remittances of dividends, to the extent that they are unfranked, and from payments of interest.

Acquisitions of interests in shares, and certain other equity instruments in Australian companies by non-Australian ("foreign") persons are subject to review and approval by the Treasurer of the Commonwealth of Australia under the Foreign Acquisitions and Takeovers Act 1975 (the Takeovers Act). In broad terms, the Takeovers Act applies to acquisitions of interests in securities in an Australian entity by a foreign person where, as a result, a single foreign person (and any associate) would control 20 per cent or more of the voting power or potential voting power in the entity, or several foreign persons (and any associates) would control 40 per cent or more of the voting power or the potential voting power in the entity. The potential voting power in an entity is determined having regard to the voting shares in the entity that would be on issue if all rights (whether or not presently exercisable) to be issued voting shares in the entity were exercised. The Takeovers Act also applies to direct investments by foreign government investors, in certain circumstances regardless of the size of the investment. Persons who are proposing relevant acquisitions or transactions may be required to provide notice to the Treasurer before proceeding with the acquisition or transaction. The Treasurer has the power to order divestment in cases where relevant acquisitions or transactions have already occurred, including where prior notice to the Treasurer was not required. The Takeovers Act does not affect the rights of owners whose interests are held in compliance with the legislation.

Limitations on voting and shareholding

Except for the provisions of the Takeovers Act, there are no limitations imposed by law, Rio Tinto plc's Articles of Association or Rio Tinto Limited's Constitution, on the rights of non-residents or foreigners to hold or vote the Group's ordinary shares or ADRs that would not apply generally to all shareholders.

UK Listing Rules cross reference table

The following table contains cross references identifying the location of information required to be disclosed in the Annual report by the UK Listing Authority's Listing Rule 9.8.4 R.

Listing rule	Description of Listing Rule	Reference in Report
9.8.4 (1)	A statement of any interest capitalised by the Group during the year	Note 8 Finance income and finance costs and Note 17 Deferred taxation
9.8.4 (2)	Any information required by Listing Rule 9.2.18 R	N/A
9.8.4 (4)	Details of any long-term incentive scheme as required by LR 9.4.3R	N/A
9.8.4 (5)	Details of any arrangement under which a director has waived any emoluments	N/A
9.8.4 (6)	Details of any arrangement under which a director has agreed to waive future emoluments	N/A
9.8.4 (7)	Details of any allotments of shares by the company for cash not previously authorised by shareholders	N/A
9.8.4 (8)	Details of any allotments of shares for cash by a major subsidiary of the company	N/A
9.8.4 (9)	Details of the participation by the company in any placing made by its parent company	N/A
9.8.4 (10)	Details of any contract of significance with the company in which a director has a material interest; or a contract between the company and a controlling shareholder	N/A
9.8.4 (11)	Details of any contract for the provision of services to the company by a controlling shareholder	N/A
9.8.4 (12)	Details of any arrangement under which a shareholder has waived or agreed to waive any dividends	Note 11 Dividends
9.8.4 (13)	Details of where a shareholder has agreed to waive future dividends	N/A
9.8.4 (14)	Information required by LR 9.2.2AR (2)(a)	N/A

Financial calendar

2016		
19	January	Fourth quarter 2015 operations review
11	February	Announcement of unaudited results for 2015
24	February	Rio Tinto Limited shares and Rio Tinto plc ADRs quoted "ex-dividend" for 2015 final dividend
25	February	Rio Tinto plc shares quoted "ex-dividend" for 2015 final dividend
26	February	Record date for 2015 final dividend for Rio Tinto plc and Rio Tinto Limited shares and Rio Tinto plc ADRs
3	March	Publication of 2015 Annual report, 20-F and Notices of annual general meetings
15	March	Plan notice date for election under the dividend reinvestment plans and date for electing dividends paid in alternate currency for the 2015 final dividend
31	March	Dividend currency conversion date (Rio Tinto plc holders electing to receive Australian dollars and Rio Tinto Limited holders electing to receive pounds sterling)
7	April	Payment date for 2015 final dividend to holders of ordinary shares and ADRs
14	April	Annual general meeting for Rio Tinto plc, London
19	April	First quarter 2016 operations review
5	May	Annual general meeting for Rio Tinto Limited, Brisbane
19	July	Second quarter 2016 operations review
3	August	Announcement of half year results for 2016
10	August	Rio Tinto plc ADRs quoted "ex-dividend" for 2016 interim dividend
11	August	Rio Tinto plc shares and Rio Tinto Limited shares quoted "ex-dividend" for 2016 interim dividend
12	August	Record date for 2016 interim dividend for Rio Tinto plc and Rio Tinto Limited shares and Rio Tinto plc ADRs
1	September	Plan notice date for election under the dividend reinvestment plans and date for electing dividends paid in alternate currency for the 2016 interim dividend for Rio Tinto plc and Rio Tinto Limited
15	September	Dividend currency conversion date (Rio Tinto plc holders electing to receive Australian dollars and Rio Tinto Limited holders electing to receive pounds sterling)
22	September	Payment date for 2016 interim dividend to holders of ordinary shares and ADRs
20	October	Third quarter 2016 operations review

2017	
January	Fourth quarter 2016 operations review
February	Announcement of unaudited results for 2016
April	Annual general meeting for Rio Tinto plc, London
April	First quarter 2017 operations review
May	Annual general meeting for Rio Tinto Limited, Sydney
July	Second quarter 2017 operations review
August	Announcement of half year results for 2017
October	Third quarter 2017 operations review

Contact details

Registered offices

Rio Tinto plc
6 St James's Square
London
SW1Y 4AD
Registered in England No. 719885

Telephone: +44 (0) 20 7781 2000
riotinto.com

Rio Tinto Limited
Level 33
120 Collins Street
Melbourne
Victoria 3000
ABN 96 004 458 404

Telephone: +61 (0) 3 9283 3333
Fax: +61 (0) 3 9283 3707
riotinto.com

Rio Tinto's agent in the US is Cheree Finan, who may be contacted at
Rio Tinto Services Inc.
80 State Street
Albany, NY 12207-2543

Shareholders

Please refer to the Investor Centre of the respective registrar if you have any queries about your shareholding.

Rio Tinto plc
Computershare Investor Services PLC
The Pavilions
Bridgwater Road
Bristol
BS99 6ZZ

Telephone: +44 (0) 370 703 6364
Fax: +44 (0) 370 703 6119
UK residents only,
Freephone: 0800 435021
Website: www.computershare.com

Holders of Rio Tinto American Depositary Receipts (ADRs)
Please contact the ADR administrator if you have any queries about your ADRs.

ADR administrator
JPMorgan Chase & Co
PO Box 64504
St. Paul, MN 55164-0504

Telephone: +1 (651) 453 2128
US residents only, toll free general:
(800) 990 1135
US residents only, toll free Global invest direct:
(800) 428 4237
adr.com
jpmorgan.adr@wellsfargo.com

Rio Tinto Limited
Computershare Investor Services Pty Limited
GPO Box 2975
Melbourne
Victoria 3001

Telephone: +61 (0) 3 9415 4030
Fax: +61 (0) 3 9473 2500
Australian residents only, toll free:
1300 813 292
New Zealand residents only, toll free:
0800 450 740
Website: www.computershare.com

Former Alcan Inc. shareholders
Computershare Investor Services Inc.
9th Floor
100 University Avenue
Toronto, ON M5J 2Y1
Ontario

Telephone: +1 416 263 9200
North American residents only,
toll free: +1 (866) 624-1341
computershare.com

Investor Centre
Investor Centre is Computershare's free, secure, self service website, where shareholders can manage their holdings online. The website enables shareholders to:

- View share balances
- Change address details
- View payment and tax information
- Update payment instructions

In addition, shareholders who register their email address on Investor Centre can be notified electronically of events such as annual general meetings, and can receive shareholder communications such as the Annual report or Notice of meeting electronically online.

Rio Tinto plc shareholders
investorcentre.co.uk/riotinto

Rio Tinto Limited shareholders
investorcentre.com/rio

MIX
Paper from responsible sources
FSC® C001785

Printed by **Park Communications**
on FSC® certified paper.

Park is EMAS certified company and its Environmental Management System is certified to ISO 14001.

100% of the inks used are vegetable oil based, 95% of press chemicals are recycled for further use and, on average 99% of any waste associated with this production will be recycled.

This document is printed on Inaset Offset, a paper containing fibre sourced from well-managed, responsible, FSC® certified forests.

The pulp used in this product is bleached using an elemental chlorine free (ECF) process.

Design and produced by **SampsonMay**
Telephone 020 7403 4099
sampsonmay.com

Typesetting and formatting by **RR Donnelley**
rrdonnelley.com

RioTinto

Get more information online

Find out more about our business and performance:
riotinto.com

View our 2015 Annual report:
riotinto.com/ar2015

View our 2015 Sustainable development online report:
riotinto.com/sd2015