RIO TINTO PLC
Form 20-F
March 15, 2013
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 20-F

(Mark One)

¨ **REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR 12(g) OF THE SECURITIES EXCHANGE ACT OF 1934**

or

x **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended: 31 December 2012

or

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from: to

or

¨ **SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
Date of event requiring this shell company report

Commission file number: 1-10533

Rio Tinto plc

Commission file number: 001-34121

Rio Tinto Limited

ABN 96 004 458 404

(Exact Name of Registrant as Specified in Its Charter)	(Exact Name of Registrant as Specified in Its Charter)
England and Wales **(Jurisdiction of Incorporation or Organisation)**	**Victoria, Australia** **(Jurisdiction of Incorporation or Organisation)**
2 Eastbourne Terrace **London, W2 6LG, United Kingdom** **(Address of Principal Executive Offices)**	**Level 33, 120 Collins Street** **Melbourne, Victoria 3000, Australia** **(Address of Principal Executive Offices)**

Julie Parent, T: 514-848-8519, E: julie.parent@riotinto.com

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

	Name of Each Exchange		**Name of Each Exchange**
Title of Each Class	**On Which Registered**	**Title of Each Class**	**On Which Registered**
American Depositary Shares*	New York Stock Exchange		
Ordinary Shares of 10p each**	New York Stock Exchange		
6.500% Notes due 2018	New York Stock Exchange	6.500% Notes due 2018	New York Stock Exchange
7.125% Notes due 2028	New York Stock Exchange	7.125% Notes due 2028	New York Stock Exchange
1.875% Notes due 2015	New York Stock Exchange	1.875% Notes due 2015	New York Stock Exchange
3.500% Notes due 2020	New York Stock Exchange	3.500% Notes due 2020	New York Stock Exchange
5.200% Notes due 2040	New York Stock Exchange	5.200% Notes due 2040	New York Stock Exchange
8.950% Notes due 2014	New York Stock Exchange	8.950% Notes due 2014	New York Stock Exchange
9.000% Notes due 2019	New York Stock Exchange	9.000% Notes due 2019	New York Stock Exchange
2.500% Notes due 2016	New York Stock Exchange	2.500% Notes due 2016	New York Stock Exchange
4.125% Notes due 2021	New York Stock Exchange	4.125% Notes due 2021	New York Stock Exchange
1.125% Notes due 2015	New York Stock Exchange	1.125% Notes due 2015	New York Stock Exchange
2.000% Notes due 2017	New York Stock Exchange	2.000% Notes due 2017	New York Stock Exchange
3.500% Notes due 2022	New York Stock Exchange	3.500% Notes due 2022	New York Stock Exchange
4.750% Notes due 2042	New York Stock Exchange	4.750% Notes due 2042	New York Stock Exchange
1.625% Notes due 2017	New York Stock Exchange	1.625% Notes due 2017	New York Stock Exchange
2.875% Notes due 2022	New York Stock Exchange	2.875% Notes due 2022	New York Stock Exchange
4.125% Notes due 2042	New York Stock Exchange	4.125% Notes due 2042	New York Stock Exchange
2.250% Notes due 2016	New York Stock Exchange	2.250% Notes due 2042	New York Stock Exchange
3.750% Notes due 2021	New York Stock Exchange	3.750% Notes due 2042	New York Stock Exchange

* Evidenced by American Depositary Receipts. Each American Depositary Share Represents one Rio Tinto plc Ordinary Share of 10p each.

** Not for trading, but only in connection with the listing of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission

Securities registered or to be registered pursuant to Section 12(g) of the Act:

Title of Class	**Title of Class Shares**
None	

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None	None

Indicate the number of outstanding shares of each of the issuer s classes of capital or common stock as of the close of the period covered by the annual report:

Title of each class	Number	Number	Title of each class
Ordinary Shares of 10p each	1,425,375,466	435,758,720	Shares
DLC Dividend Share of 10p	1	1	DLC Dividend Share
Special Voting Share of 10p	1	1	Special Voting Share

Indicate by check mark if the registrants are well-known seasoned issuers, as defined in rule 405 of the Securities Act. Yes x No ¨

If this report is an annual or transition report, indicate by check mark if the registrants are not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes ¨ No x

Note Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrants: (1) have filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrants were required to file such reports), and (2) have been subject to such filing requirements for the past 90 days: Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).* Yes x No ¨

* This requirement does not apply to the registrant until its fiscal year ending December 31, 2012.

Indicate by check mark whether the registrants are large accelerated filers, accelerated filers, or non-accelerated filers. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large Accelerated Filer x Accelerated Filer ¨ Non-Accelerated Filer ¨

Indicate by check mark which basis of accounting the registrants have used to prepare the financial statements included in this filing:

US GAAP ¨ International Financial Reporting Standards as issued by the International Accounting Standards Board x Other ¨

If Other has been checked in response to the previous question, indicate by check mark which financial statement item the registrants have elected to follow: Item 17 ¨ Item 18 ¨

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

This document comprises the annual report on Form 20-F and the annual report to shareholders for the year ended December 31, 2012 of Rio Tinto plc and Rio Tinto Limited (the 2012 Form 20-F). Reference is made to the cross reference to Form 20-F table on pages i to iii hereof (the Form 20-F Cross reference table). Only (i) the information in this document that is referenced in the Form 20-F Cross reference table, (ii) the cautionary statement concerning forward-looking statements on page v and (iii) the Exhibits, shall be deemed to be filed with the Securities and Exchange Commission for any purpose, including incorporation by reference into the Registration Statement on Form F-3 File No. 333-175037, and Registration Statements on Form S-8 File Nos. 333-184397, 33-46865, 333-8270, 33-64380, 333-7328, 333-10156, 333-13988, 333-147914 and 333-156093 and any other documents, including documents filed by Rio Tinto plc and Rio Tinto Limited pursuant to the Securities Act of 1933, as amended, which purport to incorporate by reference the 2012 Form 20-F. Any information herein which is not referenced in the Form 20-F Cross reference table, or the Exhibits themselves, shall not be deemed to be so incorporated by reference.

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2012 Annual report

This report forms part of our 2012 corporate reporting suite.

You can view our Annual report, Annual review and Sustainable development report online at:

riotinto.com/reportingcentre2012

Annual review: Highlights from around our business, including a summary of our 2012 performance

Sustainable development report: Our sustainable development strategy and performance, and our approach in action

Scan this code to view the reporting

Performance highlights

2012 financial results

Our underlying financial results reflect record iron ore production and shipments and a second half recovery in copper volumes. This was in the context of lower average market prices in 2012 which reduced underlying earnings by US$5.3 billion compared with 2011:

- Underlying earnings of US$9.3 billion.
- Net loss of US$3.0 billion after impairments of US$14.4 billion, primarily relating to aluminium businesses as well as coal assets in Mozambique.
- 15 per cent increase in full year dividend to 167 US cents per share.

12 months to 31 December

(All amounts are US$ millions unless otherwise stated)		**2012**	2011	Change
Underlying earnings[1]		**9,303**	15,549	-40%
Net (loss)/earnings[1]		**(2,990)**	5,826	-151%
Cash flows from operations		**16,450**	27,388	-40%
Capital expenditure		**17,418**	12,298	+42%
Underlying earnings per share	US cents	**503.1**	808.5	-38%
Basic (loss)/earnings per share from continuing operations	US cents	**(161.3)**	303.5	-153%
Ordinary dividends per share	US cents	**167.0**	145.0	+15%

The financial results are prepared in accordance with IFRS.

1. Underlying earnings is the 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 attributable to the owners of Rio Tinto. Net earnings and underlying earnings relate to profit attributable to owners of Rio Tinto. Underlying earnings is defined and reconciled to net earnings in note 2 on page 162.

centre on your mobile or tablet

This Annual report complies with Australian and UK reporting requirements.

Copies of Rio Tinto s shareholder documents are available on the website at riotinto.com. They can also be obtained free of charge from the Company. Some shareholders may prefer to receive the Annual review which contains summary financial statements for 2012, although shareholders should note that it does not allow as full an understanding of the Group as the Annual report.

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 , may , should , will , 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.

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Chairman s letter

Our business performed well in 2012, generating strong cash flows and underlying earnings of US$9.3 billion. Although lower than last year, principally due to lower commodity prices and higher costs, these results demonstrate the quality of our assets and the sustainable cash-generating abilities of our underlying businesses.

However, as foreshadowed at the beginning of the year, we recorded impairments of US$14.4 billion, resulting in the Group reporting a net loss of US$3 billion for 2012. These write-downs are deeply disappointing. In particular the substantial impairment of our Mozambique coal business is unacceptable.

Following these impairments, Tom Albanese stood down from the board by mutual agreement, recognising his accountability as chief executive for these impairments. On behalf of the board, I would like to acknowledge Tom s contribution and dedication to the company over his 30 years of service.

The board s objective is to ensure that the business delivers sustainable growth in value to you, our shareholders. Your directors are confident that Sam Walsh, who succeeded Tom Albanese as chief executive, will lead a renewed and focused organisation to do just this and we are working closely together with this objective in mind.

Disciplined capital management

Your board aims to unlock greater value for our shareholders through investing in the best opportunities to deliver attractive returns that are well above our cost of capital.

Recent events demonstrate that there is a need for greater discipline across our business, particularly in the way we manage and allocate capital. Under Sam s leadership, we will be simplifying and strengthening our systems in this area, and seeking greater accountability for decision-making across the organisation.

Your board regularly evaluates opportunities put forward by the business against all competing uses for cash, striving to achieve the right balance between disciplined investment, strengthening our balance sheet and returning cash to investors.

Our commitment to a strong balance sheet, ensures discipline and flexibility in our investment approach, helping us to build a robust and strongly performing business over the long term.

Our confidence is reflected in the 15 per cent increase in our annual dividend in 2012. Our cash returns to shareholders totalled US$4.5 billion in 2012, including completion of the Group s US$7 billion share buy-back programme as well as the ordinary dividend payment.

Focus of the board

One of the primary roles of Rio Tinto s board is to provide oversight of strategy development and delivery, while maintaining the highest standards of corporate governance.

The board conducted its annual strategy review with the executive team in September, reaffirming our commitment to invest in and operate large, long-term, expandable, low-cost mines and businesses. The board also took the opportunity in 2012 to visit a number of the Group s operations in Australia and Southern Africa to gain a deeper

understanding of the strategic issues at play.

Amidst continuing volatility in the global economy and major structural shifts affecting the sector, improvements need to be made in how we execute this strategy. The board has tasked Sam Walsh and his executive team with ensuring we improve capital allocation, deliver our growth projects and improve productivity at all of our sites, while building on our industry leading capabilities in areas such as stakeholder engagement and sustainable development.

As geopolitical risks continue, we have continued to look for new ways to form more effective relationships and partnerships around the world. Rio Tinto has always taken its role as a responsible business very seriously.

We believe earning the trust of our host communities and governments is vital in creating sustainable shareholder value. As the company enters its 140th year of operation this year, we recognise we wouldn t still be in business without the support of our many stakeholders.

In 2012, considerable time was spent engaging with investors on issues ranging from our capital allocation methodology to executive remuneration. More recently, we undertook an assessment of board effectiveness and, for the first time, the board s annual evaluation was conducted by an independent expert. Considerable attention will be given to the outcomes of our shareholder engagement and this evaluation exercise in the year to come.

In my letter last year, I commented on the importance of succession planning. My goal is to make sure the board combines a broad set of skills and international experience. Rio Tinto s board should be diverse in the widest sense with the best blend of appropriately skilled and experienced people from our industry, but also outside of it.

We announced last year that Guy Elliott will step down from the board at the end of 2013. I would like to thank Guy for his invaluable contribution over 33 years with the company. Chris Lynch, who joined the board as a non-executive director in 2011, will formally succeed Guy as chief financial officer on 18 April at the conclusion of the Rio Tinto plc annual general meeting. We are fortunate to have appointed someone so well-qualified to take over from Guy.

As well as succession planning, the board committees have always played an important oversight role, freeing the board to focus on strategic matters. All of our committees have been very active this year and have dealt with a number of challenges. I would like to record my personal appreciation to all of the directors who have been unstinting in their considerable support in a challenging year.

Our Remuneration Committee has taken a fresh look at our reward structures to ensure we recruit, motivate and retain the best talent, but not at any cost. I believe our approach to rewarding our people must balance the company s priorities of driving financial performance, meeting our expectations as a corporate citizen and creating greater value for our shareholders.

Looking ahead

The wider world did not stand still in 2012. The macroeconomic environment remained volatile, and prices for our products were generally lower than the year before. However, the global economy ended the year in a healthier state than forecast, with a recovery in China, and greater confidence in a recovery in the Organisation for Economic Co-operation and Development (OECD) countries.

We remain very positive about the long-term future of our business. As billions of people move from rural to urban areas over the coming decades, there will be increased demand for the metals and minerals we produce.

This is a great company, pursuing a consistent strategy with a renewed executive team and excellent people. I thank you and all of our employees for your continued support. When I report back to you on Rio Tinto s progress at this point next year, I am sure I will be reporting on an even stronger and safer organisation focused on delivering value

for each of you, our shareholders.

Jan du Plessis

Chairman

6 March 2013

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Group overview

Introduction to Rio Tinto

Rio Tinto is a leading international mining group that focuses on finding, mining and processing the Earth s mineral resources in order to maximise shareholder value. We have a diverse portfolio and a global presence: our 71,000 people work in more than 40 countries.

To deliver superior returns to shareholders over time, we take a long-term and responsible approach to our activities. This means concentrating on developing first-class orebodies into large, long-life and efficient low-cost operations, capable of providing competitive returns through business cycles.

Sustainable development is integrated into everything we do. Our operations give us the opportunity to bring long-lasting positive change to the communities, regions and countries in which we work, and our metals and minerals are transformed into end products that contribute to higher living standards.

Our responsible approach to mineral development ensures we gain and maintain our licence to operate. It means we provide confidence to our stakeholders, and improve our access to the mineral resources, people and capital we need. Our five product groups summarised below are supported by our Exploration and Technology & Innovation groups (also see pages 22 to 31).

Aluminium product group

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

Bauxite production (2012 vs 2011)

+11%

Products

Bauxite

Bauxite is the natural ore used to make aluminium. It is refined into alumina which is smelted into aluminium metal. Our wholly-owned and joint venture 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-owned

and joint venture alumina refineries are located in Australia, Brazil and Canada.

Aluminium

Aluminium is a unique and versatile modern metal. Light, strong, flexible, non-corrosive and infinitely recyclable, aluminium is one of the most widely-used metals. Its largest markets are transportation, machinery and construction. Our smelters are mainly concentrated in Canada. We also have plants in France, Cameroon, Iceland, Norway, the UK and the Middle East.

Key strengths

- Access to the largest and best-quality bauxite reserves in the industry.
- Industry-benchmark smelting technology.
- Enviable hydropower position, which delivers significant cost and other advantages in today s carbon-constrained world.
- Industry-leading cost position for aluminium smelting, and moving into the second quartile of the cost curve for alumina refining.
- Lowest-cost quartile for bauxite production.

Key production locations

- Canada
- Europe
- Australia

Key sales destinations

- Asia
- Americas
- Europe

Full operating review on page 22.

Copper product group

Rio Tinto s Copper group has a global presence and holdings in some of the world s largest copper mines. We are among the world s largest producers of copper, gold and molybdenum, and are uniquely positioned to deliver exceptional long-term value due to our high-quality assets, leading technology and a keen focus on managing costs and improving efficiency.

Mined copper production (2012 vs 2011)

+6%

Products

Copper

The world uses more than 19 million tonnes of copper every year. Copper s malleability, strength and conductivity make it useful in a broad range of building, construction and electrical applications. Copper is found in nearly every home and vehicle and is a critical element of today s industrialised world.

Gold

Gold s conductivity and non-corrosive properties make it a vital fabrication material in technology, electronics, jewellery, space exploration and dentistry. Rio Tinto is currently one of the top 15 gold producers in the world, and the largest among the diversified miners. We have interests in two of the largest gold resources, at Oyu Tolgoi and Grasberg. The latter contains the largest gold reserves in the world.

Silver

Silver has very good electrical and thermal properties. It is used in many electrical and electronic applications, such as photovoltaic cells, and is the principal ingredient of x-ray film. Silver is also regarded as a precious metal used as an investment and to make jewellery.

Molybdenum

Molybdenum is a metallic element frequently used to produce stainless steel and other metal alloys. It enhances the metal s toughness, high temperature strength and corrosion resistance.

Key strengths

- Participation in and ownership of high-quality, low-cost assets with meaningful opportunities for expansion and efficiencies.
- Management of the Oyu Tolgoi project, scheduled to be a top five copper producer and a significant gold producer.
- Investment in substantial growth projects.
- Industry-leading technology and innovation.

Key production locations

- US
- Chile
- Mongolia

Key sales destinations

- US
- China
- Japan

Full operating review on page 24.

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Diamonds & Minerals product group

The Diamonds & Minerals group comprises mining, refining and marketing operations across four sectors. Rio Tinto Diamonds is one of the world s leading diamond producers, active in mining, sales and marketing. Rio Tinto Minerals is a world leader in borates, with mines, processing plants, commercial and research facilities. Dampier Salt is one of the world s largest producers of seaborne salt. Rio Tinto Iron & Titanium is an industry leader in high grade titanium dioxide feedstocks. The Diamonds & Minerals group also includes the Simandou iron ore project in Guinea.

Titanium dioxide production (2012 vs 2011)

+11%

Products

Diamonds

Diamonds share a role with gold as an important component in jewellery that ranges from top-end jewellery through to more affordable diamond jewellery accessories. Rio Tinto is able to service both established and emerging markets as it produces the full range of diamonds in terms of size, quality and colour distribution.

Borates

Refined borates are used in hundreds of products and processes. They are a vital ingredient of many home and automotive applications, and are essential 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.

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 s key properties of light weight, chemical inertness and high strength make it ideal for use in medical applications and in the aerospace industry.

Other products include high purity iron, metal powders, zircon and rutile.

Key strengths

Poised to benefit from late-cycle demand growth.

Substantial brownfield and greenfield development pipeline including the Simandou project in Guinea.

Key production locations

- North America
- Australia
- South Africa

Key sales destinations

- North America
- China
- Japan

Full operating review on page 26.

Energy product group

We are a leading seaborne supplier of thermal and coking coal to Asian customers and are one of the world s largest uranium producers, serving electric power utilities worldwide. The Rio Tinto Energy product group has operations, exploration and development projects in Australia, southern Africa and Canada.

Thermal coal production (2012 vs 2011)

+16%

Products

Coal

Coal is abundant, relatively inexpensive and safe and easy to transport. We are a large supplier to the export thermal coal market. Thermal coal is used for electricity generation in power stations. We also produce higher-value coking, or metallurgical, coal which, when mixed in furnaces with iron ore, produces steel.

Uranium

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

Key strengths

- Strong customer relationships and high-quality assets located in close proximity to growing Asian markets.
- Success in operating long-life, cost-competitive mines and businesses.
- World-class growth opportunities including brownfield expansions at our existing coal operations in Australia and greenfield uranium exploration opportunities in the Athabasca Basin in Canada.
- Strong product stewardship strategy including investment in technologies to reduce emissions from our products.

Key production locations

Key sales destinations

- Australia
- Namibia
- Mozambique

- Japan
- South Korea
- Europe

Full operating review on page 28.

Iron Ore product group

We are the second-largest producer supplying the global seaborne iron ore trade. After a decade of rapid expansion in Australia, and more recent growth in Canada, we are well positioned to benefit from the continuing strong demand in China and other Asian markets. We are driving performance through effective project management and value-adding operational efficiencies.

Iron ore production (2012 vs 2011)

+4%

Products

Iron ore

Iron 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.

Key strengths

- Proximity of the expanded Pilbara operations in Australia to the world s largest and fastest growing markets.
- Success in increasing operational efficiency and controlling costs.
- Vast potential of brownfield developments near existing infrastructure.
- Proven success in implementing large-scale and complex, value-generating major projects on time and budget without significant impact on operational efficiency.

Key production locations

- Australia
- Canada

Key sales destinations

- China
- Japan
- South Korea

Full operating review on page 30.

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Chief executive s statement

I am proud to be leading your company and am committed to building a stronger business focused on pursuing greater value for you, our shareholders.

My more than 20 years experience with Rio Tinto, including as a member of the board for the past four years, has shown me that we have great assets, outstanding people and the right strategy. We will now have a single-minded focus on how we deliver this strategy in every market in which we operate, everywhere around the world.

I place the highest importance on upholding our values and ensuring safety is paramount in everything we do.

In 2012, while we did experience safety improvements, there were two fatalities at our managed operations and, earlier this year, a fatality at our La Granja project in Peru. I will never let up in my constant efforts to improve safety, to reinforce our strong safety culture, and to ensure that every employee and contractor plays their part in making our workplaces safer.

Highlights of 2012

The pattern of market uncertainty and volatility we have seen since the global financial crisis continued in 2012. Yet despite this, our underlying financial results were solid, indicating the fundamental strength of our businesses.

This was mainly driven by a strong operational performance from some of our businesses. Our iron ore business delivered record production and shipments, and our copper business showed a second half recovery in copper volumes.

We also experienced production increases in bauxite, alumina, thermal coal and titanium dioxide feedstock.

The mining sector has experienced unacceptable levels of cost increases over the past five years. During 2012 all of our management teams were focused on improving productivity to ensure our assets are at the lower end of the total cost curve.

We are continuing to see the benefits of cost savings from our aluminium transformation programme and through the review of support and service costs across the business but clearly much more remains to be done.

We are taking a more aggressive approach to assets in our portfolio that no longer fit our strategy. We achieved further cash proceeds from our divestment programme in 2012, with the sale of several non-core businesses including Lynemouth Power Station, the North American and Chinese portions of the Alcan Cable business, our Specialty Alumina division, and we secured a binding agreement to sell our interest in Palabora. We also made good progress on exploring options for our Pacific Aluminium and Diamonds businesses. This focus will continue in 2013.

Growth programme

Our total capital expenditure for 2012 was US$17.4 billion, reflecting investment in the high value growth of our business, in particular our world-leading iron ore operations in the Pilbara and the greenfield copper-gold project, Oyu Tolgoi, in Mongolia.

We also continued to invest in a number of other growth projects throughout 2012, such as our iron ore project in Guinea, our aluminium smelting project in Kitimat, and a project to extend the life of the Group s Kennecott Utah Copper mine.

2012 was our peak capital expenditure year and, given our commitment to greater capital discipline, we are reviewing all capital commitments in 2013.

Delivering our strategy

Under my watch, our strategy will not change but how we deliver it will. We will consistently execute our strategy in all of our markets with a focus in three key areas in 2013:

1. Strengthen capital allocation and discipline.

Prioritise our capital expenditure on the highest quality projects and improve the way we manage capital. In addition, we are taking a more aggressive portfolio approach to divest assets that no longer fit our strategy.

2. Reduce costs and improve performance at our existing operations.

Our immediate priority is to improve performance at our existing businesses by unlocking productivity improvements, aggressively reducing operating and support costs, controlling sustaining capital spend and leveraging our expertise across all stages of our operations. We are targeting cumulative cash cost savings of over US$5 billion over the next two years, which will see an annual run rate improvement of US$3 billion by the end of 2014.

3. Deliver our approved growth projects.

During 2013, we continue to focus on delivering our two significant growth projects our Iron Ore business in Australia and our Oyu Tolgoi copper-gold project in Mongolia in a risk-managed, value-enhancing manner. See page 6 for more detail on what you can expect from us in 2013. In my drive to increase accountability, I have made some changes to my executive team. I welcome two new members Jean-Sébastien Jacques and Chris Lynch and congratulate Andrew Harding on his move to head our iron ore business. I have also announced some further streamlining of my executive team, reducing my direct reports from 11 to nine.

Ongoing commitment

We expect market uncertainty and price volatility to persist in 2013, but there are positive signs emerging. In China specifically, momentum is growing under its new leadership, and we expect to see Chinese GDP growth above eight per cent in 2013.

China will remain important to us, but I also expect to see strong demand growth from India, Indonesia and other South East Asian countries as they also urbanise and industrialise. It is this outlook that gives us confidence to invest in high-value growth projects, and underpins our expectation of strong future cash generation.

The company has a renewed and strong leadership team, supported by outstanding people. I would like to thank our 71,000 employees around the world for their dedication and resilience. In many parts of our operations we faced some testing times and there will be more to come.

I remain fully confident in the long-term prospects of the business. We have the right strategy to deliver sustainable growth over the long term to meet the world s resourcing needs. In the short term, I am certain of what needs to be done and we are taking decisive steps with a clear plan to build a stronger, more accountable business.

Finally, I would like to thank you, our shareholders, for your continued support. I am committed to making a real difference building on Rio Tinto s strong foundations to put us firmly on the path of delivering greater shareholder value.

Sam Walsh

Chief executive

6 March 2013

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Strategic context

Global economy

The global economy continues to deal with the aftermath of the global financial crisis (GFC) and associated volatility. European policymakers held successive summits during 2012 to tackle tensions from excessive sovereign debt levels in the eurozone, and debate the balance between austerity and growth policies.

In the US, employment remained below 2008 levels, forcing the Federal Reserve to launch a third round of quantitative easing to further stimulate a recovery.

In contrast, the Chinese government maintained policies to control inflation and other effects from the 2009 stimulus and excess liquidity. This led to a sharper slowdown than expected during the third quarter of 2012 in China, contributing to fears that the global economy was heading for a new recession.

Political leadership transition in China added to the perception of uncertainty in 2012, forcing markets towards greater risk aversion. This was felt strongly in commodity markets, with prices for some metals and minerals experiencing large fluctuations during the year. On average, prices for most commodities were ten to 20 per cent lower than in 2011, although they remained at high levels in the longer historical context. Cost escalations, project delays and other supply constraints continued, in many cases, to offset a weaker and more uncertain demand growth environment.

Towards the end of 2012, several encouraging developments started to emerge. In Europe, action from the European Central Bank, combined with the release of bailout funds for Greece, reduced the likelihood of a Greek departure from the eurozone in 2013. It also provided European governments with more time to work towards further integration and greater resilience.

Economic activity started to pick-up again in China in the final quarter of 2012, alleviating fears of a hard-landing. Although liquidity controls in China are expected to remain in place, we would expect positive momentum to be carried into 2013, with Chinese GDP growth for the year moving back to just above eight per cent.

There remain many risks that could derail a stabilisation and improvement in global activity, including continued tensions in the Middle East. We expect volatility to remain a feature of our markets in 2013.

Our belief in the underlying and longer-term trend of rising prosperity in Asia remains unchanged. This will ultimately contribute to support and sustain an elevated level of global economic growth over the next couple of decades. While recognising that the commodity-intensive growth in China is maturing, the industrialisation and urbanisation forces associated with the economic development of emerging countries will continue to support demand for commodities.

Commodity markets

Commodity markets started 2012 relatively positively, with prices for most metals and minerals making a continued recovery from the declines experienced in the second half of 2011. However, prices largely peaked during the first quarter of 2012, sliding downwards throughout the rest of the year, with a sharp correction in the third quarter in the iron ore market. The price trends and volatility reflected the OECD macro-uncertainties described above and concerns from the market that China s slowdown was signalling the end of investment-led, steel-intensive growth.

China is entering an important and necessary transition phase to rebalance its economy towards consumption-led growth. The near-term reform agenda remains unclear and is likely to generate volatility and uncertainty. Reforms and a rebalancing of the economy will ultimately be a positive development for the sustainability of growth in China. Overall, we expect a falling level of demand intensity for early development phase commodities, but absolute demand growth should remain strong over the next two decades and new opportunities will arise for late-cycle

commodities such as titanium dioxide and other industrial minerals. Our view remains that China s steel demand will peak at around one billion tonnes per annum towards 2030. Over this timeframe, India and countries in South East Asia are expected to become increasingly important sources of demand for commodities, including steel.

Increasing capital intensity for mining projects was a persistent trend in 2012. This was a reflection of continued real labour cost escalation, declining resource grades and increased mining projects complexity. Through 2012 the mining industry also continued to face increased stakeholder pressures, highlighting the importance of proactive stakeholder engagement and good track records in sustainable development. Nevertheless, rising threats of resource nationalism, greater rent extraction by governments, or simply increased uncertainty, have implications for the economics and feasibility of projects across the industry.

Combined with significant price volatility and stronger calls from investors for near-term returns over long-dated options, these supply challenges are resulting in further investment delays and deferrals. Iron ore and copper projects are being particularly impacted.

Largely due to the supply-side challenges, copper prices remained at levels equivalent to pre-GFC prices throughout 2012. This is in sharp contrast with the aluminium market, where capacity and production in China continue to match the rapid pace of demand. Even so, physical market premia for aluminium reached new records in 2012. The availability of profitable financing deals continued to lock in access to surplus metal. Thermal coal was another market with less favourable supply and demand dynamics in 2012. Prices came under constant pressure throughout the first half of the year. Finally, following continued strong upward momentum at the start of 2012, rutile and zircon prices faced heavy downward pressures during the second half of the year from reduced Chinese buying.

Lower prices and continued cost escalations have put increasing pressure on margins across the mining industry. This is particularly true in Australia where the dollar has remained resilient to falling commodity prices. The country has attracted money-flows from investors reallocating funds away from Europe. The industry in general is starting to respond to the squeeze on margins through a renewed focus on productivity.

Outlook

As the world economy returns to the trend rate of growth, rising incomes and increased prosperity in developing countries with associated industrialisation and urbanisation will continue to drive demand for commodities. Looking to the future, our view remains that there will be high average demand growth in our markets while cost escalations and stakeholder pressures remain key challenges to grow future supply.

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Group strategy and business model

Pursuing greater value for shareholders

The global economic outlook remains uncertain and volatile. This requires us to have a clear and consistent strategy designed to support a single commitment: the pursuit of greater value for our shareholders. To achieve this we are building an even stronger, more focused, and more accountable organisation.	**Objective** Maximising total shareholder return by sustainably finding, developing, mining and processing natural resources.	**Strategy** Investing in and operating large, long-term, expandable, low-cost mines and businesses, driven by the quality of each opportunity in the most attractive industry sectors.

Shared value

Pursuing greater value for our shareholders means delivering superior returns for the people who own and invest in our company. We will do this while maintaining a focus on safety and by staying true to our core values, wherever we operate.

Delivering superior shareholder value brings with it the opportunity to share our success with many of our other stakeholders. For host governments and communities, it means ensuring widespread and lasting economic benefits. For our customers, it means delivering what they need to be successful. And for our employees, it means creating opportunities to learn and grow in a world-class business.

We will apply a disciplined and rigorous investment process to ensure that capital is invested only in assets that, after prudent assessment, offer attractive returns, well above our cost of capital. Our approach balances investment to grow the value of the business and returns to shareholders, while aiming to maintain a strong balance sheet.

Our strategy is underpinned by our leading capabilities across the value chain and we intend to deepen our expertise and leadership in these areas.

Industry-leading capabilities

A consistent strategy

As we continue to face short-term uncertainty and pricing volatility in many of our markets, our strategy remains the right one: to invest in and operate large, long-term, expandable, low-cost mines and businesses. This strategy has served us well over many years and we have full confidence that it will continue to do so in the future.

The opportunities we pursue are driven by quality and will be in the most attractive industry sectors. We are convinced of the benefits of owning a diversified asset portfolio, provided this is achieved in a way that maximises value for our shareholders. We look for high-quality assets in the right industry sectors that provide superior returns throughout the economic cycle with options for growth when the time is right. And we will realise value by divesting businesses that are no longer in line with our strategy.

We have been in business for 140 years. During this time, we have built a deep understanding and expertise in industry-leading capabilities such as sustainable development, technology and innovation, exploration, marketing and operational excellence. We believe these capabilities will support us in our renewed focus on delivering greater value for our shareholders.

We have world-class businesses, such as our industry-leading iron ore operations in Australia, and we are developers and owners of what will be a top-five copper and gold mine in the Gobi desert of Mongolia.

We have pioneered several world-leading mining and processing technologies. We are the owner of the world s largest fleet of driverless trucks, which are operated from a control centre some 1,500km away. We are using our expertise in technology and innovation to drive safety and productivity improvements across all of our businesses.

Business model

We create and preserve value through investing in and operating large-scale, long-term, low-cost mines and businesses. The nature of our business means that the life of an orebody may span many decades. Throughout the life of a business, from initial exploration to final closure and restoration, we commit to the highest standards of sustainable development

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We also have long experience of building and maintaining relationships wherever we operate. The success of our business is underpinned by doing things the right way and by staying true to our values. Our outstanding people live these values day in and day out wherever we operate around the world.

Even so, we know there is more we can do and we will be reinforcing discipline and accountability throughout the organisation. Simply put, our leaders and employees will have clear targets and be held accountable for their individual performance, which will be rewarded with career growth and development opportunities. Our people must run the business as owners, not managers.

In parallel, we will also strengthen our management and approval systems bringing greater rigour to investment decisions, and implementing effective checks and balances with clearer lines of sight to critical business issues.

What you can expect from us this year

Consistent execution of our strategy in every market, in all of our businesses, is how we will deliver value this year. In 2013, we will reduce costs, deliver our approved growth projects, reshape the portfolio, and build a more accountable business.

This year, our efforts will be focused in three key areas:

1. Reinforcing capital allocation and discipline.

2. Reducing costs and improving performance at our existing operations.

3. Delivering our approved growth projects.

Reinforcing capital allocation and discipline

We will prioritise our capital expenditure on the highest-quality projects and improve the way we manage capital. In addition, we are taking a more aggressive portfolio approach to assets that no longer fit our strategy. We will:

Simplify and strengthen our process for allocating capital.

Review capital expenditure plans across all of our businesses, as we do every year.

Streamline our portfolio through divestments targeting significant cash proceeds in 2013.

Invest only in new projects that provide attractive returns, well above cost of capital, and which compare favourably to other uses of capital.

Reducing costs and improving performance in our businesses

Our immediate priority is to improve performance at our existing businesses by unlocking productivity improvements, aggressively reducing operating and support costs, controlling sustaining capital spend and leveraging our expertise across all stages of our operations. We will:

- Improve our safety performance in 2013.
- Deliver our cumulative US$5 billion cash cost-reduction target by the end of 2014.
- Reduce exploration and evaluation spending by US$750 million (pre-tax) in 2013 compared with 2012.
- Achieve targeted reductions of US$1 billion in our sustaining capital expenditure compared with 2012.

Delivering approved growth projects

During 2013, we are committed to delivering our two significant growth projects: in our Iron Ore business in Australia and in our copper-gold project in Mongolia in a risk-managed, value-enhancing manner. We will draw upon our leadership capability in stakeholder engagement to help us build enduring relationships with our host governments and communities.

- Pilbara 290 first production accelerated to the third quarter of 2013.
- Oyu Tolgoi scheduled for first production in 2013. Discussions with the Government of Mongolia regarding the continuing implementation of the Investment Agreement are ongoing.

Achievement of our strategy is measured by a mixture of financial and non-financial performance indicators, some of which we link to executive remuneration. See page 8.

Explore and evaluate

Our experienced, in-house exploration team has a proven track record of discovering large, long-life orebodies. The team creates further value from its identification of opportunities for the brownfield expansion of our existing assets. Our orebody knowledge allows us to innovate value-enhancing approaches to developing, operating and expanding our resources and positioning our products in the market.

Develop

We develop orebodies with long-term value delivery in mind. We allocate investment only to assets that, after prudent assessment, offer attractive returns that are well above our cost of capital. During this phase, we plan the optimal

configuration for developing the orebody and for getting our products to market. We work closely with our customers to create demand in the market for the grade of product that enables us to maximise the value of the orebody over its lifecycle. Once the value of the resource is confirmed, and internal and external approvals are received, the project moves into implementation and construction.

Mine and process

We create value by safely and efficiently operating assets that fit with our Group strategy. Our global presence and management structure allow us to implement standard operating and maintenance practices across the Group. This reduces our use of consumables, increases the life of our equipment

and optimises the extraction of ore. In turn, we enjoy higher production, reduced costs and value maximisation. We use world-class technologies during mining and processing to increase our efficiency and productivity, and to produce material that is tailored to our customers needs.

Market and deliver

The majority of our customers are industrial companies that further process our products to supply numerous industries construction and infrastructure, automotive, industrial machinery and equipment, energy and consumer goods markets. We invest in long-term partnerships and innovate and improve our products and services to maximise product value to customers. We are constantly adding to our significant knowledge of our markets and value chain, allowing us to improve our investment decision-making process. In many cases, we are responsible for delivering product to our customers. We do this in a variety of ways, but always efficiently, reliably and cost-effectively.

Close down and rehabilitate

We integrate closure planning throughout an asset s lifecycle, from the earliest stages of project development. When a resource reaches the end of its life, we are committed to high standards of close-down and reclamation. This helps us to maintain a positive reputation for sustainable development and ensures we meet the expectations of our current and future stakeholders.

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Key performance indicators

Our key performance indicators (KPIs) give us a means by which to measure our financial and sustainable development performance. Their relevance to our strategy, and our performance against these measures in 2012, are explained below.

Indicator	All injury frequency rate (AIFR) Per 200,000 hours worked	Underlying earnings[a][b] US$ millions	Operating cash flow[a] US$ millions Dividends from equity accounted units Cash flow from consolidated operations
Relevance to strategy	Safety is one of our core priorities. We have a relentless focus on pursuing zero harm, reinforcing our strong safety culture, and improving safety leadership. The AIFR is a leading indicator of management performance.	This is the key financial performance indicator used across the Group. It gives insight to cost management, production growth and performance efficiency. We are focused on aggressively reducing our costs and increasing productivity to improve earnings and deliver greater value for shareholders.	Operating cash flow is a complementary measure to underlying earnings. It also provides insight to how we are managing costs and increasing efficiency and productivity across the business.
Performance	Our AIFR has improved 29 per cent over the last five years. We have maintained our AIFR of 0.67 for 2012.	Underlying earnings have fallen by US$6,246 million compared with 2011. This reflects lower average market prices for the Group commodities during the year, an overall fall in volumes sold, and industry-wide cost inflation pressures.	Operating cash flows of US$16,450 million, which include US$522 million of dividends from equity accounted units, are 40 per cent lower than in 2011, primarily as the result 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 of the 2012 financial statements.	Operating cash flow represents the cash generated by the Group s consolidated operations, before payment of interest, taxes, capital expenditure and cash flows relating to financing activities. From 2011, product group operating cash flows on pages 22 to 30 have been adjusted to exclude funding of defined benefit pension deficits; comparative figures have been modified accordingly.
More information	**page 14**	**page 219**	**page 141**

Notes

(a) The accounting information in these charts is drawn up in accordance with IFRS.

(b) Underlying earnings is the 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 2012 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.

(c) Amounts include 100 per cent of subsidiaries capital expenditures.

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KPI trend data

The Group s performance against each KPI is 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.

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

See the Remuneration report on page 92

Total shareholder return (TSR)

%

Our strategy is to maximise total shareholder return. This KPI measures performance in terms of shareholder wealth generation. We also monitor our relative TSR performance against peers.

Rio Tinto s TSR performance over the five-year period from 2008 to 2012 was driven by increasing volatility in world stock markets and commodity prices. Total dividends paid during 2012 were 163.5 US cents

Net debt[a]

US$ millions

Net debt is a measure of how we are managing our balance sheet and capital structure. We constantly evaluate and balance the alternative uses for our cash between disciplined investment, strengthening our balance sheet, and returning cash to investors.

Net debt increased from US$8,451 million at 31 December 2011 to US$19,261 million at 31 December 2012 as operating cash inflows were offset by outflows relating to capital expenditure, acquisitions, an increase in the dividend

Capital expenditure[a][c]

US$ millions

We are prioritising investment in the highest returning projects in the most attractive sectors. 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.

Capital expenditure of US$17,418 million has risen by US$5,120 million compared with 2011. This is due mainly to continued expansion and construction across the Group, including Pilbara Iron Ore mines, Oyu Tolgoi mine and

Greenhouse gas (GHG) emissions intensity

Indexed relative to 2008

Our GHG performance is important in upholding and extending our licence to operate. We are focusing on reducing the energy intensity of our operations as well as the carbon intensity of our energy, including through the development and implementation of innovative technologies.

We have reduced our total GHG emissions intensity by 5.1 per cent between 2008 and 2012. This is largely a result of the Ningxia aluminium smelter divestment in 2009 and the closure of the Lynemouth smelter in 2012.

per share, an increase of 40 per cent over 2011. Investor sentiment improved in the fourth quarter of 2012 with the share price ending 2012 closer to its highs for the year. This resulted in a positive TSR of 14.7 per cent for 2012.	payment, and the share buy-back programme.	concentrator, Kitimat aluminium smelter, Kestrel coking coal underground mine, and the Argyle underground diamond mine.	
TSR combines share price appreciation and dividends paid to show the total return to the shareholder.	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 25 Consolidated net debt of the 2012 financial statements.	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.	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.
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Risk factors

Principal risks and uncertainties

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. Principal risks and uncertainties are identified when the Risk Management Committee, business unit or function determines that the potential consequences are material at a Group level or where the risk is connected and may trigger a succession of events that, in aggregate, become material to the Group. Once identified, each principal risk or uncertainty is reviewed by the relevant internal experts and by the Risk Management Committee.

The following describes all known principal risks and uncertainties that could materially affect Rio Tinto. There may be additional risks unknown to Rio Tinto and other risks, currently believed to be immaterial, which could turn out to be material. The risk factors outlined below omit the management detail on how each is managed and mitigated.

For further information about our approach to risk management, please see page 80. Risks may materialise individually, simultaneously or in combination and could significantly affect the Group s:

- short, medium and long-term business and prospects;
- earnings, cash flow and financial position;
- overall financial results and product demand;
- current asset values;
- future asset values and growth potential;
- safety record and the long, medium and short-term health of its employees;
- environmental effects; or
- Group or business unit reputation.

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

External risks

Factor	Nature
Commodity prices and global demand for the Group s products are expected to remain uncertain.	Commodity prices and demand are volatile and strongly influenced by world economic conditions. The Group s normal policy is to sell its products at prevailing market prices and not to enter into price hedging arrangements. Recent volatility in commodity prices and demand may continue, which could adversely affect the Group s earnings, cash flow and reserves.
Past strong demand for the Group s products in China could be affected by future developments in that country.	The Group is heavily reliant on the Chinese market and if China experiences an economic downturn, or if Chinese customers source products from elsewhere, this could adversely affect demand and pricing for the Group s products. Furthermore, the basis on which the Group prices iron ore in Asia is evolving and to the extent this results in prices or pricing mechanisms that are less favourable to the Group, its earnings and cash flow could be adversely affected.
Rio Tinto is exposed to fluctuations in exchange rates.	The great majority of the Group s sales are denominated in US dollars, which is also the currency used for holding surplus cash, financing operations, and presenting external and internal results. Although many costs are incurred in US dollars, a significant portion is influenced by the local currencies of the countries where the Group operates, principally the Australian dollar and Canadian dollar. The Group s normal policy is to avoid hedging of foreign exchange rates and so the Group may be adversely affected by appreciation in the value of other currencies against the US dollar, or to prolonged periods of exchange rate volatility. These fluctuations may negatively impact the Group s profitability.
Political, legal and commercial changes in the places where the Group operates.	The Group has operations in jurisdictions where governments and communities are seeking a greater share of mineral wealth. In some jurisdictions commercial instability can arise from a culture of bribery and corruption. Some operations are conducted under specific agreements with respective governments and associated acts of relevant legislative bodies. In several countries, land title and rights to land and resources (including Indigenous title) may be unclear. Political and administrative change, policy reform, and changes in law or government regulation can result in expropriation, or nationalisation of the Group s rights or assets.

In its operations and development projects, Rio Tinto is exposed to:

- renegotiation, unilateral variation or nullification of existing agreements, leases and permits;
- changes in government ownership of operations;

significant restoration and environmental clean-up costs;

currency and foreign investment restrictions;

changes in taxation rates, regimes or international tax agreements;

limitations to power, water, energy and infrastructure access; and

general increases in regulation, including compliance costs.

Political instability and uncertainty or government changes to terms applicable to the Group s operations may result in increased costs for the Group, may curtail or negatively impact existing operations and prevent the Group from making future investments.

Community disputes in the countries and territories in which the Group operates.

Some of the Group s current and potential operations are located in or near communities that may regard these operations as being detrimental to them. Community expectations are typically complex with the potential for multiple inconsistent stakeholder views that may be difficult to resolve. Stakeholder opinion and community acceptance can be subject to many influences, for example, related industries, operations of other groups, or local, regional or national events in other places where we operate. These disputes can disrupt our operations and may increase our costs, thereby potentially impacting our revenue and profitability. In the extreme, our operations may be a focus for civil unrest or criminal activity, which can impact our operational and financial performance, as well as our reputation.

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Factor	Nature
Increased regulation of greenhouse gas emissions could adversely affect the Group s cost of operations.	Rio Tinto s operations are energy-intensive and depend on fossil fuels. Worldwide, there is increasing regulation of greenhouse gas emissions, tighter emission reduction targets and progressive introduction of carbon pricing mechanisms. These are likely to raise significantly worldwide energy, production and transport costs over the medium to long terms, which will increase the Group s cost base and, potentially, negatively impact the Group s profitability.
Regulations, standards and stakeholder expectations regarding health, safety, environment and community evolve over time and unforeseen changes could have an adverse effect on the Group s business and reputation.	The resources sector is subject to extensive health, safety and environmental laws, regulations and standards alongside community and stakeholder expectations. Evolving regulation, standards and stakeholder expectations could result in increased costs, litigation or, in extreme cases, threaten the viability of an operation.
Strategic risks	
The Group s exploration and development of new projects might be unsuccessful, expenditures may not be fully recovered and depleted ore reserves may not be replaced.	Rio Tinto identifies new orebodies and mining properties through its exploration programme, and develops or expands other operations as a means of generating shareholder value. Exploration is not always successful and there is a high degree of competition to develop world-class orebodies. The Group may also not be able to source or maintain adequate project financing, or may be unable to find willing and suitable joint venture partners to share the cost of developing large projects.
Rio Tinto may fail to make or successfully integrate acquisitions, or to complete divestment agreements.	Business combinations entail a number of risks including the cost of effectively integrating acquisitions to realise synergies, significant write-offs or restructuring charges, and unanticipated costs and liabilities. The Group may also be liable for the past acts, omissions or liabilities it has acquired that are unforeseen or greater than anticipated. The Group may also retain unforeseen liabilities for divested entities if the buyer fails to honour all commitments or the Group agrees to retain certain liabilities.
Financial risks	
The Group s reported results could be adversely affected by the impairment of assets and goodwill.	The Group may be required to record impairment charges as a result of adverse developments in the recoverable values of its assets (including goodwill). Significant assumptions in the determination of recoverable value include, but are not limited to: pricing of the Group s commodities and products, reserves and mineralised material, infrastructure availability, discount and exchange rates, operating cost projections, and timing of expenditure on major projects. In addition, the occurrence of unexpected events or events beyond the Group s control that adversely impact its business may have an impact on the assumptions underlying the recoverable value of its assets. The foregoing items are not exhaustive and impairments may be caused by factors currently unknown to the Group. To the extent that the recoverable value of an asset is impaired, such impairment may negatively impact the Group s profitability during the relevant period.
The Group s liquidity and cash flow expectations may not be realised, inhibiting planned expenditure.	The Group s ability to fund planned expenditure such as capital growth, mergers and acquisitions, innovation and other obligations may falter if its cash position proves inadequate. Our ability to weather a major economic

shock for example, in the eurozone could be compromised by insufficient cash reserves, a reduction in the value of existing reserves, or restricted access to these and other sources of cash, including the international capital markets.

General cost inflation in the resources sector is affecting both operations and projects, resulting in significant pressure on capital and operating costs.

Input costs in the resources sector have risen at a disproportionate rate, adversely affecting the economics of current operations and increasing the cost of our capital expansion projects. Many of these input costs are linked to commodity prices and in the case of capital expansion projects the time lag between incurring project costs and receiving revenue can result in additional exposure to commodity markets. Failure to contain costs may have an adverse impact on our operating margins and the viability of our capital expansion projects.

Operational risks

Estimates of ore reserves are based on uncertain assumptions that, if changed, could result in the need to restate ore reserves.

There are numerous uncertainties inherent in estimating ore reserves, including subjective judgments and determinations that are based on available geological, technical, contract and economic information. Previously valid assumptions may change significantly with new information, which may result in changes to the economic viability of some reserves and the need for them to be restated.

Labour disputes could lead to lost production and/or increased costs.

Some of the Group s employees, including employees in non-managed operations, are represented by labour unions under various collective labour agreements. The Group may not be able satisfactorily to renegotiate agreements when they expire and may face difficult negotiations or higher wage demands. In addition, labour agreements may not prevent a strike or work stoppage.

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Risk factors continued

Operational risks continued

Factor	Nature
Some of the Group s technologies are unproven and failures could adversely impact costs and/or productivity.	The Group has invested in and implemented new technologies in both information systems and operational initiatives, some of which are unproven and their eventual viability cannot be assessed with certainty. The actual benefits of these technologies may differ materially from expectations.
The Group may be exposed to major failures in the supply chain for specialist equipment and materials.	Rio Tinto operates within a complex supply chain depending on suppliers of materials, services, equipment, and infrastructure, and on providers of logistics. Supply chain failures, or significantly increased costs within the supply chain, for whatever reason, could have an adverse effect on the Group s business.
Joint ventures, strategic partnerships or non-managed operations may not be successful and may not comply with the Group s standards.	The Group participates in several joint venture and partnership arrangements, and it may enter into others, all of which necessarily involve risk. Whether or not the Group holds majority interests or maintains operational control in its joint ventures, its partners may: have economic or business interests or goals that are inconsistent with, or opposed to, those of the Group; exercise veto rights to block actions that the Group believes are in its or the joint venture s best interests; or be unable or unwilling to fulfil their obligations under the joint venture or other agreements, such as contributing capital to expansion or maintenance projects. Where these joint ventures are controlled and managed by others, the Group may provide expertise and advice but has limited control over compliance with its standards and objectives, such that partners may take action contrary to the Group s interests or policies with respect to its investment.
The Group s operations are vulnerable to a range of interruptions, not all of which are covered fully by insurance.	**1. Natural disasters and events** Mining, smelting, refining and infrastructure installations are vulnerable to natural events including earthquakes, drought, flood, fire, storm and the possible effects of climate change. **2. Sustained operational difficulties** Operating difficulties are many and various, ranging from unexpected geological variations that could result in significant ground or containment failure to breakdown of key capital equipment. Reliable roads, rail networks, ports, power generation and transmission, and water supplies are required to access and conduct our operations. Limitations, or interruptions in transport infrastructure, including as a result of third parties gaining access to our integrated facilities, could impede its ability to deliver products.

3. Information technology and cyber security
The Group relies heavily on information technology and process control systems to support our business. In common with most large, global companies, the Group has experienced cyber attacks and is faced with ongoing threats to the confidentiality, integrity and availability of such systems. Whilst no material losses related to cyber security breaches have been discovered, given the increasing sophistication and evolving nature of this threat, we cannot rule out the possibility of them occurring in the future. An extended failure of critical system components, caused by accidental, or malicious actions, including those resulting from a cyber security attack, could result in a significant environmental incident, commercial loss or interruption to operations.

4. Major operational failure
The Group s operations involve chemicals and other substances stored under high temperature and pressure, with the potential for fire, explosion or other loss of control of the process, leading to a release of hazardous materials. This could occur by accident or a breach of operating standards, and could result in a significant incident.

The Group s insurance does not cover every potential loss associated with its operations and adequate coverage at reasonable rates is not always obtainable. In addition, insurance provision may not fully cover its liability or the consequences of any business interruption. Any occurrence not fully covered by insurance could have an adverse effect on the Group s business.

The Group depends on the continued services of key personnel.

The Group s ability to maintain its competitive position is dependent on the services of a wide range of highly skilled and experienced personnel available in the locations where they are needed. Failure to recruit and retain key staff, and the inability to deploy staff worldwide, where they are most needed, could affect the Group s business. Similar constraints may be felt by the Group s key consultants, contractors and suppliers, thereby impacting the Group s expansion plans.

The Group s costs of close-down, reclamation, and rehabilitation could be higher than expected.

Close-down and reclamation works to return operating sites to the community can be extensive and costly. Estimated costs are provided for, and updated annually, over the life of each operation but the provisions might prove to be inadequate due to changes in legislation, standards and the emergence of new reclamation techniques. In addition, the expected timing of expenditure could change significantly due to changes in the business environment that might vary the life of an operation.

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* Detailed financial information on the product groups can be found within the Financial review on pages 34 to 41.

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Sustainable development

Performance data

Our sustainable development 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.

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.

We report in line with the GRI G3 guidelines at Application level A+ and have implemented the International Council on Mining and Metals (ICMM) sustainable development framework (www.icmm.com).

Safety

We are committed to achieving our goal of zero harm. This is supported by our management system which provides the framework for incorporating hazard identification, risk assessment and risk management into all aspects of the operations. Safe operations that protect our people are a priority and we work systematically to mitigate risks that are critical to operating safely.

Regrettably, two people lost their lives due to safety incidents while working at Rio Tinto managed operations in 2012. The events were a rail incident at Rio Tinto Alcan Roberval-Saguenay in Canada and an incident during maintenance work on a crusher at Palabora in South Africa. We provided support and counselling to the families and colleagues affected by these events. We conducted in-depth investigations of the causes of these incidents and ensured that the conclusions were communicated across the Group. We are determined to learn from all incidents to prevent similar events from recurring in the future.

We measure progress toward our goal of zero harm through the all injury frequency rate (AIFR), which includes data for employees and contractors. At the end of 2012, our AIFR was 0.67. Over the last five years we have reduced our AIFR by 29 per cent.

The Group-wide safety risk management programme focuses equally on personal and process safety, and material safety hazards. The identification of higher-consequence, lower-probability safety risks are managed through targeted process safety management and the use of a Semi Quantitative Risk Assessment (SQRA™) process. Risk reduction resulting from the SQRA™ process, along with critical risk controls, is used as a Group-wide leading indicator for safety performance.

We focus on building a sustainable safety culture at our operations, based around strong leadership and workforce engagement. We recognise that a slightly different approach is needed at projects where activity and thus risk levels change rapidly. We have benchmarked our approach externally, and we are piloting new methodologies that focus particularly on improving contractor alignment to our approach, and the quality of frontline leadership.

Rio Tinto has required disclosures relating to mine safety violations or other regulatory matters in accordance with Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act that are included in Exhibit 99.1 to this filing.

Greenhouse gas emissions

Rio Tinto recognises the reality and scale of the challenges posed by increasing demand for reliable and secure forms of energy, coupled with the need for urgent action to reduce global emissions of greenhouse gases (GHGs). We believe global energy and climate challenges are best met by companies, governments and society working together on a global solution. Until that is in place we recognise that it will be important for individual jurisdictions to take action.

As a capital-intensive business, changing our emissions profile and the transition to low-carbon assets and products is a long-term challenge. We are seeking a substantial decarbonisation of the business by 2050. Following the creation of Pacific Aluminium, the majority of the energy used in Rio Tinto Alcan s smelters is from low-carbon sources.

We have reduced our total greenhouse gas emissions intensity by 5.1 per cent between 2008 and 2012. Our total GHG emissions were 41 million tonnes of carbon dioxide equivalent (CO_2-e) in 2012, 2.2 million tonnes lower than in 2011.

The majority of Rio Tinto s GHG emissions are generated as a result of energy use (electricity, fuel and anodes and reductants) during mining, milling and smelting activities at our sites.

We recognise that there are also significant GHG emissions associated with the transportation, processing and use of our products. In 2012, the three most significant sources of indirect emissions associated with our products were:

- Approximately 5.4 million tonnes of CO_2-e associated with third-party transport of our products and raw materials.
- An estimated 141 million tonnes of CO_2-e associated with customers using our coal in electricity generation and steel production.
- Approximately 374 million tonnes of CO_2-e associated with customers using our iron ore to produce steel (these emissions are not in addition to the coal-use emissions above, as some customers use both our iron ore and our coal to produce steel).

We face costs associated with greenhouse gas emissions in Europe, Australia, New Zealand, various US states and Canadian provinces. As a result, over two thirds of emissions from our operations are covered by market-based carbon regulation.

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Aluminium

Financial performance

	2012	2011
	US$ million	US$ million
Revenue	**10,105**	12,159
Operating cash flow	**522**	1,216
Underlying earnings	**3**	442
Capital expenditure	**2,550**	1,957
Net operating assets	**19,606**	26,204

Figures above exclude aluminium assets identified for divestment or closure and that are now managed by the Business Support & Operations group.

Strategy and strategic priorities

The aluminium industry is likely to continue facing challenging market conditions for some years, as a structural shift has occurred, driven by the decoupling of the supply chain for bauxite, alumina and aluminium and the continued growth of the Chinese smelting industry. Against this backdrop, Rio Tinto Alcan is focused on a transformation strategy to improve the performance of the product group. This strategy has delivered improvements, but much more needs to be done in this market environment of depressed prices. Further action will be required to reduce costs, improve the productivity of the assets, and the returns that are generated on capital invested.

Rio Tinto Alcan is committed to achieving further significant performance improvements by delivering over US$1.6 billion of EBITDA improvement by the end of 2015 from both strategic investments and business improvement initiatives. This will incorporate the Aluminium group s contribution to Rio Tinto s sustainable cost reduction targets by 2014. The annual run rate from sustainable business improvement initiatives is now exceeding US$460 million, with US$250 million delivered in 2012, as planned. Key elements of this ongoing second phase of Rio Tinto Alcan s transformation include:

Widespread business improvement initiatives, including accelerated cost reduction and productivity enhancement efforts designed to provide a leaner and more efficient structure.

Stringent focus on high-return production creep and modernisation projects.

Optimisation of the product mix.

Disciplined portfolio management, including the divestment of assets no longer aligned with the product group s core strategy.

- Maximising the benefit of industry-leading positions in bauxite and energy.
- Modernising and expanding long-life Tier 1 assets.
- Strictly limiting growth in line with market conditions.

Safety

In 2012, the Aluminium product group s all injury frequency rate deteriorated to 0.72, from 0.58 in 2011. Regrettably, in January there was one fatality, which resulted from an incident on the Roberval-Saguenay railway in Quebec, Canada. The product group s ongoing priority is to implement the Zero Harm by Choice programme, as well as to continue deploying Rio Tinto HSE performance standards and risk management practices, to reach Rio Tinto Alcan s ultimate goal of zero incidents. Process safety management has made significant progress, with reporting, investigation and analysis of significant potential incidents and completion of corrective actions as a main focus.

The Grande-Baie aluminium smelter in Quebec jointly won the 2012 Chief Executive Safety Award. Three Aluminium sites were recognised in other categories:

- Most Improved Site: Yarwun, Queensland, Australia
- Best Project: Shipshaw, Quebec, Canada
- Small Business: Anglesey, Wales, UK

Greenhouse gas emissions

Rio Tinto Alcan accounted for 20 per cent of Rio Tinto s total greenhouse gas emissions (GHG) in 2012, compared to 19 per cent in 2011. At year end, total GHG intensity was 24 per cent lower than 2008 baseline performance. The realised reductions made a significant contribution to the Rio Tinto Group s overall total GHG intensity improvements. This sizeable reduction in emissions over the past several years is mainly related to the divestment or closure of non-core assets, as well as ongoing operational improvements that have combined to give Rio Tinto Alcan the lowest carbon footprint in the aluminium industry. Taking into account recent portfolio changes, 96 per cent of Rio Tinto Alcan s power supply is carbon-free and falls into the lowest-cost quartile for energy. Aluminium produced using hydroelectricity which currently represents some 83 per cent of the Aluminium product group s power supply has the lowest footprint with respect to primary energy consumption and climate change in lifecycle analysis studies.

Rio Tinto Alcan works closely with stakeholders to address sustainability concerns and help identify ways to foster greater transparency and sustainability throughout the aluminium industry.

During 2012, the Aluminium product group played a lead role as a co-founder of the Aluminium Stewardship Initiative (ASI), along with the International Union for Conservation of Nature and several other founding members. The mission of ASI is to define and deliver the first comprehensive global standard for the responsible production, use and re-use of aluminium. Rio Tinto Alcan also agreed to participate in Empreinte Carbone Québec, a pilot project launched by Quebec s Ministry of Economic Development, Innovation and Export to develop a method for calculating carbon footprint.

Review of operations

Rio Tinto Alcan s underlying earnings of US$3 million were US$439 million lower than in 2011, primarily from a significant deterioration in market conditions and the impact of the lock-out at the Alma smelter in Quebec. The combined impact of movements in prices and exchange rates, inflation and increasing prices for coke, pitch and caustic reduced underlying earnings by US$569 million year-on-year and lowered EBITDA margins by 11 per cent. This market impact was partially offset by controllable cash cost improvement initiatives which had a net positive impact of nearly four per cent on margins. The absence of the abnormal weather events that occurred in 2011 was outweighed by the impact of reduced operations from the lock-out at Alma.

Further deterioration in aluminium market conditions in 2012, together with strong currencies in certain regions and higher raw material costs, has had a negative impact on current market values in the aluminium industry. The annual impairment review for Rio Tinto Alcan and other aluminium businesses (including Pacific Aluminium)$_{(a)}$ resulted in a post-tax impairment charge of US$11.0 billion, which includes goodwill impairment of US$6.0 billion.

The average aluminium market price in 2012 was US$2,018 per tonne, a decrease of 16 per cent from 2011. Rio Tinto Alcan s average realised price for primary metal products in 2012 was US$2,383 per tonne, 12 per cent lower than US$2,715 in 2011.

Gross sales revenue for Rio Tinto Alcan decreased by 17 per cent compared with 2011. This was due to the combined effects of lower market prices across the product range and reduced production at Alma, offset by the Yarwun refinery expansion in Queensland, Australia.

Aluminium production decreased by nine per cent to 2.2 million tonnes in 2012. This was partly due to the lock-out at Alma resolved through the signing of a new labour agreement. Two thirds of the smelter s capacity was curtailed throughout the first half of the year. Alma was progressively returned to full production by January 2013. The new organisational design implemented after the negotiated labour agreement will enable productivity improvements and lower total operating costs. This new organisational design is now being deployed in other facilities and will contribute to further cost reductions in 2013.

(a) In 2011, Pacific Aluminium and certain of the Aluminium operations were transferred to the Business Support & Operations group.

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Rio Tinto Alcan s bauxite production was 31.4 million tonnes in 2012, 11 per cent higher than in 2011. Record production levels were achieved at Weipa in Queensland, Australia, as well as in Guinea. The increase in output was driven by production creep initiatives to supply requirements from the expanded Yarwun refinery, and increased third-party demand.

Alumina production increased 19 per cent to 7.0 million tonnes during 2012, as expanded refining capacity at Yarwun came on line. First bauxite was injected into the expanded Yarwun plant in July 2012. By September, the expanded refinery was operating at 90 per cent of its nameplate capacity of 3.4 million tonnes per annum. The ramp-up is on schedule to reach full capacity by the third quarter of 2013. Yarwun is moving the product group s alumina production into the second quartile of the industry cost curve.

Development projects

Rio Tinto Alcan s development pipeline is focused on developing its long-life Tier 1 assets, while strictly limiting growth in line with market conditions. Project characteristics include a low carbon footprint, low operating costs and attractive forecast returns on capital.

Feasibility and environmental impact studies are currently being completed for the South of Embley project. This would extend the life of the Weipa bauxite mine in Queensland, Australia by approximately 40 years, depending on production rates. The expansion would facilitate staged increases in production of up to 36 million dry product tonnes a year, from the current level of 23 million tonnes. It would enable the continuity of supply to Rio Tinto Alcan s two Gladstone alumina refineries and capitalise on the rapidly-growing third-party market for seaborne bauxite.

Two major smelting projects under way in Canada are designed to leverage Rio Tinto Alcan s clean, self-generated hydroelectricity and generate advantages from the latest AP smelting technology. In Quebec, the construction of the AP60 smelter is complete and is now in the commissioning phase. This 60,000 tonne plant is the first commercial-scale implementation of Rio Tinto Alcan s newest smelting technology platform. Operating at an unprecedented 600 kiloamperes, the energy-efficient AP60 is designed to deliver a US$60 to US$90 per tonne full economic cost advantage over the existing benchmark. First metal at the AP60 smelter is expected in the first half 2013. Subsequent phases will be delayed until the aluminium market shows clear signs of recovery.

The Kitimat Modernisation Project in British Columbia will increase the smelter s current production capacity by more than 49 per cent, to approximately 420,000 tonnes per year. The modernised aluminium smelter will be powered by self-generated hydroelectricity and use advanced AP40 technology to cut GHG emissions intensity by more than 50 per cent. Once completed at the end of 2014, Kitimat will be one of the lowest-cost smelters in the world, strategically located to supply key emerging markets in the Pacific Rim.

The modernisation of the ISAL aluminium smelter in Iceland is expected to increase production from 190,000 tonnes to 230,000 tonnes and includes a leading-edge casting facility to produce value-added billet. The new casting facility produced its first billet in the second quarter of 2012.

Outlook

Macroeconomic sentiment remains uncertain and continues to impact the group s product prices particularly for aluminium.

With a number of regional economies expected to improve, total primary demand for aluminium is forecast to increase by nearly six per cent in 2013. However, inventories are still high and warehousing transactions, driven by

forward pricing estimates and low interest rates, remain attractive. Medium-term supply growth is currently forecast to match or exceed demand growth, resulting in a global market surplus for the industry in the near term.

Smelter grade alumina demand is underpinned by aluminium production, so alumina demand over the long term is directly tied to aluminium demand estimates.

Of Rio Tinto Alcan s three core commodities, bauxite presents the best opportunities for attractive returns in the near term, given strong Chinese demand and supply uncertainty. The current focus of the traded bauxite market is on China s sharply increased demand for imported product. Although shipments from a traditional key supplier in Indonesia have been recovering in the wake of bauxite export restrictions introduced in May 2012, the fundamentals for traded bauxite continue to look strong going forward.

On balance, while higher regional market premiums have helped partially offset prevailing low aluminium prices, the short-term outlook for aluminium markets remains challenging, with lingering economic uncertainty and continuing price volatility. This underscores the importance of the ongoing drive to transform Rio Tinto Alcan into a leaner, highly-efficient aluminium producer capable of generating solid returns throughout the economic cycle.

The longer-term outlook for aluminium remains robust and Rio Tinto Alcan believes strong returns will be available in the future for the well-positioned, low-cost operator.

Rio Tinto Alcan anticipates strong future demand in key sectors like transportation, infrastructure and consumer goods, spurred by the continued move to urbanisation and the growth of megacities, particularly in China and other emerging Asia-Pacific economies. A measure of the enormous potential is that per capita consumption of aluminium is currently just one kilogram in India and five kilograms in Brazil, well below the average of more than 20 kilograms per capita in industrialised countries.

Mature markets will also require significantly increased volumes of aluminium. A good example is the automotive industry, currently among the top-performing sectors in the economies of both the US and Germany.

The global demand picture outlined above would translate into a need for around 40 million tonnes of modernised aluminium production (net of inventory reductions) between now and 2025, along with 75 million additional tonnes of alumina and, very importantly, around 230 million additional tonnes of bauxite. Despite this positive outlook for demand, it is ultimately supply growth that will determine whether, or when, the aluminium industry returns to a more balanced market in the long term.

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Copper

Financial performance

	2012 US$ million	2011 US$ million
Revenue	**6,661**	7,634
Operating cash flow	**492**	3,136
Underlying earnings	**1,092**	1,932
Capital expenditure	**4,347**	3,784
Net operating assets	**12,682**	12,094

Strategy and strategic priorities

The Copper product group s strategy is to maximise shareholder returns by delivering superior margins and growth from high-quality assets. This strategy will be realised by:

- Continuing progress toward zero harm and risk mitigation across the business.
- Prioritising investment and retaining development optionality on high-quality assets.
- Optimising current assets through operational performance and disciplined cost management.
- Delivering a notable reduction in overhead costs and maintaining strong EBITDA margins.
- Developing a strong pipeline of value-generating greenfield projects.
- Using technological innovations such as processing and rapid underground development to deliver operational efficiency and reduce costs.
- Collaborating with local governments and communities to contribute to sustainable development.
- Developing leadership and managing talent to deliver our business strategy.

Safety

In 2012, the Copper product group s all injury frequency rate was 0.50, compared to 0.56 in 2011. The Copper product group regrettably suffered a fatality at its Palabora operation in South Africa and two industrial fatalities occurred at the non-managed Grasberg mine in Indonesia.

The Copper product group is committed to managing the risks inherent in its business and providing a workplace where there is a culture of zero harm. To that end, the group is developing enhanced programmes and procedures to manage process safety, underground safety and contractor management activities. In addition, the group is embedding the need for all leaders and employees to focus on personal safety and work collaboratively toward the goal of zero harm.

Greenhouse gas emissions

The Copper product group s 2012 greenhouse gas (GHG) emissions were 10.66 tonnes of carbon dioxide equivalent per tonne of copper cathode produced, compared with 8.15 tonnes in 2011. The decline in efficiency resulted from the smelter shutdown at Kennecott Utah Copper and decreased production at Palabora. The Copper product group represented 6.8 per cent of Rio Tinto s total emissions.

Review of operations

The Copper product group portfolio is made up of large, long-life, low-cost operations that present meaningful opportunities to grow and improve productivity. In 2012, the group produced 549 thousand tonnes of mined copper (Rio Tinto share), making Rio Tinto the world s sixth largest supplier. The product group also produced 294 thousand ounces of mined gold, 3,657 thousand ounces of mined silver and 9.4 thousand tonnes of molybdenum as by-products of its copper operations.

Kennecott Utah Copper (Rio Tinto: 100 per cent)

Kennecott Utah Copper, adjacent to Salt Lake City, produces about 17 per cent of US copper supply. In 2012, Kennecott produced 163 thousand tonnes of refined copper, 279 thousand ounces of refined gold, and 9.4 thousand tonnes of molybdenum. Refined metal production was higher

during the second half of the year due to improved mine production and processing of inventories built up during a maintenance shutdown of the smelter in the second quarter, which was planned to coincide with the period of lower grades.

Escondida (Rio Tinto: 30 per cent)

Operated by BHP Billiton, Escondida is the world s largest copper mine. Located in Chile s Atacama Desert, it represents five per cent of global production and 16 per cent of all copper production from Chile. In 2012, Escondida produced 1,047 thousand tonnes of copper (100 per cent basis). Production was higher than 2011 due to higher grades and an increase in ore delivered to the concentrator owing to improved material handling.

Grasberg (a joint venture that gives Rio Tinto a 40 per cent share of production above specified levels until the end of 2021 and 40 per cent of all production after 2021)

Grasberg is owned and operated by PT Freeport Indonesia, a subsidiary of US-based Freeport-McMoRan Copper & Gold Inc. Located in the province of Papua in Indonesia, it is one of the world s largest copper mines. Production in 2012 did not reach the specified level, so Rio Tinto did not receive a share of production for the year.

Northparkes (Rio Tinto: 80 per cent)

Located in New South Wales, Australia, Northparkes is a joint venture with the Sumitomo Group. Northparkes produced 53.8 thousand tonnes of copper and 72 thousand ounces of gold in 2012 (100 per cent basis). The mine is the site of an innovative tunnel boring trial that has the potential to increase the rate of tunnel development underground. The site is also home to a state-of-the-art underground training facility.

Palabora (Rio Tinto: 57.7 per cent)

Palabora Mining Company is a South African company listed on the Johannesburg Stock Exchange. The mine produced 40.9 thousand tonnes of refined copper in 2012 (100 per cent basis). In December 2012, Rio Tinto announced an agreement to sell its interest in Palabora for consideration totalling US$373 million. While South Africa remains an important and prospective region for Rio Tinto, and Palabora is a good business, it is no longer a natural fit within Rio Tinto s portfolio.

Development projects

Extending mine life

The Copper product group is pursuing several promising projects to extend the life of existing operations in its portfolio.

In June 2012, Rio Tinto approved a US$660 million investment to extend the life of Kennecott Utah Copper s Bingham Canyon mine from 2018 to 2029. The project, known as Cornerstone, involves pushing back the south wall of Bingham Canyon to gain access to 515 million tonnes of 0.79 per cent copper equivalent ore. Work continues on evaluating projects to expand and upgrade the power plant to natural gas and expand the tailings impoundment.

At Escondida in northern Chile, the Ore Access and Laguna Seca Debottlenecking projects were completed in the second half of 2012, with significant production improvements already realised, in particular with the material handling process.

Escondida s Organic Growth project costing US$3.8 billion (Rio Tinto share: US$1.2 billion) was 26 per cent complete at year end. This project involves constructing a new, 152,000 tonnes per day concentrator to replace the Los Colorados concentrator and allow access to high-grade ore located under the existing facilities. The additional Oxide Leach Area project will cost US$721 million (Rio Tinto share: US$216 million) and involves the construction of a new dynamic leach pad that will maintain current levels of oxide leaching after the existing heap leach has been fully exhausted. Construction of the project is expected to be completed in 2014.

In Indonesia, the Grasberg mine is continuing its transition from primarily an open pit to a fully underground operation. The Grasberg underground

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block cave project will come on line in 2017, when the current open pit mine will be depleted, and is expected to ramp up to full capacity by 2022, reaching 160,000 tonnes of ore produced per day. In addition, Grasberg has begun construction on the Deep Mill Level Zone block cave mine, which will produce an additional 80,000 tonnes of ore per day at full capacity, expected in 2021. Together, these two projects will supply ore to the mill at 240,000 tonnes per day by 2022.

Technological innovations

Technology continues to be a primary lever to improve productivity and cost performance by increasing recoveries, enabling the processing of low-grade material, as well as optimising underground and capital development.

In 2014, Kennecott will commission its Moly Autoclave Process (MAP), which will process lower grade molybdenum concentrate more efficiently than conventional roasters and will improve recovery rates by eight per cent.

Kennecott has also completed construction and commissioning of a pilot ore sorting facility. The new technology, Copper NuWaveTM, has the potential to upgrade marginal ore and waste material by rejecting barren material from the mill pebble recycle stream.

Northparkes began commissioning of a new tunnel boring technology in October 2012. This technology is one pathway to reduce up-front capital costs and decrease construction time for underground operations. Initial tests have demonstrated a 40 per cent increase in the speed at which tunnelling occurs. Additionally, in August 2012, the Rio Tinto Block Cave Knowledge Centre officially opened at the Northparkes mine, providing employees from across the Group with the highest standard of technical and safety training for underground block caving operations.

Greenfield projects

Rio Tinto is focused on developing greenfield projects that can deliver the highest potential returns. The Group approaches each project with world-class environmental standards, and with a goal of creating sustainable economic benefits for all stakeholders.

Oyu Tolgoi (Rio Tinto: 51 per cent interest in Turquoise Hill Resources)

In a span of 34 months, the Oyu Tolgoi copper and gold mine in Mongolia has gone from the planning stage to near completion as a world-class operation and is the flagship of the Copper product group s growth portfolio. At the end of 2012, the project was 99 per cent complete for the open pit, and the group has signed a binding agreement with a Chinese power company for the supply of electricity.

Commercial production of copper concentrate is expected in 2013, and Oyu Tolgoi is set to be a top five copper producer once fully developed. Over its life, it will deliver an average annual production of 425,000 tonnes of copper and 460,000 ounces of gold, and will have net unit cash costs in the first quartile of the industry cost curve.

Oyu Tolgoi contains a 1.5 billion tonne reserve and substantial additional copper mineralisation. The deposit provides opportunities for further expansions that could see production continuing for more than 50 years. In addition, Oyu Tolgoi is in a highly prospective region with further exploration potential.

La Granja (Rio Tinto: 100 per cent)

The La Granja project in northern Peru has the potential to be one of the Group s highest value opportunities. La Granja could be the largest undeveloped greenfield copper project in Latin America, and has the potential to be a very large, long-life operation.

In 2012, Rio Tinto launched a prefeasibility study to mine copper from an open pit, with low technical risk, and using a leaching process to maximise recovery of copper. To date, 168,000 metres of drilling has been completed and further drilling will be ongoing during 2013.

The current plan is to develop the project using a staged, three-phase approach, in which the group will develop an initial leach operation, expand the operation and then construct a concentrator on site. Employing this phased approach will defer significant capital investment until after production begins, with operating cash flows supporting further expansions. Rio Tinto s knowledge of La Granja s orebody and of the broader region continues to evolve. Developing La Granja will provide access to an attractive orebody and will allow the Group to establish a positive presence in a part of the world with significant mineral potential.

Eagle (Rio Tinto: 100 per cent)

Located in Michigan, US, the Eagle copper/nickel mine is scheduled to begin operation in 2014. The mine will produce an average of 16 thousand tonnes and 13 thousand tonnes per year of nickel and copper metal respectively over seven years. Eagle Mine is also located in a highly prospective region where Rio Tinto currently holds significant tenements.

Resolution Copper (Rio Tinto: 55 per cent)

The Resolution Copper project, located in Arizona, US, is ranked among the top ten undeveloped copper assets in the world, and is expected to be a major underground block cave operation.

Resolution Copper has mining tenements covering the identified orebody. However, to realise the full potential of the project, Resolution Copper requires access to public land where mining is currently prohibited. Resolution Copper continues to seek legislative approval in the US Congress to acquire full legal title to all needed land including the adjacent public land. In exchange for that title, the project would give the public more than 2,400 hectares of high-quality Arizona conservation lands. Permitting of the project will start in 2013 with submission of the General Plan of Operations (GPoO) to the United States Forest Service, a Federal Government agency. Submission of the GPoO will initiate the process of assessing the project s environmental impacts and applying appropriate mitigation. This will be done through the generation of an Environmental Impact Statement (EIS), written by the Federal Government, per the National Environmental Policy Act (NEPA). In parallel, work continues on the prefeasibility study, with a timeline that has been extended to allow for a more complete evaluation of mining and processing options and to determine the optimal path forward.

Outlook

Rio Tinto is confident in the fundamentals of the industry and the long-term future of the copper market. While the Group expects continued volatility in the short term, the copper market s robust long-term fundamentals remain intact.

With roughly 60 per cent of copper used as an electrical conductor, the electrification and urbanisation of emerging markets, primarily China, followed by India and South East Asia, will drive copper demand growth through the next several decades. While new mine supply is due to come on line in 2013 as a result of higher prices in the past few years, Rio Tinto has exceptional copper assets and is well positioned to make the most of these market conditions.

The Copper product group is keenly focused on managing costs across its business, and maximising the technological innovations that can lower the cost of developing new mines and improving the productivity of existing operations.

Through a strategic approach of carefully prioritising work and organising key projects into phases, the Copper product group will continue to be flexible and focused on making investments that create the most value.

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Diamonds & Minerals

Financial performance

	2012	2011
	US$ million	US$ million
Revenue	**4,056**	3,654
Operating cash flow	**238**	4
Underlying earnings/(loss)	**119**	(162)
Underlying earnings excluding Simandou	**381**	251
Capital expenditure	**1,785**	1,392
Net operating assets	**8,049**	5,407

Following changes to Rio Tinto s management announced in July 2012, the Simandou iron ore project is now reported within Diamonds & Minerals to reflect management responsibility. Prior year comparatives have been restated.

Strategy and strategic priorities

Demand growth for diamonds and industrial minerals typically follows peak requirements for commodities such as iron ore and copper. The Diamonds & Minerals product group intends to capitalise on this trend by strengthening its portfolio and securing opportunities for valuable growth. The product group strategy is to:

- Improve its existing businesses operational and commercial performance.
- Build value by executing growth projects within its existing asset base.
- Grow its portfolio through value accretive exploration and acquisitions in existing and complementary sectors.

Safety

The 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) increased slightly to 0.57 in 2012 from 0.55 in 2011.

The product group faces some unique challenges in health and safety. The workforce spans multiple nationalities, ethnicities, languages and cultures in developing countries. In response, management is employing innovative strategies and visible safety leadership to educate the workforce. The product group is committed to eliminating risks of fatalities and permanent injuries, particularly in the large development projects under way. At Diavik, where the transition to underground mining was recently completed, the mine rescue team came third at the 8th International Mine Rescue Competition held in Donetsk, Ukraine, a significant achievement at the highest possible skill level.

Greenhouse gas emissions

Overall greenhouse gas (GHG) emission intensity improved across the product group due to higher production levels and the implementation of more efficient equipment and technology. GHG emissions per tonne of product were marginally higher at Rio Tinto Minerals in 2012 as a result of lower production, and intensity decreased by 8.4 per cent across Rio Tinto Iron & Titanium s operations, reflecting efficiencies associated with higher production levels and new technology. GHG emission intensities improved across all Rio Tinto Diamonds operations. In 2012 Diavik commissioned its wind farm which will reduce diesel consumption by approximately ten per cent and lower greenhouse gas emissions by approximately six per cent. The Diavik wind farm is the largest wind diesel hybrid system in the world and the first wind generation facility for Rio Tinto.

Review of operations

Diamonds & Minerals underlying earnings of US$119 million include evaluation costs in respect of Simandou of US$262 million. Excluding Simandou expenditure, underlying earnings of US$381 million were 52 per cent higher than in 2011. The group benefited from higher prices for titanium dioxide feedstocks and borates. The acquisition of BHP Billiton s interests in Richards Bay Minerals also contributed to the increase in earnings. This was offset by lower prices for diamonds and higher depreciation at Diavik following an impairment reversal in 2011.

Rio Tinto Minerals (RTM)

RTM (100 per cent interest) 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 shipping facilities in China, France, Malaysia, the Netherlands, Spain and the US.

Borates production of 463,000 tonnes boric oxide equivalent was eight per cent lower than in 2011, reflecting current global economic market conditions. The sale of Borax Argentina which historically contributed around four per cent of RTM s borates production completed in August 2012. Despite a weakening in demand during the year, RTM achieved a one per cent improvement in refined borates revenues. Earnings of US$140 million were six per cent higher than 2011, excluding the contribution from talc in the prior period.

Rio Tinto Iron & Titanium (RTIT)

RTIT is the largest producer of titanium dioxide feedstocks. RTIT mines ilmenite at its wholly-owned Rio Tinto Fer et Titane (RTFT) operation in Quebec; its managed operation Richards Bay Minerals (RBM) in South Africa (74 per cent interest); and its QIT Madagascar Minerals (QMM) operation (80 per cent interest). RTIT produces high-quality titanium dioxide feedstocks at its world-class metallurgical complexes as well as co-products including high purity iron, steel, metallic powders, zircon and rutile.

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. The purchase price paid by Rio Tinto on completion was US$1.7 billion. The acquisition was triggered in February 2012 by BHP Billiton exercising a put option agreed with Rio Tinto as part of RBM s restructuring in 2009. The price was determined through a previously-agreed expert valuation process.

In 2012, titanium dioxide feedstock production increased by 11 per cent year-on-year to 1.6 million tonnes. This reflects higher production at RTFT which completed a furnace rebuild in 2011 and an increase in attributable volumes at RBM resulting from Rio Tinto doubling its stake in September. Production was negatively impacted by the furnace rebuild at RBM that commenced in May 2012.

RTIT increased its revenues by 41 per cent due to higher prices for titanium dioxide feedstocks and the RBM transaction. RTIT continued to replace its multi-year sales contracts with alternative pricing mechanisms, increasing the exposure to current market prices. The impact of improved pricing more than offset increased input costs resulting in a 163 per cent increase in year-on-year earnings to US$397 million, including the higher contribution from RBM.

Rio Tinto Diamonds (RTD)

RTD is a leading producer of rough diamonds with a product portfolio that provides a presence in all major markets. Rio Tinto s diamond assets currently comprise the Argyle Diamond Mine in Australia (Rio Tinto: 100 per cent), the Diavik Diamond Mine in Canada (60 per cent), Murowa Diamonds in Zimbabwe (78 per cent) and the Bunder diamond project in India (100 per cent). RTD sells its share of production through its centralised marketing office in Belgium and has a niche cutting and polishing factory in Australia, where it cuts and polishes the high-end pink diamonds from the Argyle mine, and sells them to an international customer base.

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In March 2012, Rio Tinto announced a strategic review of its diamond business that includes exploring a range of options for the potential divestment of its diamonds interests.

RTD produced 13.1 million carats in 2012, a 12 per cent increase from 2011 that reflected increased grades, higher ore throughput and the absence of adverse weather interruptions which impacted 2011. Revenue in 2012 was two per cent higher than in 2011, as the effect of higher volumes was largely offset by lower prices. RTD reported a loss of US$43 million in 2012, compared to earnings of US$10 million in 2011, reflecting lower prices and higher depreciation.

A post-tax impairment of US$460 million was recognised relating to the Argyle diamond mine. An impairment review of Argyle was triggered by the announcement of the Diamonds strategic review as well as changes to the forecast ramp-up date for the underground mine. This is not included in underlying earnings.

Construction of the Argyle underground mine is proceeding and production is scheduled to commence in the first half of 2013, with ramp up to full operation to be completed by 2015, extending the life of mine until at least 2020. Production from Diavik s underground mine commenced in early 2010 in parallel with open pit operations. The transition to a fully underground operation was completed in 2012 and will sustain Diavik production well past 2020.

Dampier Salt (DSL)

Dampier Salt Limited, the world s largest salt exporter, produces industrial salt by solar evaporation of sea water at Dampier and Port Hedland, and from underground brine at Lake MacLeod, all in Western Australia. Salt is sold principally to the base chemical industry markets in Asia. During the year, DSL moved within the Diamonds & Minerals organisational structure. Salt production of 6.8 million tonnes (Rio Tinto share) increased three per cent year-on-year.

Development projects

In 2011, Diamonds & Minerals re-entered the potash business through an exploration joint venture with North Atlantic Potash Inc. a subsidiary of JSC Acron. Acron is a world leader in fertiliser production and holds multiple potash exploration permits in Saskatchewan, Canada, home to about half the world s potash reserves. Drilling results indicate encouraging potash grade and thickness. Higher nutritional standards, population growth and limited arable land make potash a critical factor in maintaining global food security, and a natural complement to RTM s existing borate fertiliser business.

Large diameter drilling was conducted and resource assessment and planning also progressed at the group s Jadar lithium-borate deposit in Serbia. If developed, the deposit has the potential to supply more than 20 per cent of global lithium demand. Lithium carbonate s fastest-growing application is in batteries that provide clean power to industrial systems and electric and hybrid cars.

Good progress was made on RTIT s TIO4 project aimed at expanding its mining and smelting capabilities in Canada and Africa. However, in January 2013, against a backdrop of weaker market conditions for its products and the need to manage and reduce its costs, RTIT has reviewed the economic viability of the project and suspended prefeasibility studies in Canada and Madagascar. The Zulti South mine expansion at RBM and exploration programme in Mozambique continue.

Following the announcement in 2011 of TiO_{2050} a proposed investment of C$800 million over five years to enhance mining and processing operations RTFT commenced investment in 2012 to upgrade its water filtration system at its steel plant, acquire a new crusher at its mining operation and begin a furnace rebuild.

The Bunder diamond project is currently more than halfway through its prefeasibility studies, which began in July 2010. These studies have confirmed the economic potential of the orebody and work is well under way to define the best development option. In January 2012, Rio Tinto

received a Letter of Intent from the Government of Madhya Pradesh to issue the mining lease for Bunder, following approval in principle from the Government of India.

During 2012, the Simandou iron ore project in Guinea also moved within Diamonds & Minerals, as it remains the responsibility of the group s new chief executive, Alan Davies, appointed in September. Simandou is a key pillar in Rio Tinto s long-term growth strategy, involving one of the largest known undeveloped iron ore resources in the world. The concession will enable the development of the largest mine and infrastructure project ever undertaken in Africa. This will include the progressive development of a 95 million tonne per annum mine, a 650-kilometre trans-Guinean railway and a new deep-water port.

The project is adopting a stage gate approval process allowing for studies to be finalised in parallel with early works, and for investment to be made in line with Government of Guinea approvals and financing processes.

The year saw significant progress, with Rio Tinto and Chinalco s listed subsidiary, Chalco, completing the formation of the Simandou Joint Venture for the development and operation of the project. In June, the project committed a further investment of US$1 billion (Rio Tinto share: US$501 million) for detailed design studies, and early works and long-lead items, primarily for developing the rail and port infrastructure.

Rio Tinto, with the support of Soguipami, the State Mining Company, submitted the Social and Environmental Impact Assessment to the Government of Guinea for review and approval. The Republic of Guinea also issued a presidential decree declaring the Simandou infrastructure a Project of National Interest (PIN) in October 2012, protecting the area of land needed to develop the rail and port infrastructure from any acquisition or development by third parties.

Outlook

Diamonds & Minerals businesses serve a range of different industries, but are linked through their track record of creating and defining new and profitable markets for their products. Demand softened in these markets in 2012 in response to broader economic trends, and the outlook for 2013 remains uncertain. However, the medium- to long-term outlook continues to be positive across all products as urbanisation and rising standards of living drive higher levels of demand.

In the borates marketplace, RTM will seek to capture profitable growth in emerging economies and maintain its position in its established markets. Planned supply chain improvements will facilitate speed and flexibility in shifting supply to promising sectors and regions. 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.

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. In response to current weak demand and in order to reduce operating costs, RTIT is taking action at a number of its operations. RBM will place its zircon and rutile processing operations on care and maintenance, while maintaining production at the core ilmenite mining and smelting operations. RTFT is taking its upgraded slag (UGS) production facility temporarily offline.

The medium- to long-term fundamentals for the diamond industry are positive and expected to support sustainable future price growth. The global mineral reserve base is steadily declining, compounded by limited exploration investment and success, and expected reductions in supply over the medium to longer-term. Demand in India and China is expected to continue to grow, and to represent nearly 50 per cent of global diamond consumption by 2020.

Demand in mature markets is expected to grow in line with GDP.

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Energy

Financial performance

	2012 US$ million	2011 US$ million
Revenue	**5,783**	7,003
Operating cash flow	**724**	2,019
Underlying earnings	**283**	1,074
Capital expenditure	**1,819**	1,327
Net operating assets	**6,996**	8,164

Strategy and strategic priorities

The Energy product group has a mix of assets in its portfolio and remains focused on safely supplying the world s growing energy needs through the sustainable development and operation of large-scale, long-life, low-cost mines.

In light of market conditions for coal and uranium, the high-cost operating environment in eastern Australia and infrastructure constraints in Mozambique, the Energy group is undertaking a review of the optimal growth profile for all its business units.

The Energy product group is focused on:

- Remaining flexible to respond to the impacts of external factors such as global economic volatility and commodity price fluctuations.
- Increasing productivity and operational performance in all business units, as well as reducing costs, to increase profitability in the near-term, while positioning the group to meet forecast long-term demand for coal and uranium.
- Maintaining strong relations with customers in expanding energy export markets, particularly in Asia.

Safety

The Energy product group aims to achieve the goal of zero harm by fostering a culture where employees and contractors have the knowledge, skills and desire to work safely at all times. In 2012, this commitment was demonstrated with Mount Thorley Warkworth named joint winner of the Rio Tinto Chief Executive Safety Award. Mount Thorley Warkworth was recognised for the passion of its senior leaders to build a safe and highly engaged workforce including seamless inclusion of contractors within the site s safety culture and the rigour with which Rio Tinto s safety systems and standards are applied. In 2012, Energy s all injury frequency rate was 0.66 compared with 0.80 in 2011, which was reflective of lower injury rates across all its business units. In addition, core fatality prevention processes including thorough investigation of significant potential incidents and active management of critical operational risks were further entrenched in the way the group works.

Greenhouse gas emissions

To date, Rio Tinto has spent more than US$100 million on research and development into technologies that will reduce emissions from coal-fired industries. This investment is necessary because all forecasts point to coal continuing to play a significant role in the global energy mix, but in an increasingly carbon-constrained environment. In 2012, the Energy group launched a three-year, A$6 million sponsorship of The Otway Project in Victoria, Australia s first industrial-scale demonstration of geological carbon dioxide storage and research. Combined with work at the University of Melbourne, the Energy group is helping to create a world-class hub for research into this important technology. In 2012, Energy s Australian coal operations implemented a new industry methodology at its New South Wales mines to more accurately estimate fugitive emissions from coal extraction, instead of using the default emission factor. In 2012, greenhouse gas emissions for the Energy group remained steady at approximately 4.3 million tonnes of carbon dioxide equivalent.

Review of operations

After a period of robust earnings following the global financial crisis, the performance of the Energy product group declined in 2012 due to lower prices for coal and uranium, a strong Australian dollar and escalating input costs.

All Energy businesses reacted swiftly to this challenging economic environment by implementing plans to address declining productivity and the sharp rise in operational costs. An impairment charge of US$2.86 billion post-tax was also recognised relating to Energy s coal business in Mozambique (refer to next page for explanation).

Rio Tinto Coal Australia (Rio Tinto: 100 per cent)

Rio Tinto Coal Australia (RTCA) manages the group s Australian coal interests. These include the Blair Athol (Rio Tinto: 71.2 per cent), Clermont (Rio Tinto: 50.1 per cent), Hail Creek (Rio Tinto: 82 per cent) and Kestrel (Rio Tinto: 80 per cent) coal mines in Queensland. RTCA also manages the Energy product group s coal mines in New South Wales, which are Hunter Valley Operations (Rio Tinto: 80 per cent), Bengalla (Rio Tinto: 32 per cent), Mount Thorley (Rio Tinto: 64 per cent) and Warkworth (Rio Tinto: 44.5 per cent).

Coal & Allied is 80 per cent owned by the Rio Tinto Group and 20 per cent owned by Mitsubishi Development. Coal & Allied also has a 36.5 per cent interest in Port Waratah Coal Services which operates the Kooragang and Carrington coal port terminals.

Australian coal production increased by eight per cent in 2012 compared to 2011 due to the completion of brownfield expansions in the Hunter Valley and the continued ramp-up of the Clermont Mine in Queensland. This was achieved despite the impacts of wet weather in eastern Australia in the first half of 2012, and carry-over effects from a shortage of explosives in New South Wales in the fourth quarter of 2011. Net earnings of US$402 million represent a 68 per cent decrease from 2011, due largely to lower prices for all coal types, the continuing strength of the Australian dollar, and higher input costs.

Coal production is forecast to increase again in 2013 through the realisation of benefits from the business-wide debottlenecking and asset management programme, the ongoing ramp-up of the Clermont Mine and first coal from the Kestrel Mine Extension. The production increase through these activities is forecast to more than offset the impact of closure of the Blair Athol Mine in central Queensland which produced its last coal in November 2012. Over nearly three decades, Blair Athol Mine produced close to 250 million tonnes of thermal coal, and at its peak was Australia s largest exporter of thermal coal. Its infrastructure facilities are now being used by the nearby RTCA-managed Clermont Mine, which opened in 2010.

In response to increased community concern regarding impacts from mining in the Hunter Valley, RTCA has made significant improvements to both operational and rehabilitation practices. Key initiatives include purchasing

noise-attenuated heavy mobile equipment and retrofitting existing fleet, and the use of real-time monitoring to modify operations in response to environmental conditions.

Energy Resources of Australia (Rio Tinto: 68.39 per cent)

Energy Resources of Australia (ERA) is a publicly listed company. Since 1981, ERA has mined ore and produced uranium oxide at its Ranger open pit mine, 260km east of Darwin in the Northern Territory.

ERA also holds title to the adjacent Jabiluka mineral lease, which is under a long-term care and maintenance agreement. Ranger and Jabiluka are surrounded by, but remain separate from, the World Heritage listed Kakadu National Park. ERA s operations are subject to stringent environmental requirements and governmental oversight.

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Ranger mine finished open-cut mining in December 2012 after 31 years. Uranium production will continue by processing previously stockpiled lower grade material while studies proceed to assess the feasibility of underground operations at Ranger.

In January 2013, a suite of agreements covering the Ranger Project Area were executed by ERA, the Mirarr Traditional Owners, the Northern Land Council and the Commonwealth Government.

Key features of the agreements include the Mirarr Traditional Owners receiving an increased share of the financial benefits from the Ranger mine, the creation of a regional Sustainability Trust which will deliver social initiatives in the local region, and an agreed approach to increasing opportunities for local Aboriginal participation in business development, training and employment.

The finalisation of these agreements is a significant achievement and reflects a strengthening in the relationship between ERA and the Gundjeihmi Aboriginal Corporation representing the Mirarr Traditional Owners.

Rio Tinto Coal Mozambique (Rio Tinto: 100 per cent)

Rio Tinto Coal Mozambique (RTCM) manages the Zambeze Project (100 per cent); Tete East Project (100 per cent); Benga Mine (65 per cent); and the Zululand Anthracite Colliery (74 per cent).

RTCM holds mining and exploration licences in the Moatize Basin in the Tete province of Mozambique. The Benga Mine was officially opened in May 2012 with first coal exported in June 2012. An impairment charge of US$2.86 billion post-tax was recognised relating to Energy s coal business in Mozambique. The development of infrastructure in Mozambique to support the undeveloped coal asset is more challenging than initially anticipated which, combined with a downward revision to estimates of recoverable coking coal volumes, has led to a reassessment of the overall scale and ramp up schedule of RTCM and consequently to the assessment of its fair value less costs to sell (FVLCS).

Benga Mine commercial production in 2012 was 460 thousand tonnes. Near-term sales volumes will reflect the availability of rail and port capacity.

Rössing Uranium (Rio Tinto: 68.58 per cent)

Rössing Mine is located near Arandis in Namibia s Erongo Region. Improving costs and efficiencies continued to be a focus at Rössing in 2012. Benefits from the business improvement strategies that were initiated in 2011 are now being realised and this work will continue in 2013. Rössing is evaluating options to expand operations and extend the mine life beyond 2023.

Rio Tinto acquired its interest in Namibia-based Rössing Uranium Limited (Rössing) in 1970. The Iranian Foreign Investments Company (IFIC) acquired its original minority shareholding in Rössing in 1975. IFIC s interest predates the establishment of the Islamic Republic of Iran and the U.S. economic sanctions targeting Iran s nuclear, energy and ballistic missile programs. IFIC acquired and continues to own a minority shareholding in Rössing in accordance with Namibian law.

Rössing is neither a business partnership nor joint venture between Rio Tinto and IFIC. Rössing is a Namibian limited liability company with a large number of shareholders, including Rio Tinto with 68.7 per cent, IFIC with 15.3 per cent, the Industrial Development Corporation of South Africa with 10 per cent, local individual shareholders with a combined interest of 3 per cent and the Government of the Republic of Namibia with 3 per cent but with an additional 51 per cent vote at a general meeting of Rössing on matters of national interest.

As a shareholder in Rössing, Rio Tinto has no power or authority to divest IFIC s holding in Rössing. However, Rössing and the Namibian Government have taken several recent steps to limit IFIC s future involvement in Rössing.

On 1 October 2010, Namibia reported to the United Nations, pursuant to Article 31 of the United Nations Security Council Resolution 1929 (UN SCR 1929), that it had reached an agreement with the Islamic Republic of Iran that IFIC will not participate in any future investments nor will it acquire any further shares in Rössing. It was also agreed that the Government of Iran will not acquire interests in any commercial activity in Namibia involving uranium mining, production, or use of nuclear materials and technology, as required under UN SCR1929, until such time as the United Nations Security Council determines that the objectives of the Resolution have been met.

The Rössing board also took steps in 2012 to terminate IFIC s involvement in the governance of Rössing. As a shareholder in Rössing, IFIC was entitled under Namibian law to attend general meetings of Rössing. IFIC was previously represented on the board of Rössing by two directors. While this level of board representation did not provide IFIC with the ability to influence the conduct of Rössing s business on its own, the Rössing board nonetheless determined that, in light of international economic sanctions, it would be in the best interest of Rössing to terminate IFIC s involvement in board activity. Therefore, on 4 June 2012, at the annual general meeting of Rössing, the shareholders of the company, including Rio Tinto, voted not to re-elect the two IFIC board members. This ended IFIC s participation in Rössing board activities. IFIC accordingly is not represented on the Rössing board, nor does it have the right to attend board meetings or receive any board information

Dividends:

While IFIC is entitled to its pro rata share of any dividend that the majority of the board may declare for all shareholders in Rössing, IFIC has not received such monies since early 2008. Simply by maintaining its own shareholding in Rössing, Rio Tinto is not engaging in any activity intended or designed to confer any direct or indirect financial support for IFIC. Further, the Rössing board determined no dividends will be paid for the year 2012.

Uranium off-take and technology:

Rössing is the world s third largest uranium mine. It sells approximately 40 percent of its uranium to U.S. power companies and most of the remainder to Canada and other key U.S. trading partners in Europe and Asia. As a minority shareholder, IFIC has no uranium product off-take rights. Neither IFIC nor other Government of Iran entities have any supply contracts in place with Rössing and receive no uranium from Rössing. IFIC also does not have access to any technology through its investment in Rössing or rights to such technology.

While Rio Tinto does not view itself as actively transacting or entering into business dealings with an instrumentality of the Government of Iran, this information has been provided to ensure transparency regarding the passive, minority shareholding in Rössing currently held by the IFIC. Rio Tinto has disclosed the IFIC shareholding matter to the United States Government and has periodically updated the U.S. Department of State as to the same.

Development projects

Rio Tinto completed the acquisition of Hathor Exploration, a junior Canadian uranium exploration company with assets in the Athabasca Basin region of Saskatchewan, in January 2012. The new entity was renamed Rio Tinto Canada Uranium (RTCU).

Its assets give the Energy product group access to a significant high-grade uranium deposit and further highly prospective exploration tenements in an area of Canada that currently supplies approximately 20 per cent of global uranium. RTCU s Roughrider Project is located in an area that hosts all of Canada s producing uranium mines.

Rio Tinto has commenced an environmental baseline programme for the Roughrider Project and engagement with local communities and stakeholders is also well under way. Rio Tinto is continuing to work with the governments of Saskatchewan and Canada to promote the growth of the uranium mining industry.

In Queensland, RTCA s Kestrel Mine Extension project is well advanced and scheduled to start production in mid-2013. The project will incrementally increase production by one million tonnes per annum, extend the life of the current mine to 2032 and reduce unit operating costs.

In Mozambique, work to refresh the development strategy is being expedited in light of the non-cash impairments announced in January 2013. The Energy product group continues to engage with the Government of Mozambique on a range of transport infrastructure options, the success of which remains the key to unlocking the full value of coal tenements in the Moatize Basin.

At ERA, the Ranger 3 Deeps orebody contains an estimated 34,000 tonnes of uranium oxide making it one of the most significant recent uranium discoveries anywhere in the world. Construction of a A$120 million exploration decline started in May 2012 with exploration drilling expected to commence in Q2 2013.

Following a successful exploration programme, Rössing Uranium is considering mining the Z20 orebody. In order to access the orebody, an infrastructure corridor would need to be established linking Z20 to the existing Rössing mine.

Outlook

With European and American economies continuing to experience low-growth conditions, subdued prices for coal and uranium are expected to continue in the short to medium term. Notwithstanding the near-term outlook, long-term demand for coal and uranium is expected to remain strong.

Under even the most ambitious climate change policy scenarios, Rio Tinto expects demand for energy to increase significantly with future global growth dominated by Asia. The International Energy Agency s most recent scenario shows China alone representing 43 per cent of global energy growth over the period 2010 to 2020. In the same scenario in the period 2010 to 2035, Asia accounts for 67 per cent of global growth, with India and other countries accelerating as China s growth profile starts to flatten.

Many countries seek a diversified energy mix to safeguard energy security, while looking to minimise costs and manage the various environmental impacts of energy use including carbon emissions. This challenging three-way balance means that coal will continue to be an important baseload fuel for decades to come and nuclear power will provide additional energy security with low emissions. Similarly, global steel demand is expected to grow at two per cent per annum to 2050, underpinning the demand for high-quality metallurgical coal.

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Iron Ore

Financial performance

	2012 US$ million	2011 US$ million
Revenue	**24,279**	29,475
Operating cash flow	**15,827**	21,778
Underlying earnings	**9,242**	13,267
Capital expenditure	**7,149**	4,004
Net operating assets	**21,068**	12,531

Strategy and strategic priorities

The Iron Ore product group s strategy is to:

- Create and protect shareholder value by maximising the return from existing assets and building value through appropriate project developments.
- Implement value-generating major expansion programmes while maintaining production at nameplate capacity.
- Maintain close control of capital and operating costs to protect margins, achieving savings through more efficient processes and reducing support and services costs.
- Continue to develop, and benefit from, technology and innovation to deliver supply chain efficiencies, reduce or maintain costs, and maximise underlying profit.
- Capitalise on its position as the leading iron ore supplier close to the world s largest, fastest-growing markets.
- Maximise shareholder returns by applying a value-in-use focus to its portfolio marketing strategy across its suite of products.

Safety

Following the three fatalities that regrettably occurred in 2011, a comprehensive examination of Iron Ore s approach to safety was launched. This resulted in key safety improvement initiatives that were implemented in 2012. Integral to improved performance will be the strong commitment to safety improvement at all levels of the organisation and a focus on critical risk management, safety leadership, employee development, hazard awareness and safety systems

simplification.

Critical risk monitoring programmes continue to be enhanced, and include increasing leadership capability and accountability. Initiatives designed to comprehensively reduce Iron Ore s overall risk profile included the phased introduction of a safer 5-star ANCAP

(Australasian New Car Assessment Program) rated light vehicle fleet and the implementation of the Nine Lifesaving Commitments hazard awareness programme.

Iron Ore maintained a major focus on health issues, particularly emerging issues impacting on the mental health of its workforce. This included embedding a mental health strategy with a focus on depression.

In 2012, the Iron Ore group s all injury frequency rate was 0.74, compared with 0.65 in 2011. Several significant potential incidents were also recorded in 2012. These shortcomings highlighted the need to embed better safety programmes and improvement initiatives throughout 2013.

Greenhouse gas emissions

A number of measures were implemented during the year to ensure that Rio Tinto s iron ore business applied best practice to its environmental performance. From a regulatory perspective, several programmes produced greenhouse gas (GHG) improvements. All federal government requirements for the National Greenhouse and Energy Reporting System and Energy Efficiency Opportunities Act were met. Pilbara operations also produced savings of 479 TJoules (1.4 per cent of the total energy footprint for the iron ore business). The Iron Ore group s total greenhouse gas emission intensity has improved 4.1 per cent from 2008.

Review of operations

Iron Ore achieved its stated production target of 250 million tonnes in 2012, overcoming volatile weather and market challenges along with a fast-tracked expansion schedule to increase overall group production to 253 million tonnes. Rio Tinto s share of production was 198.9 million tonnes, a 3.7 per cent increase over the previous year.

This evidenced a great recovery from what was a particularly difficult first quarter, when the seasonal weather conditions in the Pilbara produced three tropical cyclones. However, satisfactory operating performance was maintained, with inland mining and in-load facilities continuing to operate in a limited but functional capacity throughout the events.

The second half in particular demonstrated the integrated Pilbara system s enhanced operational efficiency, with operational capacity re-rated at 237 million tonnes per year (Mt/a) in November with minimal capital investment. The business set, and met, the challenge of reaching a 260Mt/a run-rate towards the end of the year.

As in 2011, a volatile iron ore market produced wide and rapid swings in spot prices, across which most contract prices were based, highlighting the sales and marketing team s sustained achievement in placing tonnes to the best effect. Relevant index prices reached higher than US$150 per tonne and as low as around US$80 per tonne, before settling in the US$120-130 range through the fourth quarter as demand recovered and stabilised. The dynamic nature of the market was highlighted with broad variations in customers responses to peaks and lows in demand, resulting in fragmented price referencing models across major markets.

Marketing strategy remained focused on achieving high recognition for the superior value-in-use of Rio Tinto s iron ore products, matching them with particular markets where optimal value could be realised. Despite the volatile conditions, sales increased each quarter through the year.

Operational improvement throughout the year was directed to achieving productivity gains, particularly through minimising or eliminating bottlenecks across the Pilbara rail network. Additional sidings were constructed to reduce delays.

A US$518 million investment (Rio Tinto share US$478 million) was announced to reinstate Iron Ore s AutoHaul automated train programme. Scheduled for completion in 2015, this will result in the world s first automated long-distance heavy-haul rail network. AutoHaul will enable Rio Tinto to expand capacity without making a substantial investment in additional trains. The programme involves a number of safety initiatives to ensure current safety levels are not compromised.

The year s operational efficiency gains often involved small but valuable improvements in asset deployment. For example, two additional ore cars were added to all 234-car trains, increasing annual ore throughput capacity by approximately 500,000 tonnes.

Rio Tinto s longstanding commitment to the Mine of the Future programme was reflected in a number of decisions, leading towards the first fully autonomous large-scale mining operation in the Pilbara. The Operations Centre (OC) in Perth has become the nerve centre for the Pilbara business. Most management and oversight functions formerly based in the Pilbara have been brought into the OC. Construction began on Stage 3 of the OC, which will enable more roles and responsibilities to be based there in 2013.

The five original Autonomous Haulage System (AHS) driverless trucks were transferred from West Angelas mine to Yandicoogina, where they were joined by five new autonomous trucks. They now comprise the entire fleet in the Junction South East pit, hauling about 30 million tonnes of high-grade ore a year. They will be progressively joined by 150 more AHS trucks over the next three to four years, to be initially deployed at the expanded Nammuldi mine and the new Hope Downs 4 mine.

The 40-year-old Cape Lambert power station was decommissioned during 2012 and dismantling commenced. The HIsmelt® plant in Kwinana has also been decommissioned and preparation for dismantling and potential sale of some equipment has begun.

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The ongoing challenge to recruit the workforce of the future was met with a number of activities including commencement and consolidation of regional fly-in fly-out (FIFO) hubs, introduction of the national FIFO programme, recruitment of record numbers of apprentices and graduates, utilisation of five dedicated regional training facilities, and the funding of 43 mining-related scholarships to the University of Western Australia.

Negotiations for participation agreements with Traditional Owners continued, augmenting the five agreements reached in 2011. This featured a strong commitment to finalising regional standards, incorporating mutual obligations to deliver commitments on employment, financial compensation, education and training, heritage surveys and practices, environmental care and land use.

Aboriginal employment remained a key priority of the Pilbara business, and the year saw a steady improvement in workforce numbers, boosted by the significant addition of contractors associated with the expansion programme. At the end of the year, total Aboriginal employment in the Western Australian iron ore business stood at more than 1,660 workers. The commitment to fostering Aboriginal business produced outstanding achievements. In the last three years more than A$1.6 billion in Pilbara contracts has been awarded to Aboriginal joint venture and direct contracts.

A number of regulatory and administrative arrangements were also resolved including the government approval of stage two for the Wickham residential sub-division supporting the Cape Lambert expansion.

Brockman 4 phase 2 expansion was successfully commissioned, lifting mine annual capacity to 40 million tonnes, as was the Hamersley Agricultural Project, using surplus water from the Marandoo mine extension to develop a year-round crop-growing capability.

In September, the High Court of Australia overturned earlier decisions by the Federal Court not to declare the Hamersley and Robe rail lines open for third-party access. The Australian Competition Tribunal reconsidered the matter, and, in February 2013, ruled that the lines not be opened up for other users.

The Iron Ore Company of Canada (IOC, Rio Tinto share 58.7 per cent) enjoyed a solid year, recovering from a difficult first few months to produce 9.7 million tonnes of pellets and 4.4 million tonnes of concentrate for sale. Sales were 9.9 million and 4.2 million tonnes respectively. During the year a number of improvements helped achieve efficiency gains, notably in the mobile equipment and operations sectors. A number of challenges remain as a result of the Concentrate Expansion Project (CEP) first stage, still in commissioning, which impacted concentrate production. Pellet production was stable through the year.

In March, IOC successfully secured a six-year labour contract with its unions without disruption. This agreement will enable IOC to be competitive, attract the necessary skills, and reward, attract and retain the right people to generate greater value.

During the year, the Dampier Salt business moved within the Diamonds & Minerals organisational structure, and is reported on page 27.

Development projects

A number of incremental improvements to the Pilbara integrated network, largely involving debottlenecking, resulted in a re-rating of the system s current annual capacity in November 2012 to 237 million tonnes with minimal capital investment.

The expansion of Pilbara annual capacity to the revised target of 360 million tonnes remained on track in 2012, following a two-staged investment process and a successful year of project execution. All approvals for the expansion to 290 million tonnes capacity are in place, and all rail and port approvals for the 360 million tonne stage are completed except for immediate rail links to new mine developments still in study phase.

In February, a US$3.4 billion (Rio Tinto share US$2.9 billion) investment was approved, comprising US$2.2 billion to extend the life of the Nammuldi iron ore mine by 14 years and US$1.2 billion for early works

at Cape Lambert port and rail expansions. These early works include replacing an ageing car dumper with a new dual car dumper, increasing the port s annual capacity by 20 million tonnes by 2015, and aligning in-loading capacity with current ship-loading capacity.

This was followed in June with a US$3.5 billion investment (Rio Tinto share US$2.0 billion), providing for an additional two berths and significantly increased rail capacity to support it.

Investment of US$570 million was allocated to construct a new energy-efficient gas-fired power station at Cape Lambert, producing significantly lower carbon emissions than its decommissioned predecessor.

A further US$1.7 billion (Rio Tinto share 100 per cent) of largely sustaining capital expenditure was approved to extend the life of the Yandicoogina mine to 2021 and boost nameplate capacity from 53Mt/a to 56Mt/a. A wet processing plant will also be added in order to maintain product specification levels and provide a platform for future potential expansion.

This is the largest integrated mining project in Australian history, and is on track to complete the announced schedule:

1. 225Mt/a by Q1 2011 Dampier port debottlenecking (complete)
2. 230Mt/a by end Q1 2012 Dampier port incremental (complete, re-rated to 237Mt/a in November 2012)
3. 290Mt/a by Q3 2013 Cape Lambert 53Mt/a increment (in implementation)
4. 360Mt/a in H1 2015 Cape Lambert 50Mt/a increment and car dumper replacement 20Mt/a increment (infrastructure approved)

The milestone of 290Mt/a capacity was brought forward to Q3 2013, delivering greater shareholder value more quickly.

The planned installation of a wet plant at Brockman 4 was removed, saving US$1 billion in capital expenditure. Through such measures, capital intensity has been kept at the mid-US$150s per tonne, despite rising costs and currency movements.

In response to the increased demand for iron ore from traditional and new markets, IOC re-launched the CEP that will increase capacity from 18 million tonnes of iron ore concentrate per year to 23 million tonnes. The first stage of the CEP, comprising the construction of a new primary ore crusher, a 6km overland conveyor and a fourth autogenous grinding line to increase primary processing capacity, is being commissioned and will ramp up towards full production in 2013.

The second stage involves the addition of two new spiral lines to the gravity separation circuit which was being delivered to operations from late 2012. This is planned to be followed by the installation of a new magnetite grinding and processing circuit scheduled for commissioning by the end of 2013.

Further proposed expansions are being progressed through study stages.

During 2012, the Simandou iron ore project in Guinea (covered on page 27) moved within Diamonds & Minerals, as it remains the responsibility of that group s chief executive, Alan Davies, appointed in September.

Outlook

Market softening since 2011 was a result of destocking following lower than expected Chinese steel demand, which in turn led to the final quarter rebound to levels above US$120 per tonne, moving higher into the new year. With European and American economies still suffering poor growth conditions, the market will continue to show volatility in the short to medium term.

Notwithstanding this volatility, Rio Tinto is confident of the strength of the long-term demand outlook for iron ore. Increasing global wealth is leading to billions of people moving through steel intensive phases of development. Global steel demand is expected to grow at two per cent per annum to 2050, driven by China out to 2030, with India and other South East Asian countries offsetting a potential flattening in Chinese demand growth thereafter.

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Business Support & Operations

At the end of 2012*, the Business Support & Operations (BS&O) group comprised Rio Tinto s Exploration business (see below), as well as Business Evaluation, Economics & Markets, Group Risk, Global Business Services (Information Systems & Technology, Procurement, Shared Services and Group Property), Rio Tinto Japan and Rio Tinto Singapore Holdings. From an administrative point of view, the Group Audit & Assurance function sat within BS&O, but operates independently of management under a mandate approved by the Audit and Sustainability committees. (see pages 75 and 77).

Pacific Aluminium and Other Aluminium were also part of BS&O; these comprise non-core bauxite, alumina and aluminium assets that, in 2011, Rio Tinto announced its intention to divest or close. In March 2012, the Lynemouth aluminium smelter in the UK was closed and is currently being decommissioned. In December, Lynemouth Power Station was sold to German energy company RWE. During 2012, Rio Tinto sold the Specialty Alumina business (four plants in France and Germany) to funds affiliated to H.I.G., and Alcan Cable which has operations in North America and China to General Cable.

In 2012, BS&O contributed 41 per cent of Rio Tinto s total greenhouse gas (GHG) emissions, compared with 44 per cent in 2011. Pacific Aluminium accounted for 29 per cent of the Group s total GHG emissions in 2012, and Other Aluminium accounted for 11 per cent. BS&O s all injury frequency rate improved to 0.60 in 2012, from 0.69 in 2011.

Exploration

The Group has had a sustained commitment to exploration since 1946 and considers exploration to be one of its leading capabilities. Fundamental to the exploration strategy is a focus on Tier 1 resources: the largest, lowest-cost resources that are profitable at all parts of the commodity cycle. Established Group operations, such as Weipa, the Pilbara and Rössing, were Tier 1 greenfield discoveries by Rio Tinto where value is still being realised after more than 40 years of production.

The Exploration group conducts both greenfield and brownfield exploration programmes and also supports business development groups in evaluating merger and acquisition opportunities. Greenfield exploration aims to establish new operating business units, involving geographic or commodity diversification away from existing Group operations. Brownfield exploration is directed at sustaining or growing existing Group businesses.

This table shows Exploration s Tier 1 discoveries since 2002:

Year	Discovery	Commodity	Location
2002	Resolution	Copper	US
2004	Simandou	Iron ore	Guinea
2005	La Granja	Copper	Peru
2005	Caliwingina	Iron ore	Australia
2008	Sulawesi	Nickel	Indonesia
2008	Mutamba	Titanium	Mozambique
2009	Jadar	Lithium/ borates	Serbia

2011	Amargosa	Bauxite	Brazil

At the end of 2012, the Exploration group was active in 20 countries and assessing opportunities in several others for a range of commodities including iron ore, copper, bauxite, coking coal, nickel, potash, uranium and mineral sands. Exploration activities in China were conducted through CRTX, a newly established joint venture between Chinalco and Rio Tinto. Responsibility for diamond exploration projects in Africa, Canada and India was handed over to the Diamonds & Minerals group late in 2012.

Strategy and strategic priorities

The goal of Exploration is to create value for Rio Tinto through the discovery or acquisition of Tier 1 resources that can increase future value. To pass modern community, sustainability and investment hurdles, the exploration process can take ten to 20 years from target generation to development decisions. Exploration programmes are therefore prioritised

on a global basis so that only the most attractive opportunities are pursued. Priorities are determined in consultation with the product groups, with decisions driven not by location or choice of commodity but by the quality of each opportunity.

The Exploration group is organised geographically into regional multi-commodity teams, with head offices in London, Salt Lake City, Brisbane, Beijing and Singapore. This structure provides a global reach and a local presence that allows for effective community engagement and development of Rio Tinto s social licence to operate.

Safety

The Exploration group s all injury frequency rate improved from 1.52 at the end of 2011 to 1.41 at the end of 2012. Work to improve safety performance includes an ongoing safety diagnostic process to drive operational performance improvements through 2013.

Performance

An Order of Magnitude resource study programme over the Saskatchewan potash project in Canada (a joint venture with North Atlantic Potash Inc., a subsidiary of JSC Acron) neared completion. This phase of the resource study programme will be finalised during 2013, and accountability for the project will be handed over to the Diamonds & Minerals product group.

In the US an extensive drilling programme at Tamarack, Minnesota, has indicated potential for a major nickel-copper-precious metal resource. This will advance to an Order of Magnitude study in 2013.

Drilling at the Roughrider uranium project in Saskatchewan, Canada, has outlined extensions to the known mineralisation at the Far East Resource and ongoing exploration has identified new targets for follow-up.

In the brownfield environment, Exploration is close to completing Order of Magnitude studies over coking coal projects at Mt Robert, Elphinstone and Valeria in the Bowen Basin, Australia. Drilling at Goethite Bay and Carol Lake in the orbit of the Iron Ore Company of Canada identified potentially significant iron ore mineralisation with favourable metallurgical characteristics. In Namibia, a uranium mineralisation has been identified at Z20 on the Rössing mine lease and is being drilled out in greater detail.

Progress continued on the development of the VK1 airborne gravity gradiometer, with further test flying undertaken in 2012.

Gross cash expenditure on exploration and evaluation across all of Rio Tinto in 2012 was US$1,970 million, representing a US$533 million increase over 2011 gross expenditure of US$1,437 million (due to an increased share of evaluation costs at Oyu Tolgoi and ramp-up of a number of other evaluation projects). Gross expenditure was offset by US$494 million (pre-tax) proceeds from divestment of unrequired exploration assets. Of the 2012 total spend, US$234 million related to global Exploration group activity covering nine commodities across a range of greenfield and brownfield environments.

Outlook

In 2013, the Exploration group will be active in at least 20 countries exploring for a range of commodities in a variety of greenfield and brownfield environments. Maintaining a robust exploration pipeline by identifying and securing access to the best-quality opportunities will be a key enabler of long-term success and there will be particular focus on project generation in a number of key environments.

For 2013 the list of projects moving towards potential discovery includes:

Project	Commodity	Country	Stage
Bowen Basin	Coking coal	Australia	Order of Magnitude
Saskatchewan	Potash	Canada	Order of Magnitude
Amargosa orbit	Bauxite	Brazil	Project of Merit
Sanxai	Bauxite	Laos	Project of Merit
Tamarack	Nickel	US	Order of Magnitude

* As at 1 March 2013, BS&O was restructured, and its constituent businesses and functions now report into the chief financial officer, and the Organisational Resources and Legal, External & Regulatory Affairs functions.

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Technology & Innovation

Rio Tinto s Technology & Innovation group (T&I) collectively seeks to maximise total shareholder value by partnering with the business to provide technical insights in operational improvements, technical assurance, project delivery, and innovation. T&I s focus is on creating sustainable value by embedding fundamental changes in the way Rio Tinto operates.

T&I s gross cost in 2012 was US$415 million, compared with US$343 million in 2011 and US$213 million in 2010.

The total number of employees in T&I increased from 925 at year end 2011 to 1,031 at year end 2012.

Strategy and strategic priorities

T&I s strategy is to:

- Maintain and promote a safe working environment.
- Continue to embed operational improvements in business units.
- Maximise the contribution of technology to the Group s strategy of maximising shareholder value.
- Deploy technology solutions that increase value.
- Design and build valuable new investment projects.
- Position the Group to unlock orebodies that require innovative mining solutions.

Safety

T&I is committed to the safe operation of its facilities and to employee safety. The all injury frequency rate for T&I in 2012 was 1.57 compared to 2.57 in 2011. The improvement in the rate was primarily attributed to improvements in existing safety efforts as well as the addition of the Rio Tinto Alcan Major Projects group to T&I Project Development and Implementation.

Performance

Innovation

Innovation is the research and development group within T&I. Its focus is on developing radically innovative technologies that can address the significant challenges facing the mining industry and drive increased production,

efficiency and safety.

While Rio Tinto as a whole looks at continuous improvement, Innovation is focused on step-change technologies, including the Mine of the Future™ programme. The Mine of the Future™ programme is not a single mine site; it is an approach used across Rio Tinto to find advanced ways to find, extract, and process minerals from deep within the Earth while reducing environmental impacts and further improving safety.

The wealth of technical and project expertise within Innovation is leveraged through a network of key partnerships with organisations and institutions around the world providing a vast and interconnected group of world-class experts to generate solutions.

The output of this work is protected by an intense focus on competitive advantage and developing tailored intellectual property protection strategies for each programme of work.

Mineral Technology Services

Mineral Technology Services (MTS) comprises a team of technology professionals based in seven offices in North America, Australia, South Africa and the UK, who partner with Rio Tinto s business units in the delivery of large, measureable increases in earnings and value. MTS provides technical service in the areas of geology, mining, mineral processing, geotechnics, hydrometallurgy, process control and environmental management.

A key area of focus for MTS continues to be the Improving Performance Together programme launched in 2005. In 2012 the focus was aligning the work in processing, asset management and mining to provide support across the entire value chain with a focus on targeting the highest priorities for throughput, recovery and operating performance.

Mining and Asset Management Centre

The Asset Management Centre provides strategic direction on the effective selection and utilisation of the Group s equipment for mining and processing. Working with businesses, the centre supports asset improvement initiatives through the use of global metrics and benchmarking, standards and guidelines. The work also includes developing capability through competency frameworks and formal training to support sustainable improvement and standard business processes with fit-for-purpose technical operating systems.

The focus of the Surface Mining team is to establish leading practice and develop, share and implement Group-wide solutions in core mining production processes. Other Surface Mining initiatives include payload management, load and haul efficiency improvements, increased orebody recovery, improved stockpile management, drill and blast, and off-road tyre demand reduction.

Mining Technology also includes a Strategic Production Planning (SPP) team that works with business units to develop comprehensive plans and valuations of strategic development options. Results from SPP provide a logical resource development framework for more detailed studies and investment decision-making.

Project Development & Implementation

Project Development & Implementation (PDI) is responsible for the implementation and delivery of major capital projects. PDI is made up of a centralised Project Management Office (PMO) and Project Delivery Hubs which are aligned by geographic location or commodity. The PMO is responsible for developing, promoting and supporting the implementation of the processes, standards and tools to achieve repeatable project success. The hubs are responsible for the delivery of major capital projects in partnership with product groups and business units.

PDI is delivering a significant proportion of Rio Tinto s major projects within a newly developed Capital Projects Framework which is shaped around four key elements project portfolio planning and reporting, project governance, practices, and people.

Technical Evaluation Group

The Technical Evaluation Group (TEG) is a team of internal professionals responsible for rigorously reviewing all major project proposals to ensure Rio Tinto s Investment Committee is provided with independent technical assessments to support its decision-making.

Underground Technology Centre

The objective of the Underground Technology Centre is to create and develop a world-class team in technical aspects of underground mining that will provide Rio Tinto with a competitive advantage. The centre partners with the product groups on the technical aspects of design, construction and operation, including the delivery of fit-for-purpose technology.

Outlook

T&I will continue to maintain a culture that makes safety and safety improvements the highest priority. To support the business where technical expertise and external networks will have the largest benefit to Rio Tinto and its shareholders, T&I s focus in 2013 will be on four main areas: partnering with product groups and functions on operational improvement, the safe and efficient development and implementation of projects, the pursuit of the Mine of the Future™ programme and the development of innovative alliances and relationships, and technical assurance all of which will create competitive advantage for the Group. T&I is reviewing the Group s approach to due diligence and technical assurance processes.

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Financial review

2012 financial performance compared with 2011

In order to provide additional insight into the performance of our business, Rio Tinto presents underlying earnings.

2012 underlying earnings of US$9,303 million and net loss of US$2,990 million were US$6,246 million below and US$8,816 million below the comparable measures for 2011. The principal factors explaining the movements are set out in the table below.

Changes from 2011 to 2012	US$m	Underlying earnings US$m	Net earnings US$m
2011		15,549	5,826
Prices	(5,315)		
Exchange rates	154		
Volume increases	634		
Volume declines	(943)		
General inflation and energy	(270)		
Other cash costs	(304)		
Exploration and evaluation costs (including disposals of undeveloped projects)	80		
Non cash/interest/tax/other	(282)		
Total changes in underlying earnings[(a)]		(6,246)	(6,246)
Increase in impairment charges			(5,070)
Movement in gains and losses on consolidation and disposal of interests in businesses			660
Movement in exchange differences and gains on derivatives			610
Recognition of deferred tax asset following introduction of MRRT			1,130
Other movements			100
2012		9,303	(2,990)

(a) See note 2 on page 160 of the 2012 financial statements for a reconciliation of underlying earnings to net earnings.

Prices

The effect of price movements on all major commodities in 2012 was to decrease underlying earnings by US$5,315 million compared with 2011. Average prices declined from record highs experienced in 2011 for nearly all of Rio Tinto s major commodities, with the exception of gold which was up six per cent on 2011, and minerals (mainly borates and titanium dioxide feedstocks).

The average Platts price for 62 per cent Pilbara fines declined by 24 per cent compared with 2011. Copper prices were down ten per cent, aluminium prices averaged 16 per cent lower and molybdenum was 17 per cent lower.

Commodity prices and other drivers of sales revenue of individual product groups are discussed further in the section on pages 37 to 38.

Exchange rates

Compared with 2011, on average, the US dollar depreciated by one per cent against the Australian dollar but strengthened by one per cent against the Canadian dollar, by seven per cent against the euro and by 14 per cent against the South African Rand. The effect of all currency movements was to increase underlying earnings relative to 2011 by US$154 million.

Volumes

Volume increases enhanced earnings by US$634 million compared with 2011. These were achieved primarily in iron ore, where sales volumes rose three per cent due to increased capacity at the Pilbara ports, and at Escondida in line with higher ore grades. Volume declines lowered earnings by US$943 million compared with 2011, reflecting lower mill throughput and gold grades at Kennecott Utah Copper and no metal share from Grasberg.

Energy, other cash costs and exploration

Industry-wide cost pressures continued during 2012, in particular at some of the mining hotspots where Rio Tinto has significant operations, such as New South Wales, Queensland and the Pilbara region of Western Australia. Rio Tinto has a clear focus on cost control and is targeting more than US$5 billion of cumulative cash cost savings over the next two years.

Higher energy costs across the Group lowered underlying earnings by US$23 million compared with 2011. In 2012, many operations were impacted by higher fuel, diesel and power rates.

Higher other cash costs during 2012 decreased underlying earnings by US$304 million compared with 2011 due to a combination of fixed production cost inefficiencies associated with lower volumes due to grade, higher maintenance costs and, costs associated with operational readiness for the Pilbara expansion of iron ore production.

In 2012, evaluation work progressed at many of the Group s projects including the Resolution and La Granja copper projects and the Simandou iron ore project. Development costs relating to Simandou have been capitalised from 1 April 2012. During 2012, Rio Tinto divested various exploration properties, including interests in Extract Resources and Kalahari Minerals, resulting in net gains after tax on disposal of US$342 million for the Group. The impact from movements in exploration and evaluation expenditure net of gains realised from divestments was to increase underlying earnings by US$80 million compared with 2011.

Finance costs, tax, other

The effective corporate income tax rate on underlying earnings, excluding equity accounted units, was 30 per cent, unchanged from 2011. As in 2011, the effective corporate tax on net earnings, excluding equity accounted units, is significantly impacted by the impairment of goodwill, which is non-deductible for tax purposes.

Group net finance charges were US$124 million lower than in 2011, mainly reflecting an increase in capitalised interest.

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2011 financial performance compared with 2010

2011 underlying earnings of US$15,549 million and net earnings of US$5,826 million were US$1,562 million above and US$8,412 million below the comparable measures for 2010. The principal factors explaining the movements are set out in the table below.

Changes from 2010 to 2011	US$m	Underlying earnings US$m	Net earnings US$m
2010		13,987	14,238
Prices	6,675		
Exchange rates	(998)		
Volumes	(502)		
General inflation	(376)		
Energy	(249)		
Other cash costs	(2,096)		
Exploration and evaluation costs (including disposals of undeveloped projects)	(796)		
Non cash/interest/tax/other	(96)		
Total changes in underlying earnings[(a)]		1,562	1,562
Increase in impairment charges			(8,551)
Absence of gain on consolidation of Oyu Tolgoi LLC			(445)
Lower profits on disposal of interests in businesses			(7)
Lower loss after tax from discontinued operations			87
Deferred tax asset write-off			(342)
Movements in exchange differences and gain on derivatives			(486)
Other movements			(230)
2011		15,549	5,826

(a) See note 2 on page 160 of the 2012 financial statements for a reconciliation of underlying earnings to net earnings.

Prices

The effect of price movements on all major commodities in 2011 was to increase underlying earnings by US$6,675 million compared with 2010. Prices improved for nearly all of Rio Tinto s major commodities: copper prices were up 18 per cent and gold prices were up 29 per cent. Although aluminium prices averaged ten per cent higher than 2010 they fell back sharply in the last quarter of the year. Spot iron ore prices traded 15 per cent above 2010 levels but ended the year 25 per cent below where they started, given price weakness in the fourth quarter driven by Chinese destocking.

Exchange rates

There was significant movement in the US dollar in 2011 relative to the currencies in which Rio Tinto incurs the majority of its costs. Compared with 2010, on average, the US dollar weakened by 12 per cent against the Australian dollar and by four per cent against the Canadian dollar. The effect of all currency movements was to decrease underlying earnings relative to 2010 by US$998 million.

Volumes

Lower volumes were primarily driven by lower copper and gold grades at Kennecott Utah Copper, Escondida and Grasberg. This was partly offset by higher iron ore volumes in line with the Group s increased capacity at its Pilbara ports, despite the adverse weather conditions in the first half of the year. The net impact of volume movements was a decrease in underlying earnings of US$502 million relative to 2010.

Energy, other cash costs and exploration

Higher energy costs across the Group reduced underlying earnings by US$249 million compared with 2010. 2011 was impacted by the higher fuel, diesel and power rates affecting most operations. In 2010, Aluminium operations in the Saguenay were impacted by low snow and rainfall leading to reduced power generation and the need to purchase additional power from the provincial utility.

Higher other cash costs during 2011 decreased underlying earnings by US$2,096 million compared with 2010 due to a combination of higher input prices, fixed production cost inefficiencies associated with lower volumes due to weather events and grade, higher maintenance costs and costs associated with operational readiness.

Rising raw material and input prices decreased underlying earnings by US$514 million compared with 2010, particularly relating to coke, pitch and caustic prices in the aluminium businesses. In addition, underlying earnings were impacted by unit cost increases due to lower volumes caused by severe weather conditions (US$261 million) and lower grades (US$445 million), notably in the copper business. Additional costs of US$546 million were associated with a full year of operations at new mines and operational readiness preparations particularly in the Pilbara and Coal Australia. Other production and one-off costs lowered earnings by a further US$330 million.

In 2011, evaluation work progressed at many of the Group s projects, including the Resolution and La Granja copper projects and the Simandou iron ore project. Two undeveloped coal properties were divested in 2010 resulting in a US$229 million gain on disposal. The impact from higher exploration and evaluation expenditure combined with lower gains realised from divestments was to lower underlying earnings by US$796 million compared with 2010.

Finance costs, tax, other

The effective corporate income tax rate on underlying earnings, excluding equity accounted units, was 30.0 per cent compared with 27.9 per cent in 2010. The effective corporate income tax rate on net earnings, excluding equity accounted units was 49.1 per cent compared with 27.3 per cent in 2010. The increase was due to the goodwill impairment charge being non-deductible for tax purposes.

Group net finance charges were US$245 million lower than in 2010, mainly reflecting an increase in capitalised interest in 2011.

Exclusions from underlying earnings 2010-2012

Earnings contributions from Group businesses and business segments are based on underlying earnings. Amounts excluded from net earnings in arriving at underlying earnings are summarised in the discussion of year-on-year results below.

	2012 US$m	2011 US$m	2010 US$m
Impairment charges net of reversal	**(14,360)**	(9,290)	(739)

Gains and losses on consolidation and disposal of interests in businesses	**827**	167	619
Loss after tax from discontinued operations	**(7)**	(10)	(97)
Exchange differences and gains/ (losses) on derivatives	**553**	(57)	429
Deferred tax asset write-off	**(134)**	(342)	
MRRT	**1,130**		
Other exclusions	**(302)**	(191)	39
Total excluded in arriving at underlying earnings	**(12,293)**	(9,723)	251

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Financial review continued

2012

A pre-tax impairment charge of US$17,194 million, US$14,360 million post-tax, was recognised in 2012, of which US$12,643 million pre-tax, US$11,000 million post-tax, related to the Group s aluminium businesses (including Pacific Aluminium). The valuation of Rio Tinto s aluminium businesses for impairment testing is based on the Group s assessment of fair value less costs to sell (FVLCS). During 2012, aluminium prices deteriorated further with strong Australian and Canadian currencies, high energy and raw material costs, and high volumes of London Metal Exchange (LME) inventory continuing to exert pressure on current market values in the industry. As in 2011, given the prevailing conditions in the aluminium market, FVLCS does not include the full value of the Group s planned improvements in cash margins from its value enhancement programmes.

A post-tax impairment charge of US$2,860 million was also recognised relating to Rio Tinto Coal Mozambique (RTCM). The development of infrastructure in Mozambique to support the undeveloped coal asset is more challenging than initially anticipated which, combined with a downward revision to estimates of recoverable coking coal volumes, has led to a reassessment of the overall scale and ramp-up schedule of RTCM and consequently to the assessment of its FVLCS.

In addition, there were net post-tax impairments of US$460 million relating to the Group s Argyle diamond mine and US$40 million in other net impairments. An impairment review of Argyle was triggered by the announcement during the year of the Diamonds strategic review as well as changes to the forecast ramp-up date for the underground mine.

Movements in gains and losses on consolidation and disposal of interests in businesses relate primarily to a gain of US$965 million arising on consolidation of Richards Bay Minerals (RBM) and a US$167 million loss on consolidation of Turquoise Hill Resources Ltd.

A deferred tax asset of US$1,043 million was recognised in the first half of 2012 following introduction of the Minerals Resource Rent Tax (MRRT) on 1 July 2012. At 31 December 2012, this amount was US$1,130 million. The legislation, which applies to companies with iron ore and coal operations in Australia, allows a deduction against future MRRT liability based on the market value of past investments in these mining assets as at 1 May 2010. Accordingly, a deferred tax asset has been recognised to reflect the deductibility for MRRT purposes of the market value of these mining assets to the extent recovery is probable.

2011

A post-tax impairment charge of US$9,290 million was recognised in 2011, of which US$8,855 million related to the Group s aluminium businesses. Valuation of Rio Tinto s aluminium businesses for impairment testing was based on an assessment of FVLCS derived from discounted future cash flows. The impairment was largely a result of the economic environment and related market volatility in aluminium prices in the second half of 2011 leading to declines in market values for aluminium assets.

In addition, there were net post-tax impairments of US$344 million relating to the Group s diamond business and US$91 million in other net impairments.

Profits on the disposal of businesses in 2011 related principally to the sale of the Group s talc business and Colowyo mine.

The deferred tax asset write-off in 2011 of US$342 million followed a change in French legislation which restricted the utilisation of tax losses.

2010

Rio Tinto consolidated Oyu Tolgoi LLC on 15 December 2010 following the signing of a new agreement with Ivanhoe Mines. The US$445 million gain arising on consolidation represented the excess of the fair value ascribed to the Group s indirect share of the assets and liabilities of Oyu Tolgoi LLC over the historic cost of acquiring that share through its investment in Ivanhoe Mines.

The 2010 post-tax impairment charge of US$739 million related mainly to the Alcan Engineered Products businesses. The Group completed the divestment of 61 per cent of Alcan Engineered Products to Apollo Global Management, LLC and the Fonds Stratégique d Investissement on 4 January 2011.

Profits on the disposal of businesses in 2010 relate primarily to the sale of the Group s remaining 48 per cent interest in Cloud Peak Energy Inc.

Loss after tax from discontinued operations of US$97 million (inclusive of divestment costs) related to the completion of the disposal of Alcan Packaging global Pharmaceuticals, global Tobacco, Food Europe and Food Asia divisions to Amcor on 1 February 2010, and the Alcan Packaging Food Americas division to Bemis Company Inc. on 1 March 2010.

Net earnings and underlying earnings

Both net earnings and underlying earnings deal with amounts attributable to the owners of Rio Tinto. However, IFRS requires that the profit for the period reported in the income statement should also include earnings attributable to non-controlling interests in subsidiaries. The profit for the period is reconciled to net earnings and to underlying earnings as follows:

	2012 US$m	2011 US$m	2010 US$m
(Loss)/profit from continuing operations	**(2,997)**	6,775	15,195
Loss after tax from discontinued operations	**(7)**	(10)	(97)
(Loss)/profit for the year	**(3,004)**	6,765	15,098
Attributable to non-controlling interests	**14**	(939)	(860)
Attributable to owners of			
Rio Tinto (net (loss)/earnings)	**(2,990)**	5,826	14,238
Exclusions from underlying earnings	**12,293**	9,723	(251)
Underlying earnings attributable to owners of Rio Tinto	**9,303**	15,549	13,987

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Group financial results by product group 2012-2010

	2012 US$m	Restated[a] 2011 US$m	Restated[a] 2010 US$m
Iron Ore	**9,242**	13,267	10,313
Aluminium	**3**	442	611
Copper	**1,092**	1,932	2,530
Energy	**283**	1,074	1,187
Diamonds & Minerals	**119**	(162)	204
Other operations	**(528)**	(120)	237
Inter-segment transactions	**(8)**	40	(15)
Other items	**(698)**	(593)	(554)
Exploration and evaluation	**(97)**	(102)	(52)
Net interest	**(105)**	(229)	(474)
Group underlying earnings	**9,303**	15,549	13,987
Exclusions from underlying earnings	**(12,293)**	(9,723)	251
Net (loss)/earnings	**(2,990)**	5,826	14,238

(a) Following changes to Rio Tinto s management announced in July 2012, the Simandou iron ore project and Dampier Salt operations, previously reported within Iron Ore, are now reported within Diamonds & Minerals to reflect management responsibility. Amounts in prior periods have been reclassified accordingly.

Sales revenue

Prices

Commodity	Source	Unit	2012 US$	2011 US$	2010 US$
Average prices					
Iron ore 62% Fines FOB	Platts/Baltic Exchange Freight Rate	dmtu[a]	**1.96**	2.57	2.18
Aluminium	LME[b]	Tonne	**2,018**	2,395	2,173
Copper	LME	Pound	**3.61**	4.00	3.40
Gold	LBMA	Ounce	**1,669**	1,571	1,222
Molybdenum	Metals Week: quote for dealer oxide price	Pound	**14**	16	16
Closing prices (quoted commodities only)					

Aluminium	Tonne	**2,041**	1,970	2,459
Copper	Pound	**3.65**	3.43	4.44
Gold	Ounce	**1,675**	1,575	1,410
Molybdenum	Pound	**13**	16	16

(a) Dry metric tonne unit.
(b) LME cash price.
The above table shows published prices for Rio Tinto s commodities for the last three years where these are publicly available, and where there is a reasonable degree of correlation between the published prices and Rio Tinto s realised prices. The prices set out in the table are the averages for each of the calendar years 2010, 2011 and 2012.

The Group s sales revenue will not necessarily move in line with these published prices for a number of reasons which are discussed below.

The discussion of revenues below relates to the Group s gross revenue from sales of commodities, including its share of the revenue of equity accounted units (after adjusting for sales to subsidiaries), as included in the financial information by business unit.

Iron Ore

2012 sales revenue compared with 2011

Gross sales revenue for the Iron Ore group decreased by 18 per cent in 2012 compared with 2011 reflecting lower iron ore prices partly offset by higher volumes. Sales increased quarter-on-quarter throughout 2012, resulting in record annual sales volumes despite significant volatility in the marketplace.

In 2012, the Group continued to transition its sales portfolio to pricing periods that more closely reflect the market at the time of shipment. Approximately 30 per cent of sales were priced with reference to a quarterly average index set at the prior quarter s average lagged by one month. The remainder was sold via pricing mechanisms priced closer to the index price at the time of shipment such as current quarter average, current month average or spot index prices. Index prices are adjusted for product characteristics and iron and moisture content.

2011 sales revenue compared with 2010

Gross sales revenue for the Iron Ore group increased by 25 per cent in 2011 compared with 2010, reflecting higher prices and increased volumes. In 2011, Rio Tinto s Pilbara ports operated at above annualised capacity rates and shipped record volumes of 225 million tonnes for the full year.

For the first three quarters of 2011, Rio Tinto priced its iron ore contracts on a quarterly basis with a four-month lag. From 1 October 2011, the Group transitioned to a more diversified sales contract portfolio. In the fourth quarter, approximately 40 per cent of sales were priced with a four-month lag. The remainder was sold on a shorter-term price basis. Index prices are adjusted for product characteristics and iron and moisture content.

Aluminium

2012 sales revenue compared with 2011

The Aluminium group s sales revenues are from aluminium and related products such as alumina and bauxite. Gross sales revenue for Rio Tinto Alcan decreased by 17 per cent compared with 2011, due to the combined effects of lower market prices and reduced production at Alma, offset by the Yarwun refinery expansion.

The 2012 cash LME aluminium price averaged US$2,018 per tonne, a decrease of 16 per cent on 2011. The impact of lower prices on Group sales revenue is partially offset by higher market premia as a significant portion of aluminium inventories remain locked in financing deals and are therefore unavailable for physical delivery. As a result, regional premia for physical delivery of aluminium were at record levels and on average higher than in 2011.

2011 sales revenue compared with 2010

Gross sales revenue in 2011 for the group increased by seven per cent compared with 2010, driven by higher exchange-traded aluminium prices offset by the effects of adverse weather conditions in the early part of 2011, mainly in Queensland, Australia.

The 2011 average aluminium price was US$2,395 per tonne, an increase of ten per cent on 2010. In the second half, macroeconomic concerns took hold, particularly the unfolding debt crisis in Europe, thereby reducing prices to below US$2,000 per tonne towards the end of 2011.

Copper

2012 sales revenue compared with 2011

Gross sales revenue for the Copper group decreased by 13 per cent in 2012 compared with 2011. This reflected the impact of lower prices and decreased volumes following lower mill throughput and an anticipated period of lower gold grades at Kennecott Utah Copper, and no metal share from Grasberg.

This was partly offset by increasing volumes from Escondida due to higher grades and improvements to the crushing and conveying circuit, and from Northparkes in line with a recovery in ore grades.

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Financial review continued

The Copper group also produces gold, silver and molybdenum as significant by-products. The average copper price in 2012 declined ten per cent compared with 2011 to 361 US cents per pound, gold increased six per cent to US$1,669 per ounce and molybdenum declined 17 per cent to US$13.60 per pound.

At 31 December 2012, the Group had an estimated 249 million pounds of copper sales that were provisionally priced at 360 US cents per pound. The final price of these sales will be determined during the first half of 2013.

2011 sales revenue compared with 2010

Gross sales revenue for the Copper group decreased by two per cent in 2011 compared with 2010. This was a reflection of reduced volumes due to lower grades at Kennecott Utah Copper, Escondida and Grasberg. A work stoppage which halted operations for 15 days at Escondida and industrial action at Grasberg also impacted 2011 production levels.

The average copper price increased 18 per cent to 400 US cents per pound, gold increased 29 per cent to US$1,571 per ounce and molybdenum was flat year-on-year.

At the end of 2011, the Group had an estimated 181 million pounds of copper sales that were provisionally priced at 344 US cents per pound.

Energy

2012 sales revenue compared with 2011

Gross sales revenue in 2012 for the Energy group decreased by 17 per cent compared with 2011 as a result of lower prices.

2012 was a difficult year in coal and uranium markets as supply and demand fundamentals struggled to balance in the face of global economic uncertainty, with prices declining across most of the year. The coking coal spot price reached a low of US$140 per tonne in the third quarter of 2012 after peaking at US$366 per tonne in early 2011. Similarly, the thermal coal spot price reached a low of US$80 per tonne in the third quarter of 2012 after peaking at US$130 per tonne in early 2011. The uranium spot price reached a low of US$42 per pound in October 2012, down US$10 from the same time in 2011.

A significant proportion of Rio Tinto s coal production is sold under long-term contracts. In Australia, the prices applying to sales under the long-term contracts are generally renegotiated annually for thermal coal; but prices are fixed at different times of the year and on a variety of bases. Coking coal prices for 2012 have been negotiated on a quarterly basis. For these reasons, average realised prices will not necessarily reflect the movements in any of the publicly-quoted prices. Moreover, there are significant product specification differences between mines. Sales volumes will vary during the year and the timing of shipments will also result in differences between average realised prices and published prices.

2011 sales revenue compared with 2010

Gross sales revenue in 2011 for the Energy group increased by 30 per cent compared with 2010 as a result of an improved global pricing environment, partially offset by lower volumes following adverse weather conditions in the first half of 2011.

After achieving near-record prices for thermal coal in January 2011, following Indonesian and Australian supply side disruptions, global markets for thermal and coking coal experienced broad price declines throughout the remainder of 2011. This decline reflected weaker global economic activity and strong supply growth. However, prices remained well supported.

Uranium declined 38 per cent year-on-year with substantially lower production at both Energy Resources of Australia and Rössing Uranium in Namibia.

Diamonds & Minerals

2012 sales revenue compared with 2011

Gross sales revenue increased by 11 per cent in 2012 compared with 2011. This reflects higher prices for titanium dioxide feedstocks and the increase in ownership of RBM, partially offset by the divestment of the talc business on 1 August 2011.

Revenues for Rio Tinto Iron & Titanium (RTIT) increased 41 per cent year-on-year due to higher prices for titanium dioxide feedstocks and the RBM transaction in September 2012. The market for both titanium dioxide and zircon started the year strongly, although demand subsequently softened in the second half. RTIT continued to replace its multi-year sales contracts with alternative pricing mechanisms in 2012, increasing the exposure to market prices.

Despite weakening demand during the year, Rio Tinto Minerals achieved a one per cent improvement in refined borates revenues. In 2011, talc revenues of US$250 million were included in Rio Tinto Minerals.

Diamonds revenue was two per cent higher than 2011, as the effect of higher volumes was largely offset by lower prices.

Diamond prices realised by Rio Tinto depend on the size and quality of diamonds in the product mix.

2011 sales revenue compared with 2010

Gross sales revenue increased by five per cent in 2011 compared with 2010. The group benefited from higher prices due to improved market conditions across all products. This was offset by lower volumes primarily in the diamond business, following the transition to underground mining at Argyle and severe weather conditions.

Revenues for RTIT increased by 19 per cent compared with 2010 due to increasing titanium dioxide feedstock, zircon and metallic co-product prices and demand growth associated with urbanisation trends.

Rio Tinto Minerals achieved a five per cent improvement in refined borate revenues in 2011 through strong prices, product mix and steady Asian demand growth.

Rough diamond prices improved strongly in the first eight months of 2011 due to restocking in the US and continued growth in Chinese and Indian consumer markets. Despite some softening towards the end of the year, global rough diamond prices improved 24 per cent year-on-year, as a result of which Rio Tinto Diamonds revenue increased by seven per cent year-on-year, notwithstanding the impact of lower production volumes.

Cash flow

2012 compared with 2011

A full consolidated cash flow statement is contained in the 2012 financial statements.

Cash flows from operations, including dividends from equity accounted units, were US$16.5 billion, 40 per cent lower than 2011, primarily as a consequence of lower prices.

Purchase of property, plant and equipment and intangible assets rose to US$17.4 billion, an increase of US$5.1 billion from 2011. This included the continued expansion of the Pilbara iron ore mines and infrastructure to 290Mt/a in Western Australia, the construction of the Oyu Tolgoi copper-gold mine and concentrator in Mongolia, the modernisation of the Kitimat aluminium smelter in British Columbia, the extension and expansion of the Kestrel coking coal mine in Queensland and the continued underground development of the Argyle diamond mine in Western Australia.

Capital expenditure in 2012 included the impact of financial accounting reclassification for a number of items at Oyu Tolgoi from operating to capital expenditure. This had no impact on the overall project cost, which remains on target at US$6.2 billion. In addition, some spend in the Pilbara was brought forward, enabling the acceleration of first production from the expansion to the third quarter of 2013, without any increase to the overall project spend.

During 2012, the Group doubled its holding in RBM to 74 per cent through the acquisition of BHP Billiton s entire interests for US$1.7 billion.

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The Group received US$1.35 billion following completion of the agreement with Chalco to develop and operate the Simandou iron ore project in Guinea and US$0.9 billion from the Turquoise Hill Resources rights offering. These amounts have been recognised as proceeds from issue of equity to non-controlling interests in the cash flow statement.

Cash returns to shareholders totalled US$4.5 billion in 2012, comprising US$1.5 billion in share buy-backs with the completion of the Group s US$7 billion share buy-back programme in March 2012, and dividends of US$3.0 billion.

Dividend payments were US$0.8 billion higher than in 2011, reflecting a 34 per cent increase in the 2011 total dividend.

2011 compared with 2010

Cash flows from operations, including dividends from equity accounted units, were US$27.4 billion, 16 per cent higher than 2010, primarily as a consequence of higher prices. Tax paid in 2011 increased by 51 per cent to US$6.2 billion in line with higher taxable profits.

Purchase of property, plant and equipment and intangible assets accelerated in 2011 to US$12.3 billion, an increase of US$7.7 billion from 2010. This included the continued expansion of the Pilbara iron ore mines, development of the Oyu Tolgoi copper-gold project in Mongolia, expansion of the Yarwun alumina refinery in Queensland, extension and expansion of the Kestrel coking coal mine in Queensland, and the underground development of the Argyle diamond mine in Western Australia. A US$700 million payment to the Government of Guinea following signing of the agreement for the Simandou iron ore project was recognised as capital expenditure.

In addition, the Group invested a total of US$6.4 billion (net of cash acquired) in acquiring and increasing interests in businesses. The Group completed the acquisition of a 100 per cent interest in Riversdale Mining Limited for a total of US$3.7 billion and, in 2011, paid US$0.5 billion to acquire an 88 per cent interest in Hathor Exploration Limited. Rio Tinto increased its interest in Ivanhoe Mines from 40.3 per cent to 49 per cent and participated in Ivanhoe s rights offering for a total consideration of US$1.9 billion.

During 2011, the Group bought back 91 million Rio Tinto plc shares at a total cost of US$5.5 billion.

Dividends paid in 2011 of US$2.2 billion were 27 per cent higher than 2010 reflecting the increase in the 2010 final dividend and the subsequent 2011 interim dividend.

Statement of financial position

Net debt increased from US$8.5 billion at 31 December 2011 to US$19.3 billion at 31 December 2012 as operating cash inflows were offset by outflows relating to capital expenditure, acquisitions, the increase in the dividend and the share buy-back programme. Net debt to total capital was 25 per cent at 31 December 2012 (2011: 12 per cent) and interest cover was 13 times (2011: 27 times).

Adjusted total borrowings at 31 December 2012 were US$26.3 billion. The weighted average maturity of total borrowings was around nine years with the maximum nominal amount maturing in any one calendar year currently US$2.7 billion. At 31 December 2012, approximately two thirds of Rio Tinto s adjusted total borrowings were at fixed interest rates. In 2012, Rio Tinto issued US$7.9 billion of fixed rate bonds in US dollars, euros and sterling, with maturities ranging from three to 30 years, a weighted average USD fixed rate equivalent coupon of approximately 3.6 per cent and a weighted average maturity of around 12 years. Cash and cash equivalents at 31 December 2012 were US$7.1 billion.

Group net debt is stated net of the impact of certain funding arrangements relating to equity accounted units (EAU) and partially-owned subsidiaries (EAU funded balances). This avoids showing borrowings twice in the net debt disclosure, where funding has been provided to an EAU by the Group and subsequently loaned by the EAU to a consolidated Group subsidiary.

Total provisions have decreased by US$2.6 billion; this is largely the result of a Group-wide review of estimated liabilities for close down, restoration and environmental remediation. The review included a re-evaluation of the methodology for estimating risk free discount rates in light of the impact of fiscal intervention and, where appropriate, probability weighting for the different remediation or closure outcomes which could realistically arise. Net pension provisions have increased by approximately US$244 million compared to 2011.

Financial instruments and risk management

The Group s policies with regard to financial instruments and 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. Further details of our financial instruments and risk management are disclosed in note 31 Financial instruments and risk management to the 2012 financial statements.

The Group s 2012 Annual report and financial statements show the full extent of its financial commitments, including debt. The risk factor to which the Group is subject are summarised on pages 10 to 12. The effectiveness of internal control procedures continues to be a high priority in the Rio Tinto Group. The board s statement on internal control is set out in the Risk management section.

Dividend

The 2012 interim dividend was 72.50 US cents (2011: 54.00 US cents) and the final dividend is determined as 94.50 US cents (2011: 91.00 US cents). Dividends paid on Rio Tinto plc and Rio Tinto Limited shares are equalised on a net cash basis; that is without taking into account any associated tax credits. Dividends are determined in US dollars. Rio Tinto plc dividends are paid and declared in pounds sterling and Rio Tinto Limited dividends are declared and paid in Australian dollars, converted at exchange rates on 12 February 2013. Details relating to the dividend policy, determination and payment of dividends in sterling, Australian dollars and other currencies and on the payment of dividends to holders of American Depositary Receipts (ADRs) are included in the Shareholder information section.

Capital and liquidity risk management

The Group s total capital is defined as equity attributable to owners of Rio Tinto plus equity attributable to non-controlling interests and net debt, as shown below:

Total capital

	2012	2011
	US$m	US$m
Equity attributable to owners of Rio Tinto	**46,865**	52,539
Equity attributable to non-controlling interests	**11,156**	6,669
Net debt (note 25)	**19,261**	8,451
Total capital	**77,282**	67,659

The board s overriding objective when managing capital is to safeguard the business as a going concern whilst maximising returns for the Group s shareholders. 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 the focus on its progressive dividend policy. The resulting capital structure provides the Group with a high degree of financial flexibility at a low cost of capital.

The Group s major capital and evaluation projects are listed in the Capital projects section on page 44.

Net debt at 31 December 2012 was made up principally from adjusted total borrowings of US$26.3 billion, offset by US$7.1 billion in cash and cash equivalents. As part of the Group s capital management programme, a share buy-back of US$7 billion was completed by 31 March 2012.

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Financial review continued

We expect that contractual commitments for expenditure, together with other expenditure and liquidity requirements will be met from internal cash flow and, to the extent necessary, from the existing facilities described in note 31 Financial instruments and risk management , part (v) to the 2012 financial statements. This note also provides further details of our liquidity and capital risk management.

Treasury management and financial instruments

Details of our Treasury management and financial instruments are contained within the introductory paragraphs of note 31 Financial instruments and risk management , to the 2012 financial statements.

Foreign exchange

The following sensitivities give the estimated effect on net and underlying earnings assuming that each exchange rate moved in isolation. The relationship between currencies and commodity prices is a complex one and movements in exchange rates can cause movements in commodity prices and vice versa. Where the functional currency of an operation is that of a country for which production of commodities is an important feature of the economy, such as the Australian dollar, there is a certain degree of natural protection against cyclical fluctuations, in that the currency tends to be weak, reducing costs in US dollar terms, when commodity prices are low, and vice versa.

Earnings sensitivities exchange rates

	Average exchange rate for 2012	Effect on net and underlying earnings of 10% change in full year average +/- US$m
	US cents	
Australian dollar	**104**	892
Canadian dollar	**100**	272
Euro	**129**	17
Chilean peso	**US$1= 486 pesos**	27
New Zealand dollar	**81**	27
South African rand	**12**	78
UK sterling	**158**	

The exchange rate sensitivities quoted above include the effect on net operating costs of movements in exchange rates but exclude the effect of the revaluation of foreign currency financial assets and liabilities. They should therefore be used with caution.

Further details of our exposure to foreign currency fluctuations and currency derivatives, and our approach to currency hedging, are contained within note 31 Financial risk management , part A(b)(i), to the 2012 financial statements.

Interest rates

Details of our exposure to interest rate fluctuations are contained within note 31 Financial risk management , to the 2012 financial statements.

Commodity prices

The approximate effect on the Group s underlying and net earnings of a ten per cent change from the full year average market price in 2012 for the following products would be:

Earnings sensitivities commodity prices

	Unit	**Average market price for 2012** US$	Effect on underlying and net earnings of 10% change in full year average +/- US$m
Iron ore	dmtu		1,573
Aluminium[a][b]	Tonne	**2,018**	384
Copper[a]	Pound	**3.61**	270
Gold	Ounce	**1,669**	42
Molybdenum	Pound	**14**	36
Coal	Tonne		59

(a) Excludes the impact of commodity derivatives.

(b) Excludes any impact on the non-core aluminium assets included in Other operations.

The sensitivities give the estimated impact on net earnings of changes in prices assuming that all other variables remain constant. These should be used with caution. As noted previously, the relationship between currencies and commodity prices is a complex one and changes in exchange rates can influence commodity prices and vice versa.

Further details of our exposure to commodity price fluctuations are contained within note 31 Financial instruments and risk management , to the 2012 financial statements.

Credit risks

Details of our exposure to credit risks relating to receivables, financial instruments and cash deposits, are contained within note 31 Financial instruments and risk management , to the 2012 financial statements.

Disposals and acquisitions

Information regarding disposals and acquisitions is provided in note 38 Purchases and sales of subsidiaries, joint ventures, associates and other interests in businesses , to the 2012 financial statements.

Critical accounting policies and estimates

Many of the amounts included in the financial statements involve the use of judgments and/or estimates. These judgments and estimates are based on management s best knowledge of the relevant facts and circumstances, having regard to previous experience, but actual results may differ from the amounts included in the financial statements.

Information about such judgments and estimates is contained in note 1 Principal accounting policies to the 2012 financial statements, and/or the other notes to the 2012 financial statements. The key areas are listed below.

Dual listed company reporting

Asset carrying values and the recoverability of goodwill

Asset lives

Ore reserve estimates

Close-down, restoration and clean-up obligations

Overburden removal costs

Deferred tax on fair value adjustments

Capitalisation of exploration and evaluation costs

Functional currency

Post-retirement benefits

Recoverability of potential deferred tax assets

Contingencies

Basis of consolidation

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Off balance sheet arrangements and contractual commitments

The table above presents information in relation to our material off balance sheet arrangements, principally contingent liabilities, commitments for capital expenditure and other expenditure, and commitments under operating leases at 31 December 2012. Information regarding the Group s pension commitments and funding arrangements is provided in note 46 Post retirement benefits to the 2012 financial statements. Information regarding the Group s close-down and

restoration obligations is provided in note 27 Provisions including post retirement benefits to the 2012 financial statements.

We expect that these contractual commitments for expenditure, together with other expenditure and liquidity requirements, will be met from internal cash flow and, to the extent necessary, from the existing facilities.

At 31 December 2012	< 1 yr US$m	1-3 yrs US$m	3-5 yrs US$m	> 5 yrs US$m	**Total US$m**
Expenditure commitments in relation to:					
Operating leases	415	690	555	852	**2,512**
Other (capital commitments)	11,487	1,399	127	38	**13,051**
	11,902	2,089	682	890	**15,563**
Long-term debt and other financial obligations:					
Debt	2,199	4,425	3,396	16,328	**26,348**
Interest payments	1,072	1,848	1,668	6,891	**11,479**
Unconditional purchase obligations	2,700	4,749	4,279	12,822	**24,550**
Other	40	103	(8)	(62)	**73**
	6,011	11,125	9,335	35,979	**62,450**
Total	17,913	13,214	10,017	36,869	**78,013**

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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 2012 financial statements and notes thereto. The financial statements as included on pages 139 to 223 have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS) and conform to IFRS as adopted by the EU (EU IFRS).

Rio Tinto Group

Income Statement Data

For the years ending 31 December	**2012**	2011	2010	2009	2008
Amounts in accordance with IFRS	**US$m**	US$m	US$m	US$m	US$m
Consolidated sales revenue	**50,967**	60,537	55,171	40,262	52,861
Group operating (loss)/profit[a]	**(1,153)**	13,940	19,608	7,506	10,194
(Loss)/profit for the year from continuing operations	**(2,997)**	6,775	15,195	5,784	5,436
Loss after tax from discontinued operations	**(7)**	(10)	(97)	(449)	(827)
(Loss)/profit for the year	**(3,004)**	6,765	15,098	5,335	4,609
Basic (losses)/earnings per share[b]					
(Loss)/profit from continuing operations (US cents)	**(161.3)**	303.5	731.0	301.7	286.8
Loss after tax from discontinued operations (US cents)	**(0.4)**	(0.5)	(4.9)	(25.5)	(52.7)
(Loss)/profit for the year per share (US cents)	**(161.7)**	303.0	726.1	276.2	234.1
Diluted (losses)/earnings per share[b]					
(Loss)/profit from continuing operations (US cents)	**(161.3)**	301.5	726.7	300.7	285.5
Loss after tax from discontinued operations (US cents)	**(0.4)**	(0.5)	(4.9)	(25.4)	(52.4)
(Loss)/profit for the year per share (US cents)	**(161.7)**	301.0	721.8	275.3	233.1

Dividends per share

	2012	2011	2010	2009	2008
Dividends declared during the year[b]					
US cents					
interim	**72.5**	54.0	45.0		55.6
final	**94.5**	91.0	63.0	45.0	55.6
UK pence					
interim	**46.4**	33.1	28.2		29.6
final	**60.3**	57.3	39.1	28.8	37.9
Australian cents					
interim	**68.5**	49.8	49.3		63.3
final	**91.7**	84.2	61.9	51.6	83.0

Dividends paid during the year (US cents)[b]						
ordinary		**163.5**	117.0	90.0	55.6	124.3
Weighted average number of shares	basic (millions)[b]	**1,849.1**	1,923.1	1,961.0	1,763.6	1,570.1
Weighted average number of shares	diluted (millions)[b]	**1,849.1**	1,935.5	1,972.6	1,769.6	1,577.3

Statement of financial position data

at 31 December					
	2012	2011	2010	2009	2008
Amounts in accordance with IFRS	**US$m**	US$m	US$m	US$m	US$m
Total assets	**117,573**	119,545	112,773	97,236	89,616
Share capital/premium	**10,189**	10,024	10,105	9,344	5,826
Total equity/Net assets	**58,021**	59,208	64,512	45,925	22,461
Equity attributable to owners of Rio Tinto	**46,865**	52,539	58,247	43,831	20,638

Notes

(a) Group operating loss or profit under IFRS 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 loss or profit amounts shown above exclude equity accounted operations, finance items, tax and discontinued operations.

(b) The rights issues completed in July 2009 were at a discount to the then market price. Accordingly, earnings per share and dividends per share for all periods up to the date on which the shares were issued were adjusted for the bonus element of the issue. The bonus factor for Rio Tinto plc was 1.2105 and for Rio Tinto Limited was 1.2679. In accordance with IAS 33 2 Earnings per share , the effects of anti-dilutive potential have not been included when calculating diluted loss per share for the year ended 31 December 2012.

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Acquisitions and divestments

Acquisitions

Asset		Cost US$m	Status
Acquired in 2012			
Copper	Turquoise Hill Resources Ltd (formerly Ivanhoe Mines Limited)	307	Purchase of additional shares increasing the Group s holdings to 51 per cent.
Minerals	Richards Bay Minerals	1,700	Acquisition of BHP Billiton s entire interests in Richards Bay Minerals, doubling the Group s holding to 74 per cent.
Acquired in 2011			
Copper	Ivanhoe Mines	1,860	Participation in the strategic rights offering, exercise of outstanding share warrants, exercise of subscription rights granted in 2010 and purchase of additional shares, in aggregate increasing the Group s holding to 49 per cent.
Energy	Riversdale	4,168	Staged acquisition of shares in Riversdale Mining Limited; acquisition of a controlling interest of 52.6 per cent on 8 April 2011, increasing to 100 per cent by 1 August 2011, and renamed as Rio Tinto Coal Mozambique
Energy	Hathor	550	Purchase of shares in Hathor Exploration resulting in an aggregate of a 70.2 per cent controlling interest being reached on 30 November 2011, increasing to 88 per cent by 31 December 2011 and completed on 12 January 2012.
Acquired in 2010			
Copper	Ivanhoe Mines	1,590	Purchases of additional shares, maturing of convertible debt facility and exercise of Series A and B warrants increasing the Group s holding to 40.3 per cent as at 31 December 2010. Rio Tinto consolidated Oyu Tolgoi LLC on 15 December 2010 following the signing of a new agreement with Ivanhoe Mines.

Divestments

Asset	Proceeds US$m	Status
Divested in 2012		
Alcan Cable	229	Sold to General Cable Corporation
Specialty Alumina businesses	Undisclosed	Sold to H.I.G.
Lynemouth Power Station	Undisclosed	Sold to RWE

Energy	**Extract Resources Ltd/ Kalahari Minerals plc**	429	Equity investment sold to Taurus Mineral Limited
Divested in 2011			
Alcan Engineered Products		Undisclosed	Sold 61 per cent to investment funds affiliated with Apollo Global Management, LLC (Apollo) and the Fonds Stratégique d Investissement (FSI)
Minerals	talc	340[(a)]	Sold to Imerys SA
Energy	Colowyo	Undisclosed	Sold to Western Fuels-Colorado LLC
Exploration	sundry assets	52	Sale of projects including Altai Nuurs coking coal deposit and Sari Gunay gold deposit
Divested in 2010			
Energy	Cloud Peak	573	Secondary public offering
Alcan Packaging	Beauty	Undisclosed	Sold to Sun European Partners LLP
Alcan Packaging	Medical Flexibles	66	Sold to Amcor
Alcan Packaging	Food Americas	1,200	Sold to Bemis Company Inc.
Energy	Maules Creek (Rio Tinto: 75.7%)	427	Sold to Aston Resources
Energy	Vickery (Rio Tinto: 75.7%)	28	Sold to Whitehaven Coal
Alcan Packaging	global Pharmaceuticals, global Tobacco, Food Europe and Food Asia	1,948	Sold to Amcor
Sundry asset sales		57	Sale of assets including Ghana Bauxite Company, Brockville Specialty Alumina Plant and Rawhide Mine

(a) Enterprise value

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Capital projects

Project (Rio Tinto 100% owned unless otherwise stated)	Total approved capital cost (100%) US$	Status/milestones
Completed in 2012		
Iron ore second debottlenecking of Dampier port to expand the Pilbara capacity by 5 million tonnes to 230Mt/a. Pilbara capacity was re-rated to 237Mt/a in November 2012.	$0.3bn	The project was completed on budget and commissioning commenced on time by the end of the first quarter of 2012.
Iron ore two-phased expansion of Iron Ore Company of Canada (IOC) (Rio Tinto 58.7%) from 18 to 22Mt/a and then to 23.3Mt/a.	$0.8bn	Phase one commissioning is now complete. Phase two is progressing with first production expected in the first quarter of 2013.
Alumina expansion of the Yarwun refinery in Queensland, Australia from 1.4 to 3.4Mt/a.	$2.3bn	Approved in July 2007, commissioning is proceeding on schedule with first bauxite processed on 5 July 2012. The refinery is expected to reach full production capacity in the third quarter of 2013.
Aluminium construction of a new 225MW turbine at the Shipshaw power station in Quebec, Canada.	$0.3bn	The power station was completed on time and was commissioned in October 2012.
Thermal coal 6Mt/a expansion of Hunter Valley Operations (Rio Tinto 80%) and Mount Thorley Warkworth mine (Rio Tinto 51%) and 2 million tonne expansion at Bengalla (Rio Tinto 32%), New South Wales, Australia.	$0.5bn	The three thermal coal expansions were completed in the first half of 2012 and are currently ramping up.
Coking and thermal coal development of the greenfield Benga mine in Mozambique (Rio Tinto 65%).	$0.6bn	First production was processed through the wash plant in February 2012 with the first shipment of premium hard coking coal in June 2012.
Ongoing and approved		
Iron Ore		
Expansion of the Pilbara mines, ports and railways from 237Mt/a to 290Mt/a. Rio Tinto s share of total approved capex is $8.4 bn.	$9.8bn	Completion of the phase one expansion to 290Mt/a has been brought forward to the third quarter of 2013. Dredging and piling at Cape Lambert is complete.
Expansion of the Pilbara port and rail capacity to 360Mt/a. Rio Tinto s share of total approved capex is $3.5 bn.	$5.9bn	The phase two expansion to 360Mt/a is expected to come onstream in the first half of 2015. This includes the port and rail elements which are now fully

		approved and an investment in autonomous trains. The key component of the project still requiring approval is further mine production capacity.
Development of Hope Downs 4 mine in the Pilbara (Rio Tinto 50%) to sustain production at 237Mt/a.	$2.1bn	Approved in August 2010, first production is expected in 2013. The new mine is anticipated to have a capacity of 15Mt/a and a capital cost of $1.6 billion (Rio Tinto share $0.8 billion). Rio Tinto is funding the $0.5 billion for the rail spur, rolling stock and power infrastructure.
Phase two of the Marandoo mine expansion in the Pilbara to sustain production at 237Mt/a.	$1.1bn	Approved in February 2011, the mine will extend Marandoo at 15Mt/a by 16 years to 2030.
Investment to extend the life of the Yandicoogina mine in the Pilbara to 2021 and expand its nameplate capacity from 52Mt/a to 56Mt/a.	$1.7bn	Approved in June 2012, the investment includes a wet processing plant to maintain product specification levels and provide a platform for future potential expansion.
Aluminium		
Modernisation of ISAL aluminium smelter in Iceland.	$0.5bn	Approved in September 2010, the project is expected to increase production from 190kt to 230kt and includes a leading-edge casting facility to produce value-added billet. The new casting facility produced its first billet in the second quarter of 2012. Project costs and completion schedules are under review.
AP60 plant (60kt per annum) in Quebec, Canada.	$1.1bn	Approved in December 2010, first hot metal is expected in the first half of 2013.
Modernisation and expansion of Kitimat smelter in British Columbia, Canada.	$3.3bn	Approved in December 2011, the modernisation will increase capacity from 280ktpa to 420ktpa. The pace of the project has been slowed in response to increasingly challenging market conditions. First production is now expected at the end of 2014.

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Project (Rio Tinto 100% owned unless otherwise stated)	Total approved capital cost (100%) US$	Status/milestones
Copper		
Investment in the Moly Autoclave Process (MAP) in Utah, US to enable lower-grade molybdenum concentrate to be processed more efficiently than conventional roasters and allow improved recoveries.	$0.6bn	The facility is due to come onstream by mid-2014 followed by a 12 month period to reach full capacity.
Construction of the Eagle nickel and copper mine in Michigan, US.	$0.5bn	Approved in June 2010, first production is expected in 2014. The mine will produce an average of 16kt and 13kt per year of nickel and copper metal respectively over seven years.
Development of Organic Growth Project 1 (OGP1) and the Oxide Leach Area Project (OLAP) at Escondida (Rio Tinto 30%), Chile.	$1.4bn (Rio Tinto share)	Approved in February 2012, OGP1 primarily relates to replacing the Los Colorados concentrator with a new 152kt per day plant, allowing access to high grade ore. Initial production is expected in the first half of 2015. OLAP maintains oxide leaching capacity.
Construction of phase one of Oyu Tolgoi copper and gold mine in Mongolia.	$6.2bn	Commissioning of the ore-processing equipment commenced in mid-November 2012 with first copper-gold concentrate produced in January 2013. Commercial production is scheduled for June 2013.
Grasberg project funding for 2012 to 2016.	$0.9bn (Rio Tinto share)	Investment to continue the pre-production construction of the Grasberg Block Cave, the Deep Mill Level Zone underground mines, and the associated common infrastructure. Rio Tinto s final share of capital expenditure will in part be influenced by its share of production over the 2012 to 2016 period.
Investment over next seven years to extend mine life at Kennecott Utah Copper, US from 2018 to 2029.	$0.7bn	The project was approved in June 2012. Ore from the south wall push back will be processed through existing mill facilities. The investment will enable production at an average of 180kt of copper, 185koz of gold and 13.8kt of molybdenum a year from 2019 through 2029.
Energy		
20-year extension and expansion from 4.3Mt/a to 5.7Mt/a at Kestrel (Rio Tinto 80%),	$2.0bn	The investment will extend the life of the mine to 2032 and is expected to

Queensland, Australia.		come on-stream in the second quarter of 2013 with full production in 2014.
Diamonds & Minerals		
Argyle Diamond mine underground project, extending the mine life to at least 2020. (Originally approved in 2005, the project was slowed in 2009 and restarted in September 2010.)	$2.2bn	Production is expected to commence in the first half of 2013 with ramp up to full capacity by 2015.
Investment in detailed design studies, early works and long-lead items at the Simandou iron ore project in Guinea, West Africa. Rio Tinto s share of total approved capex is $501m.	$1.0bn	Approved in June 2012, the investment is primarily for rail and port infrastructure. Timing of the ramp up and first commercial production is dependent on receiving necessary approvals from the Government of Guinea and on the Government of Guinea progressing and finalising its financing strategy.

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Production, reserves and operations

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Metals & minerals production

	Rio Tinto % share[a]	2012 Production Total	2012 Production Rio Tinto share	2011 Production Total	2011 Production Rio Tinto share	2010 Production Total	2010 Production Rio Tinto share
ALUMINA (000 tonnes)							
Rio Tinto Alcan							
Jonquière (Vaudreuil) (Canada)[b]	100.0	**1,397**	**1,397**	1,363	1,363	1,301	1,301
Queensland Alumina (Australia)	80.0	**3,693**	**2,954**	3,360	2,688	3,821	3,057
São Luis (Alumar) (Brazil)	10.0	**3,409**	**341**	3,385	339	2,507	251
Yarwun (Australia)	100.0	**2,175**	**2,175**	1,349	1,349	1,377	1,377
Specialty plants (Canada)[c]	100.0	**101**	**101**	108	108	123	123
			6,968		5,846		6,109
Pacific Aluminium							
Gove (Australia)	100.0	**2,742**	**2,742**	2,549	2,549	2,473	2,473
Other Aluminium							
Specialty plants (France/Germany)[d]		**331**	**331**	552	552	507	507
Rio Tinto total			**10,041**		8,947		9,089
ALUMINIUM (000 tonnes)							
Rio Tinto Alcan							
Alma (Canada)	100.0	**208**	**208**	434	434	434	434
Alouette (Sept-Îles) (Canada)	40.0	**593**	**237**	582	233	569	228
Alucam (Edéa) (Cameroon)	46.7	**52**	**24**	69	32	76	35
Arvida (Canada)	100.0	**177**	**177**	176	176	174	174
Bécancour (Canada)	25.1	**429**	**107**	414	104	417	104
Dunkerque (France)	100.0	**256**	**256**	235	235	260	260
Grande-Baie (Canada)	100.0	**223**	**223**	223	223	218	218
ISAL (Reykjavik) (Iceland)	100.0	**190**	**190**	185	185	190	190
Kitimat (Canada)	100.0	**182**	**182**	168	168	184	184
Laterrière (Canada)	100.0	**233**	**233**	234	234	212	212
Lochaber (UK)	100.0	**45**	**45**	45	45	41	41
Saint-Jean-de-Maurienne (France)	100.0	**93**	**93**	99	99	96	96
Shawinigan (Canada)	100.0	**81**	**81**	97	97	100	100
Sohar (Oman)	20.0	**360**	**72**	373	75	367	73
SØRAL (Husnes) (Norway)	50.0	**92**	**46**	89	45	88	44
			2,174		2,386		2,395
Pacific Aluminium							
Bell Bay (Australia)	100.0	**185**	**185**	181	181	177	177
Boyne Island (Australia)	59.4	**569**	**338**	558	331	558	332
Tiwai Point (New Zealand)	79.4	**325**	**258**	357	283	344	273
Tomago (Australia)	51.6	**546**	**281**	539	278	528	272
			1,063		1,073		1,054
Other Aluminium							

Lynemouth (UK)[e]	100.0	**15**	**15**	168	168	145	145
Sebree (US)	100.0	**205**	**205**	197	197	196	196
			220		365		341
Rio Tinto total			**3,456**		3,824		3,790

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Metals & minerals production continued

	Rio Tinto % share[a]	2012 Production Total	2012 Production Rio Tinto share	2011 Production Total	2011 Production Rio Tinto share	2010 Production Total	2010 Production Rio Tinto share
BAUXITE (000 tonnes)							
Rio Tinto Alcan							
Awaso (Ghana)[f]						39	31
Porto Trombetas (MRN) (Brazil)	12.0	**15,512**	**1,861**	15,224	1,827	15,435	1,852
Sangaredi (Guinea)	[g]	**14,001**	**6,301**	12,517	5,633	12,041	5,418
Weipa (Australia)	100.0	**23,257**	**23,257**	20,732	20,732	18,591	18,591
			31,419		28,192		25,892
Pacific Aluminium							
Gove (Australia)	100.0	**7,944**	**7,944**	7,246	7,246	7,190	7,190
Rio Tinto total			**39,363**		35,437		33,082
BORATES (000 tonnes)[h]							
Rio Tinto Minerals Boron (US)	100.0	**453**	**453**	486	486	483	483
Rio Tinto Minerals Tincalayu (Argentina)[i]		**9**	**9**	18	18	18	18
Rio Tinto total			**463**		504		500
COAL (hard coking) (000 tonnes)							
Rio Tinto Coal Australia							
Hail Creek Coal (Australia)	82.0	**7,174**	**5,882**	7,291	5,979	7,183	5,890
Kestrel Coal (Australia)	80.0	**2,468**	**1,974**	3,545	2,836	3,846	3,076
Total Australian hard coking coal			**7,857**		8,815		8,967
Rio Tinto Coal Mozambique							
Benga[j]	65.0	**289**	**188**				
Rio Tinto total hard coking coal			**8,044**		8,815		8,967
COAL (semi-soft coking) (000 tonnes)							
Rio Tinto Coal Australia							
Hunter Valley (Australia)[k]	80.0	**2,119**	**1,695**	1,906	1,450	2,469	1,869
Mount Thorley (Australia)[k]	64.0	**1,584**	**1,014**	1,922	1,159	1,460	884
Warkworth (Australia)[k]	44.5	**1,296**	**576**	594	250	764	321
Rio Tinto total semi-soft coking coal			**3,286**		2,859		3,075
COAL (thermal) (000 tonnes)							
Rio Tinto Coal Australia							
Bengalla (Australia)[k]	32.0	**7,026**	**2,248**	5,368	1,629	5,477	1,659
Blair Athol (Australia)	71.2	**2,587**	**1,843**	2,885	2,055	6,803	4,846
Clermont (Australia)[l]	50.1	**8,189**	**4,103**	5,790	2,901	3,770	1,889
Hunter Valley (Australia)[k]	80.0	**9,836**	**7,869**	10,332	7,839	8,442	6,391
Kestrel Coal (Australia)	80.0	**350**	**280**	326	261	713	571
Mount Thorley (Australia)[k]	64.0	**2,497**	**1,598**	1,319	801	1,518	920
Warkworth (Australia)[k]	44.5	**5,477**	**2,435**	5,454	2,304	5,120	2,154
Total Australian thermal coal			**20,376**		17,791		18,430

Rio Tinto Coal Mozambique							
Benga[j]	65.0	**419**	**272**				
US Coal							
Antelope (US)[m]						31,156	15,043
Colowyo (US)[n]				1,939	1,939	2,371	2,371
Cordero Rojo (US)[m]						33,518	16,184
Decker (US)[m]						2,521	609
Spring Creek (US)[m]						16,726	8,076
Total US thermal coal					1,939		42,283
Rio Tinto total thermal coal			**20,648**		19,729		60,713

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	Rio Tinto % share[a]	2012 Production Total	2012 Production Rio Tinto share	2011 Production Total	2011 Production Rio Tinto share	2010 Production Total	2010 Production Rio Tinto share
COPPER (mined) (000 tonnes)							
Bingham Canyon (US)	100.0	**163.2**	**163.2**	195.0	195.0	249.8	249.8
Escondida (Chile)	30.0	**1,047.4**	**314.2**	759.1	227.7	1,011.0	303.3
Grasberg Joint Venture (Indonesia)[o]	40.0	**0.0**	**0.0**	42.1	16.9	126.8	50.7
Northparkes (Australia)	80.0	**53.8**	**43.1**	50.4	40.3	39.0	31.2
Palabora (South Africa)[p]	57.7	**49.1**	**28.3**	69.1	39.9	74.6	43.0
Rio Tinto total			**548.8**		519.7		678.1
COPPER (refined) (000 tonnes)							
Escondida (Chile)	30.0	**310.3**	**93.1**	283.5	85.0	300.1	90.0
Kennecott Utah Copper (US)	100.0	**162.7**	**162.7**	215.3	215.3	269.3	269.3
Palabora (South Africa)[p]	57.7	**40.9**	**23.6**	59.0	34.0	58.0	33.4
Rio Tinto total			**279.4**		334.4		392.8
DIAMONDS (000 carats)							
Argyle (Australia)	100.0	**8,471**	**8,471**	7,441	7,441	9,804	9,804
Diavik (Canada)	60.0	**7,230**	**4,338**	6,677	4,006	6,500	3,900
Murowa (Zimbabwe)	77.8	**403**	**313**	367	285	178	139
Rio Tinto total			**13,122**		11,733		13,843
GOLD (mined) (000 ounces)							
Barneys Canyon (US)	100.0	**1**	**1**	2	2	2	2
Bingham Canyon (US)	100.0	**200**	**200**	384	384	466	466
Escondida (Chile)	30.0	**98**	**29**	122	37	174	52
Grasberg Joint Venture (Indonesia)[o]	40.0	**0**	**0**	444	178	458	183
Northparkes (Australia)	80.0	**72**	**58**	76	61	65	52
Palabora (South Africa)[p]	57.7	**11**	**6**	13	8	13	7
Rawhide (US)[q]						9	9
Rio Tinto total			**294**		669		772
GOLD (refined) (000 ounces)							
Kennecott Utah Copper (US)	100.0	**279**	**279**	379	379	596	596
IRON ORE (000 tonnes)							
Hamersley Iron six wholly owned mines (Australia)	100.0	**126,630**	**126,630**	121,525	121,525	112,706	112,706
Hamersley Channar (Australia)	60.0	**10,947**	**6,568**	11,015	6,609	11,016	6,610
Hamersley Eastern Range (Australia)	(r)	**9,303**	**9,303**	9,385	9,385	9,206	9,206
Hope Downs (Australia)	50.0	**30,793**	**15,396**	31,740	15,870	31,720	15,860
Iron Ore Company of Canada (Canada)	58.7	**14,079**	**8,267**	13,457	7,902	14,710	8,638
Robe River (Australia)	53.0	**61,707**	**32,705**	57,502	30,476	59,641	31,610
Rio Tinto total			**198,869**		191,767		184,629
MOLYBDENUM (000 tonnes)							

Bingham Canyon (US)	100.0	**9.4**	**9.4**	13.6	13.6	12.9	12.9
SALT (000 tonnes)							
Dampier Salt (Australia)	68.4	**9,996**	**6,833**	9,666	6,608	7,589	5,188
SILVER (mined) (000 ounces)							
Bingham Canyon (US)	100.0	**2,086**	**2,086**	2,976	2,976	3,754	3,754
Escondida (Chile)	30.0	**3,501**	**1,050**	4,327	1,298	6,140	1,842
Grasberg Joint Venture (Indonesia)[o]	40.0	**0**	**0**	208	83	1,721	688
Others		**685**	**521**	766	566	752	577
Rio Tinto total			**3,657**		4,924		6,862

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Metals & minerals production continued

	Rio Tinto % share[a]	2012 Production Total	2012 Production Rio Tinto share	2011 Production Total	2011 Production Rio Tinto share	2010 Production Total	2010 Production Rio Tinto share
SILVER (refined) (000 ounces)							
Kennecott Utah Copper (US)	100.0	**2,451**	**2,451**	3,189	3,189	4,732	4,732
TALC (000 tonnes)							
Rio Tinto Minerals talc (Australia/Europe/North America)[s]				592	592	1,000	1,000
TITANIUM DIOXIDE FEEDSTOCK (000 tonnes)							
Rio Tinto Iron & Titanium (Canada/South Africa)[t][u]	100.0	**1,594**	**1,594**	1,443	1,443	1,392	1,392
URANIUM (000 lbs U_3O_8)							
Energy Resources of Australia (Australia)	68.4	**8,304**	**5,679**	5,571	3,810	8,614	5,891
Rössing (Namibia)	68.6	**5,950**	**4,081**	4,736	3,248	7,999	5,485
Rio Tinto total			**9,760**		7,058		11,377

Production data 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 onsite, except for the data for bauxite and iron ore which represent production of marketable quantities of ore.

(a) Rio Tinto percentage share, shown above, is as at the end of 2012. Where this shareholding has changed over the period 2010-2012, the weighted average ownership has been used. 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) Rio Tinto sold its 100 per cent interest in the Brockville specialty alumina plant with an effective date of 20 September 2010. Production data are shown up to that date. Production continues from the Jonquière specialty alumina plant.

(d) Rio Tinto sold its interest in these specialty alumina assets with an effective date of 1 August 2012. Production is shown up to that date.

(e) Rio Tinto closed the Lynemouth aluminium smelter on 29 March 2012.

(f) Rio Tinto Alcan had an 80 per cent interest in the Awaso mine but purchased the additional 20 per cent of production. Rio Tinto Alcan sold its interest in Ghana Bauxite Company, owner of the Awaso mine, with an effective date of 1 February 2010.

(g) Rio Tinto has a 22.95 per cent shareholding in the Sangaredi mine but benefits from 45 per cent of production.

(h) Borate quantities are expressed as B2O3.

(i) Rio Tinto sold its interest in Borax Argentina with an effective date of 21 August 2012. Production is included up to that date.

(j) Benga moved to commercial production during the third quarter of 2012.

(k) Rio Tinto s interest in these mines is held through Coal & Allied Industries Ltd; Rio Tinto increased its interest in Coal & Allied from 75.7 per cent to 80.0 per cent with effect from 16 December 2011. Production data reflect the increased shareholding from that date.

(l) Production commenced at Clermont in the second quarter of 2010.

(m) As a result of the initial public offering of Cloud Peak Energy Inc. on 20 November 2009, Rio Tinto held a 48.3 per cent interest in the Antelope, Cordero Rojo and Spring Creek mines and a 24.1 per cent interest in the Decker mine. These interests were formerly reported under Rio Tinto Energy America but are now managed by Cloud Peak Energy. Following a secondary public offering in December 2010, Rio Tinto completed the divestment of its entire interest in Cloud Peak Energy Inc. with an effective date of 15 December 2010. Production data are shown up to that date.

(n) Rio Tinto sold its 100 per cent interest in Colowyo with an effective date of 1 December 2011. Production data are shown up to that date.

(o) Through a joint venture agreement with Freeport-McMoRan Copper & Gold (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. The 2012 production from Grasberg did not exceed the metal attributable to PT Freeport Indonesia per the joint venture agreement for the year. Accordingly, Rio Tinto s share of joint venture production was zero for the year 2012.

(p) In December 2012, Rio Tinto announced that it had signed a binding agreement to sell its 57.7 per cent effective interest in the Palabora Mining Company.

(q) Rio Tinto sold its 100 per cent interest in the Rawhide mine with an effective date of 25 June 2010. Production data are shown up to that date.

(r) Rio Tinto s share of production includes 100 per cent of the production from the Eastern Range mine. Under the terms of the joint venture agreement (Rio Tinto 54 per cent), Hamersley Iron manages the operation and is obliged to purchase all mine production from the joint venture.

(s) Rio Tinto sold its 100 per cent interest in the talc business with an effective date of 1 August 2011. Production data are shown up to that date.

(t) On 7 September 2012, Rio Tinto increased its stake in Richards Bay Minerals (RBM) from 37 per cent to 74 per cent through the acquisition of BHP Billiton s interest in RBM.

(u) 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.

Production figures are sometimes more precise than the rounded numbers shown, hence an apparent small difference may result where the Rio Tinto share is totalled.

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Ore reserves (under industry guide 7)

For the purposes of this combined Annual report on Form 20-F estimates of ore reserves have been prepared in accordance with the SEC s Industry Guide 7 under the United States Securities Act of 1933 and the following definitions:

An Ore Reserve means that part of a mineral deposit that can be economically and legally extracted or produced at the time of the reserves determination. To establish this, studies appropriate to the type of mineral deposit involved have been carried out to estimate the quantity, grade and value of the ore mineral(s) present. In addition, technical studies have been completed to determine realistic assumptions for the extraction of the minerals including estimates of mining, processing, economic, marketing, legal, environmental, social and governmental factors. The degree of these studies is sufficient to demonstrate the technical and economic feasibility of the project and depends on whether or not the project is an extension of an existing project or operation. The estimates of minerals to be produced include allowances for ore losses and the treatment of unmineralised materials which may occur as part of the mining and processing activities. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proven Ore Reserves as defined below.

The term economically , as used in the definition of reserves, implies that profitable extraction or production under defined investment assumptions has been established through the creation of a mining plan, processing plan and cash flow model. The assumptions made must be reasonable, including costs and operating conditions that will prevail during the life of the project.

Ore reserves presented in accordance with SEC Industry Guide 7 do not exceed the quantities that, it is estimated, could be extracted economically if future prices were to be in line with the average of historical prices for the three years to 30 June 2012, or contracted prices where applicable. For this purpose, contracted prices are applied only to future sales volumes for which the price is predetermined by an existing contract; and the average of historical prices is applied to expected sales volumes in excess of such amounts. Moreover, reported ore reserve estimates have not been increased above the levels expected to be economic based on Rio Tinto s own long term price assumptions.

The term legally , as used in the definition of reserves, does not imply that all permits needed for mining and processing have been obtained or that other legal issues have been completely resolved. However, for reserves to exist, there is reasonable assurance of the issuance of these permits or resolution of legal issues. Reasonable assurance means that, based on applicable laws and regulations, the issuance of permits or resolution of legal issues necessary for mining and processing at a particular deposit will be accomplished in the ordinary course and in a timeframe consistent with the Company s current mine plans.

The term proven reserves means reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling; and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well established. Proven reserves represent that part of an orebody for which there exists the highest level of confidence in data regarding its geology, physical

characteristics, chemical composition and probable processing requirements.

The term probable reserves means reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation. This means that probable reserves generally have a wider drill hole spacing than for proven reserves.

The amount of proven and probable reserves shown below does not necessarily represent the amount of material currently scheduled for extraction, because the amount scheduled for extraction may be derived from a life of mine plan predicated on prices and other assumptions which are different to those used in the life of mine plan prepared in accordance with Industry Guide 7.

The estimated ore reserve figures in the following tables are as of 31 December 2012. Metric units are used throughout. The figures used to calculate Rio Tinto s share of 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. Commodity price information is given in footnote (a).

Where operations are not managed by Rio Tinto the reserves are published as received from the managing company.

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Ore reserves (under industry guide 7) continued

	Type of mine (b)	Total ore reserves at end 2012 Tonnage	Grade	Rio Tinto share Interest %	Recoverable mineral millions of tonnes
BAUXITE (c)		millions of tonnes	% Al_2O_3		
Reserves at operating mines					
Rio Tinto Alcan					
Porto Trombetas (MRN) (Brazil) (d)	O/P	**63**	**50.9**	12.0	**8**
Sangaredi (Guinea) (e)	O/P	**320**	**49.6**	23.0	**73**
Weipa (Australia)	O/P	**1,533**	**52.8**	100.0	**1,533**
Pacific Aluminium					
Gove (Australia)	O/P	**155**	**49.5**	100.0	**155**
Rio Tinto total					**1,769**

		Total ore reserves at end 2012 millions of tonnes		Recoverable mineral millions of tonnes
BORATES (f)				
Reserves at operating mine				
Rio Tinto Minerals Boron (US) mine	O/P	**22**	100.0	**22**
stockpiles (g)		**3.1**	100.0	**3**
Rio Tinto total				**26**

		Marketable coal Marketable reserves millions of tonnes	quality (j) Calorific value	Sulphur content	Interest %	Marketable reserves millions of tonnes
COAL (h)	Coal type (i)		MJ/kg	%		
Reserves at operating mines						
Rio Tinto Coal Australia						

Bengalla	O/C	SC	**128**	**27.86**	**0.48**	32.0	**41**
Clermont	O/C	SC	**165**	**27.90**	**0.33**	50.1	**82**
Hail Creek	O/C	MC	**66**	**32.20**	**0.35**	82.0	**54**
Hunter Valley Operations	O/C	SC + MC	**217**	**28.99**	**0.58**	80.0	**173**
Kestrel Coal	U/G	MC	**116**	**31.60**	**0.59**	80.0	**93**
Mouth Thorley Operations	O/C	SC + MC	**25**	**29.80**	**0.45**	64.0	**16**
Warkworth	O/C	SC + MC	**242**	**29.80**	**0.45**	44.5	**108**
Rio Tinto total reserves at Australian operating mines							**567**
Rio Tinto Coal Mozambique							
Benga (k)	O/C	SC + MC	**119**	**26.40**	**0.89**	65.0	**77**
Rio Tinto total reserves at operating mines							**644**
Undeveloped reserves (l)							
Rio Tinto Coal Australia							
Mount Pleasant	O/C	SC	**326**	**26.92**	**0.48**	80.0	**261**

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	Type of mine (b)	Total ore reserves at end 2012				Rio Tinto share
		Tonnage	Grade	Average mill recovery %	Interest %	Recoverable metal millions
COPPER		millions of tonnes	% Cu			of tonnes
Reserves at operating mines						
Bingham Canyon (US)						
mine (m)	O/P	**704**	**0.49**	85	100.0	**2.940**
stockpiles (g) (n)		**80**	**0.28**	85	100.0	**0.191**
Escondida (Chile)						
sulphide mine (o)	O/P	**4,883**	**0.70**	84	30.0	**8.669**
sulphide leach mine (p)	O/P	**1,888**	**0.46**	36	30.0	**0.936**
oxide mine	O/P	**73**	**1.03**	69	30.0	**0.156**
sulphide stockpiles (g)		**1.2**	**1.21**	75	30.0	**0.003**
sulphide leach stockpiles (g)		**37**	**0.63**	25	30.0	**0.018**
oxide stockpiles (g) (q)		**18**	**0.49**	65	30.0	**0.017**
Grasberg (Indonesia)	O/P + U/G	**2,424**	**1.00**	89	(r)	**6.905**
Northparkes (Australia)						
mine	U/G	**66**	**0.80**	89	80.0	**0.377**
stockpiles (g)		**8.2**	**0.40**	86	80.0	**0.022**
Oyu Tolgoi (Mongolia)						
South Oyu mine (s)	O/P	**1,040**	**0.46**	82	33.5	**1.304**
South Oyu stockpiles (g) (t)		**9.0**	**0.44**	85	33.5	**0.011**
Palabora (South Africa) (u)	U/G	**35**	**0.54**	84	57.7	**0.093**
Rio Tinto total reserves at operating mines						**21.642**
Undeveloped reserves (l)						
Eagle (US) (v)	U/G	**5.2**	**2.49**	97	100.0	**0.126**
Oyu Tolgoi (Mongolia)						
Hugo Dummett North (w)	U/G	**460**	**1.80**	92	33.5	**2.550**
Hugo Dummett North Extension (x)	U/G	**31**	**1.73**	92	30.5	**0.151**
Rio Tinto total undeveloped reserves						**2.826**
						Recoverable diamonds millions
DIAMONDS (c)		**millions of tonnes**	**carats per tonne**			**of carats**
Reserves at operating mines						
Argyle (Australia)						

AK1 pipe mine	O/P + U/G	**66**	**2.1**		100.0	**139.4**
AK1 pipe stockpiles (g)		**0.5**	**1.0**		100.0	**0.5**
Diavik (Canada)						
mine	U/G	**18**	**2.9**		60.0	**31.5**
stockpiles (g)		**0.3**	**2.9**		60.0	**0.6**
Rio Tinto total						**172.0**
GOLD		**millions of tonnes**	**grammes per tonne**			**Recoverable metal millions of ounces**
Reserves at operating mines						
Bingham Canyon (US)						
mine (m)	O/P	**704**	**0.20**	64	100.0	**2.875**
stockpiles (g)		**80**	**0.14**	64	100.0	**0.232**
Grasberg (Indonesia)	O/P + U/G	**2,424**	**0.83**	68	(r)	**12.227**
Northparkes (Australia)						
mine	U/G	**66**	**0.28**	68	80.0	**0.328**
stockpiles (g)		**8.2**	**0.24**	67	80.0	**0.035**
Oyu Tolgoi (Mongolia)						
South Oyu mine (s) (y)	O/P	**1,040**	**0.31**	74	33.5	**2.581**
South Oyu stockpiles (g) (t)		**9.0**	**0.33**	74	33.5	**0.024**
Rio Tinto total reserves at operating mines						**18.301**
Undeveloped reserves (l)						
Eagle (US) (v)	U/G	**5.2**	**0.25**	55	100.0	**0.023**
Oyu Tolgoi (Mongolia)						
Hugo Dummett North (w)	U/G	**460**	**0.37**	83	33.5	**1.544**
Hugo Dummett North Extension (x)	U/G	**31**	**0.62**	83	30.5	**0.159**
Rio Tinto total undeveloped reserves						**1.726**

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Ore reserves (under industry guide 7) continued

	Type of mine (b)	Total ore reserves at end 2012			Rio Tinto share	
		Tonnage	Grade	Average mill recovery %	Interest %	Marketable product millions of tonnes
IRON ORE (c) (z)		millions of tonnes	% Fe			
Reserves at operating mines						
Hamersley Iron (Australia)						
Brockman 2 (Brockman ore) (aa)	O/P	**44**	**62.0**		100.0	**44**
Brockman 4 (Brockman ore)	O/P	**561**	**62.0**		100.0	**561**
Marandoo (Marra Mamba ore)	O/P	**211**	**63.2**		100.0	**211**
Mt Tom Price (Brockman ore)						
mine (bb)	O/P	**52**	**63.7**		100.0	**52**
stockpiles (g)		**8**	**62.4**		100.0	**8**
Mt Tom Price (Marra Mamba ore) (cc)	O/P	**11**	**60.9**		100.0	**11**
Nammuldi (Marra Mamba ore)	O/P	**166**	**62.6**		100.0	**166**
Paraburdoo (Brockman ore) (dd)	O/P	**13**	**63.4**		100.0	**13**
Western Turner Syncline (Brockman ore)						
mine (ee)	O/P	**331**	**62.1**		100.0	**331**
stockpiles (g)		**5**	**58.9**		100.0	**5**
Yandicoogina (Pisolite ore HG)						
mine	O/P	**209**	**58.6**		100.0	**209**
stockpiles (g)		**0.4**	**56.9**		100.0	
Yandicoogina (Process Product) (ff)	O/P	**115**	**58.6**		100.0	**115**
Channar JV (Australia)						
Brockman ore (gg)	O/P	**42**	**62.9**		60.0	**25**
Eastern Range JV (Australia)						
Brockman ore (hh)	O/P	**49**	**62.7**		54.0	**27**
Hope Downs JV						
Hope Downs 1 (Marra Mamba ore) (ii)	O/P	**250**	**61.6**		50.0	**125**
Hope Downs 4 (Brockman ore)	O/P	**130**	**63.1**		50.0	**65**
Iron Ore Company of Canada (Canada) (jj)	O/P	**555**	**65.0**		58.7	**326**
Palabora (South Africa) (u)	U/G	**7.4**	**55.1**		57.7	**4**
Robe River JV (Australia)						
Pannawonica (Pisolite ore)						

mine	O/P	**266**	**57.2**		53.0	**141**
stockpiles (g)		**8**	**56.4**		53.0	**4**
West Angelas (Marra Mamba ore)						
mine (kk)	O/P	**226**	**61.8**		53.0	**120**
stockpiles (g)		**2**	**61.2**		53.0	**1**
Rio Tinto total reserves at operating mines						**2,563**
Undeveloped reserves (l)						
Silvergrass East (Marra Mamba ore) (ll)	O/P	**99**	**62.1**		100.0	**99**
Simandou (Guinea) (mm)	O/P	**1,844**	**65.5**		50.4	**928**
Turee Central (Brockman ore)	O/P	**78**	**61.9**		100.0	**78**
Rio Tinto total undeveloped reserves						**1,106**
						Recoverable metal millions
MOLYBDENUM		**millions of tonnes**	**% Mo**			**of tonnes**
Reserves at operating mines						
Bingham Canyon (US)						
mine (nn) (m)	O/P	**704**	**0.046**	69	100.0	**0.224**
stockpiles (nn) (g)		**80**	**0.029**	69	100.0	**0.016**
Rio Tinto total						**0.240**
						Recoverable metal millions
NICKEL		**millions of tonnes**	**% Ni**			**of tonnes**
Undeveloped reserves (l)						
Eagle (US) (v)	U/G	**5.2**	**2.93**	84	100.0	**0.128**

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	Type of mine (b)	Total ore reserves at end 2012 Tonnage	Grade Average mill recovery %	Rio Tinto share Interest %	Rio Tinto share Recoverable metal
		millions of tonnes	grammes per tonne		millions of ounces
SILVER					
Reserves at operating mines					
Bingham Canyon (US)					
mine (m)	O/P	**704**	**2.14**	65 100.0	**31.304**
stockpiles (g)		**80**	**1.84**	65 100.0	**3.071**
Grasberg (Indonesia)	O/P + U/G	**2,424**	**4.24**	70 (r)	**78.650**
Rio Tinto total					**113.024**
		millions of tonnes	% U_3O_8		Recoverable metal millions of tonnes
URANIUM					
Reserves at operating mines					
Energy Resources of Australia (Australia)					
Ranger #3 stockpiles (oo) (g)		**7.3**	**0.132**	86 68.4	**0.006**
Rössing (Namibia)					
mine (pp)	O/P	**127**	**0.035**	84 68.6	**0.025**
stockpiles (g)		**3.8**	**0.019**	82 68.6	**0.0004**
Rio Tinto total					**0.032**

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Ore reserves (under industry guide 7) continued

	Type of mine	Proven ore reserves at end 2012 Tonnage millions of tonnes	Grade % Al_2O_3	Drill hole spacing (qq)	Probable ore reserves at end 2012 Tonnage millions of tonnes	Grade % Al_2O_3	Drill hole spacing (qq)
BAUXITE (c)							
Reserves at operating mines							
Rio Tinto Alcan							
Porto Trombetas (Brazil) (d)	O/P	47	51.0	200m × 200m	16	50.5	400m × 400m
Sangaredi (Guinea) (e)	O/P	135	50.7	38m × 38m	185	48.9	75m × 75m
Weipa (Australia)	O/P	524	52.5	150m × 150m	1,010	53.0	300m × 300m
Pacific Aluminium							
Gove (Australia)	O/P	142	49.5	50-100m × 50-100m	13	49.4	200-400m × 200-400m

		Reserves millions of tonnes	Recoverable reserves millions of tonnes	Yield to give marketable reserves %	Drill hole spacing (qq)	Marketable reserves Proven millions of tonnes	Drill hole spacing (qq)	Probable millions of tonnes	Drill hole spacing (qq)
BORATES (f)									
Reserves at operating mine									
Rio Tinto Minerals Boron (US)									
mine	O/P	13			0-130m × 0-130m	9.0			130-488m × 130-488m
stockpiles (g)						3.1			

	Type of mine (b)	Reserves total millions	Recoverable reserves millions	Yield to give marketable reserves %	Drill hole spacing (qq)	Proven millions of tonnes	Drill hole spacing (qq)	Probable millions of tonnes	Drill hole spacing (qq)
COAL (h)									

		of tonnes					
Reserves at operating mines							
Rio Tinto Coal Australia							
Bengalla	O/C	171	75	121	100-450m × 100-450m	7.2	300-1000m × 300-1000m
Clermont	O/C	172	96	160	300m × 300m	4.2	600m × 600m
Hail Creek	O/C	128	52	43	100-500m × 100-500m	23	200-1000m × 200-1000m
Hunter Valley Operations	O/C	317	68	184	125-500m × 125-500m	33	400-1000m × 400-1000m
Kestrel	U/G	140	83	37	500m × 500m	79	1000m × 1000m
Mount Thorley Operations	O/C	38	66	20	125-500m × 125-500m	4.7	400-1000m × 400-1000m
Warkworth	O/C	372	65	141	125-500m × 125-500m	101	400-1000m × 400-1000m
Rio Tinto Coal Mozambique							
Benga (k)	O/C	277	46	64	0-500m × 0-500m	55	500-1000m × 500-1000m
Undeveloped reserves (l)							
Rio Tinto Coal Australia							
Mount Pleasant	O/C	399	82			326	350-1000m × 350-1000m

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	Type of mine (b)	Proven ore reserves at end 2012 Tonnage millions of tonnes	Grade % Cu	Drill hole spacing (qq)	Probable ore reserves at end 2012 Tonnage millions of tonnes	Grade % Cu	Drill hole spacing (qq)
COPPER							
Reserves at operating mines							
Bingham Canyon (US)							
mine (m)	O/P	417	0.53	85m x 85m	287	0.44	131m x 131m
stockpiles (g)		40	0.22		41	0.34	
Escondida (Chile)							
sulphide mine (o)	O/P	2,738	0.79	50m x 50m	2,145	0.59	90m x 90m
sulphide leach mine (p)	O/P	1,066	0.49	60m x 60m	822	0.44	115m x 115m
oxide mine (q)	O/P	35	1.19	35m x 35m	38	0.88	45m x 45m
sulphide stockpiles (g)		1.2	1.21				
sulphide leach stockpiles (g)		37	0.63				
oxide stockpiles (g)		18	0.49				
Grasberg (Indonesia)	O/P + U/G	800	1.15	0-60m x 0-60m	1,624	0.93	7-358m x 7-358m
Northparkes (Australia)							
mine	U/G				66	0.80	30-50m x 30-50m
stockpiles (g)		8.2	0.40				
Oyu Tolgoi (Mongolia)							
South Oyu mine (s)	O/P	426	0.54	30m x 50m	614	0.40	70m x 70m
South Oyu stockpiles (g) (t)		9.0	0.44				
Palabora (South Africa) (u)	U/G				35	0.54	76m x 76m
Undeveloped reserves							
Eagle (US) (v)	U/G				5.2	2.49	1-25m x 1-25m
Oyu Tolgoi (Mongolia)							
Hugo Dummett North (w)	U/G				460	1.80	50-70m x 100-125m
Hugo Dummett North Extension (x)	U/G				31	1.73	50-70m x 100-125m
DIAMONDS (c)		millions	carats		millions of tonnes	carats	

		of tonnes	**per tonne**			**per tonne**	
Reserves at operating mines							
Argyle (Australia)							
AK1 pipe mine	O/P + U/G	3.7	1.1	0-50m x 0-50m	63	2.2	50m x 50m
AK1 pipe stockpiles (g)		0.3	1.0		0.2	0.9	
Diavik (Canada)							
mine	U/G	10	3.2	2-39m x 2-62m	7.7	2.6	8-63m x 5-74m
stockpiles (g)		0.3	2.9				
		millions of tonnes	**grammes per tonne**		**millions of tonnes**	**grammes per tonne**	
GOLD							
Reserves at operating mines							
Bingham Canyon (US)							
mine (m)	O/P	417	0.21	85m x 85m	287	0.18	131m x 131m
stockpiles (g)		40	0.14		41	0.14	
Grasberg (Indonesia)	O/P + U/G	800	1.03	1-60m x 1-60m	1,624	0.74	7-358m x 7-358m
Northparkes (Australia)							
mine	U/G				66	0.28	30-50m x 30-50m
stockpiles (g)		8.2	0.24				
Oyu Tolgoi (Mongolia)							
South Oyu mine (s)	O/P	426	0.42	30m x 50m	614	0.24	70m x 70m
South Oyu stockpiles (g) (t)		9.0	0.33				
Undeveloped reserves (l)							
Eagle (US) (v)	U/G				5.2	0.25	1-25m x 1-25m
Oyu Tolgoi (Mongolia)							
Hugo Dummett North (w)	U/G				460	0.37	50-70m x 100-125m
Hugo Dummett North Extension (x)	U/G				31	0.62	50-70m x 100-125m

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Ore reserves (under industry guide 7) continued

	Type of mine (b)	Proven ore reserves at end 2012 Tonnage millions of tonnes	Grade % Fe	Drill hole spacing (qq)	Probable ore reserves at end 2012 Tonnage millions of tonnes	Grade % Fe	Drill hole spacing (qq)
IRON ORE (c) (z)							
Reserves at operating mines							
Hamersley Iron (Australia)							
Brockman 2 (Brockman ore) (aa)	O/P	18	62.9	50m x 50m	26	61.4	50m x 50m
Brockman 4 (Brockman ore)	O/P	422	62.3	50m x 50m	139	61.3	50 100m x 50m
Marandoo (Marra Mamba ore)	O/P	188	63.5	75m x 75m	23	61.2	75m x 75m
Mt Tom Price (Brockman ore)							
mine (bb)	O/P	16	64.0	30-120m x 30-60m	37	63.6	30-120m x 30-60m
stockpiles (g)					8	62.4	
Mt Tom Price (Marra Mamba ore) (cc)	O/P	10	61.1	60m x 30m	0.7	59.0	60m x 30m
Nammuldi (Marra Mamba ore)	O/P	74	62.8	25-50m x 25-50m	92	62.4	25-200m x 25-50m
Paraburdoo (Brockman ore) (dd)	O/P	6	62.9	30-60m x 30-60m	7	63.9	30-60m x 30-60m
Western Turner Syncline (Brockman ore)							
mine (ee)	O/P	262	62.3	60m x 60m	69	61.1	60m x 60m
stockpiles (g)					5	58.9	
Yandicoogina (Pisolite ore HG)							
mine	O/P	209	58.6	100m x 50m			
stockpiles (g)					0.4	56.9	
Yandicoogina (Process product)	O/P	115	58.6	100m x 50m			

(ff)							
Channar JV (Australia)							
Brockman ore (gg)	O/P	24	63.1	30-60m x 30-60m	18	62.7	30-120m x 30-120m
Eastern Range JV (Australia)							
Brockman ore (hh)	O/P	40	62.7	30-60m x 30-60m	9	62.7	30-120m x 30-120m
Hope Downs JV (Australia)							
Hope Downs 1 (Marra Mamba ore) (ii)	O/P	9	61.3	25-50m x 50m	241	61.6	25-100m x 50m
Hope Downs 4 (Brockman ore)	O/P	76	62.9	63-125m x 50-100m	55	63.3	63-125m x 50-100m
Iron Ore Company of Canada (Canada) (jj)	O/P	320	65.0	61-122m x 30-61m	235	65.0	122m x 61-122m
Palabora (South Africa) (u)	U/G				7.4	55.1	76m x 76m
Robe River JV (Australia)							
Pannawonica (Pisolite ore)							
mine	O/P	174	57.3	50-70m x 50-70m	92	57.1	50-100m x 50-100m
stockpiles (g)		1	56.8		7	56.3	
West Angelas (Marra Mamba ore)							
mine (kk)	O/P	160	62.2	25-100m x 25-50m	66	60.9	50-200m x 25-50m
stockpiles (g)		1	62.6		1	59.9	
Undeveloped reserves (l)							
Silvergrass East (Marra Mamba ore) (ll)	O/P	61	62.7	50m x 50m	38	61.3	200m x 100m
Simandou (Guinea) (mm)	O/P				1,844	65.5	30-125m x 30-125m
Turee Central (Brockman ore)	O/P	72	62.0	60-120m x 60-120m	6.1	61.4	60-120m x 60-120m
MOLYBDENUM		**millions of tonnes**	**% Mo**		**millions of tonnes**	**% Mo**	
Reserves at operating mine							
Bingham Canyon (US)							
mine (nn) (m)	O/P	417	0.046	85m x 85m	287	0.046	131m x 131m
stockpiles (nn) (g)		40	0.044		41	0.015	

NICKEL		millions of tonnes	% Ni	millions of tonnes	% Ni	
Undeveloped reserves						
Eagle (US) (v)	U/G			5.2	2.93	1-25m x 1-25m

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	Type of mine (b)	Proven ore reserves at end 2012 Tonnage millions of tonnes	Grade grammes per tonne	Drill hole spacing (qq)	Probable ore reserves at end 2012 Tonnage millions of tonnes	Grade grammes per tonne	Drill hole spacing (qq)
SILVER							
Reserves at operating mines							
Bingham Canyon (US)							
mine (m)	O/P	417	2.22	85m x 85m	287	2.01	131m x 131m
stockpiles (g)		40	1.74		41	1.94	
Grasberg (Indonesia)	O/P + U/G	800	4.43	0-60m x 0-60m	1,624	4.14	7-358m x 7-358m
		millions of tonnes	**% U_3O_8**		**millions of tonnes**	**% U_3O_8**	
URANIUM							
Reserves at operating mines							
Energy Resources of Australia (Australia)							
Ranger #3 stockpiles (oo) (g)					7.3	0.132	
Rössing (Namibia)							
mine (pp)	O/P	25	0.033	4-7m x 4-9m	102	0.035	20-120m x 20-120m
stockpiles (g)		3.8	0.019				

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Ore reserves (under industry guide 7) continued

Notes

(a) Commodity prices (based on a three year average historical price to 30 June, 2012) used to test whether the reported reserve estimates could be economically extracted, include the following benchmark prices :

Ore reserve	Unit	US$
Aluminium	pound	0.99
Copper	pound	3.56
Gold	ounce	1,378
Iron ore		
Australian benchmark (fines fob)	dmtu**	133.10
Molybdenum	pound	14.80
Nickel	pound	945.00
Silver	ounce	26.20

** dry metric tonne unit

(b) Type of mine: O/P = open pit, O/C = open cut, U/G = underground
(c) Reserves of iron ore, bauxite and diamonds are shown as recoverable reserves of marketable product after accounting for all mining and processing losses. Mill recoveries are therefore not shown.
(d) Reserves at Trombetas (MRN) decreased following production.
(e) The reserves increased at Sangaredi following continued exploration, technical and economic studies supporting a reduced cut-off grade.
(f) Reserves of industrial minerals are expressed in terms of marketable product, ie after all mining and processing losses. In the case of borates, the marketable product is B_2O_3 .
(g) Stockpile components of reserves are shown for all operations at the relevant mine.
(h) For coal, the yield factors shown reflect the impact of further processing, where necessary, to provide marketable coal.
(i) Coal type: SC: steam/thermal coal, MC: metallurgical/coking coal.
(j) Coals from Australia have been analysed on an Air Dried moisture basis in accordance with Australian Standards. Marketable reserve tonnages are reported at product moisture.
(k) Benga reserves are reported under operating mines for the first time following commencement of mining. The decrease in reserve tonnes is a result of production and technical studies.
(l) The term 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.
(m) Bingham Canyon open pit reserve tonnes decreased after updated technical studies including re-assessment of geotechnical and processing parameters.
(n) Bingham Canyon stockpile reserve grades increased following re-assessment of processing options.
(o) Escondida sulphide reserve tonnes increased and grade decreased following economic studies and improved metallurgical recoveries.
(p) Escondida sulphide leach reserve tonnes decreased following economic studies and re-allocation of tonnes to the mill.

(q) The Escondida oxide stockpile reserve tonnes decrease follows processing of stockpiled ore.
(r) 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.
(s) South Oyu reserves are reported under operating mines for the first time following commencement of mining. Rio Tinto increased its interest in South Oyu from 32.3 per cent to 33.5 per cent during 2012.
(t) South Oyu stockpiles reserves are reported for the first time following commencement of mining.
(u) In December 2012, Rio Tinto announced that it has signed a binding agreement to sell its 57.7 per cent effective interest in the Palabora Mining Company. The decrease in reported tonnage reflects production as well as anticipated metal recovery rates based on reconciliation results.
(v) Eagle reserve tonnes increased after additional drilling and some stope redesign.
(w) Hugo Dummett North reserves increased following updated economic studies. Rio Tinto increased its interest in Hugo Dummett North from 32.3 per cent to 33.5 per cent during 2012.
(x) Hugo Dummett North Extension reserve tonnes increased and gold grade decreased following technical and economic studies. Rio Tinto increased its interest in Hugo Dummett North Extension from 29.5 per cent to 30.5 per cent during 2012.
(y) Updated technical studies have resulted in a decrease in South Oyu open pit reserve gold grade.
(z) All Pilbara Iron reserves tonnes reported below are on a dry weight basis.
(aa) The Brockman 2 (Brockman ore) reserves increase follows technical and economic studies.
(bb) The decrease in Mt Tom Price (Brockman ore) reserves results from production and technical and economic studies.
(cc) The decrease in Mt Tom Price (Marra Mamba ore) reserves reflects production and technical and economic studies.
(dd) The increase in Paraburdoo (Brockman ore) reserves follows technical and economic studies.
(ee) Western Turner Syncline (Brockman ore) reserves increased after updating technical and economic studies.
(ff) The Yandicoogina (Process Product) reserves decrease reflects production and updated technical and economic studies.
(gg) The Hamersley Channar (Brockman ore) reserves decrease reflects production and updated technical and economic studies.
(hh) The Hamersley Eastern Range (Brockman ore) reserves increase follows technical and economic studies.
(ii) Hope Downs 1 (Marra Mamba ore) reserves reduction reflects production and updated technical studies.
(jj) Reserves at Iron Ore Company of Canada are reported as marketable product (55 per cent pellets and 45 per cent concentrate for sale), at a natural moisture content of two per cent using process upgrade factors derived from current IOC concentrating and pellet operations. The marketable product is obtained from mined material comprising 763 million dry tonnes at 37.9 per cent iron (proven) and 557 million dry tonnes at 37.5 per cent iron (probable).
(kk) West Angelas (Marra Mamba) reserve tonnes reduced following production and updated technical and economic studies.
(ll) Silvergrass East (Marra Mamba ore) reserves are reported for the first time as a result of technical and economic studies.
(mm) Rio Tinto s interest in the Simandou joint venture (JV) has reduced from 95 per cent to 50.35 per cent . The remaining JV share is Chalco with 44.65 per cent and the IFC with 5 per cent. Arrangements entered into between the JV and the Government of Guinea (the Settlement Agreement) provide for the Government of Guinea to acquire an interest in the JV. The JV has completed a Definitive Engineering Study that supports the first publication of Ore Reserves for the Simandou Project. Ore Reserves cut-offs are Fe>=58 per cent and Al_2O_3<3 per cent for reporting.
(nn) Molybdenum grades interpolated from exploration drilling assays have been factored based on a long reconciliation history to blasthole and mill samples.
(oo) Following completion of open cut mining, Ranger #3 reserves are reported as stockpiles only with reduced tonnes and grade.
(pp) Rössing reserve tonnes reduced following production and an updated block model.
(qq)

Drill hole spacings are either average distances, a specified grid distance (a regular pattern of drill holes - the distance between the drill holes along the two axes of the grid will be aligned to test the size, shape and continuity of the mineral deposit; as such there may be different distances between the drill holes along the two axes of a grid) or the maximum drill hole spacing that is sufficient to determine the reserve category for a particular deposit. As the continuity of mineralisation varies from deposit to deposit, the drill hole spacing required to categorise a reserve varies between and within deposit types.

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Mines and production facilities

Group mines as at 31 December 2012

(Rio Tinto s interest 100 per cent unless otherwise shown)

Mine	Location	Access	Title/lease
Bauxite			
Rio Tinto Alcan			
CBG Sangaredi (22.95%)	Kamsar, Guinea	Road, air and port	Lease expires in 2038.
MRN Porto Trombetas (12%)	Porto Trombetas, Para, Brazil	Air or port	Mineral rights granted for undetermined period.
Weipa/Ely	Weipa, Queensland, Australia	Road, air and port	The Queensland Government Comalco (ML704) lease expires in 2041 with an option of a 21-year extension, then two years notice of termination; the Ely Alcan Queensland Pty. Limited Agreement Act 1965 (ML7301) expires in 2048 with a 21-year right of renewal with a two-year notice period.
Pacific Aluminium			
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.
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% of production)	Papua, Indonesia	Pipeline, road and port	Indonesian Government Contracts of Work expire in 2021 with option of two ten-year extensions.
Kennecott Utah Copper	Near Salt Lake City, Utah, US	Pipeline, road and rail	Owned
Bingham Canyon		Road and rail	

Northparkes (80%)	Goonumbla, New South Wales, Australia		Hold three State Government mining leases of which two are pending renewal after lodgement in 2011 and remain in effect until renewal approval as per relevant legislation. Third lease expires 2031. Development consent approved in 2009 for extension of mine life to 2025.
Oyu Tolgoi (51% of Turquoise Hill Resources which owns 66% of Oyu Tolgoi)	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.
Palabora (57.7%)	Phalaborwa, Limpopo Province, South Africa	Rail and road	Lease from South African Government until deposits depleted. Base metal claims owned by Palabora.
Diamonds & Minerals			
Diamonds			
Argyle Diamonds	Kimberley Ranges, Western Australia	Road and air	Mining tenement held under Diamond (Argyle Diamond Mines Joint Venture) Agreement Act 1981-1983; lease extended for 21 years from 2004.
Diavik (60%)	Northwest Territories, Canada	Air, ice road in winter	Mining leases from Canadian Federal Government expiring in 2017 and 2018 with options to renew.
Murowa (77.8%)	Zvishavane, Zimbabwe	Road and air	Claims and mining leases
Industrial minerals			
Dampier Salt (68.4%)	Dampier, Lake MacLeod and Port Hedland, Western Australia	Road and port	State agreements (mining leases) expiring in 2013 at Dampier, 2018 at Port Hedland and 2021 at Lake MacLeod with options to renew in each case.
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 State in 1949 and 1951 which, subject to certain Mining Act restrictions, confer rights and obligations of an owner.

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History	Type of mine	Power source
Bauxite mining commenced in 1973. Shareholders are 51% Halco and 49% Government of Guinea. Rio Tinto Alcan has held 45% of Halco since 2004. Current annual capacity is 13.6 million tonnes. Rio Tinto Alcan has a 45 per cent interest in the mine s production.	Open cut	On-site generation (fuel oil)
Mineral extraction commenced in April 1979. Initial production capacity 3.4 million tonnes annually. From October 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 Alcan (12%), CBA (10%), Alcoa/Abalco (18.2%) and Norsk Hydro (5%).	Open cut	On-site generation (heavy oil, diesel)
Bauxite mining commenced in 1961 at Weipa. Major upgrade completed at Weipa 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. 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 that increases the shipping capability was commissioned in 2006 at Weipa.	Open cut	On-site generation; new power station commissioned in 2006
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. Current production capacity about ten million tonnes per annum with mine life estimated to 2030.	Open cut	Central power station located at the Gove refinery
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. Modernisation includes smelter complex and expanded tailings dam.	Open pit	On-site generation supplemented by long-term contracts with Rocky Mountain Power
Production started in 1995; interest acquired in 2000.		

	Open pit and underground	Supplied from State grid
Oyu Tolgoi was first discovered in 1996. Construction began in late 2009 and in early 2011 a new zone of shallow copper-molybdenum-gold mineralisation was discovered in southern Mongolia. The discovery, known as Ulaan Khud North, extends the known strike length of the Oyu Tolgoi mineralised system by an additional three kilometres to the north, to more than 23 kilometres.	Open pit and underground	On site diesel generation in addition to grid power from China
Development of 20-year underground mine commenced in 1996 with open pit closure in 2003.	Underground	Supplied by ESKOM via grid network
Interest increased from 59.7% following purchase of Ashton Mining in 2000. Underground mine project approved in 2005 to extend mine life to 2020.	Open pit to underground in future	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.	Open pit to underground in future	On-site diesel generators; installed capacity 44MW and 9.2MW of wind capacity
Discovered in 1997. Small-scale production started in 2004.	Open pit	Supplied by ZESA with diesel generator back-up
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); dredging 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

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Mines and production facilities continued

Group mines as at 31 December 2012 continued (Rio Tinto s interest 100 per cent unless otherwise shown)

Mine	Location	Access	Title/lease
Industrial minerals continued			
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 state and converted to new order mining rights on 7 May 2012. Mining rights run until 8 May 2041 for both lease areas.
Energy			
Energy Resources of Australia (68.4%)	Northern Territory, Australia	Road	Mining tenure granted by Federal Government.
Ranger			
Rio Tinto Coal Australia* Bengalla (32%)	New South Wales and Queensland, Australia	Road, rail, conveyor and port	Leases granted by state.
Clermont Mine (50.1%)			
Hail Creek (82%)			
Hunter Valley Operations (80%)			
Kestrel (80%)			
Mount Thorley Operations (64%)			
Warkworth (44.46%)			
Rio Tinto Coal Mozambique	Tete, Mozambique	Road and rail	Mining concession granted by state.
Benga (65%)			
Rössing Uranium (68.6%)	Namib Desert, Namibia	Rail, road and port	National government grant.
Iron Ore			
Hamersley Iron	Hamersley Ranges, Western	Railway and port (owned	Agreements for life of mine with Government of Western Australia.

Brockman 2 Brockman 4 Marandoo Mount Tom Price Nammuldi Paraburdoo Western Turner Syncline Yandicoogina	Australia	by Hamersley Iron and operated by Pilbara Iron)	
Channar (60%) Eastern Range (54%)			
Hope Downs 1 (50% mine, 100% infrastructure)	Pilbara region, Western Australia	Railway owned and operated by Rio Tinto	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.

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History	Type of mine	Power source
Exploration project started in 1986; construction approved 2005. Ilmenite and zirsil production started at the end of 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 diesel 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 December 2012.	Stockpile	On-site diesel/steam power generation
Kestrel was acquired and recommissioned in 1999. Hail Creek started in 2003. Clermont Mine commenced production in 2010. Rio Tinto completed the privatisation of Coal & Allied during 2011, which is now owned 80/20 with Mitsubishi Development, and which Rio Tinto continues to manage. Successive acquisitions of surrounding assets results in the current portfolio. Blair Athol Mine ceased operations in 2012.	Open cut and underground (Kestrel)	State-owned grid
Interest acquired in 2011. Production began in 2012.	Open pit	Mozambican national grid and diesel generators
Production began in 1976.	Open pit	Supplied by NamPower via grid network
Annual capacity increased to 68 million tonnes during 1990s. Yandicoogina first ore shipped in 1999 and port capacity increased. Eastern Range started 2004.	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 April 2006 and first production occurred November 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
Interest acquired in 2000 through North. Current operation began in 1962 and has processed over one billion tonnes of crude ore since. Annual capacity 17.5 million tonnes of concentrate of which 13.5 million tonnes can be pelletised.	Open pit	Supplied by Newfoundland Hydro under long-term contract
First shipment in 1972. Annual sales reached 30 million tonnes in late 1990s. Interest acquired in 2000 through North. West Angelas first ore shipped in 2002 and mine expanded in 2005. Current capacity approximately 50 million tonnes per year.	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron

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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 2012 (based on 100% ownership)
Aluminium				
Rio Tinto Alcan				
Alma	Alma, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium rod, t-foundry, molten metal, high purity, remelt, busbars	438,000 tonnes per year aluminium
Alouette (40%)	Sept-Îles, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium high purity, remelt	597,000 tonnes per year aluminium
Alucam (46.7%)	Edéa, Cameroon	100% freehold	Aluminium smelter producing aluminium slab, remelt	100,000 tonnes per year aluminium
Arvida	Saguenay, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium billet, molten metal, remelt	176,000 tonnes per year aluminium
Bécancour (25.1%)	Bécancour, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium slab, billet, t-foundry, remelt, molten metal	433,000 tonnes per year aluminium

Dunkerque	Dunkerque, France	100% freehold	Aluminium smelter producing aluminium slab, small form foundry, remelt	262,000 tonnes per year aluminium
Grande-Baie	Saguenay, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium slab, molten metal, high purity, remelt	224,000 tonnes per year aluminium
ISAL	Reykjavik, Iceland	100% freehold	Aluminium smelter producing aluminium slab, remelt, billet	191,000 tonnes per year aluminium
Jonquière (Vaudreuil)	Jonquière, Quebec, Canada	100% freehold	Refinery producing specialty aluminas and smelter grade aluminas	1,500,000 tonnes per year alumina
Kitimat[(a)]	Kitimat, British Columbia, Canada	100% freehold	Aluminium smelter producing aluminium billet, slab, remelt	187,000 tonnes per year aluminium
Laterrière	Saguenay, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium slab, remelt, molten metal	239,000 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
Saint-Jean-de-Maurienne	Saint-Jean-de-Maurienne, France	100% freehold	Aluminium smelter producing aluminium rod, remelt	142,000 tonnes per year aluminium
São Luis (Alumar) (10%)		100% freehold		

	São Luis, Maranhão, Brazil		Refinery producing alumina	3,500,000 tonnes per year alumina
Shawinigan	Shawinigan, Quebec, Canada	100% freehold	Aluminium smelter producing aluminium billet, remelt	102,000 tonnes per year aluminium
Sohar (20%)	Sohar, Oman	100% leasehold (expiring 2039)	Aluminium smelter producing aluminium, high purity, remelt	372,000 tonnes per year aluminium
SØRAL (50%)	Husnes, Norway	100% freehold	Aluminium smelter producing aluminium billet, remelt	184,000 tonnes per year aluminium
Yarwun	Gladstone, Queensland, Australia	97% freehold. 3% leasehold (expiring 2101 and after)	Refinery producing alumina	3,400,000 tonnes per year alumina
Pacific Aluminium				
Bell Bay	Bell Bay, Northern Tasmania, Australia	100% freehold	Aluminium smelter producing aluminium slab, molten metal, small form and t-foundry, remelt	180,000 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	560,000 tonnes per year 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	Refinery producing alumina	2,650,000 tonnes per year alumina

		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.		
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	350,000 tonnes per year aluminium
Tomago (51.6%)	Tomago, New South Wales, Australia	100% freehold	Aluminium smelter producing aluminium billet, slab, remelt	530,000 tonnes per year aluminium

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Smelter/refinery	Location	Title/lease	Plant type/product	Capacity as of 31 December 2012 (based on 100% ownership)
Other Aluminium				
Sebree	Robards, Kentucky, US	100% freehold	Aluminium smelter producing aluminium billet, t-foundry, remelt	200,000 tonnes per year aluminium
Copper				
Kennecott Utah Copper	Magna, Salt Lake City, Utah, US	100% freehold	Flash smelting furnace/Flash convertor furnace copper refinery	335,000 tonnes per year refined copper
Palabora (57.7%)	Phalaborwa, South Africa	100% freehold	Reverberatory Pierce Smith copper refinery	90,000 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	1,030,000 tonnes per year titanium dioxide slag, 550,000 tonnes per year iron
Iron Ore				
IOC Pellet Plant (59%)	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	13,500,000 tonnes per year pellet

Notes:

[a] Capacity as at 31 December 2012 reflects the closures of two potlines in preparation for the Kitimat modernisation project. The nameplate capacity of the Kitimat smelter remains at 282,000 tonnes per year.

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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 2012 (based on 100% ownership)
Aluminium				
Rio Tinto Alcan				
Highlands power stations	Lochaber, Kinlochleven, UK	100% freehold	Hydroelectric power	109MW
Kemano power station	Kemano, British Columbia, Canada	100% freehold	Hydroelectric power	896MW
Quebec power stations	Saguenay, Quebec, Canada (Chute-à-Caron, Chute-à-la-Savane, Chutes-des-Passes, Chute-du-Diable, Isle-Maligne, Shipshaw)	100% freehold (except Péribonka lease to 2058)	Hydroelectric power	3,147MW
Vigelands power station	Nr Kristiansand, Norway	100% freehold	Hydroelectric power	26MW
Yarwun alumina refinery co-generation plant	Gladstone, Queensland, Australia	100% freehold	Gas turbine and heat recovery steam generator	160MW
Weipa power stations	Lorim Point, Andoom, Queensland, Australia	100% leasehold	On-site generation (diesel)	36MW
Pacific Aluminium				
Gladstone power station (42%)	Gladstone, Queensland, Australia	100% freehold	Thermal power station	1,680MW
Gove power station	Nhulunbuy, Northern Territory, Australia	100% leasehold	Heavy oil fired thermal power station	180MW
Copper				
Phalaborwa power station	Phalaborwa, Limpopo Province, South Africa	100% freehold	Steam turbine running off waste	9.27MW

(57.7%)			heat boilers at the copper smelter	
Puncakjaya Power (22.12%)	Grasberg, Papua, Indonesia	Lease	Diesel power plant	193MW
Kennecott Utah Copper Power Stations	Salt Lake City, Utah, US	100% freehold	Thermal power plant 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

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Power plant	Location	Title/lease	Plant type/product	Capacity as of 31 December 2012 (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				
Energy Resources of Australia (Rio Tinto: 68.4%)	Ranger mine, Jabiru, Northern Territory, Australia	Lease	Five diesel generator sets rated at 5.1MW; 1 diesel generator rated at 1.9MW	27.4MW
Iron Ore				
IOC power station	Sept Îles, Quebec, Canada	100% freehold	Hydroelectric power	22MW
Paraburdoo power station	Paraburdoo, Western Australia, Australia	Lease	LM6000 PC gas fired turbines	153MW
Yurralyi Maya power station (Rio Tinto: 58%)	Dampier, Western Australia, Australia	Lease	LM6000 PD gas fired turbines	180MW

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Letter from the chairman

Dear Shareholder,

In our pursuit of greater shareholder value, we must maintain the highest standards of corporate governance. In the section that follows, we focus on our corporate governance framework and practice, provide you with further details about the board and explain how it carries out its responsibilities to safeguard the Group s assets. We acknowledge that the level of write-downs across our coal and aluminium businesses is deeply disappointing. Under Sam Walsh s leadership, there is greater focus, discipline and accountability throughout the organisation. This is underpinned by your board s oversight of the robust corporate governance framework to support our business and strategic delivery.

Strategy and risk management

My role as chairman is to lead the board and to ensure it is focused on its oversight of management and the delivery of our strategy. Sam Walsh s role as chief executive is to focus on sustained operational excellence and growth of the business and to do so with safety as the utmost priority. Our roles are complementary but distinct. The separation of executive and non-executive accountabilities is essential to good governance: the executives, under Sam s leadership, have an operational role, whereas the non-executives have an oversight role, ensuring accountability and exercising strong and deliberate challenge through the board decision-making process to ensure appropriate control mechanisms are in place to safely implement our strategy and plans.

Your board devotes much of its time to reviewing, debating and challenging proposals for investment from management, as well as dealing with a wide range of other issues including safety and the Group s strategic direction, monitoring business performance, optimising capital allocation and expenditure whilst carefully evaluating the wide range of risks facing the business.

Board composition

The board places great emphasis on succession planning, both non-executive and executive. Even though we were successful in bringing forward new talent to the executive team in 2012, the impairments which we booked in early 2013 led to the departure of Tom Albanese and Doug Ritchie. The board is grateful to Tom and Doug for their significant contributions to Rio Tinto over their many years with the Group, and was pleased to appoint Sam Walsh as chief executive. Sam s many years of experience with the Company will ensure a rapid and effective transition towards building a stronger business. The board has also appointed Chris Lynch as chief financial officer-designate. He has a wealth of experience, both within and outside the sector, and will be a great asset to the Executive Committee. The board was also pleased to announce the promotion of Jean-Sébastien Jacques as chief executive, Copper, following Andrew Harding s move to lead the Iron Ore group.

Our efforts continue to focus on ensuring that the profile, skill sets, diversity and individual qualities of our executives and non-executives can serve the current and future needs of the business and the ever-changing environment in which we operate.

We are a balanced and diverse board, comprising myself as chairman, three executive directors and eight independent non-executive directors, all of whom meet strict independence criteria. The directors bring with them truly international experience from a wide range of professional, business and public office backgrounds. For Rio Tinto, diversity embraces a range of different measures, including, of course, gender diversity. We have adopted a diversity

and inclusion policy and set measurable objectives for achieving diversity across the Company, including on the board.

We provide new board members with a detailed induction programme and extensive ongoing training, including site visits. In 2012, we visited our mineral sand and coal operations in Southern Africa. We also visited our alumina refineries in Queensland and our underground copper mine in Northparkes, New South Wales, Australia.

Board evaluation

For the first time in 2012, the board s annual performance evaluation was facilitated by an independent external expert, and the board will devote considerable attention to the outcomes of this exercise, when the outcomes are shared in the first half of 2013. I remain happy with the overall effectiveness of the board and the contribution each member of the board is making, while recognising the need for continuous improvement and a focus on accountability, values, strong governance and prudent management of risk in the delivery of our strategy.

We want to ensure we have people on your board for whom corporate governance is not simply a set of rules: we need those who embrace it and appreciate that we want to manage the Group in the interests of all our stakeholders. Good governance is at the heart of everything we do. As you will read in the sections that follow, the board committees, under the effective leadership of their respective chairs, carry out important and demanding roles on the board s behalf and facilitate the embedding of effective governance across the organisation.

Yours sincerely,

Jan du Plessis

Chairman

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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 2012

In compiling this report, the directors have referred to the June 2010 edition of the UK Corporate Governance Code (the Code), the Australian Securities Exchange (ASX) Corporate Governance Principles and Recommendations (the ASX Principles), and the New York Stock Exchange (NYSE) Corporate Governance Standards (the NYSE Standards).

Throughout 2012, and at the date of this report, the Group applied the principles of, and was compliant with the provisions of, the Code and with the ASX Principles.

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 one exception. 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, information about which is set out on page 77. This committee does not develop corporate governance principles for the board s approval. The board itself performs this task and approves the Group s overall system of governance and internal controls.

Further information about the corporate governance framework is available in the Shareholders 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 regularly review its strategic direction. In doing this, the board also has responsibility for corporate governance and oversees management s control and accountability framework.

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 the Executive Committee. In turn, authorities are also delegated to individual members of the Executive Committee, all within an agreed financial control framework. 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 97). These performance targets are determined by the Remuneration Committee on behalf of the board for the chief executive based upon his proposals and objectives for the year. The chief executive establishes targets for the other members of his Executive Committee which are then cascaded throughout management teams. Further details of the performance evaluation of the executive directors and other senior executives is discussed in the Remuneration report.

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 83 to 85. Details of changes to the board during 2012 and in the year to date are set out in the Directors report on page 89.

Director independence

The tests of independence of a non-executive director vary between the jurisdictions where Rio Tinto has listings. The board has adopted a formal policy for the determination of the independence of its non-executive directors which is available on the Group s website. Applying the criteria of the independence policy, the board is satisfied that all of its non-executive directors are independent.

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 judgment 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 to both 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 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.

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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. For further information see page 101.

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, except in special circumstances, would not normally serve more than nine years.

Lord Kerr has been a non-executive director since 2003 and has therefore already served for nine years.

Given the recent executive changes, he has agreed to stand for re-election to the boards at the AGMs. The board considers that Lord Kerr will provide continuity given his significant knowledge of the business and has confirmed that he continues to be independent in carrying out his role.

Governance processes

In 2012, there were eight scheduled board meetings and one board meeting convened and held at short notice. Details of the directors attendance at all of the board and committee meetings held in 2012 are set out on the following page.

The board has regular discussions with the executives on the Group s strategy. These discussions will typically include strategy presentations that are given by product group chief executives, or other members of management. An annual two-day strategy-setting meeting with the Executive Committee is held 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 team through effective allocation of the Group s resources.

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 company secretaries. The directors are also able to obtain independent professional advice at the Group s expense.

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

All new non-executive directors undertake a formal induction programme. In addition, they are routinely provided with training and development opportunities. The directors are also encouraged to participate in site visits to the Group s operations around the world and to meet with local employees. In 2012, the board visited our bauxite and alumina operations in Gladstone, Queensland, our copper mine at Northparkes, New South Wales, our mineral sand operations in Richards Bay, South Africa and our coal business in Mozambique.

Board performance evaluation

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

For 2012, the board evaluation process was facilitated by Independent Board Evaluation, an independent external consultancy with no other connection with the Company, engaged by the chairman and co-ordinated by the company secretary.

A comprehensive brief was provided to Independent Board Evaluation. The evaluation process involved the consultant attending board and committee meetings in an observer capacity. This was supported by detailed interviews conducted with every board member and members of the Executive Committee and the company secretary.

Based on these interviews, the senior independent non-executive director received a report on the chairman, and feedback on his performance has been provided to him.

The chairman appraised the performance of non-executive directors and provided feedback on each individual s performance and contribution.

A similar process was followed for the board committees. Independent Board Evaluation provided feedback to each of the committee chairs on the performance of each committee. In turn, this will be discussed and any actions agreed by each committee later this year.

Following the conclusion of this evaluation exercise, the board plans to hold a dedicated session at one of its scheduled meetings to discuss the output from the performance evaluation and to consider what actions to put into effect during the remainder of 2013.

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Corporate governance continued

Directors membership of and attendance at board and Committee meetings during 2012

	Board scheduled[f]	Board short notice[f]	Audit Committee[f]	Remuneration Committee[f]	Sustainability Committee[f]	Nominations Committee[f]	Chairman s Committee[f]
Jan du Plessi[a]	7/8	1/1		7/7		4/4	19/19
Tom Albanese[b]	8/8	1/1					18/19
Guy Elliott	8/8	1/1					16/19
Sam Walsh[c]	8/8	1/1					
Robert Brown	8/8	1/1			5/5	4/4	
Vivienne Cox	8/8	1/1			5/5	4/4	
Michael Fitzpatrick	8/8	1/1	6/6	9/9		4/4	
Ann Godbehere	8/8	1/1	6/6			4/4	
Richard Goodmanson	8/8	1/1		9/9	5/5	4/4	
Andrew Gould[d]	2/3	1/1		3/4		1/2	
Lord Kerr	8/8	1/1	6/6		5/5	4/4	
Chris Lynch[e]	8/8	1/1	4/4			4/4	
Paul Tellier	8/8	1/1	6/6	9/9		4/4	
John Varley	7/8	1/1		9/9		4/4	

(a) Appointed to the Remuneration Committee on 7 February 2012
(b) Stood down from the board on 17 January 2013
(c) Appointed chief executive on 17 January 2013
(d) Retired from the board on 10 May 2012
(e) Appointed to the Audit Committee 1 June 2012. Appointed chief financial officer-designate on 1 March 2013, at which time Chris Lynch resigned from the Committee.
(f) Number of meetings attended/maximum the director could have attended

Governance structure

The board has established formal committees which are responsible for audit, remuneration, sustainability and matters relating to executive and non-executive succession. In addition, a Chairman s Committee operates under delegated authority between scheduled board meetings. These 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 and can be viewed on the corporate governance section of the website.

The chief executive is assisted by the Executive Committee in monitoring performance and delivering Rio Tinto s strategy.

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Progress against our priorities

What we said

Review financial and non-financial performance metrics to retain a strong balance sheet;

Review executive succession planning under the leadership of the Nominations Committee; and

Deliver year-on-year improvement in safety performance.

What we have achieved

Carried out the annual strategy session at which we reconfirmed through optimising our asset allocation strategy to balance capital management/dividend versus growth focus on the pursuit of greater shareholder value;

Continued focus on succession planning, including changes to the Executive Committee implemented in September 2012 and February 2013;

Hosted two governance round-table meetings with key Australian and UK investors covering the role and accountabilities of the board and committees; and

Continued focus on safety improvement and simplifying performance assessment so as to be based upon safety measures rather than programmes to drive performance.

What are our priorities

Strategy

We invest in and operate large, long-life, low-cost mines and businesses in the most favourable industry sectors.

We pursue greater value for shareholders and optimise future capital allocation by prioritising and investing in only the highest returning projects.

We continue to focus on retaining a strong balance sheet.

Succession and diversity

Maintain a focus on executive and non-executive succession planning, taking into account the Group's diversity and inclusion policy.

Performance

Delivering on existing commitments and growth projects.

Enhance performance at existing businesses by unlocking substantial productivity improvements, aggressively reducing costs and improved management of our sustaining capital.

Target cumulative cash cost savings of over US$5 billion by the end of 2014.

Strengthen existing management systems; instilling greater rigour to internal review processes; introducing greater clarity and accountability to decision-making; and clearer line of sight to critical business issues.

Continue focus on improved safety performance.

Board committees

Audit Committee

Members of the Committee are Ann Godbehere (chair), Mike Fitzpatrick, John Kerr and Paul Tellier. Chris Lynch was appointed to the Committee on 1 June 2012 and stood down upon his appointment as chief financial officer-designate on 1 March 2013.

Key responsibilities

The primary function of the Audit Committee is to assist the board in fulfilling its responsibilities by monitoring the integrity of financial reporting, internal control, risk management and compliance systems.

The Audit Committee s main responsibilities include the review of accounting principles, policies and practices adopted in the preparation of public financial information, review with management of procedures relating to financial controls, including internal audit plans and reports, review with external auditors of the scope and results of their audit, review and approval of the auditors fees, the nomination of auditors for appointment by shareholders, and the review of and recommendation to the board for approval of risk management policies and processes. It also oversees the 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 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.

Governance processes

The Committee met six times in 2012. The chairman, chief executive, chief financial officer, other senior management and external and internal auditors regularly attend its meetings.

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 Code and ASX Principles requirement 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 Committee, deemed to be financially literate by virtue of their business experience.

The Committee applies policies for the pre-approval of permitted services provided by the Group s external auditors PricewaterhouseCoopers LLP (PwC). All of the engagements for services provided by them were either within the pre-approval policies or 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, including the Australian Corporations Act 2001 and US legislation.

The Committee considered reports from PwC and Group Audit & Assurance on the activities undertaken in reviewing and auditing the control environment in order to assess the quality and effectiveness of the internal control system. This included an evaluation of 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. A review of the scope and the outputs from the annual Internal Control Questionnaire, a key element of Rio Tinto s internal control framework, was also evaluated.

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Corporate governance continued

The external auditor attended all six Committee meetings during the year. In advance of the Committee meetings, the audit partners brief the chairman on key matters. Private sessions are routinely held with members of the external audit team to discuss the status of the audit and nature of interaction 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 were presented to the Committee which concluded that PwC continued to provide a high-quality audit and an 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 has been the external auditor since the formation of the dual listed company structure in 1995. The Committee does not consider it necessary at the present time to undertake a tender process for the Group s external auditors. Since 2002, PwC has 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. This continued refreshing of the team brings new perspectives to the audit and promotes healthy debate between auditors and management as well as the Committee. The current UK audit engagement partner, Richard Hughes, was appointed for the 2011 year end and therefore 2015 will be his last year of involvement before transition to a new engagement partner. The Australian audit engagement partner, Paul Bendall, was appointed for the 2012 year end and therefore 2016 will be his last year.

What we did in 2012

- Established dedicated induction, training and development programme for all committee members;
- Reviewed Internal Audit Strategy for 2013/14;
- Monitored effectiveness of the Group s risk management process;
- Oversight of transition of Australian external audit partner;
- Appointment of new head of Group Audit & Assurance;
- Engaged with European Commission over EU audit reform proposals; and
- Focused on Impairment, acquisitions and the Annual report.

What we are doing in 2013

In compliance with the revised Code, reviewing the Committee's scope and accountabilities to ensure that, if requested by the board, it can monitor the effectiveness of the Group's reporting processes and provide advice on whether the annual report and accounts, taken as a whole, is fair, balanced and understandable;

Reviewing and, as appropriate, enhancing the Committee's disclosures regarding its activities during the year, including discussion of significant issues it has considered, and a discussion of the processes and checks carried out to ensure the effectiveness and independence of the external auditors;

Reviewing and reinforcing the existing process and control environment;

Monitoring and evaluating the effectiveness of the Group's risk management processes and controls;

Overseeing the 2014 Group Audit & Assurance planning process and, specifically, the 2014 Internal Audit plan;

Continuing the focus on dedicated training and development sessions for Committee members on a range of technical accounting subjects. Subjects earmarked for 2013 include accounting for asset retirement obligations; and accounting for exploration, evaluation and capital projects.

Ann Godbehere

Chairman

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Nominations Committee

Members of the Committee comprise Jan du Plessis (chair) and all of the serving 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 diversity and capacity required to oversee the delivery of the Rio Tinto 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. Following a final review of shortlisted candidates, the Committee will make a recommendation for new board members to the board for approval.

On behalf of the board, the Committee also reviews proposals for senior executive appointments, monitors executive succession planning and oversees the board s policy on external appointments of Executive Committee members.

Governance processes

In 2012, the Committee met four times.

The members of the Committee are independent in accordance with the independence policy adopted by the board.

Sustainability Committee

Members of the Committee are Richard Goodmanson (chair), Robert Brown, Vivienne Cox and John Kerr.

Key responsibilities

The Committee assists the board to oversee management processes, standards, and strategies designed to manage social and environmental risks and achieve 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.

Governance processes

In 2012, the Committee met five times. The chairman, chief executive, and other senior management regularly attend its meetings.

The members of the Committee are all independent.

Remuneration Committee

Members of the Committee are John Varley (chair), Jan du Plessis (appointed to the Committee on 7 February 2012), Mike Fitzpatrick, Richard Goodmanson, and Paul Tellier. Andrew Gould was a member of the Committee until his retirement on 10 May 2012.

Key responsibilities

The Remuneration Committee assists the board to fulfil its oversight responsibility to shareholders to ensure that remuneration policy and practices reward fairly and responsibly and with a clear link to corporate and individual performance.

The report of the Remuneration Committee on pages 92 to 125 has been recommended by the Committee for approval by the board.

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Corporate governance continued

Chairman s Committee

Members of the Committee are Jan du Plessis (chair), Guy Elliott, Chris Lynch, further to his recent appointment as chief financial officer-designate, and Sam Walsh.

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, and deal with the implementation of board decisions on transactions and other corporate matters. Other than for the chairman of the board, the Committee performs the annual review of non-executive directors fees and makes a recommendation to the board, as appropriate.

Diversity and inclusion

Our commitment to diversity and inclusion

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 sustainable value for Rio Tinto and its stakeholders.

What diversity and inclusion means 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 diversity and inclusion

We use the following to drive action and build awareness about diversity and inclusion:

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 Diversity and Inclusion 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 continue to build an inclusive culture in which all talent can thrive.

Some of the activities and initiatives relating to diversity that we undertook during the year are:

- The development of executive-sponsored diversity and inclusion plans within the product groups and geographies in alignment with business goals and the Group Diversity and Inclusion strategy aimed at increasing the diversity in our workforce at all levels and building a more inclusive culture. Progress will be evaluated each year by the Executive Committee and Group Diversity Council beginning in 2013.

- The design of a diversity and inclusion scorecard to accompany the above plans with metrics in three areas: 1) Who we are (demographics); 2) How we behave (performance and development); and 3) What we stand for (values), to be applied across Rio Tinto to help baseline, trend and track progress as well as to address areas where we may be underperforming.

- The 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.

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The publication of a resource and training manual to accompany our *Why gender matters* guide to further integrate gender, diversity and human rights considerations into the management and planning of all Communities and Social Performance (CSP) work across all sections of our business.

The launch of easily-accessible language learning applications with access to over 23 languages to encourage employees to improve existing foreign language skills as well as to learn new languages.

Expansion of our diversity champions network group to include additional geographies and operations and the establishment of several new business unit diversity councils and committees across Rio Tinto increasing leadership engagement, cross-company collaboration, and the sharing and replication of best practices.

The expansion of training programmes aimed at countering unconscious bias-targeting senior leaders, hiring managers and recruiters to help minimise the impact of bias in recruitment and development practices as well as to improve 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 2012, the proportion of women on the board was 14 per cent, in senior management 15 per cent and in the overall workforce 18 per cent.

Measurable objectives and progress

We established the following five-year measurable objectives for workforce diversity at the start of 2011.

Measurable objective	Progress during 2012
Women to represent 20 per cent of our senior management by 2015.	Women represented 15 per cent of our senior management in 2012.
Women to represent 40 per cent of our 2015 graduate intake.	Women represented 30 per cent of our 2012 graduate intake.
15 per cent of our 2015 graduate intake to be nationals from regions where we are developing new businesses.	24 per cent of our 2012 graduate intake were nationals from regions where we are developing new businesses.

Two further objectives relating to diversity of the board were established for 2012:

The Nominations Committee will undertake a review of board diversity.

For each director selection and appointment process, the external search firm supporting the Nominations Committee will put forward at least one credible and suitably experienced female candidate.

An assessment of board diversity was completed in 2012 with the support of an external consultancy, Independent Board Evaluation. The output from that assessment will be reviewed in the context of the board s succession plans during 2013.

The search firm was instructed to put forward at least one credible and suitably experienced female candidate for the searches undertaken during 2012. Their details were included in submissions made to the Nominations Committee. No appointment of a non-executive director was made in 2012. Accordingly, this objective remains in place for 2013.

The board has decided to adopt an additional measurable objective directed at gender diversity to undertake specialist training aimed at countering unconscious bias, designed to influence the mindsets that hinder the progress of women and minority groups within the Group.

The board will assess progress against these objectives annually.

Board 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 website.

The Nominations Committee regularly reviews the structure, size and composition of the board. As a consequence of this review in 2012, the board confirmed the following statement as to the mix of skills and diversity it is looking to achieve in membership of the board.

In leading a global mining and metals company, the board seeks to continually evolve its membership by seeking non-executive directors with diverse and complementary skills and perspectives, as well as experience which reflects the geographic spread of the Group s operations. Core skills required for non-executive membership of the board are maintained. These skills may, depending upon the circumstances, comprise international business, financial or public policy experience, strategic acumen or mining or metals industry experience. The board aspires to increase other aspects of diversity, including the gender diversity, of directors in order to bring a diversity of skills, experience and perspective to the governance of the Group. The board recognises that the evolution of the mix of skills and diversity is a long-term process and weighs the various factors relevant to board balance and diversity when vacancies arise.

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Corporate governance continued

Other disclosures

Global code of conduct

Rio Tinto s commitment to integrity and compliance is set out in *The way we work.* This contains principles and standards of conduct which reaffirm the Group s commitment to integrity and compliance. It is inspired by our four core values: accountability, respect, teamwork and integrity.

It is supported by Rio Tinto s extensive framework of policies and standards. Core policies are adopted by the board after wide consultation, externally and within the Group. Once adopted, they are communicated to business units worldwide, together with mandatory standards, guidance notes and resources to support implementation. Business units are required to devote the necessary effort by management to implement and report on these policies and standards.

Rio Tinto s core policies, addressed in *The way we work,* include: access to land; business integrity; communities; corporate governance; employment; environment; human rights; internal controls and reporting; occupational health; political involvement; government relations; safety; sustainable development; and transparency. These are supported by policies in the areas of data privacy, risk, information management and security.

Each policy is supported by standards and guidance, expanding on the minimum expectations on topics such as antitrust, continuous disclosure, anti-bribery, compliance, cultural heritage and health, safety and the environment. These policies and standards apply to all Rio Tinto managed businesses. Where the Group does not have operating responsibility for a business, Rio Tinto s policies are communicated to its business partners and they are encouraged to adopt similar policies of their own. Rio Tinto employees are required to undertake training about the requirements of *The way we work* and other core policies.

Whistleblowing programme

The board has adopted a confidential and independently operated whistleblowing programme called *Speak-OUT.* This offers an avenue where concerns can be reported anonymously if employees so choose, subject to local law. This can include any significant concerns about the business, or behaviour of individuals, including suspicion of violations of financial reporting, safety or environmental procedures or business integrity issues generally. During 2012, enhanced features were introduced to the programme, including improved web submission, a new case management tool to better manage cases, and a reporting tool to allow for improved analysis of case statistics and reporting. Rio Tinto is also looking at ways to increase the positive awareness of *Speak-OUT* among employees.

Dealing in Rio Tinto securities

Rio Tinto has a set of 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 from the chairman or the company secretary before any proposed dealing to ensure that they do not deal when in possession of inside information. Directors and members of the Executive Committee will not be given clearance during close periods immediately preceding the announcement of annual and interim results. The rules prohibit the hedging of unvested options or other unvested securities issued as remuneration. The Rules for dealing in Rio Tinto securities can be viewed on the website.

Communication with stakeholders

Rio Tinto recognises the importance of effective timely communication with shareholders and the wider investment community.

To ensure that trading in its securities takes place in an informed market, the Group has adopted continuous disclosure standards which are overseen by the Continuous Disclosure Committee and form part of the Group s corporate governance standards. The 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.

Rio Tinto makes immediate disclosure to the listing authorities of any information that a reasonable person would expect to have a material effect on its share price in accordance with their rules. All information released to the markets is posted on the media section of the website.

In addition to statutory documents, Rio Tinto s website features in-depth information on health, safety and the environment, corporate governance, as well as general investor information, publications and policies and guidance. Annual and half year results, as well as any major presentations, are also webcast. Presentation material from investor seminars is also made available on the 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 2012 all of the directors attended the annual general meetings. Rio Tinto s external auditor, PricewaterhouseCoopers, attends the annual general meetings and is available to answer questions about the conduct of the external audit and the preparation and content of the independent auditors report. Any 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.

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, other board committee chairs, and non-executive directors are also available on request. 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.

During 2012, these 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, whilst in 2012, corporate governance round tables were hosted to provide investors with an opportunity to engage with non-executive directors. 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

Risk management

Rio Tinto s overriding objective is to generate attractive sustainable returns to shareholders through a strategy of investing in large, long-term, low-cost mines and businesses. The directors recognise that creating shareholder return is the reward for taking and accepting risk. The risks facing shareholders are, to some extent, managed by the Group s diversified portfolio of assets spread across multiple geographies, currencies and commodities.

A description of the risk factors that could affect Rio Tinto are found on pages 10 to 12.

Risk policy and standard

The board recognises that risk is an integral component of the business, and that it is characterised by both threat and opportunity. The Group fosters a risk aware corporate culture in all decision-making, and is committed to managing all risk in a proactive and effective manner through competent risk management. To support this commitment, risk is analysed in order to inform the management decisions taken at all levels within the organisation. The principles of the risk analysis and management process are set out in the Risk policy and standard which is on the website.

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Risk approach

The Risk policy and standard is supported by an integrated framework of risk governance and reporting specifying how the Group organises the handling of risk. Together with the policy, the framework provides an ongoing process for identifying, evaluating and managing the significant risks faced by the Group. Clear accountability for risk management is defined throughout the Group and is a key performance area of line managers. The process has been in place for 2012 and up to the date of the report.

To support risk understanding and management at all levels, the Group Risk function provides the necessary infrastructure, information collation for the senior executive, and co-ordination between other risk-focused functions. Group Risk reports into the Risk Management Committee.

Internal controls

The directors are responsible for the Group s system of internal controls and for reviewing annually its effectiveness in providing shareholders with a return on their investments that is consistent with a responsible assessment and management of risks. This includes reviewing financial, operational and compliance controls and risk management procedures and their effectiveness. The directors have completed their annual review and assessment for 2012. Whilst the Audit Committee is responsible for oversight of the effectiveness of the risk management process, accountability for identifying and managing risks rests with the chief executive and is cascaded throughout the Group through the Executive Committee.

Internal risk control systems

Two of the Group s management committees, the Executive Committee and the Disclosure and Procedures 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. Each year, the leaders of the Group s businesses and functions complete an Internal Control Questionnaire that seeks to confirm 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 results of the internal control evaluation are presented to the Audit Committee in support of their review of the Group s internal controls. 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.

In 2012, information was reported by management to the Audit Committee to enable it to assess the effectiveness of the internal controls and the management of material business risks. In addition, as part of their role, the board and its committees routinely monitor the Group s material business risks.

Due to the limitations inherent in any risk management system, the process for identifying, evaluating and managing the material business risks is designed to manage, rather than eliminate, risk and to provide reasonable, but not absolute assurance, against material misstatement or loss. Certain risks, for example natural disasters, cannot be managed to an acceptable degree using internal controls. Such major risks are transferred to third parties in the international insurance markets, to the extent considered appropriate. The Group has material investments in a number of jointly controlled entities and associates. Where Rio Tinto does not have managerial control, it cannot guarantee that local management of mining and related assets will comply with Rio Tinto standards or objectives. The review of their internal controls is less comprehensive than that of the Group s managed operations.

Auditors and internal assurance

As indicated in the report of the Audit Committee on page 75,

Rio Tinto has adopted policies designed to uphold the independence of the Group s external auditors by prohibiting their engagement to provide other accounting and other professional services that might compromise their appointment as independent auditors.

The engagement of the external auditors to provide statutory audit services, other services pursuant to legislation, taxation services and

certain other services are pre-approved. Any engagement of the external auditors to provide other permitted services is subject to the specific approval of the Audit Committee or its chairman.

At half year and year end, the chief financial officer and the external auditors submit to the Audit Committee a schedule of the types of services that were performed 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 then the chairman of the Audit Committee must give prior approval of the engagement.

Further information on audit and non-audit fees of the Group s external auditors as well as remuneration payable to other accounting firms, is set out in note 40 to the financial statements and in the Directors report.

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 efficiency and effectiveness of the relevant systems and processes. The function has adopted 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 the Sustainability Committee and has full access to all functions, records, property and personnel of the Group. The head of Group Audit & Assurance reports functionally to both the Audit Committee and Sustainability Committee, providing each Committee with information relevant to their specific terms of reference.

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 respect of its internal audit function, Rio Tinto utilises the services of external service providers. The Audit Committee has a policy which addresses conflicts of interest in relation to management requested engagements of the service provider. The policy complies with the IIA s standards on independence. Certain services are pre-approved under the policy as they would not be 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 and the Australian Corporations Act 2001.

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

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Corporate governance continued

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 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/or the business.

The directors consider that the 2012 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 7.3, this written statement relies on a sound system of risk management and internal controls and confirms 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

The management of Rio Tinto plc and Rio Tinto Limited 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 their common 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 (IFRS).

Because of its 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.

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 our financial statements.

Management conducted an assessment of the effectiveness of internal control over financial reporting as of 31 December 2012, based on the Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and concluded that it was effective.

PricewaterhouseCoopers LLP and PricewaterhouseCoopers, the auditors of Rio Tinto plc and Rio Tinto Limited respectively, audited the Financial statements included in this Form 20-F and audited the effectiveness of internal controls over financial reporting as of 31 December 2012. Their audit report is included on page 226 of this Annual Report on Form 20-F.

There were no changes in the internal controls over financial reporting that occurred during the period covered by this Annual Report on Form 20-F 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.

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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 59

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

Skills and experience: Jan, a South African and British citizen, worked in various management positions in the South African Rembrandt Group from 1981 and in 1988 became group finance director of Compagnie Financière Richemont, the Swiss luxury goods group, before being appointed chairman of British American Tobacco plc (BAT) in 2004, a position which he held until 2009. Jan has been based in Europe for most of his career.

External appointments (current and recent): Non-executive director and senior independent non-executive director of Marks and Spencer Group plc since 2008 and March 2012, respectively, non-executive director of BAT from 1999 until 2009 and chairman of the board from 2004 until 2009, non-executive director and chairman of the audit committee of Lloyds Banking Group plc from 2005 and 2008, respectively, until 2009.

Sam Walsh AO (C)

Chief executive, BCom (Melbourne), age 63

Appointment: Director of Rio Tinto since 2009. He was appointed chief executive in January 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 January 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 June 2010, he was appointed an Officer in the General Division of the Order of

Australia.

External appointments (current and recent): Director of Seven West Media Limited, Australia s largest diversified media business, from 2008 until January 2013.

Robert Brown (N, S and I)

Non-executive director, BSc, age 68

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 first 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 and chairman of Aimia Inc. since 2005 and 2008, respectively and, non-executive director of BCE Inc. and Bell Canada since 2009. He is also non-executive director of Fier CPVC Montreal L.P., a venture capital firm, since 2005, president and chief executive officer of CAE Inc. from 2004 until 2009, and non-executive director of Ace Aviation Holdings Inc. from 2004 to 2009.

Vivienne Cox (N, S and I)

Non-executive director, MA (Oxon), MBA (INSEAD), age 53

Appointment: Director of Rio Tinto since 2005.

Skills and experience: Vivienne is a British citizen. She was executive vice president of Gas, Power and Renewables at BP and former chief executive of BP Alternative Energy. During her career at BP she served in a variety of positions ranging from supply and trading, to commercial, finance and exploration and renewable energy. Vivienne holds degrees in chemistry from Oxford University and in business administration from INSEAD.

External appointments (current and recent): Non-executive director of BG Group plc, the exploration arm of British Gas, since February 2012; non-executive director and senior independent non-executive director of Pearson plc since January 2012 and January 2013 respectively; non-executive director of the UK Department for International Development since 2010; non-executive director of The Climate Change Organisation since 2010; non-executive director and non-executive chairman of Climate Change Capital Limited from 2008 and 2009 respectively until March 2012; member of the supervisory board of Vallourec, a steel tube maker, since 2010; member of the offshore advisory committee of Mainstream Renewable Power from 2010 until December 2012; and a member of the board of INSEAD business school since 2009.

Guy Elliott (C)

Chief financial officer, MA (Oxon), MBA (INSEAD), age 57

Appointment: Director and chief financial officer of Rio Tinto since 2002, Guy will retire at the end of 2013. He remains on the boards until then and has been appointed senior executive director. He will continue in his role as chief

financial officer until 18 April 2013 when he will step down as chief financial officer.

Skills and experience: Guy, a British citizen, has been with Rio Tinto for more than 30 years. He joined the Group in 1980 in the uranium marketing division having previously been in investment banking. He subsequently held a variety of commercial and management positions, including head of Business Evaluation and president of Rio Tinto Brasil, before becoming chief financial officer.

External appointments (current and recent): Non-executive director and chairman of the audit committee of Royal Dutch Shell plc since 2010 and 2011 respectively, a member of the Takeover Panel since 2012 and non-executive director and senior independent director of Cadbury plc from 2007 and 2008, respectively, until 2010.

Chris Lynch (A, N and I until 1 March 2013)

Executive director, BComm, MBA, age 59

Appointment: Director of Rio Tinto since 2011. He was appointed as an executive director and chief financial officer-designate in March 2013.

Skills and experience: Chris, an Australian citizen, has nearly 30 years experience in the mining and metals industry and is also a leading figure in the Australian business community. His directorship reflects the significance of Australia to Rio Tinto s global operations. He was chief executive officer of the Transurban Group, an international toll road developer and manager with interests in Australia and North America, until July 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 July 2012; non-executive director of AMT Management Limited; Citylink Melbourne Limited, Sydney Roads Limited and The Hills Motorway Limited during 2008; and commissioner of the Australian Football League since 2008.

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Board of directors continued

Ann Godbehere (A, N and I)

Non-executive director, FCGA, age 57

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 British American Tobacco plc since 2011; non-executive director of UBS AG since 2009; non-executive director of Atrium Underwriting Group Limited and Arden Holdings Limited since 2007; non-executive director and chairman of the audit committee of Prudential Public Limited Company since 2007 and 2009, respectively; chief financial officer and executive director of Northern Rock (Asset Management) plc from 2008 to 2009.

Richard Goodmanson (R, N, S and I)

Non-executive director, MBA, BEc and BCom, BEng (Civil), age 65 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 North American division 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 Southeast Asia, including the construction of the Hong Kong Subway System.

External appointments (current and recent): Non-executive director of Qantas Airways Limited since 2008; economic adviser to the governor of Guangdong Province, China from 2003 to 2009; executive vice president and chief operating officer of E.I. du Pont de Nemours and Company Limited from 1999 until 2009; and director of the United Way of Delaware, a charitable organisation, between 2002 and 2009.

Lord Kerr of Kinlochard (A, N, S and I)

Non-executive director, GCMG, MA (Oxon), age 71

Appointment: Director of Rio Tinto since 2003.

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 under secretary 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 January 2012; director and vice chairman of Scottish Power Limited since 2009 and April 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 to May 2012; chairman of the Court and Council of Imperial College London from 2005 to 2011; advisory board member of BAE Systems from 2008 to 2011; advisory board member of Scottish Power (Iberdrola) from 2007 to 2009; trustee of the National Gallery in London from 2002 to 2010; trustee of the Rhodes Trust from 1997 to 2010; and a Fulbright Commissioner from 2004 to 2009.

Michael Fitzpatrick (A, R, N and I)

Non-executive director, BEng, BA (Oxon), age 60

Appointment: Director of Rio Tinto since 2006.

Skills and experience: Michael, an Australian citizen, contributes wide-ranging investment and local knowledge of Australian business. He 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 Carnegie Wave Energy Limited since November 2012, 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 and chairman of the Victorian Funds Management Corporation from 2006 to 2008.

Hon. Paul Tellier (A, R, N and I)

Non-executive director, LLL, BLitt (Oxon), LL.D, C.C. age 73

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. Until 2004, he was president and chief executive officer of Bombardier Inc., the aerospace and transportation company.

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

John Varley (R, N and I)

Non-executive director, BA, MA (Oxon), age 56

Appointment: Director of Rio Tinto and chairman of the Remuneration Committee since 2011 and senior independent non-executive director since May 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): Director of Barclays PLC and Barclays Bank PLC from 1998 until 2010; Non-executive director of BlackRock Inc., an asset management firm, since 2009; non-executive director of AstraZeneca plc since 2006; chairman of Marie Curie Cancer Care since 2011; chairman of Business Action on Homelessness since 2006; and president of the Business Disability Forum since 2005.

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Directors who left the Board

Tom Albanese

Chief executive, BS (Mineral Economics), MS (Mining Engineering), age 55 Appointment: Director of Rio Tinto from 2006 and chief executive from 2007 until January 2013.

Skills and experience: Tom, a US citizen, joined Rio Tinto in 1993 on Rio Tinto s acquisition of Nerco Minerals, a US energy company, where he was chief operating officer. His first position with Rio Tinto was general manager of the Greens Creek mine in Alaska. He then held a series of management positions, including overseeing the integration of North Limited into Rio Tinto operations on North s acquisition in 2000. He was appointed chief executive of the Industrial Minerals group in 2000, and chief executive of the Copper group and head of Exploration in 2004.

External appointments (current and recent): Director of the International Council on Mining and Metals since 2007; and member of the board of visitors, Duke University, Fuqua School of Business from 2009.

Andrew Gould

Non-executive director, BA, FCA, age 66

Appointment: Director of Rio Tinto from 2002 and senior independent non-executive director from 2008 to May 2012.

Skills and experience: Andrew, a British citizen, was chairman of Schlumberger Limited, where he held a succession of financial and operational management positions, including that of executive vice president of Schlumberger Oilfield Services and chief executive officer of Schlumberger Limited.

External appointments (current and recent): Chairman of Schlumberger Limited from 2003 to April 2012; chief executive officer of Schlumberger Limited from 2003 to 2011; non-executive director of BG Group plc since 2011; member of the board of trustees of King Abdullah University of Science and Technology in Jeddah, Saudi Arabia since 2008; and a member of the advisory board of the King Fahd University of Petroleum and Minerals in Dhahran, Saudi Arabia since 2007.

Company secretaries

Ben Mathews

BA (Hons), FCIS, age 46

Skills and experience: Ben joined the Group as company secretary of Rio Tinto in 2007. Prior to this, he spent five years with BG Group plc, an oil and gas company, as company secretary. He has previously worked for National Grid plc, British American Tobacco plc and PricewaterhouseCoopers LLP. Ben is a fellow of the Institute of Chartered Secretaries and Administrators and has a joint honours degree in French and European Studies.

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

Tim Paine

BEc, LLB, age 49

Skills and experience: Tim joined the Group as joint company secretary of Rio Tinto Limited in January 2013 and 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.

Stephen Consedine

BBus, CPA, age 51

Skills and experience: Stephen joined Rio Tinto Limited in 1983 and held various positions in Accounting, Treasury, and Employee Services and was company secretary of Rio Tinto Limited from 2002 until January 2013. He holds a business degree and is a certified practising accountant.

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

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Executive Committee

Hugo Bague

MA (Linguistics), age 52

Hugo Bague was appointed Group executive, Organisational Resources in 2009 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 committee, and the compensation committee of Jones Lang LaSalle Incorporated, a global real estate services firm, since 2011.

Preston Chiaro

BSc (Hons) (Environmental Engineering), MEng (Environmental Engineering), age 59

Preston was appointed Group executive, Technology & Innovation in 2009. He joined the Group in 1991 at Kennecott Utah Copper s Bingham Canyon mine as vice president, Technical Services. In 1995 he became vice president and general manager of the Boron Operations in California and was chief executive of Rio Tinto Borax from 1999 to 2003. Preston then became chief executive of the Energy group and in 2007, upon a management reorganisation, he also assumed responsibility for the Industrial Minerals group.

Preston was a director of Cloud Peak Energy Inc. from 2008 to 2011, director of Rössing Uranium Limited from 2004 to 2009, and director of the World Coal Institute between 2003 and 2009, serving as chairman from 2006 to 2008. Since 2006 he has been a board member of Resources for the Future, an environmental and natural resources policymaking body.

Jacynthe Côté

BChem, age 54

Jacynthe became chief executive, Rio Tinto Alcan in 2009. She joined Alcan in 1988 and has significant operational and international experience in the aluminium industry. She was chief executive officer, Primary Metal, Rio Tinto Alcan, where she was responsible for all primary metal facilities and power generation installations worldwide. Her previous roles in Alcan include president and chief executive officer, Bauxite & Alumina business group and senior management roles in business planning, human resources and environment, health and safety. Jacynthe has a degree in chemistry from Laval University in Quebec and was awarded an honorary doctorate from Université du Québec à Chicoutimi in 2011.

Jacynthe has been a member of the Advisory Board of the Montreal Neurological Institute since July 2010, member of the Hautes Études Commerciales Board since 2009, member of the Canadian Council of Chief Executives since 2009, and a member of the International Aluminium Institute since 2009.

Alan Davies

BBus (Acctcy) LLB, LLM, FCA, age 42

Alan was appointed chief executive, Diamonds & Minerals in September 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. 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 April 2012.

Andrew Harding

BEng (Mining Engineering), MBA, age 46

Andrew Harding was appointed chief executive, Iron Ore in February 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 Rio Tinto 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 (formerly Ivanhoe Mines Ltd) between 2009 and July 2010; and between 2011 and February 2013.

Jean-Sébastien Jacques

MSc age 41

Jean-Sébastien was appointed chief executive, Copper in February 2013. He joined Rio Tinto in October 2011 as president, International Operations Copper, where he led a senior team and oversaw Rio Tinto s interests in the Palabora Mining Company in South Africa, Northparkes Mines in Australia, Kennecott Eagle Minerals, the Pebble Mine in the US and Sulawesi in Indonesia. Prior to joining Rio Tinto, Jean-Sébastien spent more than 15 years working across Europe, South East Asia, India and the US in operational and strategy roles in the aluminium, bauxite and steel industries. He served as group director, Strategy and was on the executive committee at Tata Steel Group from 2007 to 2011.

He became a director of Turquoise Hill Resources Ltd in February 2013.

Harry Kenyon-Slaney

BSc (Hons) (Geology), age 52

Harry was appointed chief executive, Energy in September 2012. He joined the Group in 1990 from Anglo American Corporation and has held management positions in South Africa, Australia and the UK. Harry spent his early career at Rio Tinto in marketing and operational roles in the uranium, copper and industrial minerals businesses. In 2004, he was appointed chief executive of Energy Resources of Australia and in 2007, managing director of Rio Tinto Iron & Titanium. Prior to his current role, he was chief executive of Rio Tinto s Diamonds & Minerals product group.

He became a director of the World Coal Association in October 2012.

Debra Valentine

BA (History), JD, age 59

Debra was appointed Group executive, Legal, External & 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 has been a member of the US-based Council on Foreign Relations since 1993, and the American Law Institute since 1991. She is on the board of the Extractive Industries Transparency Initiative and the North America Advisory Council at Chatham House.

Tom Albanese, Guy Elliott and Sam Walsh were also members of the Executive Committee in 2012 through their positions as chief executive, chief financial officer and chief executive of Iron Ore and Australia respectively. Their biographies are shown on pages 83 and 85.

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Directors report

The directors present their report and audited financial statements for the year ended 31 December 2012.

Dual listed structure and constitutional documents

An explanation of the dual listed companies structure (DLC) of Rio Tinto plc and Rio Tinto Limited, and of the Companies constitutional documents can be found on pages 127 to 137. This section also provides a description of voting rights restrictions which may apply in respect of the shares of either Company under specified circumstances.

Activities and business review

Rio Tinto s principal activities during 2012 were minerals exploration, development, production and processing.

The business review set out on pages 1 to 45 provides a comprehensive review of the development and performance of Rio Tinto s operations for the year ended 31 December 2012 and the likely future developments and expected results of those operations. The information set out in the business review is incorporated by reference into this report and is deemed to form part of this report.

The subsidiary and associated undertakings principally affecting the profits or net assets of the Group in the year are listed in notes 34 to 37 to the financial statements.

Significant changes and events affecting the Group during 2012 and until the date of this report have been:

On 12 January 2012, Rio Tinto announced the completion of the acquisition of 100 per cent of the issued and outstanding shares of Hathor Exploration Limited for a price of C$4.70 per share.

On 24 January 2012, Rio Tinto announced that it had taken a majority stake in Turquoise Hill Resources Limited (Turquoise Hill), (formerly Ivanhoe Mines Ltd) having purchased shares that took its interest to 51 per cent. On 30 July 2012, Rio Tinto announced the purchase of further shares under Turquoise Hill s rights offering at a total cost of US$934,998,344, representing approximately 51 per cent of the shares offered under the rights offering. Upon completion of the rights offering, Rio Tinto owned 510,968,850 shares representing an interest of approximately 51 per cent.

On 1 February 2012, following BHP Billiton s decision to exercise a put option agreed between Rio Tinto and BHP Billiton as part of Richards Bay Minerals (RBM) restructuring in 2009, the Group announced its intention to increase its stake in RBM to 74 per cent through the acquisition of BHP Billiton s 37 per cent interest.

On 8 February 2012, the Group announced the commitment of a further US$3.4 billion (Rio Tinto share US$2.9 billion) to the expansion of its Pilbara iron ore operations, comprising US$2.2 billion to extend the life of the Nammuldi iron ore mine and US$1.2 billion for early infrastructure works for the proposed capacity expansion to

353 million tonnes per year. On 20 February 2012, the Group announced a US$518 million investment in autonomous trains for the Pilbara iron ore rail network.

On 14 February 2012, the Group announced that it had approved US$1.4 billion investment in two projects to support higher production at the Escondida copper mine in Chile in which Rio Tinto holds a 30 per cent interest.

On 20 March 2012, Rio Tinto announced that it had priced US$2.5 billion of fixed rate bonds, comprising US$500 million of three-year, US$500 million of five-year, US$1 billion of 10-year and US$500 million of 30-year SEC-registered debt securities.

On 26 March 2012, the Group completed the US$5 billion Rio Tinto buy-back programme announced in February 2011 and subsequently increased to US$7 billion in August 2011.
On 27 March 2012, Rio Tinto announced that it had begun a strategic review of its diamond business that would include exploring a range of options for potential divestment of its interests.

On 28 March 2012, Rio Tinto announced that it had received a binding offer for its specialty aluminas business from H.I.G. The transaction completed on 1 August 2012.

On 18 April 2012, Rio Tinto announced that it had signed an agreement with Turquoise Hill under which Rio Tinto agreed to support and provide certain elements of a comprehensive funding package for Turquoise Hill to underpin the development of the Oyu Tolgoi copper-gold mine in Mongolia. The parties also agreed that Rio Tinto, which owned 51 per cent of Turquoise Hill, would replace a number of the directors on the Turquoise Hill board with Rio Tinto-nominated directors and also nominate a new management team. On 23 May 2012, Rio Tinto announced it had agreed to amend certain terms of the agreement announced on 18 April 2012 to address conditions of regulatory approval and more closely align the terms of the proposed Turquoise Hill rights offering with current market conditions.

On 25 April 2012, Rio Tinto and Chinalco s listed subsidiary, Chalco, announced completion of the agreement to develop and operate the Simandou iron ore project in Guinea, following the completion of all Chinese regulatory approvals. As a result, a consortium led by Chalco made an earn-in payment of US$1.35 billion, in line with an agreement reached with Rio Tinto in March 2010, giving Chalco a 47 per cent interest.

On 9 May 2012, Rio Tinto announced that Chris Lynch had been appointed a member of the Audit Committee with effect from 1 June 2012.

On 21 May 2012, Rio Tinto announced that it had reached an agreement to sell Alcan Cable to General Cable Corporation for US$185 million.

On 19 June 2012, the Group announced its intention to invest US$660 million over the next seven years to extend the life of its Kennecott Utah Copper Bingham Canyon mine in Salt Lake City from 2018 to 2029. The investment will enable production at an average of 180 thousand tonnes of copper, 185 thousand ounces of gold and 13.8 thousand tonnes of molybdenum a year from 2019 to 2029.

On 20 June 2012, Rio Tinto announced the next steps in its phased investment programme, committing US$4.2 billion (100 per cent basis US$6.2 billion) to develop its Tier 1 iron ore business. The investment covers US$3.7 billion (100 per cent basis US$5.2 billion) for expansion of the industry-leading Pilbara iron ore operations in Western Australia and US$501 million (100 per cent basis US$1.0 billion) for further infrastructure development at the Simandou iron ore project in Guinea.

On 8 August 2012, Rio Tinto announced that Blair Athol mine, in Queensland, Australia, would cease mining operations later in the year.

On 17 August 2012, the Group announced that it had priced US$1.25 billion of 5-year, US$1.0 billion of 10-year and US$750 million of 30-year SEC-registered debt securities.

On 5 September 2012, the Group announced that it had completed the sale of the North American portion of its Alcan Cable business to General Cable Corporation for US$151 million in cash, subject to customary adjustments. The Group further announced that it expected the sale of the Alcan Cable Tianjin operation to close later in the year, for US$34 million in cash subject to customary adjustments. The final consideration amounts received following adjustments were $171 million and $58 million respectively.

On 7 September 2012, Rio Tinto announced that it had completed the acquisition of BHP Billiton s interest in Richards Bay Minerals for a purchase price of US$1.7 billion.

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Directors report continued

On 14 September 2012, the Group announced that the High Court of Australia had overturned earlier decisions by the Federal Court not to declare the Hamersley and Robe rail lines open for third party access. On 11 February 2013, the Group announced that the Tribunal had reconsidered the matter and had ruled that the lines should not be opened up for other users.

On 5 November 2012, the Group announced that Oyu Tolgoi had signed a binding agreement with a Chinese power company for the supply of electricity to its mine in Mongolia.

On 4 December 2012, Rio Tinto announced that it had priced EUR 1.25 billion and GBP 500 million of fixed rate notes under its European Debt Issuance Programme.

On 11 December 2012, the Group announced it had reached a binding agreement to sell its 57.7 per cent effective interest in Palabora Mining Company Limited for US$373 million. The purchaser is a consortium comprising the following South African and Chinese entities (respective interests in brackets): (i) The Industrial Development Corporation of South Africa Limited (20 per cent), (ii) Hebei Iron & Steel Group (35 per cent), (iii) Tewoo Group Co., Ltd (20 per cent) and (iv) General Nice Development Ltd (25 per cent). The sale is subject to customary regulatory approvals in South Africa and China.

On 14 January 2013, Rio Tinto entered into an agreement with Chinalco Mining Corporation International Limited (CMCI), a subsidiary of Chinalco, to participate as a cornerstone investor in CMCI s initial public offering (IPO) in Hong Kong on 31 January 2013. Pursuant to the agreement, Rio Tinto acquired approximately one per cent of CMCI s issued share capital post IPO for a total consideration of US$30 million.The shares are subject to a six-month lock-up period.

On 17 January 2013, the Group announced that it expected to recognise a non-cash impairment charge of approximately US$14 billion (post tax) in its 2012 full year results. These impairments included an amount of approximately US$3 billion relating to Rio Tinto Coal Mozambique, as well as reductions in the carrying values of Rio Tinto s aluminium assets in the range of US$10-11 billion. The Group expected to report a number of smaller asset write-downs in the order of US$500 million. The Group also announced that Tom Albanese had stepped down as chief executive and that Iron Ore chief executive Sam Walsh had been appointed as his successor. Doug Ritchie, who led the acquisition and integration of the Mozambique coal assets in his previous role as Energy chief executive, had also stepped down.

On 13 February 2013, Rio Tinto announced that Pacific Aluminium s Gove alumina refinery in Nhulunbuy will continue to operate as planning, approvals and delivery of the gas to Gove project progresses.

On 14 February 2013, the Group announced the appointment of Andrew Harding and Jean-Sébastien Jacques as chief executive, Iron Ore and chief executive, Copper, respectively.

On 28 February, Rio Tinto announced the appointment of Chris Lynch as chief financial officer to succeed Guy Elliott, with effect from 18 April 2013. The Group also announced that Bret Clayton s role of Group executive, Business Support & Operations, will be restructured and its responsibilities will be transferred to other Executive Committee members from 1 March 2013.

Details of events after the statement of financial position date are further described in note 44 to the financial statements.

As permitted by sections 299(3) and 299A(3) of the Australian Corporations Act 2001, information which is likely to result in unreasonable prejudice, regarding likely future developments in, and the expected results of the operations of the Group or its strategies and prospects, has been omitted.

Risk identification, assessment and management

The Group s risk factors are set out on pages 10 to 12.

Share capital

Details of the Group s share capital as at 31 December 2012 can be found at notes 28 and 29 to the financial statements. Details of the rights and obligations attached to each class of shares can be found on page 127 under the heading Voting rights . The voting rights of shares held beneficially by a third party in line with an employee share plan are set out on page 127.

Details of certain agreements triggered on a change of control can be found on page 127 under the heading Dual listed companies structure .

Details of certain restrictions on holding shares in Rio Tinto are described on page 128 under the heading Limitations on ownership of shares and merger obligations . There are no other restrictions on the transfer of ordinary shares in Rio Tinto plc save for:

restrictions that may from time to time be imposed by laws and regulations (for example, those relating to market abuse and insider dealing);

restrictions that may be imposed pursuant to the Listing Rules of the UK Financial Services Authority, whereby certain employees of the Group require approval to deal in shares;

restrictions on the transfer of shares that may be imposed under Rio Tinto plc s Articles of Association or under Part 22 of the UK Companies Act 2006, in either case following a failure to supply information required to be disclosed following service of a request under section 793 of the UK Companies Act 2006; and

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 2012, shareholders authorised:

the purchase by Rio Tinto Limited and its subsidiaries, and the on-market repurchase by Rio Tinto plc of up to 141,685,000 Rio Tinto plc shares (representing approximately ten per cent of Rio Tinto plc s issued share capital at that time);

the off-market purchase by Rio Tinto plc of up to 141,685,000 Rio Tinto plc shares acquired by Rio Tinto Limited or its subsidiaries under the above authority; and

the off-market 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).

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Purchases

	Rio Tinto plc			Rio Tinto Limited			
	Total number[a] of shares purchased	Average price[b] paid per share US$	Total number[c] of shares purchased as part of publicly announced plans or programmes	Total number[a] of shares purchased	Average price[b] paid per share US$	Total number[c] of shares purchased as part of publicly announced plans or programmes	Approximate dollar value of shares that may yet be purchased under the plans or programmes US$
2012							
1 Jan to 31 Jan	10,318,021	56.29	10,318,021	437,142	67.91		914,440,144
1 Feb to 29 Feb	9,181,889	59.35	9,181,889	295,919	74.38		369,498,379
1 Mar to 31 Mar	6,724,000	54.95	6,724,000	140,463	68.05		
1 Apr to 30 Apr	695,918	54.96		715,527	66.84		
1 May to 31 May				27,521	59.87		
1 Jun to 30 Jun				10,532	55.85		
1 Jul to 31 Jul				34,182	57.65		
1 Aug to 31 Aug				20,151	57.04		
1 Sep to 30 Sep	829,467	49.19		672,063	57.83		
1 Oct to 31 Oct				25,082	58.75		
1 Nov to 30 Nov				15,869	60.25		
1 Dec to 31 Dec	727,080	58.01		24,167	65.33		
Total	28,476,375[d]		26,223,910[e]	2,418,618	65.04		
2013							
1 Jan to 31 Jan				506,239	70.29		
1 Feb to 19 Feb				82,581	70.89		

Notes

(a) Rio Tinto plc ordinary shares of 10p each; Rio Tinto Limited shares.

(b) The average prices paid have been translated into US dollars at the exchange rate on the day of settlement.

(c) Shares purchased by the Companies registrars 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) This figure represents 2.00 per cent of Rio Tinto plc issued share capital at 31 December 2012.

(e) This figure represents 1.84 per cent of Rio Tinto plc issued share capital at 31 December 2012.

During 2012, in order to satisfy obligations under employee share plans, Rio Tinto plc issued 939,423 shares from treasury. Rio Tinto plc s registrar purchased on market 727,080 shares and delivered an additional 1,272,405 shares to plan participants. Rio Tinto Limited s registrar purchased on market and delivered 1,098,185 shares to plan participants.

Also during the year, the Companies registrar purchased on market 1,525,385 Rio Tinto plc shares and 1,320,433 Rio Tinto Limited shares to satisfy obligations to shareholders under the dividend reinvestment plans.

On 4 August 2011, Rio Tinto announced an increase in the share buy-back programme by US$2 billion to US$7 billion, subject to market conditions. The programme was completed on 26 March 2012. In total, 116,862,405 Rio Tinto plc shares were repurchased under the programme since February 2011 for a total aggregate consideration of US$7 billion.

For the period 1 January 2013 to 19 February 2013, Rio Tinto plc issued 606,918 shares from treasury in connection with employee share plans and Rio Tinto Limited s registrar purchased on market and delivered 623,699 shares to plan participants.

Awards over 1,858,662 Rio Tinto plc shares and 1,268,990 Rio Tinto Limited shares were granted under employee share plans during 2012. As at 19 February 2013, awards were outstanding over 7,793,460 Rio Tinto plc shares and 5,096,778 Rio Tinto Limited shares. Upon vesting, awards may be satisfied by the issue of new shares, the purchase of shares on market, or, in the case of Rio Tinto plc, by issuing treasury shares.

Dividends

Details of dividends paid and the dividend policy can be found on page 131.

Directors

The names of the directors who served during the year, together with their biographical details and other information, are shown on pages 83 to 85. Andrew Gould retired at the conclusion of the Rio Tinto Limited annual general meeting held on 10 May 2012.

All directors will stand for re-election at the 2013 annual general meetings.

A table of directors attendance at board and committee meetings during 2012 is on page 74.

Secretaries

Details of the company secretary of each of Rio Tinto plc and Rio Tinto Limited together with their qualifications and experience are set out on page 85.

Corporate governance

A full report on corporate governance can be found on pages 71 to 82 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, officers of the Companies, including officers of wholly owned subsidiaries, against liabilities arising from the conduct of the Group s business. The directors and the company secretaries of the Companies, and certain employees serving as directors of subsidiaries at the Group s request have been indemnified in accordance with these provisions.

No amount has been paid under any of these indemnities during the year.

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Directors report continued

The Group has purchased directors and officers insurance during the year. In broad terms, the insurance cover indemnifies individual directors and officers 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 17.

Donations

No donations were made during 2012 for political purposes in the EU, Australia or elsewhere, as defined by the UK Companies Act 2006. During 2012, the Group spent US$292 million on community assistance programmes and payments into benefit receiving trusts set up in directly negotiated community impact benefit agreements.

Charitable donations in the UK during 2012 amounted to £0.3 million.

Government regulations

Rio Tinto is subject to extensive government regulations affecting all aspects of its operations and consistently seeks to apply best practice in all of its activities. Rio Tinto s product diversity and geographical spread help to mitigate the likelihood that any single government regulation could have a material effect on the Group s business.

Rio Tinto s operations globally are subject to various applicable local, state, provincial and federal regulations governing mining and processing, land tenure and use, environmental requirements, workplace health and safety, data privacy, trade and export, corporations, competition, intellectual property, access to infrastructure, foreign investment, securities and taxation. Some operations are conducted under specific agreements with the respective governments and associated acts of parliament.

In relation to hydroelectric power generation in Canada, water rights, as well as power sales and purchases, are regulated by the Quebec and British Columbia provincial agencies.

In addition, Rio Tinto s uranium operations in Northern Territory, Australia and Namibia are subject to specific regulation in relation to mining and the export of uranium.

Rio Tinto s South African-based operations are also subject to black economic empowerment legislation which includes the requirement to transfer (for fair value) 26 per cent of the Group s South African mining assets to historically disadvantaged South Africans by 2014.

Environmental regulation

Rio Tinto measures its performance against environmental regulation by rating incidents on a low, moderate, high, or critical scale of likelihood and consequence of impacting the environment. High and critical ratings are reported to the executive management team and the Sustainability Committee including progress with remedial actions. Prosecutions

and other breaches are also used to gauge Rio Tinto s performance.

In 2012, there were seven environmental incidents rated high consequence at Rio Tinto managed operations (2011: 11).

These incidents were of a nature to impact the environment or potentially concern local communities. Of these, three resulted from water discharge, three were spills and one related to air emissions. The incidents included:

- A spill of alumina during unloading of a ship at a port in Cameroon.
- Permit conditions related to water discharge being exceeded on a number of occasions at a smelter in France.
- An off-site release of water in breach of permit conditions at a coal mine in Queensland, Australia.
- Excessive dust being generated from a coal mine in the Hunter Valley, Australia.
- A spill of diesel from storage tanks at a mine site in Mongolia.

During 2012, six operations incurred fines amounting to US$47,102 (2011: US$236,416).

Australian corporations that exceed specified thresholds are required under the Australian National Greenhouse and Energy Reporting Act 2007 to register and report on greenhouse gas emissions and energy use and production. Three Rio Tinto entities, Rio Tinto Limited, Alcan Gove Pty Limited and Pechiney Consolidated Australia Limited, are separately covered by the Act. All three companies submitted their reports by the required 31 October 2012 deadline.

The same three Rio Tinto entities have obligations under the Australian Energy Efficiency Opportunities Act 2006 (EEO). All three completed the required public reporting in 2012. Six assessments for the second five year assessment cycle (one from Alcan Gove Pty Limited and five from Rio Tinto Limited) were completed in 2012. Pechiney Consolidated Australia Limited is scheduled to complete its assessment in 2013.

Further information on the Group s environmental performance is included in the sustainable development section of this Annual report, on pages 14 to 21 and on the website.

Legal proceedings

Neither Rio Tinto plc nor Rio Tinto Limited nor any of their subsidiaries is a defendant in any proceedings which the directors believe will have a material effect on either Company s financial position or profitability. Contingencies are disclosed in note 32 to the financial statements.

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 32 to 33. Amounts charged for the year, net of any gains on disposal, generated a net loss for Exploration and evaluation of US$1,476 million (2011: US$1,348 million). Research and development costs were US$129 million (2011: US$148 million).

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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 2013 annual general meetings. A separate resolution will seek authority for the Audit Committee to determine their remuneration. 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 225 in the financial statements.

No person who was an officer of Rio Tinto during 2012 was a director or partner of the auditors 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 auditor is 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 auditor is aware of that information.

Fees for audit and non-audit services

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

	2012	2011
	US$m	US$m
Audit fees[(a)]	**17.2**	14.4
Assurance services[(b)]	**5.3**	4.4
Taxation services	**0.7**	1.5
All other fees[(c)]	**1.4**	3.6
	24.6	23.9

(a) Audit fees relating to statutory audits.

(b) Assurance services are mainly related to half year review procedures, carve-out financial statements, sustainability assurance and limited assurance over the Taxes paid in 2012 report.

(c) All other fees include services in connection with the divestment programme and similar corporate projects. Further information on audit and non-audit fees is set out in note 40 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 and quality and efficiency and was completed by individual Rio Tinto business units. The results of this survey 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 has been the external auditor since the formation of the dual listed company structure in 1995. The Audit Committee does not consider it necessary at the present time to undertake a tender process for the Group s external auditors. Since 2002, PwC has 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. This continued refreshing of the team brings new perspectives to the audit and promotes healthy debate between auditors and management as well as the Committee.

Based on advice provided by the Audit Committee as set out in the Report of the Audit Committee on page 75, 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 the Australian Corporations Act 2001 and US legislation.

Financial instruments

Details of the Group s financial risk management objectives and policies and exposure to risk are described in note 31 to the 2012 financial statements.

Value of land

Most of the Group s interests in mining properties and leases, and in other land and buildings, have been included in the financial statements at cost in accordance with its accounting policies. It is not possible to estimate the market value of such interests in land as this will depend on product prices over the long term which will vary with market conditions.

Creditor payments

It is the Group s policy to agree terms of payments with suppliers when entering into contracts and to meet its obligations accordingly. The Group does not follow any specific published code or standard on payment practice.

At 31 December 2012, there were 25 days (2011 restated: 33 days) purchases outstanding in respect of the Group based on the total invoiced by suppliers during the year.

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Letter from the Remuneration Committee chairman

Dear Shareholder

On behalf of the board, I am pleased to introduce our 2012 Remuneration Report, for which we seek your support at our annual general meetings in London in April, and in Sydney in May.

The report is designed to provide you with the necessary information to demonstrate the link between our Group s strategy, its performance, and the remuneration outcomes for its executives.

Incentive plans

As we mentioned last year, a key priority in 2012 was to review the future structure of our incentive plans. Our current long-term incentive plans (LTIPs), which were approved by shareholders in 2004, are due to expire in 2014. Accordingly, we have undertaken a wide-ranging review of our LTIP arrangements to ensure that they continue to incentivise management to deliver our long-term strategy.

Based upon the views expressed by shareholders during our extensive consultations, the Committee is recommending amendments to the Group s LTIPs for approval by shareholders at the 2013 annual general meetings. The new plans incorporate the views and feedback from many major shareholders; the Committee is grateful for the time shareholders took to meet with us and was encouraged by the overall level of support we received.

The main principles of and changes to our LTIP structure, all within the context of no increased overall reward opportunity, are:

- The simplification of our LTIP arrangements by reducing the number of plans from two to a single Performance Share Plan (PSP).

- The addition of a new performance measure (the improvement in our earnings before interest and tax (EBIT) margin relative to the EBIT margin improvement achieved by our major competitors) to complement the existing Total Shareholder Return (TSR) measures. This measure provides a good line of sight to executives; and, with TSR, incentivises management to deliver long-term shareholder value while maximising operational performance in the medium term. We believe that this EBIT margin performance measure will provide an appropriate means of gauging the sustained operational performance of our business and encouraging the cost-competitive operation of our mining assets, a core part of our strategy.

- The extension of the vesting and performance period for awards under the PSP from four years to five. We consider that this duration more appropriately recognises the timeframes over which our business operates, reflecting the long-term nature of our sector, and enhances the alignment of our remuneration structure with our Company strategy.

The simplification of the PSP award structure by consolidating the current potential for 1.5 times vesting of awards for outstanding performance within the maximum face value of awards of 438 per cent of base salary (i.e. the previous face value of 292 per cent with the potential for 1.5 times vesting).

Strengthening the alignment of executives interests with those of shareholders by increasing the executive shareholding guidelines from two to four times base salary for the chief executive; and from two to three times base salary for the other executives.

The introduction of malus and claw back provisions to provide the Committee with the ability to reduce or cancel unvested LTIP awards and to recover vested LTIP awards in certain circumstances.

In order to implement these changes, a resolution to approve the rules of the new PSP is being submitted to shareholders for approval at the 2013 annual general meetings. Further detailed information about the proposed new PSP is provided in the notices of meeting for the 2013 annual general meetings.

The Committee fully intends to keep the Group s long-term incentive arrangements under review, taking into account the practices of our key international competitors. This review will include the percentage of an award under the new PSP that vests for threshold performance, recognising that this is an important issue for some of the shareholders with whom we consulted.

The Committee recognises the importance of ensuring that the outcomes of the Group s executive pay arrangements described in the Policy Report that follows properly reflect the Group s overall performance and the experience of its shareholders over the performance period. It will exercise the discretions reserved to it accordingly.

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The Committee has also approved some changes to the way we measure health and safety performance in our short-term incentive plan (STIP) from 2013. These changes incorporate feedback from shareholders during our consultations in 2012. The weighting of the safety component will be increased from 17.5 per cent to 20 per cent of the overall STIP. Since 2007, the safety component has been increasingly based on leading indicators to drive safety performance. From 2013, in order to simplify further the STIP, performance for executives will be judged on safety outcomes rather than programmes to drive future performance. Further details of the changes are provided on page 97.

2012 performance and remuneration

The financial performance of the business generally exceeded targets set by the board at the beginning of 2012. The board was, however, deeply disappointed by the US$14.4 billion write-downs that we have taken in 2012, primarily in our aluminium and energy businesses. The individual STIP outcomes for 2012 are a direct reflection of these features, as detailed more fully in the report that follows.

The Committee has reviewed the base salary levels for Executive Committee members and, consistent with our stated policy, it has made adjustments taking into account the Group s and individual performance, as well as other factors that it considers relevant such as base salary budgets applying to the broader employee population.

The Committee has considered the Group s overall performance in the context of the LTIP awards that vested at the end of 2012 and has concluded that the vesting of awards based upon the achievement of TSR measures is justified.

2013 decisions

We announced in January that Tom Albanese and Doug Ritchie had stepped down by mutual agreement from their respective roles following the asset write-downs. The Committee determined that their performance in 2012 did not justify them receiving any STIP award. For other members of the Executive Committee, individual performance in 2012 as well as association with the asset write-downs were taken into account. Different levels of STIP award resulted from this, as detailed more fully in the report that follows.

The Committee reviewed in detail each component of the proposed remuneration package for the new chief executive, Sam Walsh, to ensure that an appropriate offer was made to him, focusing on aligning his potential reward with the aim of pursuing greater value for shareholders and increased discipline and accountability throughout the organisation. This approach was reflected in the remuneration packages determined by the Committee for Andrew Harding upon his promotion to become chief executive of the Iron Ore Group in Perth, and for Jean-Sébastien Jacques upon his promotion to the Executive Committee as chief executive of the Copper Group. Most recently, the Committee reviewed and determined each component of the remuneration package for Chris Lynch upon his appointment as chief financial officer, and for Hugo Bague upon his appointment as Group executive, Organisational Resources.

The Committee is mindful of the Group s renewed focus and discipline in delivering its strategy under Sam Walsh s new leadership and will be taking this into account in shaping the future direction and focus of its short and long-term incentive arrangements for management.

Governance

We continue to ensure that the Company meets regulatory and legislative remuneration requirements specified by Australian and UK regulation and, as part of this, we held extensive meetings with shareholders and proxy advisory bodies in Australia and the UK during the year to describe and explain our remuneration policies and practices.

There have been major initiatives by both the UK and Australian governments to strengthen the role of owners in the determination of pay policy and practice. The new UK regulations are expected to be finalised in the first half of 2013. While the final shape of many of these proposals is yet to be definitively determined, the format of this report has been restructured in an attempt to capture the spirit of the UK Government s thinking, particularly with regard to the presentation of a separate Policy Report and an Implementation Report. As we said last year, our endeavour here is to explain what we pay our senior executives and why. Our remuneration structures fixed, short-term and long-term are described in the first section of the pages that follow (the Policy Report). The application of the policy described in the Policy Report to pay decisions during 2012 and 2013 is then described in the Implementation Report.

I am all too conscious of the fact that this report runs to 34 pages. We try to balance the need for a simple narrative of the year s remuneration events with the appetite of many of our shareholders and our regulators for more detail. So, where we can, we use appendices for some of that detail so that the big picture can be observed without too much clutter. But, as always, we welcome your feedback on our report.

Yours sincerely,

John Varley

Remuneration Committee chairman

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Remuneration Report

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 remuneration structure and policies, and assessing their cost, including pension and superannuation arrangements for executives;
- determining the use of short and long-term incentive plans (LTIP) 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, setting of performance criteria, where applicable, and 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, executives and the company secretary of Rio Tinto plc.

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 Committee is committed to ensuring that remuneration policy and practices reflect, to the extent practicable, corporate governance guidance on executive remuneration.

The members of the Committee are John Varley (chair), Jan du Plessis (appointed to the Committee on 7 February 2012), Mike Fitzpatrick, Richard Goodmanson and Paul Tellier.

The membership and meeting attendances are detailed in the corporate governance section on page 74. The Committee is supported by executives and members of senior management who regularly attend meetings to provide information as requested by the Committee. These included the chief executive, Hugo Bague (Group executive, Organisational Resources), John Beadle (global practice leader, Performance and Reward) and Ben Mathews (company secretary). None of the attendees mentioned above were present when matters associated with their own remuneration were considered.

How the Committee spent its time in 2012

During 2012, the Committee met nine times. It fulfilled its responsibilities as set out in its terms of reference. In particular, its work has included:

- reviewing and determining base salary increases for the executives;
- reviewing and determining threshold and outstanding performance targets used in the 2012 STIP and so far in 2013, reviewing actual performance against these targets as well as establishing the 2013 STIP financial and safety targets;
- reviewing and determining LTIP grants for the executives and deciding vesting outcomes;
- a detailed review of the proposed changes to the LTIPs;
- extensive consultation with leading shareholders and proxy advisers in Australia and the UK in shaping the LTIPs;
- reviewing and approving the new global employee share plan;
- reviewing and determining the appointment packages for Harry Kenyon-Slaney and Alan Davies as chief executive Energy and chief executive Diamonds and Minerals respectively; and
- a review of remuneration practices against our comparator groups.

Most recently in 2013, the Committee reviewed and determined the terms of departure of Tom Albanese as chief executive and Doug Ritchie.

The Committee reviewed and determined the terms of appointment for Sam Walsh, as our new chief executive and for Andrew Harding and Jean-Sébastien Jacques as our new chief executives for Iron Ore and Copper respectively. In addition, the Committee reviewed and determined the terms of appointment for Chris Lynch as our new chief financial officer and for Hugo Bague upon his appointment as Group executive, Organisational Resources.

Independent advisers

The independent advisers engaged by and reporting to the Committee during 2012 were Deloitte LLP. During 2012 Deloitte LLP provided general and technical executive remuneration services. These services included benchmarking data, and advice about remuneration of employees other than key management personnel across the Group. Deloitte LLP was paid US$357,130 for these services.

As part of this engagement, Deloitte LLP provided remuneration recommendations to the Committee during 2012 (being advice relating to the elements of remuneration for the key management personnel, as defined under the Australian Corporations Act), including Committee meeting attendance, advice in relation to the proposed changes to the LTIPs and advice in relation to management proposals. Deloitte LLP was paid US$133,072 for these services.

To ensure that remuneration recommendations were made free from undue influence by key management personnel to whom they may relate, the Committee has established a Protocol for the engagement of and interaction with remuneration consultants and has monitored compliance with its requirements throughout 2012. Each remuneration recommendation was accompanied by a declaration from Deloitte LLP that the recommendation was made free from undue influence of key management personnel to whom it related. The board has received assurance from the Committee and is therefore satisfied that the remuneration recommendations received from Deloitte LLP were made free from undue influence by key management personnel to whom any of the remuneration recommendations related.

Deloitte LLP is a member of the Remuneration Consultants Group and, as such, voluntarily operates under the Code of Conduct in relation to executive remuneration consulting in the UK. The Code is based upon principles of transparency, integrity, objectivity, competence, due care and confidentiality by executive remuneration consultants. Deloitte LLP has confirmed that it adhered to the Code throughout 2012 for all remuneration services provided to Rio Tinto. It is available at www.remunerationconsultantsgroup.com.

The Committee is comfortable that Deloitte LLP, in providing remuneration advice to the Committee, does not have any connections with Rio Tinto that may impair its independence.

Deloitte LLP also provided various non-audit services to the Group during 2012 (including advice in relation to taxation, project management and consulting and advisory services), and was paid a total of US$33.9 million for these services.

Deloitte LLP is the only remuneration consultant which provided remuneration recommendations to the Committee during 2012. Other services and publications were received from a range of advisers, including Towers Watson and Mercer in relation to remuneration data and external validation of Total Shareholder Return (TSR) performance.

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Remuneration Policy Report

About this Policy Report

Draft legislation was published by the UK Government during 2012, setting out the Government s proposals for reforming the reporting of, and voting on, executive remuneration by listed companies. The regulations are expected to be finalised in the first half of 2013, and Rio Tinto will be required to comply with these regulations in its 2013 annual report. If approved by the UK Parliament, the regulations require the directors to present to shareholders a Remuneration policy statement that is subject to a binding vote for the first time at the 2014 AGMs and at least every three years thereafter. This section of the report aims to align our communication with shareholders closer to the spirit of the draft proposals, and provides the essential narrative of our remuneration policy. The structure of the report will change next year to reflect the final regulations.

This 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. So the key management personnel are, in addition to the directors, the Executive Committee members. The Executive Committee comprises the executive directors, product group chief executive officers (PGCEOs) and Group executives. Throughout this report, the members of the Executive Committee are collectively referred to as executives . They are listed on page 100 which also shows the positions held during the year and dates of appointment.

In addition to executive remuneration, this report covers the remuneration of the chairman and the non-executive directors on page 113.

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 appropriate remuneration structures, the Committee preserves considerable discretions, enabling it, if it thinks fit, to override mechanistic outcomes.

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.

We aim to engage our people over the long-term by fostering diversity, providing challenging work and development opportunities, and encouraging strong delivery by performance. This people strategy is underpinned by our values of respect, integrity, accountability and teamwork and our commitment to provide sustainable growth and development for both Rio Tinto and our employees.

Our remuneration policy is based on the principles of aligning remuneration outcomes with our strategy, and of encouraging strong delivery by employees by differentiating top performers, while achieving simplicity and transparency in the design and communication of remuneration arrangements. 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 in the executive remuneration structure table on pages 96 to 99.

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 rewards remain appropriate and proportionate, both when compared 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 aligned with performance delivered 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 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.

Health and safety

We have a strong focus on health and 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 key elements of our licence to operate.

Health and safety key performance indicators currently comprise 17.5 per cent of the STIP for executives. From 2013, this component will be increased to 20 per cent and the measures for executives will be split equally between lost time injury frequency rate (LTIFR) and AIFR. We believe, based upon empirical evidence, that these lagging measures provide a stronger link to actual safety performance.

The extent of the impact of a fatality on the STIP score for executives is based on an assessment by the Committee of the impact of leadership, individual behaviour and systems in the incident. Further details on the approach to fatalities are provided on page 97.

For some executives, where relevant, an additional proportion of their individual objectives under the STIP, which comprise 30 per cent of the total STIP opportunity, is linked to safety objectives.

Long-term focus

Consistent with our strategy of investing in and operating large, long-term, low-cost mines and businesses, 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 risks.

Half of the STIP for executives is deferred into shares which vest after three years.

The performance-based options and shares awarded prior to 2013 have a three and four-year time horizon, respectively. The proposed time horizon for performance shares under the new Performance Share Plan is five years. As a transitional measure, it is proposed that any awards granted in 2013 under this plan will vest 50 per cent after four years and 50 per cent after five years.

Options will no longer be granted under the new compensation regime, but existing options which vest may be exercised, as now, up to ten years after the grant.

The Committee fully intends to keep the Group s long-term incentive arrangements under review, taking into account the practices of our key international competitors. This review will include the percentage of an award under the new Performance Share Plan that vests for threshold performance, recognising that this is an important issue for some of the shareholders with whom we consulted.

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Remuneration Policy Report continued

Shareholder alignment

We reward executives for delivering shareholder value by using relative TSR as the measure for our LTIP.

For LTIP awards to be granted from 2013 under the new Performance Share Plan, the Committee is proposing a new relative EBIT margin improvement measure to complement the current relative TSR measures and to incentivise executives to deliver long-term shareholder value while maximising operational performance in the medium term. This measure will comprise one third of the total value of the LTIP awards.

The reward opportunity under the remaining portion of the LTIP awards will be delivered based on relative TSR performance against both the HSBC Global Mining Index and the broader market of large global companies as measured through the Morgan Stanley Capital World Index (MSCI).
TSR is considered an appropriate performance measure for the LTIPs as it captures objectively the return Rio Tinto delivers to its shareholders over the long term and rewards executives based on the Group s TSR performance against its comparators.

The choice of both the HSBC 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 and is consistent with rewarding executives for providing stable returns over the long term relative to the broader market and the mining sector.

When remuneration is delivered

The following chart provides a timeline of when total remuneration is delivered, using 2012 as an example.

Executive remuneration structure

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 a focus 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 on page 8.

	Link to Group performance	Remuneration arrangements
Fixed		
Base salary		Base salaries are reviewed annually effective 1 March.

	Provides the fixed element of the remuneration package. Reflects an employee s sustained contribution to the organisation.	Any increases are determined with reference to underlying Group and individual performance, global economic conditions, role responsibilities, an assessment against relevant comparator groups, internal relativities and base salary budgets applying to the broader employee population. Benchmarking is undertaken periodically but not annually, and our intention is to apply judgment in evaluating market data. Base salaries for 2013 are included in the Implementation Report.
Benefits	Provide locally competitive post- employment and other benefits in a cost-efficient manner.	Post-employment benefit arrangements include pension or superannuation and post-retirement medical benefits, where applicable. Other benefits include healthcare, accident insurance, provision of company-provided transport, professional advice and secondment and relocation payments made to and on behalf of executives living outside their home country.

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Performance-related (At risk)

Short Term Incentive Plan (STIP)

Focuses participants on achieving demanding annual performance goals, which are based on the Group s key performance indicators (KPIs), to create sustainable shareholder value.

We demand that sustainable business practices are adhered to, particularly in the context of safety.

The maximum annual bonus opportunity for outstanding performance under the STIP for executives is 200 per cent of base salary (if target performance is achieved, 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).

50 per cent of the STIP is delivered in cash and 50 per cent is delivered in deferred shares under the Bonus Deferral Plan (BDP).

Threshold, target and outstanding performance levels are established for all STIP measures in order to drive high levels of business and individual performance. The STIP awards for achieving these performance levels are 50 per cent, 100 per cent and 200 per cent of the target STIP opportunity respectively. There is no award for below threshold performance.

The financial performance targets for the measures identified below are established through an annual planning process, where the product group and Group plans are reviewed and ultimately determined by the board. 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) and outstanding (above target) levels are determined by the Committee at the beginning of each performance year.

The following measures and weightings were used to determine STIP payments for executives in 2012:

Business measures	Weighting for executive directors and Group executives %	Weighting for PGCEOs[a] %
Rio Tinto Group		
Underlying earnings flexed and unflexed	26.25	10.50
Cash flow flexed and unflexed	26.25	10.50
Product group		
Underlying earnings flexed and unflexed		15.75
Cash flow flexed and unflexed		15.75
Total financial measures	52.50	52.50
Health and safety	17.50	17.50

Total business measures	70.00	70.00
Individual measures, e.g. cost management, achievement of strategic initiatives	30.00	30.00
Total	100.00	100.00

(a) For 2012 Sam Walsh was considered a PGCEO with regard to STIP performance measures.

From 2013, the health and safety component of the STIP will be increased to 20 per cent and the financial measures will be reduced to 50 per cent.

The health and safety score for executives is capped at 100 per cent (out of a maximum of 200 per cent) if there is a fatality in their area of accountability. The extent of the final impact of any fatalities on the STIP score for executives is based on a judgment process that assesses the impact of leadership, individual behaviour and systems in the incident. An additional adjustment may also be made to the STIP score for executives for severe permanent disability injuries.

The Committee selected the financial measures because they are KPIs used in managing the business. In measuring performance against the annual plan, the original plan is flexed to exclude the impact of uncontrollable fluctuations in exchange rates, quoted metal prices and other prices. Earnings and cash flow results are therefore compared against equally weighted flexed and unflexed targets.

In 2013, there will be a specific focus for executives on management of our cost base within our STIP.

Bonus Deferral Plan (BDP)

Ensure ongoing alignment between executives and shareholders through deferral of STIP into Rio Tinto shares.

50 per cent of the STIP is delivered in cash and 50 per cent delivered in deferred shares under the BDP.

The BDP vests in the December of the third year after the end of performance year to which they relate.

Performance Share Plan (PSP) (2013 onwards)

Simple structure to align executive reward with shareholders returns and operational performance over a truly long-term horizon.

Award levels are set to incentivise executives to meet the long-term strategic goals of the Group, to provide retention

A resolution to approve the rules of the new PSP is being submitted to shareholders for approval at the 2013 annual general meetings. Further detailed information about the new PSP is provided in the notices of the 2013 annual general meetings. In the event of any variation between the summary below and the new PSP rules, the PSP rules will apply.

As discussed with shareholders during the consultation process, awards under the new PSP will have a maximum face value of 438 per cent of base salary, which is unchanged from the maximum

for the executive team and to contribute towards the competitiveness of the overall remuneration package.

TSR rewards the deliver of superior returns to shareholders over the long term.

value available under the current PSP framework.

The awards have been calculated independently by our consultants (Towers Watson and Deloitte LLP) to have an expected value of approximately 50 per cent of the face value. This compares with an expected value of approximately 65 per cent of the face value under the current PSP. Expected value is face value, adjusted for the probability of the performance target being met.

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Remuneration Policy Report continued

Performance-related (At risk)

Performance Share Plan (PSP) (2013 onwards) continued

EBIT margin improvement rewards gauging the 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 performance 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 shareholders. As a transitional measure, awards granted in 2013 will vest 50 per cent after four years and 50 per cent after five years. This means that the maximum expected value that could be awarded under the new PSP is 219 per cent of base salary (ie 438 per cent x 50 per cent).

Actual award levels proposed for 2013 vary by executive and are included in the Implementation Report on pages 102, 104 and page 106. In all cases, the maximum face value of PSP awards granted to Executive Committee members in 2013 will be lower than the maximum value granted to participants under the current PSP in 2012 of 438 per cent of base salary.

Conditional share awards vest subject to the achievement of stretching performance conditions, comparing Rio Tinto s performance against:

- One third: TSR relative to the HSBC 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 following ten global mining comparators (for 2013 awards): Alcoa, Antofagasta, Anglo American, Barrick Gold, BHP Billiton, Freeport McMoRan, Peabody, Teck Resources, Vale and Xstrata

Each component of the award will be assessed independently. For the TSR components, the award will vest as follows:

Outperformance of the index by 6 per cent per annum	1.0x award vests
Performance between equal to the index and 6 per cent outperformance	Proportionate vesting between 0.225x and 1.0x vesting
Performance equal to the index	0.225x 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 ranked position using the following schedule:

Equal or greater to 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

With respect to the EBIT margin measure, the Committee will consider, on a discretionary basis, any specific, significant below the line items (e.g. impairments) reported by Rio Tinto or its peers during the performance period when determining any level of vesting indicated by third-party data.
The outperformance required for maximum vesting under all components of the award is considered by the Committee to be 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 number of shares which have vested at the end of the performance period been held throughout the period.

Previous long-term incentive structure

Subject to approval from shareholders at the annual general meetings, from 2013 onwards, long-term incentive awards will be made solely under the proposed PSP as set out in the table above.

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. This section summarises the key features of the awards which were made in 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 from selecting the full award in performance shares was therefore 438 per cent of base salary (292 per cent x 150 per cent).

It is assumed that for 2012 executives selected the full award in performance shares for ease of comparison to grants under the new plan.

The total expected value of awards made under either preference was the same, at 190 per cent of base salary.

Both awards were based solely on relative TSR performance 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 accordingly.

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Performance-related (At risk)

Share Option Plan (SOP)

(pre-2013)

Three-year performance period.
Awards have a maximum face value of 300 per cent of base salary.
Options vest subject to the achievement of a stretching TSR performance condition, comparing Rio Tinto s TSR performance to that of the HSBC Global Mining Index.
Vesting of awards made in 2012 is as follows:

Outperformance of the index by 5 per cent per annum	Awards vest in full
Performance between index and 5 per cent outperformance	Proportionate vesting of residual award for performance between index and 5 per cent outperformance of the index
Performance equal to index	Awards of up to 20,000 options or one-third of the award (whichever is higher)
Performance less than index	Nil vesting

The SOP will cease operation from 2013. No further awards of share options will be made.

Performance Share Plan (PSP)

(pre-2013)

Four-year performance period.
Subject to the mix chosen (see above) 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 awards is 190 per cent of base salary.
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 HSBC Global Mining Index
50 per cent: the Morgan Stanley Capital World Index (MSCI)
Vesting of awards made in 2012 is as follows:

Outperformance 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 outperformance of the index.
Outperformance 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

If, but only 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.

Performance evaluation process for executives

Rio Tinto conducts an annual performance evaluation 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, a performance review is conducted by the chairman of the board who makes recommendations for decision by the Remuneration Committee.

The key objectives of the performance evaluation process are to:

- improve organisational effectiveness by creating alignment between the executive s individual objectives and Rio Tinto s strategy, and
- provide a consistent, transparent and balanced approach to measure, recognise and reward executive performance.

Individual objectives for members of the Executive Committee are proposed by the chief executive and reported to the Remuneration Committee at the beginning of the year. Annual performance reviews are completed early in the following year. Performance evaluations for each executive took place in accordance with the process described. Individual objectives and awards for 2012 for executives are set out in the tables on pages 102, 107 and 108.

Discretion

The Committee recognises the importance of ensuring that the outcomes of the Group s executive pay arrangements described in this Policy Report properly reflect the Group s overall performance and the experience of its shareholders over the performance period.

The Committee undertakes to its 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. However, such discretion should not operate as an automatic override, and it must be exercised judiciously so as not to reduce the motivation of key executives.

To the extent that discretion is applied in any year, the Committee undertakes that this will be clearly explained and disclosed to shareholders. The discretion exercised in relation to 2012 remuneration is described in the Implementation Report.

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Remuneration Policy Report continued

Executives service contracts

The executive directors have service contracts that 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. The 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 paying the base salary only in lieu of any unexpired notice. For Jacynthe Côté, the 12 months notice includes salary and target STIP opportunity, in line with typical market practice in Canada and her former Alcan Inc. contract.

Sam Walsh s employment concludes, without the need for either party to give notice, on 31 December 2015. The Company may also terminate his employment for any reason on 31 December 2014, provided it gives notice of this decision by 31 October 2014. Chris Lynch s employment concludes, without the need for either party to give notice, on 28 February 2017. The Company may also terminate Chris Lynch s employment for any reason on 29 February 2016, provided it gives notice of this decision by 31 December 2015.

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 are forfeited in these circumstances.

If termination is a result of redundancy, the terms of the relevant policy may apply in the same way as for other local employees. In the case of involuntary termination, Jacynthe Côté may be eligible to receive 24 months salary and target STIP opportunity inclusive of notice in line with entitlements under her Alcan Inc. contract.

Name	Position(s) held during 2012	Date of appointment to position
Executive directors		
Tom Albanese[(a)]	Chief executive	1 May 2007
Guy Elliott[(b)]	Chief financial officer	19 June 2002
Sam Walsh[(c)]	Chief executive, Iron Ore and Australia	5 June 2009
Other executives		
Hugo Bague	Group executive, People & Organisation	1 August 2007
Preston Chiaro	Group executive, Technology & Innovation	1 November 2009
Bret Clayton	Group executive, Business Support & Operations	1 November 2009
Jacynthe Côté	Chief executive, Rio Tinto Alcan	1 February 2009
Alan Davies	Chief executive, Diamonds & Minerals	1 September 2012
Andrew Harding[(d)]	Chief executive, Copper	1 November 2009

Harry Kenyon-Slaney	Chief executive, Energy Diamonds & Minerals	1 September 2012 1 November 2009
Doug Ritchie[(e)]	Chief executive, Energy	1 November 2009
Debra Valentine	Group executive, Legal & External Affairs	15 January 2008

(a) Mr Albanese held the role of chief executive until 17 January 2013, and will leave the Group on 16 July 2013.
(b) Mr Elliott will retire from the Group on 31 December 2013.
(c) Mr Walsh held the role of chief executive Iron Ore and Australia until 16 January 2013, and was appointed chief executive on 17 January 2013.
(d) Mr Harding was appointed chief executive Iron Ore on 14 February 2013.
(e) Mr Ritchie held the role of chief executive Energy until 31 August 2012 and took long service leave from 1 September 2012 until 31 December 2012. He will leave the Group on 16 July 2013. Mr Ritchie s 2012 base salary of A$967,000 remains unchanged.

The treatment of leavers, and the consequences of a change of control

The share plan rules govern entitlements that executive participants may have upon termination of employment.

Performance Share Plan (2013 onwards)

For grants made under the new PSP, awards will continue to the normal vesting date and remain subject to the performance conditions. If the executive leaves during the first 36 months from the date of grant, the award will be reduced pro rata to reflect the number of days worked, up to and including the date of termination, as a proportion of the first 36 months from the date of grant. In circumstances where the executive resigns or is dismissed for misconduct, or for any other reason that the Committee decides, the award will lapse.

Malus and clawback

The Committee has authority under the proposed PSP to reduce or cancel PSP awards in the event of gross misconduct, a materially adverse error in the Company s or a product group s financial statements, or exceptional events that have a materially detrimental impact on the value of any Group company. These are termed malus provisions, The Committee has also proposed clawback provisions, authorising it to recover the value of any shares which have vested under the new PSP (or a cash equivalent) on an individual basis, in the case of deliberate misconduct by a participant which has a material impact on the value or reputation of a Group company, or for any other reason that the directors decide in a particular case.

Share Option Plan (SOP)

If an executive leaves, awards will lapse unless he is an eligible leaver, being an executive who leaves the Group, in general, by reason of ill-health, injury, disability, agreed retirement, redundancy, transfer of the undertaking in which the executive works, change of control of the executive s employing company, or death. In addition, the Committee retains discretion to determine whether an executive is an eligible leaver.

If the executive is an eligible leaver, vested awards will lapse one year from the termination date and unvested awards will lapse one year from the vesting date. Unvested awards remain subject to the satisfaction of performance conditions. For awards made in 2012, if an executive leaves within 24 months of the date of grant, the award will be reduced pro-rata to reflect the number of months worked, as a proportion of the first 24 months from the date of grant.

Performance Share Plan (pre-2013)

If an executive leaves, awards will lapse unless he is an eligible leaver. If the executive is an eligible leaver, awards will continue to the normal vesting date and remain subject to the satisfaction of performance conditions. For awards made in 2012, if an executive leaves within 24 months of the date of grant, the award will be reduced pro-rata to reflect the number of months worked, as a proportion of the first 24 months from the date of grant.

Bonus Deferral Plan (BDP)

If an executive leaves, awards will lapse unless he is an eligible leaver. If the executive is an eligible leaver, awards will vest on the normal vesting date. Any dividend equivalent shares will be calculated on the vested shares.

Management Share Plan (MSP)

If an executive leaves, the awards will lapse unless he is an eligible leaver. If the executive is an eligible leaver, awards will vest on the termination date, unless the Committee decides that the awards will vest on the normal vesting date. The awards will be reduced pro-rata to reflect the proportion of the period between the date of grant and the normal vesting date which has not elapsed. Any dividend equivalent shares will be calculated on the vested shares.

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Shareholding policy for executives

The Group recognises the importance of aligning executives interests with those of shareholders and they are therefore expected to build up a meaningful shareholding. The Committee intends that executives should aim to reach, within five years of appointment, a holding equivalent in value to:

four times base salary for the chief executive; and

three times base salary for other executives.

These were increased from the previous level of two times base salary as part of the changes to the Group s long-term incentive arrangements from 2013. The Committee expects that this shareholding will be built up by holding shares that vest under the LTIPs. Details of executives share interests in the Group are set out in Table 3 on page 118.

Complementary shareholding requirements will be introduced for senior management below the Executive Committee in 2013.

Share dealing policy

Executives and employee insiders are bound by the Rules for dealing in Rio Tinto securities which comply with the requirements of the ASX Listing Rules and are consistent with the UK Listing Authority s Model Code. These rules are available on the Rio Tinto website. The rules apply fixed close periods before results announcements as well as other prohibited periods during which key management personnel and employee insiders are prohibited from trading Rio Tinto securities. Directors, other executives and employee insiders are required to certify that they do not hold any inside information when seeking clearance to deal in Rio Tinto securities. All employees subject to the rules receive regular training and information.

Executives and employee insiders are prohibited from engaging in hedging arrangements, dealing in derivatives or entering into other arrangements, including borrowing against share and performance share holdings which limit the economic risk related to Rio Tinto securities, including in relation to securities awarded under LTIPs.

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 permitted to retain any fees earned.

In 2012, the following executive directors received fees from external appointments: Guy Elliott received US$212,147 (2011: US$219,918) and Sam Walsh received A$161,000 (2011: A$137,084).

Details of all board members and executives external appointments can be found on pages 83 to 84.

Company secretary remuneration

The executive remuneration policy applies to the company secretary of both Rio Tinto plc and Rio Tinto Limited. They may participate in the Group s incentive arrangements. The individual performance measures for the company secretaries STIP comprise Group and individual objectives. Their personal measures reflect the key responsibilities of the company secretarial role and include ensuring compliance with regulatory requirements, continual improvement of corporate governance practice and measures related to the provision of corporate secretarial services to the Group.

Chairman and non-executive directors remuneration

Chairman

The Committee determines the terms of service, including remuneration, of the 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 chairman is not present at any discussion regarding his own remuneration.

The chairman receives a fixed annual fee and does not receive any additional fee or allowance either for committee membership or for overseas travel. He is provided with a car and driver for business purposes, and private healthcare. He is also covered under the Group s accident policy. These are disclosed as benefits in Table 1b on page 116. He does not participate in the Group s incentive plans or pension arrangements.

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. Non-executive directors receive a fixed annual fee comprising a base fee, committee membership or committee chairmanship fees, as applicable, and allowances for attending meetings which involve medium or long distance air travel. Rio Tinto does not pay retirement or post-employment benefits to non-executive directors; neither do any of them 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 are also covered under the Group s accident policy.

The fees payable to non-executive directors are subject to review by the Chairman s Committee. During 2011, the review took into account market and related developments. In light of Rio Tinto s size, the complexity of its dual listed company structure and the resulting demands on directors as well as market developments, the base fee for non-executive directors was increased to £85,000 from 1 January 2012. Other fees were also increased, as indicated in the table on page 113, with effect from 1 January 2012, including allowances for overseas meetings involving long and medium distance flights. There have been no changes to the fees or allowances since that time.

Shareholding policy for non-executive directors

The board has 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. To help facilitate this, a non-executive directors share purchase plan has been established under which non-executive directors may elect to invest a proportion of their fees net of tax on a regular basis to acquire shares on the open market. Details of non-executive directors share interests in the Group are set out in Table 3 on page 118.

Letters of appointment

The chairman s letter of appointment 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.

Non-executive directors have formal letters of appointment setting out their duties and responsibilities. These letters are available for inspection at Rio Tinto plc s registered office, and at its annual general meeting. Each non-executive director is appointed by the board subject to their election and annual re-election by shareholders as detailed on page 73. Non-executive directors appointments may be terminated by giving three months notice. There are no provisions for compensation payable on termination of their appointment.

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Remuneration Implementation Report

About this Remuneration Implementation Report

If the draft legislation published by the UK Government in 2012 is approved, an Implementation Report will be presented to shareholders for approval for the first time in 2014. This report aims to bring our disclosure closer to the spirit of the draft proposals by outlining how our remuneration policy was implemented in 2012 and how it is intended to be operated in 2013. For example, we have used the actual value of LTIP awards that vested in the remuneration tables that follow. We have also referred to the face value of awards proposed to be made in 2013 and the maximum potential value of PSP awards granted in 2012. This disclosure is provided in detail for each executive. However, the structure of the report will change next year to reflect the final regulations.

All remuneration numbers are shown gross of tax and in the relevant currency.

Sam Walsh (executive director and chief executive Iron Ore and Australia)

Base salary

The Committee has increased Sam s base salary by 14.9 per cent with effect from 17 January 2013 to reflect Sam s appointment as chief executive.

	2013	2012	% change
Base salary (stated in A$ 000)	**1,900**	1,654	14.9

Salaries are normally reviewed on 1 March.

STIP objectives for 2012

In addition to the health, safety and financial measures summarised in the executive remuneration structure table on page 97, the following individual objectives were set for 2012:

Delivery of the Pilbara 290Mt project portfolio and the 360Mt study projects together with expansion options beyond 360Mt.

Delivery of expansion initiatives at IOC, progress the Simandou Joint Venture and project studies and formation of the Orissa Joint Venture.

Implementation of improvements arising from the safety diagnostic and construction and contractor safety work undertaken in the Pilbara in 2011.

Provide leadership to the business in Australia.

Support our people strategy by building capability, diversity, engagement and leadership.

STIP outcomes for 2012

The following table summarises the outcomes for each objective.

Measures	Weight (%)	Score (out of 200%)	Weighted score (out of 200%)
Group financial	21.0	85	17.8
PG financial	31.5	100	31.5
PG health and safety	17.5	97	17.0
Individual	30.0	140	42.0
Total	100.0		108.3

The Group s performance against the financial targets was 85 per cent.

The Iron Ore group achieved strong earnings and cash flow results for 2012 and the performance against the financial targets was 100 per cent.

The total safety score for the Iron Ore group was close to target and resulted in a score of 97 per cent (out of a maximum of 200 per cent).

The Committee, with input from the chairman of the board, assessed Sam 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.

As a result, Sam received a STIP award of 108.3 per cent of target, equivalent to 130 per cent of base salary, 50 per cent to be delivered in cash in March 2013, and the remainder to be delivered in deferred shares, vesting in December 2015.

LTIP award granted in 2012

As reported last year, the maximum potential value of the award is 438 per cent of base salary. The eventual value of the award will depend on the Group s relative TSR performance during the years 2012-2015.

LTIP award for 2013

Subject to shareholder approval of the proposed new PSP, Sam s PSP award in 2013 will have a face value of 420 per cent of base salary. Half of the award may vest after four years in 2017, and half the award may vest after five years in 2018, subject to the Group s performance against its relative TSR and the relative EBIT margin measures.

LTIP outcome for the period ended 31 December 2012

The performance shares under the PSP awarded in 2009 had a four-year performance period that ended on 31 December 2012. This award partially vested at 92.5 per cent (61.7 per cent of maximum) and Sam received 29,861 shares on 20 February 2013. He also received a cash payment of A$109,079 equal to the aggregate net dividends that would have been paid on the vested shares. No dividends are paid on the shares that lapsed.

Share options under the SOP granted in 2010 had a performance period that ended on 31 December 2012. This award has vested in full. Sam has an option over 83,763 shares at a price of A$76.15 per share. The market price of Rio Tinto Limited shares at 19 February 2013, being the latest practicable date before the date of publication of this report, was A$70.51. These options can be exercised from 22 March 2013. Further details of the awards vesting in 2013 and in prior years are provided on pages 111 and 120.

Shareholding

At 19 February 2013, the value of Sam s shareholding was 1.74 times his current base salary.

Superannuation

Sam s target defined benefit superannuation at age 62 was a lump sum multiple of 4.05 times final basic salary, being 20 per cent for each year and proportionate month of service with the Company, provided through an employer funded superannuation plan as provided to other Australian based employees. In line with other Australian based employees with defined benefit provision who remain in service beyond age 62, Sam s benefit will be calculated as the greater of:

(a) 20 per cent of basic salary, averaged progressively over the three years to age 65, 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 basic salary; plus

(ii) Company contributions at the Superannuation Guarantee rate, currently nine per cent of basic salary, 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 receives 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.

The accrued lump sum benefit as at 31 December 2012 was A$6,836,000 (31 December 2011: A$6,245,000). The additional Company contribution for 2012 was A$64,000 (2011: A$59,000). Further details are set out in table 2 on page 117.

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Sam will receive relocation costs between Perth and London. He is also eligible for a housing allowance during his secondment.

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 applicable Australian legislation; the value of this leave as at 17 January 2013 was A$1,231,318 and A$1,513,967 respectively.

Total remuneration

The table below provides a summary of actual remuneration in respect of 2010, 2011 and 2012 stated in Australian dollars, prior to Sam s appointment as chief executive. This is in addition to statutory disclosure requirements set out in Table 1a on page 114. The purpose of this table is to enable shareholders better to understand the actual remuneration received and to provide an overview of the actual outcomes of the Group s remuneration arrangements. The remuneration details set out in table 1a on pages 114 and 115, include theoretical accounting values relating to various parts of the remuneration packages, most notably LTIP arrangements. Accordingly, the numbers below are not directly comparable with those in table 1a on page 114.

(stated in A$ 000)	**2012**	2011	2010
Base salary paid[a]	**1,643**	1,571	1,475
STIP payment cash	**1,075**	1,196	1,416
STIP payment deferred shares[b]	**1,075**	1,196	1,416
Total short-term pay	**3,793**	3,963	4,307
Value of LTIP awards vesting[c]	**2,225**	1,383	1,016
Superannuation[d]	**410**	372	377
Other benefits[e]	**231**	92	100
Total remuneration	**6,659**	5,810	5,800
Percentage change in total remuneration (2012 versus 2011; 2011 versus 2010)	**14.6%**	0.2%	
Percentage of total remuneration provided as performance related pay (STIP and LTIP)	**65.7%**	65.0%	66.3%
Percentage of total remuneration provided as non-performance related pay (Base salary, Pension & Other benefits)	**34.3%**	35.0%	33.7%
Percentage of maximum STIP awarded[f]	**65.0%**	75.2%	96.0%
Percentage of maximum STIP forfeited	**35.0%**	24.8%	4.0%
Percentage of target STIP awarded	**108.3%**	125.4%	160.0%

(a) Salary paid in the financial year to 31 December. Salaries are reviewed with effect from 1 March. (b) Value of STIP deferred under the BDP.

(c) 2012 figures are based on the estimated value of the LTIP awards which vested in respect of the performance period that ended 31 December 2012.

(d) Superannuation represents the value of one year s superannuation accrual calculated using an IAS19 methodology and assumptions on rates of investment return, inflation and salary increases and is sensitive to changes to those assumptions.

(e) Includes healthcare, car allowance, activities in relation to Rio Tinto s sponsorship of the medals for the 2012 London Olympics and other contractual payments.

(f) The maximum potential STIP award is 200 per cent of base salary.

The graphs below show the potential value of the 2013 remuneration package at below threshold, threshold, target and outstanding performance levels together with the proportion of the package delivered through fixed and variable remuneration. The values have been calculated based on the proposed amendments to the LTIP in 2013.

The PSP, STIP-deferred shares and STIP-cash are all performance-related remuneration.

Potential value of 2013 remuneration package

Proportion of the 2013 remuneration package value delivered through fixed and variable remuneration

Guy Elliott (chief financial officer)

Base salary

	2013	2012	% change
Base salary (stated in £ 000)	**738**	738	0.0

Salaries are normally reviewed on 1 March.

STIP outcomes for 2012

The Committee has determined that Guy would not receive a STIP award for 2012 in light of the impairment charges to the Group.

LTIP award granted in 2012

As reported last year, the maximum potential value of the award is 438 per cent of base salary. The eventual value of the award will depend on the Group s relative TSR performance during the years 2012-2015.

LTIP award for 2013

The Committee has determined that no LTIP award will be granted to Guy for 2013 in light of his forthcoming retirement.

LTIP outcomes for the period ended 31 December 2012.

The performance shares under the PSP awarded in 2009 had a four-year performance period that ended on 31 December 2012. This award partially vested at 92.5 per cent (61.7 per cent of maximum) and Guy is eligible to receive 33,062 shares from 18 February 2013. He also received a cash payment of £77,064, equal to the aggregate net dividends that would have been paid on the vested shares. No dividends are paid on the shares that lapsed.

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Remuneration Implementation Report continued

Share options under the SOP granted in 2010 had a performance period that ended on 31 December 2012. This award has vested in full. Guy has an option over 88,749 shares at a price of £37.05 per share. The market price of Rio Tinto plc shares at 19 February 2013 being the latest practicable date before the date of publication of this report was £37.14. These options can be exercised from 22 March 2013. Further details of the awards vesting in 2013 and in prior years are provided on pages 111 and 120.

Shareholding

At 19 February 2013, the value of Guy s shareholding was 5.2 times his current base salary.

Pension

Guy s target defined benefit pension is equal to 2.3 per cent of basic salary for each year of service with the Company to age 60, through funded and unfunded arrangements as provided to other UK based employees. The accrued pension as at 31 December 2012 was £547,000 per annum, (31 December 2011: £514,000 per annum). Further details are set out in table 2 on page 117.

Total remuneration

The table below provides a summary of actual remuneration in respect of 2010, 2011 and 2012 stated in pounds sterling. This is in addition to statutory disclosure requirements set out in Table 1a on page 114. The purpose of this table is to enable shareholders better to understand the actual remuneration received and to provide an overview of the actual outcomes of the Group s remuneration arrangements. The remuneration details, set out in table 1a on pages 114 and 115, include theoretical accounting values relating to various parts of the remuneration packages, most notably LTIP arrangements. Accordingly, the numbers below are not directly comparable with those in table 1a on page 114.

(stated in £ 000)	**2012**	2011	2010
Base salary paid[a]	**735**	713	675
STIP payment cash	**0**	0	632
STIP payment deferred shares[b]	**0**	0	632
Total short-term pay	**735**	713	1,939
Value of LTIP awards vesting[c]	**1,311**	1,100	563
Pension[d]	**382**	351	331
Other benefits[e]	**149**	210	173
Total remuneration	**2,577**	2,374	3,006
Percentage change in total remuneration (2012 versus 2011; 2011 versus 2010)	**8.6%**	(21.0%)	
Percentage of total remuneration provided as performance related pay (STIP and LTIP)	**50.9%**	46.3%	60.8%
Percentage of total remuneration provided as non-performance related pay (Base salary, Pension & Other benefits)	**49.1%**	53.7%	39.2%

Percentage of maximum STIP awarded[f]	**0%**	0.0%	93.6%
Percentage of maximum STIP forfeited	**100%**	100.0%	6.4%
Percentage of target STIP awarded	**0%**	0.0%	155.9%

(a) Salary paid in the financial year to 31 December. Salaries are reviewed with effect from 1 March.

(b) Value of STIP deferred under the BDP.

(c) 2012 figures are based on the estimated value of the LTIP awards which vested in respect of the performance period that ended 31 December 2012.

(d) Pension represents the value of one year s pension accrual calculated using an IAS19 methodology and assumptions on rates of investment return, inflation and salary increases and is sensitive to changes to those assumptions.

(e) Includes healthcare, provision of a car and driver, activities in relation to Rio Tinto s sponsorship of the medals for the 2012 London Olympics and other contractual payments.

(f) The maximum potential STIP award is 200 per cent of base salary.

The graphs below show the potential value of the 2013 remuneration package at below threshold, threshold, target and outstanding performance levels together with the proportion of the package delivered through fixed and variable remuneration.

The STIP-cash is performance related remuneration.

Potential value of 2013 remuneration package

Proportion of the 2013 remuneration package value delivered through fixed and variable remuneration

Retirement

Guy will retire on 31 December 2013.

During 2013, he will receive his contractual remuneration, including base pay, eligibility for STIP, benefits and pension contributions, until his retirement date. Any 2013 STIP award will be made in cash and paid in March 2014. Upon his retirement, good leaver treatment and pro-rating will apply to any outstanding LTIP awards in accordance with the Plan rules. In accordance with his contractual commitments, he will also be eligible for post-retirement medical insurance under the Rio Tinto Medical Expenses Plan, subject to the rules of the Plan.

Chris Lynch (chief financial officer-designate)

Chris Lynch will be on a standard Rio Tinto plc contract which includes a 12-month notice period. He will receive a remuneration package comprising a base salary of £800,000, target annual bonus opportunity of 120 per cent of base salary and a PSP award with a face value of 420 per cent of base salary in 2013. He will receive benefits including pension, medical insurance, relocation costs from Melbourne to London and transitional housing support.

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Tom Albanese (former chief executive)

Base salary

	2013	2012	% change
Base salary (stated in £ 000)	**1,056**	1,056	0.0

Salaries are normally reviewed on 1 March.

STIP outcomes for 2012

The Committee has determined that Tom will receive no STIP award for 2012. He will not receive a STIP award for 2013.

LTIP award granted in 2012

This award will lapse when Tom leaves the Group.

LTIP award for 2013

The Committee has determined that no LTIP award will be granted to Tom for 2013.

LTIP outcome for the period ended 31 December 2012

The performance shares under the PSP awarded in 2009 had a four-year performance period that ended on 31 December 2012. This award partially vested at 92.5 per cent (61.7 per cent of maximum) and Tom received 44,417 shares on 19 February 2013. He also received a cash payment of £103,531, equal to the aggregate net dividends that would have been paid on the vested shares. No dividends are paid on the shares that lapsed.

Share options under the SOP granted in 2010 had a performance period that ended on 31 December 2012. This award has vested in full. Tom has an option over 119,230 shares at a price of £37.05 per share. The market price of Rio Tinto plc shares at 19 February 2013, being the latest practicable date before the date of publication of this report, was £37.14. These options can be exercised from 22 March 2013. Further details of the awards vesting in 2013 and in prior years are provided on pages 111 and 120.

All further outstanding, unvested LTIP awards will lapse when Tom leaves the Group.

Pension

Tom s target defined benefit pension is equal to two-thirds of basic salary at age 60, through funded and unfunded arrangements as provided to other UK-based employees. This is inclusive of benefits accrued in the US. The accrued pension as at 31 December 2012 was £552,000 per annum, (31 December 2011: £476,000 per annum). Further details are set out in table 2 on page 117.

Total remuneration

The table below provides a summary of actual remuneration in respect of 2010, 2011 and 2012 stated in pounds sterling. This is in addition to statutory disclosure requirements set out in Table 1a on page 114. The purpose of this table is to enable shareholders better to understand the actual remuneration received and to provide an overview of the actual outcomes of the Group s remuneration arrangements. The remuneration details set out in table 1a on pages 114 and 115 include theoretical accounting values relating to various parts of the remuneration packages, most notably LTIP arrangements. Accordingly, the numbers below are not directly comparable with those in table 1a on page 114.

(stated in £ 000)	**2012**	2011	2010
Base salary paid[a]	**1,052**	1,010	907
STIP payment cash	**0**	0	797
STIP payment deferred shares[b]	**0**	0	797
Total short-term pay	**1,052**	1,010	2,501
Value of LTIP awards vesting[c]	**1,762**	1,478	873
Pension[d]	**1,360**	1,230	1,105
Other benefits[e]	**195**	269	208
Total remuneration	**4,369**	3,987	4,687
Percentage change in total remuneration (2012 versus 2011; 2011 versus 2010)	**9.6%**	(14.9%)	
Percentage of total remuneration provided as performance related pay (STIP and LTIP)	**40.3%**	37.1%	52.6%
Percentage of total remuneration provided as non-performance related pay (Base salary, Pension & Other benefits)	**59.7%**	62.9%	47.4%
Percentage of maximum STIP awarded[f]	**0%**	0.0%	87.8%
Percentage of maximum STIP forfeited	**100%**	100.0%	12.2%
Percentage of target STIP awarded	**0%**	0.0%	146.4%

(a) Salary paid in the financial year to 31 December. Salaries are reviewed with effect from 1 March.

(b) Value of STIP deferred under the BDP.

(c) 2012 figures are based on the estimated value of the LTIP awards which vested in respect of the performance period that ended 31 December 2012.

(d) Pension represents the value of one year s pension accrual calculated using an IAS19 methodology and assumptions on rates of investment return, inflation and salary increases and is sensitive to changes to those assumptions.

(e) Includes healthcare, provision of a car and driver, activities in relation to Rio Tinto s sponsorship of the medals for the 2012 London Olympics and other contractual payments.

(f) The maximum potential STIP award is 200 per cent of base salary.

Termination

Tom leaves the Group on 16 July 2013. Until this date, he will receive his base salary, benefits and pension contributions. Tom will return to the US prior to his termination date, and be eligible to receive post-retirement medical coverage in the US for himself and his spouse, in line with contractual commitments.

He received his 2009 performance share and the 2010 share option awards, both of which vested prior to his termination date in accordance with the plan rules, as indicated in this report. He will also be able to exercise any vested but unexercised share options up to his termination date.

Tom will not receive a STIP award for either 2012 or 2013, nor an LTIP award in 2013. When he leaves the Group, all outstanding but unvested LTIP and BDP awards earned in previous years will lapse and be forfeited.

No termination payments will be made to Tom Albanese.

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Remuneration Implementation Report continued

What we paid our other Executive Committee members and why

Base salary

The base salary increase for Debra Valentine was in line with the 2013 salary budgets applying to the broader Rio Tinto employee population in the UK and US. The increases for Andrew Harding and Hugo Bague reflect their appointments as chief executive Iron Ore and Group executive, Organisational Resources respectively.

Stated in 000	**2013**	2012	% change
Hugo Bague[a]	**£472.5**	£429.5	10.0
Preston Chiaro	**US$789.0**	US$789.0	0.0
Jacynthe Côté[b]	**C$930.0**	C$930.0	0.0
Alan Davies[c]	**A$771.3**	A$748.8	3.0
Andrew Harding[d]	**£546.0**	£436.0	25.2
Jean-Sébastien Jacques[e]	**£436.0**		
Harry Kenyon-Slaney[f]	**£512.3**	£512.3	0.0
Debra Valentine	**US$671.6**	US$652.0	3.0

(a) Hugo Bague s base salary increase of 10.0 per cent reflects his appointment as Group executive, Organisational Resources effective 1 March 2013.

(b) Jacynthe Côté s base salary was converted to Canadian dollars from March 2012 to align earnings currency with home base expenditures.

(c) Alan Davies was appointed to his current role effective 1 September 2012.

(d) Andrew Harding s base salary increase of 25.2 per cent reflects his appointment as chief executive, Iron Ore and the additional scope and responsibilities of his role, effective from 14 February 2013.

(e) Jean-Sébastien Jacques base salary upon his appointment as chief executive, Copper on 14 February 2013.

(f) Harry Kenyon-Slaney received a base salary increase of 17.5 per cent from £436,000 to £512,300, effective from 1 September 2012, upon appointment to his new role.

(g)

Bret Clayton stepped down from the Executive Committee on 1 March 2013 and therefore is not shown in the 2013 salary or any other forward looking tables relating to 2013.

STIP objectives and outcomes for 2012

A summary of the assessed score against achievement of financial, health and safety and individual objectives by executive is set out in the table on pages 107 and 108.

These assessments were undertaken against specific individual targets (for the Group or a product group, as appropriate), set at the start of the year. The Committee also exercised discretion to reduce some payouts from a purely formulaic assessment, in order to appropriately reflect overall performance in the year, as indicated in the table. As a result, 2012 STIP payouts for the executives range from 0 per cent to 113.9 per cent of target. Half of the bonus is delivered in cash and half in the form of deferred shares.

LTIP awards granted in 2012

The maximum potential value of PSP awards granted in 2012 is 438 per cent of base salary. The eventual value of the award will depend on the Group s relative TSR performance during the years 2012-2015.

LTIP awards for 2013

Subject to shareholder approval of the proposed new PSP, the Committee has decided that the PSP awards in 2013 will have a face value of awards as shown in the table opposite. Half of the award will vest after four years in 2017, and half the award will vest after five years in 2018, subject to the Group s performance against its relative TSR and the relative EBIT margin measures.

The average face value of awards made to Executive Committee members is 380 per cent of base salary.

Note that in all cases, this maximum value available to Executive Committee members is lower than the maximum value available through grants made under the current PSP in 2012, of 438 per cent of base salary.

Maximum value (Percentage of 1 March base salary)	**2013**
Hugo Bague	**400**
Preston Chiaro	**300**
Jacynthe Côté	**300**
Alan Davies	**420**
Andrew Harding	**420**
Jean-Sébastien Jacques	**380**
Harry Kenyon-Slaney	**420**
Debra Valentine	**400**

LTIP outcomes for the period ended 31 December 2012

The performance shares under the PSP awarded in 2009 had a four-year performance period that ended on 31 December 2012. These awards partially vested at 92.5 per cent (61.7 per cent of maximum).

PSP awards were only made to employees who were executive directors or PGCEOs in 2009 (Tom Albanese, Preston Chiaro, Bret Clayton, Jacynthe Côté, Guy Elliott and Sam Walsh). Other executives were awarded only Management Share Plan (MSP) and SOP grants in 2009.

Share options under the SOP granted in 2010 had a performance period that ended on 31 December 2012. These awards vested in full. Options can be exercised from 22 March 2013.

Further details of the LTIP outcomes for the period ended 31 December 2012 and in prior years are provided on pages 111 and 120.

Post-employment benefits

Executives may participate in pension, superannuation and post-employment medical benefits offered to the broader employee population in similar locations.

Termination

Doug Ritchie leaves the Company on 16 July 2013. Until this date he will receive base pay, benefits and superannuation contributions. He will not receive an increase on his base salary of A$967,000 for 2013. Neither will he receive a STIP award either for 2012 or 2013, nor an LTIP award for 2013.

He received his 2010 SOP award, which vested prior to his termination date in accordance with the SOP rules. He will also be able to exercise any vested but unexercised SOP awards up to his termination date. When he leaves the Group, all outstanding unvested LTIP and BDP awards earned in previous years will lapse and be forfeited. Save for the statutory payment of outstanding annual leave and long service leave, no termination payments will be made to Doug Ritchie.

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Measures	Weight (%)	Score (out of 200%)	Weighted score (%)
Hugo Bague			
Group financial	52.5	85	44.6
Group health and safety[(a)]	17.5	100	17.5
Individual	30.0	133	39.9
Total (% of salary out of 200%)	100.0		102.0

(a) The health and safety score was reduced from 120 to 100 per cent of target due to fatalities.

Preston Chiaro			
Group financial	52.5	85	44.6
T&I health and safety	17.5	115	20.2
Individual	30.0	115	34.5
Sub total[(a)]	100.0		99.3
Discretionary adjustment			(49.7)
Total (% of salary out of 200%)			49.6

(a) The Committee decided that the STIP outcome be reduced by 50 per cent in light of the impairment in the Coal business resulting in a final weighted score of 49.6 per cent of base salary.

Bret Clayton

The Committee decided that Bret Clayton will not receive a STIP award for 2012 in light of the impairment in the Coal business.

Jacynthe Côté			
Group financial	21.0	85	17.8

Summary of 2012 individual objectives

Develop a human capital planning framework that enables greater flexibility for developing talent across all levels of the organisation and enables each business to focus human capital investments where they matter the most

Demonstrate progress against Group diversity targets

Improve employee engagement though delivering on agreed actions

Support leadership development in emerging regions and executive succession planning and development

Increase the effectiveness of project development and implementation capabilities

Delivery of new technologies to the product groups at commercial scale

Implement changes resulting from a review of the T&I organisation and improve engagement and partner relations

Support our people strategy by building capability, diversity, engagement and leadership

Continue to drive sustainable cost reductions, EBITDA margins through

PG financial	31.5	91	28.7	business improvement, asset sales and closures where appropriate
PG health and safety[a]	17.5	75	13.1	
Individual	30.0	89	26.7	
Sub total[b]	100.0		86.3	
Discretionary adjustment			(64.7)	
Total (% of salary out of 200%)			21.6	Continue to reduce carbon footprint

(a) The health and safety score was reduced from 112 to 75 per cent of target due to a fatality.

Delivery of projects, particularly Yarwun 2 commissioning, according to targets

(b) The Committee decided that the STIP outcome be reduced by 75 per cent in light of the impairment in the Aluminium business resulting in a final award of 21.6 per cent of base salary.

Protect the pipeline of growth projects while maintaining flexibility with timelines

Support our people strategy by building capability, diversity, engagement and leadership

Alan Davies[a]

Group financial	21.0	85	17.8	Deliver business value and engage people through implementation of the business improvement programme based on lean principles
PG financial	31.5	76	23.9	
PG health and safety	17.5	98	17.2	
Individual	30.0	120	36.0	
Total (% of salary out of 200%)	100.0		94.9	

(a) Scores relate to the period 1 September 2012 31 December 2012.

Communicate the Diamonds & Minerals business strategy and engage people though the development and delivery of the product group identity and culture

Progress portfolio of major growth projects in a safe, timely and cost-effective manner while identifying and progressing M&A opportunities

Support our people strategy by building capability, diversity, engagement and leadership

Outline initial thoughts on a strategy to address current critical issues across

Andrew Harding			
Group financial	21.0	85	17.8
PG financial	31.5	116	36.6
PG health and safety[(a)]	17.5	100	17.5
Individual	30.0	140	42.0
Total (% of salary out of 200%)	100.0		113.9

(a) The health and safety score was reduced from 133 to 100 per cent of target due to a fatality.

Diamonds & Minerals

Demonstrate leadership and build credibility within Diamonds & Minerals, gearing for long-term success in the role

Ensure appropriate resources, structure and support to deliver sustainable value in key strategic locations

Provide the leadership, resources and support to deliver Oyu Tolgoi to first ore, transition to operations and preparedness for first commercial production

Continue to pursue growth opportunities and meet studies targets for La Granja and Resolution

Deliver sustainable improvement in safety and productivity and provide focused leadership in process safety and underground safety for the Group

Support our people strategy by building capability, diversity, engagement and leadership

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Remuneration Implementation Report continued

Measures	Weight (%)	Score (out of 200%)	Weighted score (%)	Summary of 2012 individual objectives
Harry Kenyon-Slaney				
Group financial	21.0	85	17.8	Deliver business value and engage people through implementation of the business improvement programme based on lean principles
PG financial[(a)]	31.5	72	22.6	
PG health and safety[(a)]	17.5	113	19.8	
Individual[(a)]	30.0	133	39.9	
Total (% of salary out of 200%)	100.0		100.1	

(a) Scores are pro-rated for the period while chief executive Diamonds & Minerals (1 January 2012 31 August 2012) and for the period while chief executive Energy (1 September 2012 31 December 2012).

				Communicate the Diamonds & Minerals business strategy and engage people though the development and delivery of the product group identity and culture
				Progress portfolio of major growth projects in a safe, timely and cost-effective manner while identifying and progressing M&A opportunities
				Support our people strategy by building capability, diversity, engagement and leadership
				Outline initial thoughts on a strategy to address current critical issues across Energy
				Demonstrate leadership and build credibility within Energy, gearing for long-term success in the role
Debra Valentine				Improve operational efficiency of the Legal and External Affairs function in accordance with support strategy review targets
Group financial	52.5	85	44.6	
Group health and safety	17.5	120	21.0	
Individual	30.0	131	39.3	
	100.0		104.9	

Total (% of salary out of 200%)	Establish new Human Rights framework to link existing initiatives and internal controls
	Provide support on key strategic projects and investment opportunities
	Continue focus on developing relationships with key external stakeholders across key countries
	Implement cyber security strategy to protect high-value technology, assets and information and protect the value of technology projects through patents and licences where appropriate
	Support our people strategy by building capability, diversity, engagement and leadership

Total remuneration

The tables below provide a summary of actual remuneration in respect of 2011 and 2012 stated in the currency of payment. This is in addition to statutory disclosure requirements set out in Table 1a on page 114. The purpose of this table is to enable shareholders to better understand the actual remuneration received by executives and to provide an overview of the actual outcomes of the Group s remuneration arrangements. The remuneration details, set out in table 1a on pages 114 and 115, include theoretical accounting values relating to various parts of the remuneration packages, most notably LTIP arrangements.

	Hugo Bague		Preston Chiaro		Bret Clayton	
(stated in 000)	**2012**	2011	**2012**	2011	**2012**	2011
Base salary paid[a]	**£427**	£406	**US$786**	US$763	**US$760**	US$738
STIP payment cash	**£219**	£248	**US$196**	US$389	**US$0**	US$476
STIP payment deferred shares[b]	**£219**	£249	**US$196**	US$390	**US$0**	US$476
Total short-term pay	**£865**	£903	**US$1,178**	US$1,542	**US$760**	US$1,690
Value of LTIP awards vesting[c]	**£4**	£1,123	**US$1,217**	US$1,032	**US$1,174**	US$996
	£27	£27	**US$383**	US$256	**US$342**	US$236

Pension or superannuation[d]						
Other benefits[e]	**£220**	£281	**US$101**	US$209	**US$1,156**	US$1,070
Total remuneration	**£1,116**	£2,334	**US$2,879**	US$3,039	**US$3,432**	US$3,992
Percentage change in total remuneration (2012 versus 2011)	**(52.2%)**		**(5.3%)**		**(14.0%)**	
Percentage of total remuneration provided as performance related pay (STIP and LTIP)	**39.6%**	69.4%	**55.9%**	59.6%	**34.2%**	48.8%
Percentage of total remuneration provided as non-performance related pay (Base salary, Pension & Other benefits)	**60.4%**	30.6%	**44.1%**	40.4%	**65.8%**	51.2%
Percentage of maximum STIP awarded[f]	**51.0%**	59.9%	**24.8%**	50.6%	**0.0%**	63.9%
Percentage of maximum STIP forfeited	**49.0%**	40.1%	**75.2%**	49.4%	**100.0%**	36.1%
Percentage of target STIP awarded	**102.0%**	119.9%	**49.6%**	101.2%	**0.0%**	127.8%

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	Jacynthe Côté[g]		Alan Davies[h]		Andrew Harding	
(stated in 000)	**2012**	2011	**2012**	2011	**2012**	2011
Base salary paid[a]	**C$921**	C$864	**A$250**		**£433**	£410
STIP payment cash	**C$100**	C$475	**A$118**		**£248**	£249
STIP payment deferred shares[b]	**C$101**	C$475	**A$119**		**£249**	£250
Total short-term pay	**C$1,122**	C$1,814	**A$487**		**£930**	£909
Value of LTIP awards vesting[c]	**C$1,380**	C$1,969	**A$378**		**£0**	£728
Pension or superannuation[d]	**C$474**	C$432	**A$3**		**£27**	£27
Other benefits[e]	**C$139**	C$42	**A$204**		**£484**	£507
Total remuneration	**C$3,115**	C$4,257	**A$1,072**		**£1,441**	£2,171
Percentage change in total remuneration (2012 versus 2011)	**(26.8%)**				**(33.6%)**	
Percentage of total remuneration provided as performance related pay (STIP and LTIP)	**50.8%**	68.6%	**57.4%**		**34.5%**	56.5%
Percentage of total remuneration provided as non-performance related pay (Base salary, Pension & Other benefits)	**49.2%**	31.4%	**42.6%**		**65.5%**	43.5%
Percentage of maximum STIP awarded[f]	**10.8%**	54.2%	**47.5%**		**57.0%**	59.4%
Percentage of maximum STIP forfeited	**89.2%**	45.8%	**52.5%**		**43.0%**	40.6%
Percentage of target STIP awarded	**21.6%**	108.5%	**94.9%**		**113.9%**	118.9%

	Harry Kenyon-Slaney		Doug Ritchie[i]		Debra Valentine	
(stated in 000)	**2012**	2011	**2012**	2011	**2012**	2011
Base salary paid[a]	**£459**	£410	**A$961**	A$917	**US$648**	US$620
STIP payment cash	**£256**	£236	**A$0**	A$467	**US$342**	US$399
STIP payment deferred shares[b]	**£257**	£237	**A$0**	A$467	**US$342**	US$400
Total short-term pay	**£972**	£883	**A$961**	A$1,851	**US$1,332**	US$1,419
Value of LTIP awards vesting[c]	**£4**	£514	**A$0**	A$1,954	**US$381**	US$2,291
Pension or superannuation[d]	**£94**	£87	**A$270**	A$245	**US$219**	US$213
Other benefits[e]	**£219**	£127	**A$167**	A$73	**US$1,510**	US$816
Total remuneration	**£1,289**	£1,611	**A$1,398**	A$4,123	**US$3,442**	US$4,739
Percentage change in total remuneration (2012 versus 2011)	**(20.0%)**		**(66.1%)**		**(27.4%)**	
Percentage of total remuneration provided as performance related pay (STIP and LTIP)	**40.1%**	61.3%	**0.0%**	70.0%	**30.9%**	65.2%
Percentage of total remuneration provided as non-performance related pay (Base salary, Pension & Other)	**59.9%**	38.7%	**100.0%**	30.0%	**69.1%**	34.8%
Percentage of maximum STIP awarded[f]	**50.1%**	56.3%	**0.0%**	50.2%	**52.5%**	63.4%
Percentage of maximum STIP forfeited	**49.9%**	43.7%	**100.0%**	49.8%	**47.5%**	36.6%
Percentage of target STIP awarded	**100.1%**	112.7%	**0.0%**	100.5%	**104.9%**	126.8%

(a) Salary paid in the financial year to 31 December. Salaries are reviewed with effect from 1 March.

(b) Value of STIP deferred under the BDP.

(c) 2012 figures are based on the estimated value of the LTIP awards which vested in respect of the performance period that ended 31 December 2012.

(d) Pension or superannuation represents the value of one year s pension or superannuation accrual calculated using an IAS19 methodology and assumptions on rates of investment return, inflation and salary increases and is sensitive to changes to those assumptions. For Bret Clayton and Debra Valentine the 2011 the Other post employment benefits component has been restated as an incorrect methodology was used to value them. The figures previous disclosed in 2011 were US$235,000 for Bret Clayton and US$215,000 for Debra Valentine.

(e) Includes healthcare, tax advice, car allowance or car and activities in relation to Rio Tinto s sponsorship of the medals for the 2012 London Olympics. Will include active or legacy expatriate related benefits, as relevant.

(f) The maximum potential STIP award is 200 per cent of base salary.

(g) All 2011 amounts have been converted from US$ to C$ at the 2011 average exchange rate.

(h) Remuneration details reflect remuneration received for the period 1 September 2012 31 December 2012.

(i) Outstanding LTIP awards will lapse upon leaving the Group.

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Remuneration Implementation Report continued

Potential value of 2013 remuneration package

The table below shows the potential minimum and maximum value of the 2013 remuneration package and the threshold, target and maximum value of the 2013 STIP and LTIP awards. The values have been calculated based on the proposed amendments to the LTIP in 2013.

Stated in 000	Currency	**Minimum potential remuneration[a]**	Threshold value of STIP and LTIP awards[b]	Target value of STIP and LTIP awards[c]	Maximum value of STIP and LTIP awards[d]	**Maximum potential remuneration**
Hugo Bague	£	**£441**	£618	£1,324	£2,648	**£3,089**
Preston Chiaro	US$	**US$789**	US$927	US$1,973	US$3,945	**US$4,734**
Jacynthe Côté	C$	**C$930**	C$1,093	C$2,325	C$4,650	**C$5,580**
Alan Davies	A$	**A$771**	A$1,115	A$2,391	A$4,782	**A$5,553**
Andrew Harding	£	**£546**	£789	£1,693	£3,385	**£3,931**
Jean-Sébastien Jacques	£	**£436**	£591	£1,264	£2,529	**£2,965**
Harry Kenyon-Slaney	£	**£512**	£740	£1,588	£3,176	**£3,688**
Debra Valentine	US$	**US$672**	US$940	US$2,015	US$4,030	**US$4,702**

(a) Base salary is the minimum potential remuneration.

(b) Calculated based on threshold performance under the STIP and threshold PSP vesting.

(c) Calculated based on target performance under the STIP and target PSP vesting.

(d) Calculated based on outstanding performance under the STIP and maximum PSP vesting.

Remuneration mix

The graphs below show the proportion of the package delivered through fixed and variable remuneration. The values have been calculated based on the proposed amendments to the LTIP in 2013. The PSP, STIP deferred shares and STIP cash are all performance related remuneration.

Proportion of the 2013 remuneration package value delivered through fixed and variable remuneration

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Remuneration Report appendix

Long-term incentives vesting outcomes for the period ended 31 December 2012

2009 PSP awards (four-year performance period)

A group of eight comparator companies was used to assess Rio Tinto s relative TSR performance, which is the performance measure used to determine the vesting of awards made under the 2009 PSP. For PSP awards made from and including 2010, two indices are used for assessing Rio Tinto s relative TSR performance as detailed in the table on page 112. The Committee is recommending the inclusion of a relative EBIT margin measure for awards to be granted from 2013 representing one-third of the total potential value of the overall award.

PSP awards were only made to executive directors and PGCEOs in 2009 (Tom Albanese, Preston Chiaro, Bret Clayton, Jacynthe Côté, Guy Elliott and Sam Walsh). Other executives were awarded only MSP and SOP grants in 2009 which vested respectively in January 2012 and March 2012.

PSP performance period that ended on 31 December 2012

Comparator companies[(a)]	Alcoa, Anglo American, Barrick Gold, BHP Billiton, Freeport-McMoRan, Newmont Mining, Vale, Xstrata
Performance period	1 January 2009 31 December 2012
(4 years)	
Performance condition	Rio Tinto must achieve a ranking of 5th (median of the comparator group) for threshold vesting at 35 per cent. The maximum vesting is 1.5 times the award with equal steps between 5th and 1st rank. No awards vest below the threshold levels.
TSR Ranking	
	3rd (108.2 per cent TSR)
% of shares vested	92.5 per cent (61.7 per cent of maximum)
% of shares forfeited	7.5 per cent (38.3 per cent of maximum)

(a) The comparator companies were selected at the start of the performance period.

The 2008 average share price was abnormally inflated by the BHP Billiton bid. The Committee at that time used the average of the Rio Tinto share price over the three-month period commencing 12 February 2009 (as opposed to a 12-month period commencing 1 January 2008) for the purpose of calculating the opening share price for TSR performance over the performance period. It used the same period in relation to the PSP comparator companies. However, the usual 12-month methodology was used to calculate the ending share prices for TSR comparison

purposes, for Rio Tinto and comparator companies. The usual conventions were also applied to set the levels of award based upon the prior year average share price which resulted in a significant reduction in shares awarded compared to the prior year. This approach was consistently adopted by the Committee for the 2009 SOP awards which vested in 2012.

The table below summarises the average vesting of performance shares for executive directors and PGCEOs over the five-year period 2009-2013.

Performance period	Vesting year	% of shares vested	% of maximum shares vested
2005-2008	2009	92.5	62
2006-2009	2010	39.6	26
2007-2010	2011	36.4	24
2008-2011	2012	0.0	0
2009-2012	2013	92.5	62
Average vesting		52.2	35

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Remuneration Report appendix continued

2010 SOP awards (three-year performance period)

The HSBC Global Mining Index is used to assess Rio Tinto s relative TSR performance which is the performance measure used to determine the vesting of awards made under the SOP.

SOP performance period that ended on 31 December 2012

Comparator group	HSBC Global Mining Index
Performance period (3 years)	1 January 2010-31 December 2012
Rio Tinto outperformance	26.0%
Outperformance required for full vesting	15.8%
% of options vested	100%
% of options forfeited	

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 methodology used to calculate the ending share prices for TSR comparison purposes, for Rio Tinto and the index, was the last 12 months in the performance period. The usual conventions were also applied to set the number of options awarded, based upon the prior year average share price.

The table below summarises the average vesting of share options for executive directors and PGCEOs over the five-year period 2009-2013.

Performance period vested	Vesting year	% of options
2006-2008	2009	100
2007-2009	2010	0
2008-2010	2011	0
2009-2011	2012	100
2010-2012	2013	100
Average vesting		60

MSP awards

Although executives are not eligible to receive awards under the MSP, Alan Davies received grants prior to his appointment as PGCEO.

Plan period	Plan period that ended 31 December 2012
Vesting period	22 March 2010-31 December 2012
% of shares vested	100
% of shares forfeited	

Debra Valentine received an MSP award when she joined the Group in 2008 which vested in January 2012.

Five-year TSR and relevant index TSR

Relative TSR is the single performance measure used to determine the vesting of awards made under the PSP and SOP prior to 2013. Rio Tinto s TSR relative to the relevant index, or the comparator group in the case of the PSP, over the performance period has a direct impact on the levels of LTIP vesting.

The effect of this performance on shareholder wealth, as measured by TSR delivered during the relevant calendar year, is detailed in the table.

Year	Dividends paid during the year US cents per share	Share price Rio Tinto plc pence 1 Jan	Share price Rio Tinto plc pence 31 Dec	Share price Rio Tinto Limited A$ 1 Jan	Share price Rio Tinto Limited A$ 31 Dec	**Total shareholder return (TSR) Group %**
2012	163.5	3,125	3,512	60.30	66.01	14.7
2011	117.0	4,487	3,125	85.47	60.30	(31.1)
2010	90.0	3,390	4,487	74.89	85.47	31.3
2009	68.0	1,231	3,390	29.97	74.89	171.5
2008	152.0	4,392	1,231	105.65	29.97	(71.4)

The graph below illustrates the TSR performance of the Group against the HSBC Global Mining Index and the MSCI over the past five years. These two indices are used to assess Rio Tinto s relative TSR performance for awards made under the PSP from and including 2010. The HSBC Global Mining Index alone is used to determine the vesting of awards made under the SOP. The graph has been prepared in accordance with the requirements of Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008 and is not an indication of the likely vesting of awards granted under the PSP and SOP. The remuneration structure table on pages 97 to 99 provides further details of the performance conditions for the PSP and SOP.

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What we paid our non-executive directors

Fees

The table below sets out the annual fees payable to the chairman and the non-executive directors.

	2013	2012	2011
Director fees			
Chairman s fee	**£700,000**	£700,000	£700,000
Non-executive director base fee	**£85,000**	£85,000	£80,000
Senior independent director	**£40,000**	£40,000	£35,000
Committee fees			
Audit Committee chairman	**£35,000**	£35,000	£35,000
Audit Committee member	**£20,000**	£20,000	£15,000
Remuneration Committee chairman	**£30,000**	£30,000	£30,000
Remuneration Committee member	**£15,000**	£15,000	£10,000
Sustainability Committee chairman	**£30,000**	£30,000	£25,000
Sustainability Committee member	**£15,000**	£15,000	£10,000
Nominations Committee member	**£7,500**	£7,500	£7,500
Overseas meeting allowances			
Long distance (flights over 10 hours per journey)	**£10,000**	£10,000	£7,500
Medium distance (flights of 5-10 hours per journey)	**£5,000**	£5,000	£3,500

Details of each element of remuneration paid to the chairman and non-executive directors during 2012 are set out in Table 1b. No post-employment, long-term or termination payments were paid and no share-based payments were made. The total payments made to the chairman and non-executive directors in 2012 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.

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.

New global employee share plan

The Committee believes that all employees should be given the opportunity to become shareholders in our business. Following the approval received by shareholders in 2012 at the annual general meetings, the Committee implemented a new global employee share purchase plan in 2012. The new plan has been 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 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 the new plan will serve to engage, retain and motivate employees over the long term.

The participation rate following the initial launch of the Plan was approximately 25 per cent of the eligible employee population.

Dilution

Awards under the SOP, PSP and all employee Plans may be satisfied by treasury shares, the issue of new shares or the purchase of shares in the market. Currently, Rio Tinto plc satisfies these awards by the issue of new shares or the transfer of shares from treasury. Rio Tinto Limited satisfies these awards by the market purchase and delivery of shares to plan participants. Rio Tinto plc complies with applicable corporate governance guidelines in relation to the issue of new shares. All other share awards are satisfied by the use of shares which are purchased in the market. Further information in respect of the number of shares issued under plan arrangements can be found in note 45 to the financial statements.

Shareholder voting

The table below sets out the results of the resolutions to approve the Group s 2011 remuneration report at the 2012 AGMs.

Total votes cast	Votes for	Votes against	Votes withheld*
1,210,514,384	1,145,753,353	64,761,031	19,698,032

* 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.

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Remuneration Report appendix continued

Table 1a Executives remuneration

		Short-term benefits					Long-term benefits			
							Value of share based awards[f]			
Stated in US$ 000s[a]		Base salary	Cash bonus[b]	Other cash based benefits[c]	Non monetary benefits[d]	Total short-term benefits[e]	Other long-term benefits	BDP[g]	CCA[h]	PSP
Executive directors										
Tom Albanese	2012	1,667		3	306	1,976		338		2,675
	2011	1,619		3	429	2,051		535		2,384
Guy Elliott	2012	1,165		24	213	1,402		268		1,924
	2011	1,143		24	312	1,479		396		1,650
Sam Walsh	2012	1,702	1,115	93	146	3,056		964		3,152
.	2011	1,622	1,211	93	2	2,928		922		2,390
Other key management personnel										
Hugo Bague	2012	677	354	139	208	1,378		290		852
	2011	651	388	131	320	1,490		210	27	654
Preston Chiaro	2012	786	196		101	1,083		294		1,284
	2011	762	389		209	1,360		376		1,118
Bret Clayton	2012	760		3	1,153	1,916		247		1,241
	2011	738	476		1,070	2,284		270		1,076
Jacynthe Côté	2012	921	101	12	128	1,162		320		1,467
	2011	916	480	7	35	1,438		300	44	1,199
Alan Davies	2012	258	123	59	152	592		265		105
Andrew Harding	2012	687	401	125	642	1,855		319		1,018
	2011	658	389	114	680	1,841		226	27	779
Harry Kenyon-Slaney	2012	727	415	144	203	1,489		318		995
	2011	658	369	132	72	1,231		224	19	694
Doug Ritchie	2012	995		8	164	1,167		289		1,221
	2011	947	473		75	1,495		287	33	912
Debra Valentine	2012	648	342	26	1,483	2,499		376		845
	2011	620	399	26	790	1,835		226	30	642

Notes to Table 1a Executives remuneration

(a) The total remuneration is reported in US dollars. The amounts have been converted using the relevant 2012 average exchange rates of £1=US$1.5848, A$1=US$1.0357, and C$1=US$1.0006. The annual cash bonus payable under

the STIP has been converted using the relevant 2012 year end exchange rates of £1=US$1.6171, A$1=US$1.0375 and 1C$=US$1.0037.

(b) Cash bonus relates to the cash portion of the 2012 STIP to be paid in March 2013.

(c) Other cash based benefits include cash in lieu of a car and fuel. For Hugo Bague, Harry Kenyon-Slaney and Andrew Harding, it includes a cash supplement equal to 20 per cent of the amount by which their Contributory Salary exceeds the Earning Cap as defined in the Rio Tinto Pension Fund. For Alan Davies, it includes the difference between the Company superannuation contributions and the minimum level allowed in Australia under the Superannuation Guarantee legislation or the concessional contributions limits, which can be paid as a taxable cash allowance. For Jacynthe Côté, it includes a residual amount paid out in 2012 for her 2011 flexible perquisites and a residual amount to be paid out in 2013 for her 2012 flexible perquisites.

(d) Non monetary benefits for executives include healthcare, provision of a car, professional advice, flexible perquisites, activities in relation to Rio Tinto s sponsorship of the medals for the 2012 London Olympics and secondment costs comprising housing, education, tax equalisation and relocation payments made to and on behalf of executives living outside their home country. For Tom Albanese and Guy Elliott, it includes the value of company provided transport. Rio Tinto provides accident cover for employee members of the Rio Tinto Pension Fund. Some of the executives are members of the Rio Tinto Pension Fund; the total premium paid in 2012 was US$8,433.

(e) Total short-term benefits represents the disclosure of total emoluments and compensation required under the UK Companies Act 2006 (UK) and total remuneration under the Australian Corporations Act 2001 and applicable accounting standards.

(f) The value of share based awards has been determined in accordance with the recognition and measurement requirements of IFRS 2 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 45 (Share Based Payments) in the 2012 full 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.

(g) BDP (Bonus Deferral Plan) represents the deferral of the 2010, 2011 and 2012 bonus under STIP into Rio Tinto Shares.

(h) CCA (Company Contributed Awards) represents the shares provided to employees below the executive directors and PGCEO level under the 2008 BDP to provide and enhance retention.

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		Long-term benefits			Post-employment benefits[j]				
		Value of share based awards[f]							
Stated in US$ 000s[a]		MSP	SOP	Others[i]	Pension and superannuation	Other post-employment benefits[k]	Termination benefits	Total remuneration	Currency of actual payment[l]
Executive directors									
Tom Albanese	2012		1,951	6	2,156			9,102	£
	2011		1,668	8	1,974			8,620	£
Guy Elliott	2012		1,407	7	605			5,613	£
	2011		1,189	7	563			5,284	£
Sam Walsh	2012		817	3	424			8,416	A$
	2011		1,047	3	384			7,674	A$
Other key management personnel									
Hugo Bague	2012		793	6	43			3,362	£
	2011	182	579	6	43			3,190	£
Preston Chiaro	2012		975	2	383			4,021	US$
	2011		818	1	256			3,929	US$
Bret Clayton	2012		944		339	3		4,690	US$
	2011		791		234	2		4,657	US$
Jacynthe Côté	2012		1,114		474			4,537	US$/C$
	2011	8	860		436	1		4,286	US$/C$
Alan Davies	2012	121	0	1	3			1,087	A$
Andrew Harding	2012	0	881	8	43			4,124	£
	2011	173	644	8	43			3,741	£
Harry Kenyon-Slaney	2012		523	8	149			3,482	£
	2011	80	376	9	139			2,772	£
Doug Ritchie	2012		1,009	2	280			3,968	A$
	2011	454	714	2	253			4,150	A$
Debra Valentine	2012	6	785	1	214	5		4,731	US$
	2011	339	573	1	208	5		3,859	US$

(i) Others include the Share Savings Plan and Share Ownership Plan as described in the Remuneration Report on page 113.

(j) 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.

(k) For Bret Clayton and Debra Valentine, the 2011 Other post employment benefits have been restated as an incorrect methodology was used to value them. The figures previous disclosed in 2011 were US$1,000 for Bret Clayton and US$7,000 for Debra Valentine.

(l) Jacynthe Côté s remuneration was stated in US dollars until 29 February 2012 using a fixed exchange rate of US$1=C$0.987167. Effective 1 March 2012, her salary and all other short-term benefits received are paid in Canadian dollars.

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Remuneration Report appendix continued

Table 1b Non-executive directors remuneration

Stated in US$ 000(a)		Short-term benefits: Fees	Other cash based benefits[b]	Non-monetary benefits[c]	Total remuneration[d]	Currency of actual payment
Chairman						
Jan du Plessis	2012	1,109		225	1,334	£
	2011	1,123		333	1,456	£
Non-executive directors						
Robert Brown	2012	170	87	119	376	£
	2011	156	46	55	257	£
Vivienne Cox	2012	170	48	100	318	£
	2011	175	18	22	215	£
Sir Rod Eddington	2011	51	22	7	80	A$
Michael Fitzpatrick	2012	186	58	122	366	A$
	2011	166	55		221	A$
Yves Fortier	2011	55	29	18	102	£
Ann Godbehere	2012	202	32	100	334	£
	2011	196	18	25	239	£
Richard Goodmanson	2012	218	95	137	450	£
	2011	196	48	17	261	£
Andrew Gould[e]	2012	85		8	93	£
	2011	238	12		250	£
Lord Kerr	2012	202	48	83	333	£
	2011	180	12	19	211	£
Christopher Lynch[f]	2012	152	89	145	386	A$
	2011	43	22		65	A$
Paul Tellier	2012	202	87	115	404	£
	2011	180	46	38	264	£
John Varley	2012	235	95		330	£
	2011	59			59	£

Notes to Table 1b Non-executive directors remuneration

(a) The total remuneration is reported in US dollars. The amounts have been converted using the relevant 2012 average exchange rates of £1 =US$1.5848, A$1= US$1.0357.

(b) Other cash based benefits for non-executive directors comprise overseas meeting allowances.

(c) Non monetary benefits include for Jan du Plessis the value of company provided transport, medical insurance premiums and activities in relation to Rio Tinto s sponsorship of the medals for the 2012 London Olympics. For Robert Brown, Vivienne Cox, Michael Fitzpatrick, Ann Godbehere, Richard Goodmanson, Lord Kerr, Christopher Lynch and Paul Tellier, it includes the value of activities in relation to Rio Tinto s sponsorship of the medals for the 2012 London Olympics. For Andrew Gould, it includes the value of a retirement gift. Rio Tinto plc provides accident cover for non-executive directors; the total premium paid in 2012 was US$5,465.

(d) Represents disclosure of short-term benefits total emoluments and compensation required under the UK Companies Act 2006 and total remuneration under the Australian Corporations Act 2001 and applicable accounting standards.

(e) Andrew Gould retired from the boards in May 2012.

(f) Christopher Lynch s fees (other than statutory superannuation contributions) were paid to the Transurban Group until July 2012.

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Table 2 Directors pension entitlements (as at 31 December 2012)

Defined benefit pensions

		Accrued benefits					Transfer value
Age	Years of service completed	At 31 Dec 2011 £ 000 pa pension	**At 31 Dec 2012 £ 000 pa pension**	**Change in accrued benefits during the year ended 31 Dec 2012 £ 000 pa pension**	Change in accrued benefit net of inflation[a] £ 000 pa pension	At 31 Dec 2011 £ 000	**At 31 Dec 2012 £ 000**	Change, net of personal contributions[f] £ 00
55	31	476	**522**	**46**	33	8,485	**10,192**	1,707
57	32	514 A$ 000 lump sum	**547 A$ 000 lump sum**	**33 A$ 000 lump sum**	17 A$ 000 lump sum	11,937 A$ 000	**12,925 A$ 000**	988 A$ 00
63	21	6,245	**6,836**	591	466	6,245	**6,836**	591

Defined contribution pensions

			Company contributions	
	Age	Years of service completed	Year to 31 Dec 2011 A$ 000	**Year to 31 Dec 2012 A$ 000**
Australian director				
Sam Walsh	63	21	59	64

Notes to Table 2

(a) Price inflation is calculated as the increase in the relevant retail or consumer price index over the year to 31 December 2012, except for Australia where a September to September change is used.

(b) Tom Albanese accrued pension benefits in the US plans for service up to 30 June 2006 and is accruing benefits in the UK plans for subsequent service.

(c) The transfer value of benefits in the UK plans is calculated in accordance with regulations 7 to 7E of the Occupational Pension Schemes (Transfer Values) Regulations 1996.

(d) The transfer value of benefits in the US plans is represented by the Accumulated Benefit Obligation calculated on the accounting assumptions used for the Group s post-retirement benefits disclosures.

(e) Tom Albanese and Guy Elliott have benefits provided through a combination of funded and unfunded arrangements. The pension and transfer values shown are in respect of their total benefits.

(f) Member contributions relating to Sam Walsh s defined benefit pension have been classified as employer contributions rather than personal contributions. This is a different treatment to that used in prior years to better reflect his benefits, and ensure consistency with the figures in Table 1a. The overall transfer value and the accrued benefits are unaffected.

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Table 3 Directors and executives beneficial interests in Rio Tinto shares

	Rio Tinto plc			Rio Tinto Limited			Movements	
	1 Jan 2012[a]	31 Dec 2012[b]	19 Feb 2013[b]	1 Jan 2012[a]	31 Dec 2012[b]	19 Feb 2013[b]	Exercise of options[c]	Compensation[d]
ese	251,328	253,042	253,042				957	85
vn	2,200	2,200	4,200					
ox	2,912	2,912	2,912					
is	30,000	30,000	30,000					
	103,078	103,272	103,278				112,423	185
				6,252	6,252	6,252		
here	1,046	2,111	2,981					
n	9,287	12,465	12,465					
uld	2,642	2,642	2,642					
	12,000	15,000	15,000					
	2,070	2,070	2,070	5,121	6,890	6,890		
	13,852	16,039	16,039					
	2,985	2,985	2,985					
				46,950	46,950	46,950		
e	24,216	34,910	34,910				288	22,035
aro	99,182	99,373	99,412					
n	28,280	28,616	28,621					18,668
té	18,266	22,636	22,636					7,425
				7,821	7,821	7,821		
	69	154	154	15,737	24,684	24,684		13,281
ien								
ney	21,831	27,815	27,815					10,206
e				29,955	42,399	42,399		24,360
	12,240	29,852	30,032				180	30,783

Notes to Table 3

(a) Or date of appointment, if later.

(b) Or date of retirement, if earlier.

(c) Shares obtained through the exercise of options under the Rio Tinto Share Savings Plan or the SOP. The number of shares retained may differ from the number of options exercised.

(d) Shares obtained through the Rio Tinto Share Ownership Plan and/or vesting of awards under the PSP, MSP and BDP.

(e) Share movements due to sale or purchase of shares, shares received under the Dividend Reinvestment Plan, shares purchased/sold through the Rio Tinto America Savings Plan or non-executive directors Share Purchase Plan.

(f) Appointed 14 February 2013.

(g) Interests in outstanding awards under LTIPs and option schemes are set out in Tables 4 and 5.

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Table 4 Executives with awards under long-term incentive plans 2012

Market price at award	**1 Jan 2012[(a)]**	Awarded	Lapsed/ cancelled	Dividend shares	Vested	**31 Dec 2012**	Performance period concludes	Date electi
£40.58	**20,127**					**20,127**	01-Dec-13	
£40.58	**6,380**					**6,380**	01-Dec-13	
£36.15		7,069				**7,069**	01-Dec-14	
£40.58	**8,837**					**8,837**	01-Dec-13	
£36.15		7,062				**7,062**	01-Dec-14	
£40.58	**7,472**					**7,472**	01-Dec-13	
£36.15		8,636				**8,636**	01-Dec-14	
£40.58	**9,979**					**9,979**	01-Dec-13	
£36.15		9,096				**9,096**	01-Dec-14	
A$81.00	**823**					**823**	01-Dec-13	
A$65.85	**2,315**					**2,315**	01-Dec-14	
£40.58	**15,956**					**15,956**	01-Dec-13	
£40.58	**7,465**					**7,465**	01-Dec-13	
£36.15		7,096				**7,096**	01-Dec-14	
£40.58	**7,521**					**7,521**	01-Dec-13	
£36.15		6,729				**6,729**	01-Dec-14	
A$81.00	**7,639**					**7,639**	01-Dec-13	
A$65.85		7,221				**7,221**	01-Dec-14	
£40.58	**6,802**					**6,802**	01-Dec-13	
£36.15		7,244				**7,244**	01-Dec-14	
A$81.00	**17,914**					**17,914**	01-Dec-13	
A$65.85		18,490				**18,490**	01-Dec-14	

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Remuneration Report appendix continued

Table 4 Executives with awards under long-term incentive plans 2012 continued

Market price at award	1 Jan 2012[a]	Awarded	Lapsed/ cancelled	Dividend shares	Vested	31 Dec 2012	Performance period concludes	Date o electio
£52.58	**59,362**		59,362				31-Dec-11	
£19.82	**48,019**					**48,019**	31-Dec-12	
£37.30	**79,486**					**79,486**	31-Dec-13	
£41.51	**56,943**					**56,943**	31-Dec-14	
£36.15		54,230				**54,230**	31-Dec-15	
£52.58	**14,128**		9,424		4,704		31-Dec-11	16-Feb-1
£37.30	**31,531**					**31,531**	31-Dec-13	
£41.51	**22,943**					**22,943**	31-Dec-14	
£36.15		22,056				**22,056**	31-Dec-15	
£52.58	**23,688**		23,688				31-Dec-11	
£19.82	**20,904**					**20,904**	31-Dec-12	
£37.30	**40,559**					**40,559**	31-Dec-13	
£41.51	**27,565**					**27,565**	31-Dec-14	
£36.15		25,724				**25,724**	31-Dec-15	
£52.58	**22,871**		22,871				31-Dec-11	
£19.82	**20,182**					**20,182**	31-Dec-12	
£37.30	**39,160**					**39,160**	31-Dec-13	
£41.51	**26,670**					**26,670**	31-Dec-14	
£36.15		24,893				**24,893**	31-Dec-15	
£52.58	**22,299**		14,874		7,425		31-Dec-11	15-Feb-1
£19.82	**23,787**					**23,787**	31-Dec-12	
£37.30	**46,153**					**46,153**	31-Dec-13	
£41.51	**31,682**					**31,682**	31-Dec-14	
£36.15		30,056				**30,056**	31-Dec-15	
A$75.03	**9,750**					**9,750**	31-Dec-13	
A$81.00	**6,228**					**6,228**	31-Dec-14	
A$65.85	**6,663**					**6,663**	31-Dec-15	
£52.58	**30,930**		30,930				31-Dec-11	
£19.82	**35,743**					**35,743**	31-Dec-12	
£37.30	**59,166**					**59,166**	31-Dec-13	
£41.51	**39,805**					**39,805**	31-Dec-14	
£36.15		37,899				**37,899**	31-Dec-15	
A$126.48	**6,485**		4,326		2,159		31-Dec-11	14-Feb-1
A$47.60	**1,365**		911		454		31-Dec-11	14-Feb-1

A$75.03	**31,064**					**31,064**	31-Dec-13	
£41.51	**23,219**					**23,219**	31-Dec-14	
£36.15		22,390				**22,390**	31-Dec-15	
£52.58	**7,210**		4,810		2,400		31-Dec-11	27-Feb-1
£37.30	**31,531**					**31,531**	31-Dec-13	
£41.51	**33,936**					**33,936**	31-Dec-14	
£36.15		22,390				**22,390**	31-Dec-15	

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	Conditional award granted	Market price at award	1 Jan 2012[a]	Awarded	Lapsed/ cancelled	Dividend shares	Vested	31 Dec 2012	Performance period concludes	Date of election	Marke price a electio
e Share Plan continued											
e	10-Mar-08	A$126.48	**8,691**		5,797		2,894		31-Dec-11	22-Feb-12	A$68.5
	09-Jul-09	A$47.60	**1,829**		1,220		609		31-Dec-11	22-Feb-12	A$68.5
	22-Mar-10	A$75.03	**32,180**					**32,180**	31-Dec-13		
	06-May-11	A$79.57	**24,713**					**24,713**	31-Dec-14		
	19-Mar-12	A$65.85		25,417				**25,417**	31-Dec-15		
	10-Mar-08	£52.58	**13,967**		9,316		4,651		31-Dec-11	27-Feb-12	£37.0
	22-Mar-10	£37.30	**31,887**					**31,887**	31-Dec-13		
	06-May-11	£41.51	**22,553**					**22,553**	31-Dec-14		
	19-Mar-12	£36.15		21,257				**21,257**	31-Dec-15		
	10-Mar-08	A$126.48	**21,366**		21,366				31-Dec-11		
	09-Jul-09	A$47.60	**4,497**		4,497				31-Dec-11		
	17-Mar-09	A$52.01	**26,670**					**26,670**	31-Dec-12		
	09-Jul-09	A$47.60	**5,614**					**5,614**	31-Dec-12		
	22-Mar-10	A$75.03	**55,842**					**55,842**	31-Dec-13		
	06-May-11	A$79.57	**61,752**					**61,752**	31-Dec-14		
	19-Mar-12	A$65.85		63,540				**63,540**	31-Dec-15		
t Share Plan											
e	17-Mar-09	£19.82	**16,769**			562	17,331		31-Dec-11	16-Feb-12	£36.3
[b]	22-Mar-10	A$75.03	**5,118**					**5,118**	31-Dec-12		
	21-Mar-11	A$81.00	**3,487**					**3,487**	31-Dec-13		
	19-Mar-12	A$65.85	**3,997**					**3,997**	31-Dec-14		
	17-Mar-09	A$52.01	**8,490**			253	8,743		31-Dec-11	14-Feb-12	A$69.2
	09-Jul-09	A$47.60	**1,787**			53	1,840		31-Dec-11	14-Feb-12	A$69.2
ney	17-Mar-09	£19.82	**7,403**			248	7,651		31-Dec-11	27-Feb-12	£37.0
e	17-Mar-09	A$52.01	**8,572**			255	8,827		31-Dec-11	22-Feb-12	A$68.5
	09-Jul-09	A$47.60	**1,804**			53	1,857		31-Dec-11	22-Feb-12	A$68.5
	14-Sep-09	A$58.05	**9,879**			294	10,173		31-Dec-11	22-Feb-12	A$68.5
	10-Mar-08	£52.58	**6,053**			332	6,385		15-Jan-12	27-Feb-12	£37.0
	17-Mar-09	£19.82	**19,107**			640	19,747		31-Dec-11	27-Feb-12	£37.0

Notes to Table 4

(a) Or date of appointment.

(b) Alan Davies was appointed on 1 September 2012.

(c) Awards denominated in pounds sterling were for Rio Tinto plc ordinary shares of 10p each and awards denominated in Australian dollars were for Rio Tinto Limited shares.

(d) The weighted fair value per share of conditional awards granted under the BDP was £35.77 for Rio Tinto plc and A$64.98 for Rio Tinto Limited and for PSP was £26.27 for Rio Tinto plc and A$47.99 for Rio Tinto Limited and for MSP was A$64.96 for Rio Tinto Limited.

(e) Conditional awards are awarded at no cost to the recipient and no amount remains unpaid on any shares granted.

(f) The amount in US dollars has been converted from sterling at the rate of £1 = US$1.58475 and Australian dollars at the rate of A$1 = US$1.03565, being the average exchange rates for 2012.

(g) Details of performance conditions for the PSP are provided below.

Four-year performance period.

Subject to the mix chosen (see above) 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 awards is 190 per cent of base salary.

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 HSBC Global Mining Index

50 per cent: the Morgan Stanley Capital World Index (MSCI)

Vesting of awards made in 2012 is as follows:

Outperformance 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 outperformance of the index.
Outperformance 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

If, but only 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.

(h) As of 19 February 2013, the executives in the table above had 1,537,797 shares awarded and not vested under long-term incentive plans.

(i) The 2009 PSP awards granted on 17 March and 9 July 2009 and with a performance period that concluded 31 December 2012 vested at 92.5 per cent.

(j) Details of performance conditions for BDP are provided below.

50 per cent of the STIP is delivered in cash and 50 per cent delivered in deferred shares under the BDP.

The BDP vests in the December of the third year after the end of performance year to which they relate.

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Remuneration Report appendix continued

Table 5 Executives holding options to acquire Rio Tinto plc and Rio Tinto Limited shares 2012

	Date of grant	1 Jan 12[(a)]	Granted	Vested during 2012	Exercised	Lapsed/ cancelled
Share Savings Plan						
Tom Albanese	06-Oct-06	**957**		**957**	957	
	04-Oct-11	**531**				
Hugo Bague	17-Oct-08	**288**		**288**	288	
	20-Oct-09	**84**				
	04-Oct-11	**425**				
Preston Chiaro	05-Oct-10	**189**				
	04-Oct-11	**243**				
Alan Davies	05-Oct-10	**323**				
Guy Elliott	17-Oct-08	**629**				
Andrew Harding	20-Oct-09	**723**				
Harry Kenyon-Slaney	05-Oct-07	**280**				
	20-Oct-09	**434**				
Doug Ritchie	20-Oct-09	**422**				
Debra Valentine	05-Oct-10	**189**				
Sam Walsh	20-Oct-09	**125**				
	05-Oct-10	**457**				
Share Option Plan						
Tom Albanese	07-Mar-03	**168,459**				
	22-Apr-04	**101,706**				
	09-Mar-05	**101,592**				
	07-Mar-06	**81,722**				
	17-Mar-09	**72,029**		**72,029**		
	22-Mar-10	**119,230**				
	06-May-11	**85,415**				
	19-Mar-12		81,345			
Hugo Bague	17-Mar-09	**15,714**		**15,714**		
	22-Mar-10	**47,297**				
	06-May-11	**34,415**				
	19-Mar-12		33,085			
Preston Chiaro	07-Mar-06	**62,067**				
	17-Mar-09	**31,355**		**31,355**		
	22-Mar-10	**60,838**				
	06-May-11	**41,348**				
	19-Mar-12		38,586			
Bret Clayton	07-Mar-06	**13,033**				
	17-Mar-09	**30,274**		**30,274**		
	22-Mar-10	**58,740**				
	06-May-11	**40,005**				
	19-Mar-12		37,339			

Jacynthe Côté	17-Mar-09	**35,680**		**35,680**	
	22-Mar-10	**69,230**			
	06-May-11	**47,523**			
	19-Mar-12		45,084		
Alan Davies	07-Mar-06	**3,151**			
	17-Mar-09	**6,279**		**6,279**	

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	Vested and exercisable on 31 Dec 12	**31 Dec 12**	Exercise price	Value of options exercised during 2012	Market price on date of exercise	Date from which first exercisable	Expiry date
Share Savings Plan							
Tom Albanese			£17.084	£18,896.92	£36.83	01-Jan-12	01-Jul-12
		531	£28.630			01-Jan-17	01-Jul-17
Hugo Bague			£26.576	£479.23	£28.24	01-Jan-12	01-Jul-12
		84	£21.480			01-Jan-13	01-Jul-13
		425	£28.630			01-Jan-17	01-Jul-17
Preston Chiaro		**189**	£31.660			01-Jan-13	06-Jan-13
		243	£24.580			01-Jan-14	05-Jan-14
Alan Davies		**323**	A$59.26			01-Jan-14	01-Jul-14
Guy Elliott		**629**	£26.576			01-Jan-14	01-Jul-14
Andrew Harding		**723**	A$48.73			01-Jan-15	01-Jul-15
Harry Kenyon-Slaney		**280**	£23.850			01-Jan-13	01-Jul-13
		434	£21.480			01-Jan-15	01-Jul-15
Doug Ritchie		**422**	A$48.73			01-Jan-15	01-Jul-15
Debra Valentine		**189**	£31.660			01-Jan-13	06-Jan-13
Sam Walsh		**125**	A$48.73			01-Jan-15	01-Jul-15
		457	A$59.26			01-Jan-16	01-Jul-16
Share Option Plan							
Tom Albanese	168,459	**168,459**	£10.434			07-Mar-06	07-Mar-13
	101,706	**101,706**	£10.979			22-Apr-09	22-Apr-14
	101,592	**101,592**	£15.086			09-Mar-08	09-Mar-15
	81,722	**81,722**	£22.397			07-Mar-09	07-Mar-16
	72,029	**72,029**	£16.530			17-Mar-12	17-Mar-19
		119,230	£37.050			22-Mar-13	22-Mar-20
		85,415	£42.450			06-May-14	06-May-21
		81,345	£35.179			19-Mar-15	19-Mar-22
Hugo Bague	15,714	**15,714**	£16.530			17-Mar-12	17-Mar-19
		47,297	£37.050			22-Mar-13	22-Mar-20
		34,415	£42.450			06-May-14	06-May-21
		33,085	£35.179			19-Mar-15	19-Mar-22
Preston Chiaro	62,067	**62,067**	£22.397			07-Mar-09	07-Mar-16
	31,355	**31,355**	£16.530			17-Mar-12	17-Mar-19
		60,838	£37.050			22-Mar-13	22-Mar-20
		41,348	£42.450			06-May-14	06-May-21
		38,586	£35.179			19-Mar-15	19-Mar-22
Bret Clayton	13,033	**13,033**	£22.397			07-Mar-09	07-Mar-16
	30,274	**30,274**	£16.530			17-Mar-12	17-Mar-19
		58,740	£37.050			22-Mar-13	22-Mar-20
		40,005	£42.450			06-May-14	06-May-21
		37,339	£35.179			19-Mar-15	19-Mar-22
Jacynthe Côté	35,680	**35,680**	£16.530			17-Mar-12	17-Mar-19
		69,230	£37.050			22-Mar-13	22-Mar-20
		47,523	£42.450			06-May-14	06-May-21

		45,084	£35.179			19-Mar-15	19-Mar-22
Alan Davies	3,151	**3,151**	A$54.951			07-Mar-09	07-Mar-16
	6,279	**6,279**	A$33.450			17-Mar-12	17-Mar-19

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Remuneration Report appendix continued

Table 5 Executives holding options to acquire Rio Tinto plc and Rio Tinto Limited shares 2012 continued

	Date of grant	**1 Jan 12[a]**	Granted	**Vested during 2012**	Exercised	Lapsed/ cancelled
Share Option Plan						
Guy Elliott	13-Mar-02	**41,691**			41,691	
	07-Mar-03	**117,886**				
	22-Apr-04	**89,213**				
	09-Mar-05	**88,332**				
	07-Mar-06	**70,330**				
	17-Mar-09	**53,615**		**53,615**		
	22-Mar-10	**88,749**				
	06-May-11	**59,708**				
	19-Mar-12		56,849			
Andrew Harding	17-Mar-09	**6,268**		**6,268**		
	22-Mar-10	**46,597**				
	06-May-11	**34,829**				
	19-Mar-12		33,585			
Harry Kenyon-Slaney	17-Mar-09	**6,938**		**6,938**		
	22-Mar-10	**47,297**				
	19-Mar-12		33,585			
Doug Ritchie	07-Mar-06	**7,308**				
	17-Mar-09	**8,230**		**8,230**		
	22-Mar-10	**48,270**				
	06-May-11	**37,070**				
	19-Mar-12		38,126			
Debra Valentine	17-Mar-09	**13,558**		**13,558**		
	22-Mar-10	**47,831**				
	06-May-11	**33,830**				
	19-Mar-12		31,886			
Sam Walsh	07-Mar-06	**48,079**				
	17-Mar-09	**40,005**		**40,005**		
	22-Mar-10	**83,763**				

Notes to Table 5

(a) Or date of appointment.

(b) All options granted over ordinary shares. Rio Tinto plc ordinary shares of 10p 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. Details of the performance conditions for the SOP are provided in the Executive remuneration structure table on page 99.

(c) The closing price of Rio Tinto plc ordinary shares at 31 December 2012 was £35.115 and of Rio Tinto Limited ordinary shares at 31 December 2012 was A$66.01. The high and low prices during 2012 of Rio Tinto plc and Rio Tinto Limited shares were £39.88 and £27.155 and A$72.30 and A$48.63 respectively.

(d) The exercise price represents the price payable on the options.

(e) The weighted fair value per option during 2012, at date of grant, was as follows: Rio Tinto plc SOP was £11.85; Rio Tinto Limited SOP was A$19.69.

(f) Details of the performance condition for the SOP are provided below.

Three-year performance period.

Awards have a maximum face value of 300 per cent of base salary.

Options vest subject to the achievement of a stretching TSR performance condition, comparing Rio Tinto s TSR performance to that of the HSBC Global Mining Index.

Vesting of awards made in 2012 is as follows:

Outperformance of the index by 5 per cent per annum	Awards vest in full
Performance between index and 5 per cent outperformance	Proportionate vesting of residual award for performance between index and 5 per cent outperformance of the index
Performance equal to index	Awards of up to 20,000 options or one-third of the award (whichever is higher)
Performance less than index	Nil vesting

The SOP will cease operation from 2013. No further awards of share options will be made.

(g) As of 19 February 2013, the executives held 2,599,763 options to acquire Rio Tinto plc and Rio Tinto Limited shares.

(h) Between 31 December 2012 and 19 February 2013 no options were granted to the executives.

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	Vested and exercisable on 31 Dec 12	31 Dec 12	Exercise price	Value of options exercised during 2012	Market price on date of exercise	Date from which first exercisable	Expiry date
Share Option Plan							
Guy Elliott			£12.050	£1,052,697.75	£37.30	13-Mar-05	13-Mar-12
	117,886	**117,886**	£10.434			07-Mar-06	07-Mar-13
	89,213	**89,213**	£10.979			22-Apr-09	22-Apr-14
	88,332	**88,332**	£15.086			09-Mar-08	09-Mar-15
	70,330	**70,330**	£22.397			07-Mar-09	07-Mar-16
	53,615	**53,615**	£16.530			17-Mar-12	17-Mar-19
		88,749	£37.050			22-Mar-13	22-Mar-20
		59,708	£42.450			06-May-14	06-May-21
		56,849	£35.179			19-Mar-15	19-Mar-22
Andrew Harding	**6,268**	**6,268**	A$33.450			17-Mar-12	17-Mar-19
		46,597	A$76.150			22-Mar-13	22-Mar-20
		34,829	£42.450			06-May-14	06-May-21
		33,585	£35.179			19-Mar-15	19-Mar-22
Harry Kenyon-Slaney	**6,938**	**6,938**	£16.530			17-Mar-12	17-Mar-19
		47,297	£37.050			22-Mar-13	22-Mar-20
		33,585	£35.179			19-Mar-15	19-Mar-22
Doug Ritchie	**7,308**	**7,308**	A$54.951			07-Mar-09	07-Mar-16
	8,230	**8,230**	A$33.450			17-Mar-12	17-Mar-19
		48,270	A$76.150			22-Mar-13	22-Mar-20
		37,070	A$81.800			06-May-14	06-May-21
		38,126	A$64.688			19-Mar-15	19-Mar-22
Debra Valentine	**13,558**	**13,558**	£16.530			17-Mar-12	17-Mar-19
		47,831	£37.050			22-Mar-13	22-Mar-20
		33,830	£42.450			06-May-14	06-May-21
		31,886	£35.179			19-Mar-15	19-Mar-22
Sam Walsh	**48,079**	**48,079**	A$54.951			07-Mar-09	07-Mar-16
		40,005	A$33.450			17-Mar-12	17-Mar-19
		83,763	A$76.150			22-Mar-13	22-Mar-20

	Value of options granted in 2012 US$000 s	% of 2012 total remuneration that consists of options
Executive directors		
Tom Albanese	393	4.3
Guy Elliott	276	4.9
Sam Walsh		

Other Executive Committee members		
Hugo Bague	165	4.9
Preston Chiaro	191	4.8
Bret Clayton	185	3.9
Jacynthe Côté	222	4.9
Alan Davies		
Andrew Harding	168	4.1
Harry Kenyon-Slaney	168	4.8
Doug Ritchie	204	5.1
Debra Valentine	159	3.4

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Directors report continued

Audited information

Under Schedule 8 of the Large and Medium-sized Companies and Groups (Accounts and Reports) Regulations 2008, the information included in respect of the non-executive directors and the directors short-term employee benefits and termination benefits in Tables 1a and 1b, and the information included in respect of the directors accrued benefits, transfer values and defined contribution pension in Table 2, Table 4 and Table 5 are all auditable. The Australian Securities and Investments Commission issued an order dated 22 December 2010 (as amended on 17 February 2012) 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 223). The information provided in this 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 no material uncertainties that cast significant doubt about the ability of the Companies and the Group to continue as a going concern have been identified, and they have a reasonable expectation that the Group has adequate financial resources to continue in operational existence for the foreseeable future. Therefore, these financial statements have been prepared on a going concern basis.

Annual general meetings

The 2013 annual general meetings will be held on 18 April in London and 9 May in Sydney. Separate notices of the 2013 annual general meetings are produced for the shareholders of each Company. The Directors report is made in accordance with a resolution of the board.

Jan du Plessis

Chairman

6 March 2013

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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 executive offices in Melbourne.

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 to distinguish between Rio Tinto plc and Rio Tinto Limited. Financial data in US dollars (US$) is derived from, and should be read in conjunction with, the 2012 financial statements. In general, financial data in pounds sterling (£) and Australian dollars (A$) 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 2012 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 and The Consolidated Zinc Corporation. The Rio Tinto Company was incorporated in 1873 to reopen ancient copper workings in Spain. The Consolidated Zinc Corporation 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 Consolidated Zinc Corporation and the Rio Tinto Company Limited of the United Kingdom 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, the RTZ Corporation became Rio Tinto plc and CRA Limited became Rio Tinto Limited, together known as the Rio Tinto Group.

In 2007, Rio Tinto completed an agreed takeover of the Canadian aluminium producer Alcan Inc.

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 together, 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. 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 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 rights

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 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, then they may depart from the Equalisation Ratio. However, should such a departure occur, then 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 two parts of the Group. Such dividend payments are of no economic significance to the shareholders of either Company, as they will have no effect on the Group s overall resources.

Voting rights

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.

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Shareholder information continued

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 merger 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 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 in the UK and Australia, 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. 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 rights

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 rights 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 stand alone 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, then 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 then, 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 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 restrictions contained in their Articles of Association and Constitution.

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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.

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 shares are also listed on NYSE Euronext Brussels and its American depositary receipts are listed on the New York Stock Exchange. Rio Tinto plc delisted from NYSE Euronext Paris with effect from 23 February 2012.

As at 19 February 2013, there were 45,666 holders of record of Rio Tinto plc s shares. Of these holders, 364 had registered addresses in the US and held a total of 494,542 Rio Tinto plc shares, representing 0.03 per cent of the total number of Rio Tinto plc shares issued and outstanding as at such date. In addition, 110,519,168 Rio Tinto plc shares were registered in the name of a custodian account in London which represented 7.75 per cent of Rio Tinto plc shares issued and outstanding. These shares were represented by 110,519,168 Rio Tinto plc ADRs held of record by 400 ADR holders. In addition, certain accounts of record with registered addresses other than in the US hold shares, in whole or in part, beneficially for US persons.

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.

As at 19 February 2013, there were 207,950 holders of record of Rio Tinto Limited shares. Of these holders, 302 had registered addresses in the US, representing approximately 0.04 per cent of the total number of Rio Tinto Limited shares issued and outstanding as of such date. In addition, nominee accounts of record with registered addresses other than in the US may hold Rio Tinto Limited shares, in whole or in part, beneficially for US persons.

Category	Depositary actions	Associated fee
Depositing or substituting the underlying shares	Issuance of ADSs against the deposit of shares, including deposits and issuance in respect of:	US$5.00 per 100 ADSs (or portion thereof) evidenced by the new ADSs delivered

	Share distributions, stock split, rights, merger	
	Exchange of securities or other transactions	
	Other events or distributions affecting the ADSs or the deposited securities	
Selling or exercising rights	Distribution or sale of securities, the fee being in an amount equal to the fee for the execution and delivery of ADSs which would have been charged as a result of the deposit of such securities	US$5.00 for each 100 ADSs (or portion thereof)
Withdrawing an underlying share	Acceptance of ADSs surrendered for withdrawal of deposited securities	US$5.00 for each 100 ADSs (or portion thereof) evidenced by the ADSs surrendered
Transferring, splitting or grouping receipts	Transfers, combining or grouping of depositary receipts	US$2.50 per ADS
General depositary services, particularly those charged on an annual basis	Other services performed by the depositary in administering the ADRs	US$0.02 per ADS (or portion thereof) not more than once each calendar year and payable at the sole discretion of the depositary by billing holders or deducting such charge from one or more cash dividends or other cash distributions
	Provide information about the depositary s right, if any, to collect fees and charges by offsetting them against dividends received and deposited securities	
Expenses of the depositary	Expenses incurred on behalf of holders in connection with:	Expenses payable at the sole discretion of the depositary by billing holders or by deducting charges from one or more cash dividends or other cash distributions
	Compliance with foreign exchange control regulations or any law or regulation relating to foreign investment	
	The depositary s or its custodian s compliance with applicable law, rule or regulation	
	Stock transfer or other taxes and other governmental charges	

Cable, telex, facsimile and electronic transmission/delivery	
Expenses of the depositary in connection with the conversion of foreign currency into US dollars (which are paid out of such foreign currency)	
Any other charge payable by the depositary or its agents	

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Shareholder information continued

American depositary receipts (ADRs)

Rio Tinto plc has a sponsored ADR facility with JPMorgan Chase Bank NA (JPMorgan) under a Deposit Agreement, dated 13 July 1988, as amended on 11 June 1990, as further amended and restated on 15 February 1999, 18 February 2005 when JPMorgan became Rio Tinto plc s depositary and on 29 April 2010. The ADRs evidence Rio Tinto plc American Depositary Shares (ADS), each representing one ordinary share. The shares are registered with the US Securities and Exchange Commission (SEC), are listed on the NYSE and are traded under the symbol RIO.

Fees and charges payable by a holder of ADSs

In accordance with the terms of the Deposit Agreement, JPMorgan may charge holders of Rio Tinto ADSs, either directly or indirectly, fees or charges up to the amounts described in the table on the previous page.

Fees and payments made by the depositary to the issuer

JPMorgan has agreed to reimburse certain company expenses related to the Rio Tinto plc ADR programme and incurred by the Group in connection with the programme. The Group is entitled to receive US$1.05 million in respect of expenses incurred by the Group in connection with the ADR programme for the year ended 31 December 2012. JPMorgan did not pay any amount on the Group s behalf to third parties. JPMorgan also waived certain of its standard fees and expenses associated with the administration of the programme relating to routine programme maintenance, reporting, distribution of cash dividends, annual meeting services and report mailing services.

Under certain circumstances, including removal of JPMorgan as depositary or termination of the ADR programme by the Company, the Company is required to repay JPMorgan any amounts of administrative fees and expenses waived during the 12-month period prior to notice of removal or termination.

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 Companies with notice.

The shareholders who have provided such, or an equivalent, notice are:

Rio Tinto plc	Date of notice	Number of shares	Percentage of issued share capital
The Capital Group Companies, Inc	13 Jun 2006	41,031,494	3.90
AXA S.A.	29 Jan 2008	48,493,873	4.86

Capital Research and Management Company	2 Jul 2009	75,461,183	4.95
BlackRock Inc.	4 Dec 2009	127,744,871	8.38
Shining Prospect Pte. Ltd	13 Mar 2012	182,550,329	12.7
Rio Tinto Limited			
BlackRock Group	1 Feb 2013	21,861,589	5.02
Shining Prospect Pte. Ltd[a]	4 Feb 2008		

(a) Shining Prospect Pte. Ltd, a Singapore-based entity owned by Chinalco (Aluminum Corporation of China) holds 182,550,329 Rio Tinto plc shares. Through the operation of Australian Corporations Act as modified, this interest gives these entities and their associates voting power of 9.8 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.

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 19 February 2013, the total amount of the Group s voting securities owned by the directors in Rio Tinto plc was 191,930 ordinary shares of 10p each and in Rio Tinto Limited was 60,092 ordinary shares, in aggregate representing less than one per cent of the Group s total number of shares in issue.

Analysis of ordinary shareholders

	Rio Tinto plc				Rio Tinto Limited			
As at 19 February 2013	No of accounts	%	Shares	%	**No of accounts**	**%**	**Shares**	**%**
1 to 1,000 shares	34,225	74.95	11,294,638	0.80	**174,667**	**83.99**	**51,961,217**	**11.93**
1,001 to 5,000 shares	8,961	19.62	17,898,941	1.27	**29,833**	**14.35**	**59,229,868**	**13.59**
5,001 to 10,000 shares	820	1.80	5,647,088	0.40	**2,319**	**1.11**	**16,081,332**	**3.69**
10,001 to 25,000 shares	481	1.05	7,599,590	0.54	**846**	**0.41**	**12,327,112**	**2.83**
25,001 to 125,000 shares	562	1.23	33,514,308	2.37	**225**	**0.11**	**10,371,598**	**2.38**
125,001 to 250,000 shares	193	0.42	35,114,046	2.49	**14**	**0.01**	**2,588,813**	**0.59**
250,001 to 1,250,000 shares	282	0.62	158,847,183	11.25	**32**	**0.02**	**14,949,453**	**3.43**
1,250,001 to 2,500,000 shares	66	0.14	110,312,166	7.81	**4**	**0.00**	**8,186,930**	**1.88**
2,500,001 shares and over	76	0.17	1,031,656,726[a]	73.07	**10**	**0.00**	**260,062,397**	**59.68**
			1,425,496,959[b]	100.00			**435,758,720[c]**	**100.00**
Number of holdings less than					**3,593**			

marketable parcel of A$500

(a) This includes 110,519,168 shares held in the name of a nominee on the share register. The shares are listed on the NYSE in the form of American Depositary Receipts (ADRs).

(b) The total issued share capital is made up of 1,411,884,686 publicly held shares; 13,612,273 shares held in Treasury.

(c) Publicly held shares in Rio Tinto Limited.

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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:

Rio Tinto Limited	Number of shares	**Percentage of issued share capital**
HSBC Custody Nominees (Australia) Limited	89,470,664	**20.53**
J.P. Morgan Nominees Australia Limited	60,892,759	**13.97**
National Nominees Limited	51,569,088	**11.83**
Citicorp Nominees Pty Limited	17,336,936	**3.98**
BNP Paribas Noms Pty Ltd (DRP)	10,965,711	**2.52**
Citicorp Nominees Pty Limited (Colonial First State Inv a/c)	9,498,938	**2.18**
J.P. Morgan Nominees Australia Limited (Cash Income a/c)	8,492,224	**1.95**
AMP Life Limited (BSP a/c)	4,278,397	**0.98**
UBS Wealth Management Australia Nominees Pty Ltd	3,957,974	**0.91**
Australian Foundation Investment Company Limited	3,599,706	**0.83**
Argo Investments Limited	2,456,539	**0.56**
HSBC Custody Nominees (Australia) Limited (NT Comnwlth Super Corp a/c)	2,333,748	**0.54**
Perpetual Trustee Company Limited	1,885,764	**0.43**
BNP Paribas Nominees Pty Ltd (Agency Lending DRP a/c)	1,510,879	**0.35**
Navigator Australia Ltd (MLC Investment Sett a/c)	944,886	**0.22**
UBS Nominees Pty Ltd	908,850	**0.21**
Woodross Nominees Pty Ltd	825,181	**0.19**
Australian United Investment Company Limited	815,000	**0.19**
UBS Nominees Pty Ltd	665,000	**0.15**
QIC Limited	623,000	**0.14**
	273,031,244	**62.66**

Large registered shareholders are nominees who hold securities on behalf of beneficial shareholders.

Dividends

Both Companies have paid dividends on their shares every year since incorporation in 1962. The rights of Rio Tinto shareholders to receive dividends are explained under the description of the Dual listed companies structure on page 127.

Dividend policy

The aim of Rio Tinto s progressive dividend policy is to increase the US dollar value of ordinary dividends over time. The rate of the total annual dividend, in US dollars, is determined taking into account the results for the past year and the outlook. Under Rio Tinto s dividend policy, the interim dividend is set at one half of the total ordinary dividend for the previous year and the final ordinary dividend is expected to be at least equal to the previous interim dividend.

Dividend determination

The majority of the Group s sales are transacted in US dollars, making this the most reliable measure for the Group s global business performance. It is Rio Tinto s 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 announcement and are then declared 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 shareholders of Rio Tinto Limited can elect to receive dividends in sterling. These dividend amounts are calculated by converting the declared dividend using currency exchange rates applicable five business 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 also offer payment services in other currencies, subject to a fee.

2012 dividends

The 2012 interim and final dividends were determined at 72.5 US cents and at 94.5 US cents per share respectively and the applicable conversion rates for the interim and final dividend were US$1.56160 and US$1.56610 to the pound sterling and US$1.05825 and US$1.03090 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$1.54975 and for Rio Tinto Limited shareholders who elected to receive their dividend in sterling the applicable conversion rate was £0.64527.

Final dividends of 60.34 pence or 91.67 Australian cents per share will be paid on 11 April 2013. For those Rio Tinto plc shareholders requesting the 2012 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 2012 final dividend be paid in pounds sterling, the applicable conversion rates will be announced on 4 April 2013.

The charts on the next page set out the amounts of interim and final dividends paid or payable on each share or ADR in respect of each financial year, but before deduction of any withholding tax.

These have been restated for the impact of the 2009 rights issues and the ADR ratio change.

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Shareholder information continued

	2012	2011	2010	2009	2008 restated
Rio Tinto Group US cents per share					
Interim	**72.50**	54.00	45.00		55.61
Final	**94.50**	91.00	63.00	45.00	55.61
Total	**167.00**	145.00	108.00	45.00	111.22
Rio Tinto plc UK pence per share					
Interim	**46.43**	33.14	28.21		29.64
Final	**60.34**	57.33	39.14	28.84	37.85
Total	**106.77**	90.47	67.35	28.84	67.49
Rio Tinto Limited Australian cents per share					
Interim	**68.51**	49.81	49.27		63.25
Final	**91.67**	84.20	61.94	51.56	82.97
Total	**160.18**	134.01	111.21	51.56	146.22
Rio Tinto plc US cents per ADR					
Interim	**73.99**	53.55	43.45		55.61
Final [(a)]		91.56	63.25	45.00	55.61
Total [(a)]		145.11	106.70	45.00	111.22

(a) The final dividend payable to holders of ADRs for the 2012 financial year will be announced on 4 April 2013 when the GBP:USD currency conversion rate is determined. The ADR dividend for 2010 is re-stated from the 2010 Annual report and reflects the dividend after currency conversion.

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.

Exchange rates

The following tables show, for the periods and dates indicated, certain information regarding the exchange rates for the pound sterling and Australian dollar, based on the Noon Buying Rates for pounds sterling and Australian dollars expressed in US dollars per £1.00 and per A$1.00.

Pounds sterling

Year ended 31 December[(c)]	Period end	Average rate	High	Low
Jan 2013	1.59	1.60	1.63	1.57
Dec 2012	1.55	1.56	1.57	1.54
Nov 2012	1.56	1.58	1.60	1.55

Oct 2012	1.61	1.61	1.62	1.60
Sep 2012	1.62	1.61	1.63	1.59
Aug 2012	1.58	1.57	1.59	1.56
2012	1.63	1.59	1.63	1.53
2011	1.55	1.60	1.67	1.67
2010	1.56	1.55	1.64	1.43
2009	1.62	1.57	1.70	1.35
2008	1.44	1.86	2.03	1.44

Share price information

The following table shows share prices for the period indicated, the reported high and low middle market quotations, which represent an average of bid and asked prices, for Rio Tinto plc s shares on the London Stock Exchange based on the Daily Official List, the highest and lowest sale prices of the Rio Tinto plc ADRs as reported on the NYSE composite tape and the high and low closing sale prices of Rio Tinto Limited shares based upon information provided by the ASX. There is no established trading market in the US for Rio Tinto Limited s shares.

	Pence per Rio Tinto plc share		US$ per Rio Tinto plc ADS		A$ per Rio Tinto Limited share	
	High	Low	High	Low	High	Low
2008[b]	7,078	1,049	118.03	12.50	156.10	32.00
2009[b]	3,420	1,140	55.93	19.63	74.89	29.38
2010	4,584	2,812	72.65	39.30	87.94	61.70
2011	4,712	2,713	76.67	40.50	88.68	59.00
2012	3,988	2,716	62.70	42.32	72.30	48.63
Aug 2012	3,200	2,716	50.70	43.00	56.86	48.63
Sep 2012	3,282	2,718	53.18	43.16	57.80	49.34
Oct 2012	3,260	2,915	52.09	46.81	59.15	53.36
Nov 2012	3,214	2,935	51.31	47.20	60.00	56.25
Dec 2012	3,568	3,120	58.22	49.71	66.53	58.41
Jan 2013	3,691	3,440	59.92	54.82	69.25	64.60
2011						
First quarter	4,712	3,874	76.67	61.07	88.68	77.41
Second quarter	4,528	4,033	74.99	64.79	88.30	77.30
Third quarter	4,595	2,889	74.00	44.08	84.35	60.20
Fourth quarter	3,620	2,713	58.94	40.50	70.75	59.00
2012						
First quarter	3,988	3,331	62.70	51.24	72.30	61.40
Second quarter	3,556	2,772	57.25	42.32	66.79	52.90
Third quarter	3,282	2,716	53.18	43.00	58.97	48.63
Fourth quarter	3,568	2,915	58.22	46.81	66.53	53.36

(a) On 12 April 2010, Rio Tinto announced a ratio change for the Rio Tinto plc ADR programme. With effect from 30 April 2010, one ADR represents one ordinary share of 10p in Rio Tinto plc. Prior to this date one ADR represented four ordinary shares of 10p. To effect this change ADR holders received three additional ADRs for every one ADR held as of 22 April 2010, the ADR record date. Prior year comparatives have been restated for the impact of the ratio change.

(b) None of these prices have been restated to take account of the rights issues undertaken in 2009.

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Australian dollars

Year ended 31 December[c]	Period end	Average rate	High	Low
Jan 2013	1.04	1.05	1.06	1.04
Dec 2012	1.04	1.05	1.06	1.04
Nov 2012	1.04	1.04	1.05	1.03
Oct 2012	1.04	1.03	1.04	1.02
Sep 2012	1.04	1.04	1.06	1.02
Aug 2012	1.03	1.05	1.06	1.03
2012	1.04	1.04	1.08	0.97
2011	1.02	1.03	1.10	0.94
2010	1.02	0.92	1.02	0.81
2009	0.890	0.790	0.940	0.620
2008	0.698	0.852	0.983	0.607

(c) The Noon Buying Rate on such dates differed slightly from the rates used in the preparation of Rio Tinto s financial statements as of such date. No representation is made that pound sterling and Australian dollar amounts have been, could have been or could be converted into dollars at the Noon Buying Rate on such dates or at any other dates.

Material contracts

Articles of Association and Constitution

As explained on pages 127 to 128, 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. Please refer to the section on Guarantees on page 129 for further information. 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 any other person connected with him has any material interest other than by virtue of his interests in shares or debentures or other securities of or otherwise in or through the Company, except where resolutions:

indemnify him 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;

relate to an offer of securities in which he may be interested as a holder of securities or as an underwriter;

concern 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;

relate to an employee benefit in which the director will share equally with other employees; and

relate 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.

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 Company s 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 100 to 101 provides information on shareholding policies relating to executive and non-executive directors. Please refer to Corporate Governance page 73 for information on 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.

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.

Voting rights

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 by the shareholders at the parallel meeting of the other Company s shareholders.

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 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 (Rio Tinto plc); or
- the holder of the Special Voting Share.

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.

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Shareholder information continued

Matters are transacted at general meetings by the proposing and passing of resolutions:

- 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 DLC Merger Sharing Agreement further classifies resolutions as Joint Decisions and Class Rights Actions as explained under Voting rights on page 133.

Annual general meetings must be convened with 21 days written notice for Rio Tinto plc and with 28 days notice for Rio Tinto Limited. Other meetings of Rio Tinto plc must be convened with 21 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 in 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 kind.

The DLC Merger Sharing Agreement further sets out the rights of ordinary shareholders in a liquidation as explained on page 128.

Facility agreement

Rio Tinto Finance plc and Rio Tinto Finance Limited entered into a facility agreement on 12 November 2010 as borrowers with a syndicate of banks. The facility is guaranteed by Rio Tinto plc and Rio Tinto Limited. The facility comprises a US$6 billion multi-currency five-year revolving credit facility (including a US$ denominated same day access swingline facility). The funds made available under the Facility Agreement may be used for the general corporate purposes of the Group.

Advances under the revolving facility bear an interest rate per annum equal to the margin (which is dependent on the Group s long-term credit rating as determined by Moody s and Standard & Poors and the level of drawdown) plus LIBOR or EURIBOR (in relation to any euro loan) plus any mandatory cost.

The Facility Agreement contains no financial covenants.

At 31 December 2012, the facility was undrawn. Further details of the Group s credit facilities are set out in note 23 of the 2012 financial statements.

During the last quarter of 2012, the Group entered into bi-lateral bank facility agreements amounting to US$2 billion in aggregate. The facilities are denominated in US dollars and for a term of one year and extendable at the Group s option by a further 364 days. At 31 December 2012 the facility was undrawn. Any borrowings under each facility are at prevailing LIBOR rates plus an agreed margin dependent on the amount of drawdown and the credit rating of the group. The facility is not subject to financial covenants.

Exchange controls and foreign investment

Rio Tinto plc

There are no UK foreign exchange controls or other 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 affect the conduct of Rio Tinto plc s operations. The Bank of England, however, administers financial sanctions against specified targets related to certain regimes. 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.

Rio Tinto Limited

Under current Australian legislation, the Reserve Bank of Australia does not restrict the import and export of funds and no permission is required for the movement of funds into or out of Australia, except that restrictions apply to certain financial transactions relating to specified individuals and entities associated with certain regimes.

The Department of Foreign Affairs and Trade has responsibility for the administration of restrictions relating to terrorists and their sponsors, and the former Iraqi regime.

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, voting power or certain other equity instruments in Australian companies by foreign interests 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). The Takeovers Act applies to any acquisition of 15 per cent or more of the outstanding shares of, or voting power in, an Australian company or to any transaction that results in one non-resident, or a group of associated non-residents, controlling 15 per cent or more of the shares of or voting power in, an Australian company. The Takeovers Act also applies to any transaction which results in a group of non-associated non-residents controlling 40 per cent or more of the shares of, or voting power in, an Australian company. Persons who are proposing such acquisitions or transactions are required to notify the Treasurer of their intention. The Treasurer has the power to order divestment in cases where such acquisitions or transactions have already occurred. 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 1975 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 foreign persons to hold or vote the Group s ordinary shares or ADSs that would not apply generally to all shareholders.

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Taxation

UK resident individuals shareholdings in Rio Tinto plc

Taxation of dividends

Dividends carry a tax credit equal to one ninth of the dividend. Individuals who are liable to income tax at the basic rate will have no further tax to pay. Higher rate tax payers are liable to tax on UK dividends at 32.5 per cent, which after taking account of the tax credit produces an effective tax liability of 25 per cent of the dividend received. Additional rate tax payers are liable to tax on UK dividends at 42.5 per cent until 5 April 2013 and 37.5 per cent thereafter, which after taking account of the tax credit produces an effective tax liability of 36.1 per cent of any dividend received up to 5 April 2013 and 30.5 per cent thereafter.

Dividend reinvestment plan (DRP)

The taxation effect of participation in the DRP will depend on individual circumstances. Shareholders will generally be liable to tax on dividends reinvested in the DRP on the same basis as if they had received the cash and arranged the investment. The dividend should, therefore, be included in the annual tax return.

The shares acquired should be added to shareholdings at the date and at the net cost shown on the share purchase advice. The actual cost of the shares for Rio Tinto plc shareholders, including the stamp duty/stamp duty reserve tax and broker s commission, will form the base cost for capital gains tax purposes.

Capital gains tax

Shareholders who have any queries on capital gains tax issues are advised to consult their financial adviser.

Details of relevant events since 31 March 1982 and adjusted values for Rio Tinto plc securities as at that date are available on the Group s website.

Australian resident individuals shareholdings in Rio Tinto Limited

Taxation of dividends

The basis of the Australian dividend imputation system is that when Australian resident shareholders receive dividends from Rio Tinto Limited they may be entitled to a credit for the Australian tax paid by the Group in respect of that income, depending on the tax status of the shareholder.

The application of the system results in the Australian tax paid by the Group being allocated to shareholders by way of franking credits attaching to the dividends they receive. Such dividends are known as franked dividends. A dividend may be partly or fully franked. The current Rio Tinto Limited dividend is fully franked and the franking credits attached to the dividend are shown in the distribution statement provided to shareholders.

The extent to which a company can frank a dividend depends on the credit balance in its franking account. Credits to this account can arise in a number of ways, including when a company pays company tax or receives a franked dividend from another company. The dividend is required to be included in a resident individual shareholder s assessable income. In addition, an amount equal to the franking credit attached to the franked dividend is also included in the assessable income of the resident individual, who may then be entitled to a rebate of tax equal to the

franking credit amount included in their income. Should the franking credits exceed the tax due, the excess is refunded to the resident individual.

The effect of the dividend imputation system on non-resident shareholders is that, to the extent that the dividend is franked, no Australian tax will be payable and there is an exemption from dividend withholding tax.

A withholding tax is normally levied at the rate of 15 per cent when unfranked dividends are paid to non-resident shareholders residing in a country with which Australia has a taxation treaty. Most Western countries have a taxation treaty with Australia. A rate of 30 per cent applies to countries where there is no taxation treaty.

Since 1988, all dividends paid by Rio Tinto Limited have been fully franked. It is the Group s policy to pay fully franked dividends whenever possible. The boards expect Rio Tinto Limited to be able to pay fully franked dividends for the foreseeable future.

Dividend reinvestment plan (DRP)

Shareholders will generally be liable for tax on dividends reinvested in the DRP on the same basis as if they had received the cash and arranged the investment. The dividend should therefore be included in the annual tax return as assessable income.

The shares acquired should be added to the shareholding at the date of acquisition at the actual cost of the shares, which is the amount of the dividend applied by the shareholder to acquire shares and any incidental costs associated with the acquisition will form part of the cost base or reduced cost base of the shares for capital gains tax purposes.

Capital gains tax

The Australian capital gains tax legislation is complex. If shareholders have acquired shares after 19 September 1985 they may be subject to capital gains tax on the disposal of those shares.

Generally, disposal of shares held on capital account would give rise to a capital gain or loss. A capital gain arises when the proceeds on disposal are greater than the cost base of shares. A capital loss arises when the proceeds on sale are less than the cost base or reduced cost base. Where a capital gain arises on shares held for at least 12 months, individual, trust and superannuation fund shareholders may be eligible for a capital gains tax discount.

Shareholders are advised to seek the advice of an independent taxation consultant on any possible capital gains tax exposure.

US residents

The following is a summary of the principal UK tax, Australian tax and US Federal income tax consequences of the ownership of Rio Tinto plc ADSs, Rio Tinto plc shares and Rio Tinto Limited shares, the Group s ADSs and shares by a US holder as defined below. It is not intended to be a comprehensive description of all the tax considerations that are relevant to all classes of taxpayer. Future changes in legislation may affect the tax consequences of the ownership of the Group s ADSs and shares.

It is based in part on representations by the Group s depositary bank as depositary for the ADRs evidencing the ADSs and assumes that each obligation in the deposit agreements will be performed in accordance with its terms.

You are a US holder if you are a beneficial owner of the Group s ADSs and shares and you are: a citizen or resident of the US; a domestic corporation; an estate whose income is subject to US federal income tax regardless of its source; or a trust if a US court can exercise primary supervision over the trust s administration and one or more US persons are

authorised to control all substantial decisions of the trust.

This section applies to US holders only if shares or ADSs are held as capital assets for tax purposes. This section does not apply to shareholders who are members of a special class of holders subject to special rules, including a dealer in securities, a trader in securities who elects to use a mark-to-market method of accounting for securities holdings, a tax exempt organisation, a life insurance company, a person liable for alternative minimum tax, a person that actually or constructively owns ten per cent or more of Rio Tinto s voting stock, a person that holds shares or ADSs as part of a straddle or a hedging or conversion transaction, or a person whose functional currency is not the US dollar.

This section is based on the US Internal Revenue Code of 1986, as amended (the Code), its legislative history, existing and proposed regulations, published rulings and court decisions, and on the convention between the US and UK, and the convention between the US and Australia which may affect the tax consequences of the ownership of the Group s ADSs and shares. These laws and conventions are subject to change, possibly on a retroactive basis.

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Shareholder information continued

For the purposes of the Conventions and of the Code, US holders of ADSs are treated as the owners of the underlying shares.

The summary describes the treatment applicable under the conventions in force at the date of this report.

UK taxation of shareholdings in Rio Tinto plc

Taxation of dividends

US holders are not liable to UK withholding tax on dividends paid by Rio Tinto plc. Dividends carry a tax credit equal to one ninth of the net dividend, or ten per cent of the net dividend plus the tax credit. The tax credit is not repayable to US holders.

Capital gains

A US holder will not normally be liable to UK tax on capital gains realised on the disposition of Rio Tinto plc ADSs or shares unless the holder carries on a trade, profession or vocation in the UK through a permanent establishment in the UK and the ADSs or shares have been used for the purposes of the trade, profession or vocation or are acquired, held or used for the purposes of such a permanent establishment.

Inheritance tax

Under the UK Estate Tax Treaty, a US holder, who is domiciled in the US and is not a national of the UK, will not be subject to UK inheritance tax upon the holder s death or on a transfer during the holder s lifetime unless the ADSs and shares form part of the business property of a permanent establishment in the UK or pertain to a fixed base situated in the UK used in the performance of independent personal services. In the exceptional case where ADSs or shares are subject both to UK inheritance tax and to US Federal gift or estate tax, the UK Estate Tax Treaty generally provides for tax payments to be relieved in accordance with the priority rules set out in the Treaty.

Stamp duty and stamp duty reserve tax

Transfers of Rio Tinto plc ADSs will not be subject to UK stamp duty provided that the transfer instrument is not executed in, and at all times remains outside, the UK. Electronic paperless purchases of Rio Tinto plc shares are subject to stamp duty reserve tax (SDRT) at a rate of 0.5 per cent (rounded to the nearest penny). Purchases of Rio Tinto plc shares using a stock transfer form are subject to Stamp Duty at a rate of 0.5 per cent on transactions over £1,000 (rounded up to the nearest £5). Conversions of Rio Tinto plc shares into Rio Tinto plc ADSs will be subject to additional Stamp Duty or SDRT at a rate of 1.5 per cent on all transfers to the depositary or its nominee.

Australian taxation of shareholdings in Rio Tinto Limited

Taxation of dividends

US holders are not normally liable to Australian withholding tax on dividends paid by Rio Tinto Limited because such dividends are normally fully franked under the Australian dividend imputation system, meaning that they are paid out

of income that has borne Australian income tax. Any unfranked dividends would suffer Australian withholding tax which under the Australian income tax convention is limited to 15 per cent of the gross dividend.

Capital gains

US holders are not normally subject to any Australian tax on the disposal of Rio Tinto Limited ADSs or shares unless they have been used in carrying on a trade or business wholly or partly through a permanent establishment in Australia, or the gain is in the nature of income sourced in Australia.

Gift, estate and inheritance tax

Australia does not impose any gift, estate or inheritance taxes in relation to gifts of shares or upon the death of a shareholder.

Stamp duty

An issue or transfer of Rio Tinto Limited shares does not require the payment of Australian stamp duty.

US federal income tax

In general, taking into account the earlier assumptions that each obligation of the Deposit Agreement and any related agreement will be performed according to its terms, for US federal income tax purposes, if you hold ADRs evidencing ADSs, you will be treated as the owner of the shares represented by those ADRs. Exchanges of shares for ADRs, and ADRs for shares, generally will not be subject to US federal income tax.

Taxation of dividends

Under the US federal income tax laws, and subject to the Passive Foreign Investment Company, or PFIC, Rules discussed below, if you are a US holder, the gross amount of any dividend the Group pays out of its current or accumulated earnings and profits (as determined for US federal income tax purposes) is subject to US federal income taxation.

If you are a non-corporate US holder, dividends paid to you in taxable years beginning after 31 December 2012 will be taxed at ordinary income rates on dividends.

You must include any Australian tax withheld from the dividend payment in this gross amount even though you do not in fact receive it. The dividend is taxable to you when you, in the case of shares, or the depositary, in the case of ADSs, receive the dividend, actually or constructively. The dividend will not be eligible for the dividends-received deduction generally allowed to US corporations in respect of dividends received from other US corporations. The amount of the dividend distribution that you must include in your income as a US holder will be the US dollar value of the non-US dollar payments made, determined at the spot UK pound/US dollar rate (in the case of Rio Tinto plc) or the spot Australian dollar/US dollar rate (in the case of Rio Tinto Limited) on the date the dividend distribution is includible in your income, regardless of whether the payment is in fact converted into US dollars. Generally, any gain or loss resulting from currency exchange fluctuations during the period from the date you include the dividend payment in income to the date you convert the payment into US dollars will be treated as ordinary income or loss and will not be eligible for the special tax rate applicable to qualified dividend income. The gain or loss generally will be income or loss from sources within the US for foreign tax credit limitation purposes. Distributions in excess of current and accumulated earnings and profits, as determined for US federal income tax purposes, will be treated as a non-taxable return of capital to the extent of your basis in the shares or ADSs and thereafter as capital gain.

Subject to certain limitations, any Australian tax withheld in accordance with the Australia/United States Tax Treaty and paid over to Australia will be creditable or deductible against your US federal income tax liability. Special rules apply in determining the foreign tax credit limitation with respect to dividends that are subject to the maximum 20 per cent tax rate beginning after 31 December 2012.

For foreign tax credit purposes, dividends will generally be income from sources outside the US and will, depending on your circumstances, generally be either passive or general income which, in either case, is treated separately from other types of income for purposes of computing the foreign tax credit allowable to you.

Taxation of capital gains

Subject to the PFIC rules discussed below, if you are a US holder and you sell or otherwise dispose of the Group s ADSs or shares, you will recognise capital gain or loss for US federal income tax purposes equal to the difference between the US dollar value of the amount that you realise and your tax basis, determined in US dollars, in your shares or ADSs. Capital gain of a non-corporate US holder is generally taxed at preferential rates where the holder has a holding period greater than one year. The gain or loss will generally be income or loss from sources within the US for foreign tax credit limitation purposes.

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Passive Foreign Investment Company (PFIC) Rules

We believe that the Group s shares or ADSs should not be treated as stock of PFIC for US federal income tax purposes, but this conclusion is a factual determination that is made annually and thus may be subject to change. If we were to be treated as a PFIC, unless the shares or ADSs are marketable stock and a US holder elects to be taxed annually on a mark-to-market basis with respect to the shares or ADSs, gain realised on the sale or other disposition of the shares or ADSs would in general not be treated as capital gain. Instead, if you are a US holder, you would be treated as if you had realised such gain and certain excess distributions rateably over your holding period for the shares or ADSs and would be taxed at the highest tax rate in effect for each such year to which the gain was allocated, together with an interest charge in respect of the tax attributable to each such year. In addition, dividends that you receive from us will not be eligible for the special tax rates applicable to qualified dividend income if we are a PFIC either in the taxable year of the distribution or the preceding taxable year, but instead will be taxable at rates applicable to ordinary income.

Documents on display

Rio Tinto is subject to the Securities and Exchange Commission reporting requirements for foreign companies. A Form 20-F, which corresponds with the Form 10-K for US public companies, was filed with the SEC on 15 March 2013. Rio Tinto s Form 20-F and other filings can be viewed on the Rio Tinto website as well as the SEC website at www.sec.gov. ADR holders may also read without charge and copy at prescribed rates any document filed at the public reference facilities of the SEC s principal office at 100 F Street NE, Washington, DC 20549, US. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

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Group income statement

Years ended 31 December

	Note	**2012 US$m**	2011 US$m	2010 US$m
Continuing operations				
Consolidated sales revenue	2	**50,967**	60,537	55,171
Net operating costs (excluding items shown separately)	4	**(37,536)**	(36,260)	(35,262)
Impairment charges less reversals	6	**(13,953)**	(9,174)	(982)
Gains and losses on consolidation and disposal of interests in businesses	2, 38	**845**	185	753
Exploration and evaluation costs	13	**(1,970)**	(1,437)	(594)
Profits on disposal of interests in undeveloped projects	13	**494**	89	522
Operating (loss)/profit		**(1,153)**	13,940	19,608
Share of profit after tax of equity accounted units	7	**1,034**	704	1,101
Impairment after tax of investments in equity accounted units	6	**(2,457)**	(592)	
(Loss)/profit before finance items and taxation		**(2,576)**	14,052	20,709
Finance items				
Net exchange gains/(losses) on external debt and intragroup balances	25	**497**	(154)	529
Net gains on derivatives not qualifying for hedge accounting		**87**	51	162
Finance income	8	**116**	115	163
Finance costs	8	**(276)**	(497)	(778)
Amortisation of discount		**(416)**	(353)	(294)
		8	(838)	(218)
(Loss)/profit before taxation		**(2,568)**	13,214	20,491
Taxation	9	**(429)**	(6,439)	(5,296)
(Loss)/profit from continuing operations		**(2,997)**	6,775	15,195
Discontinued operations				
Loss after tax from discontinued operations	2	**(7)**	(10)	(97)
(Loss)/profit for the year		**(3,004)**	6,765	15,098
attributable to non-controlling interests		**(14)**	939	860
attributable to owners of Rio Tinto (net (losses)/earnings)		**(2,990)**	5,826	14,238
Basic (loss)/earnings per share				
(Loss)/profit from continuing operations	10	**(161.3c)**	303.5c	731.0c
Loss from discontinued operations	10	**(0.4c)**	(0.5c)	(4.9c)
(Loss)/profit for the year	10	**(161.7c)**	303.0c	726.1c
Diluted (loss)/earnings per share				
(Loss)/profit from continuing operations	10	**(161.3c)**	301.5c	726.7c

Loss from discontinued operations	10	**(0.4c)**	(0.5c)	(4.9c)
(Loss)/profit for the year	10	**(161.7c)**	301.0c	721.8c

The notes on pages 146 to 215 are an integral part of these consolidated financial statements.

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Group statement of comprehensive income

Years ended 31 December

	Note	**2012 US$m**	2011 US$m	2010 US$m
(Loss)/profit after tax for the year		**(3,004)**	6,765	15,098
Other comprehensive income:				
Currency translation adjustment		**674**	(974)	1,504
Currency translation, on companies disposed of, transferred to the income statement		**(3)**	46	6
Cash flow hedge fair value (losses)/gains		**(67)**	82	(93)
Cash flow hedge losses transferred to the income statement		**99**	141	95
Gains/(losses) on revaluation of available for sale securities		**34**	(236)	215
Gains on revaluation of available for sale securities transferred to the income statement		**(355)**	(19)	(10)
Actuarial losses on post retirement benefit plans	46	**(420)**	(1,956)	(782)
Share of other comprehensive (loss)/income of equity accounted units, net of tax		**(108)**	48	206
Tax relating to components of other comprehensive income	9	**84**	468	253
Other comprehensive (loss)/income for the year, net of tax		**(62)**	(2,400)	1,394
Total comprehensive (loss)/income for the year		**(3,066)**	4,365	16,492
attributable to owners of Rio Tinto		**(3,192)**	3,504	15,350
attributable to non-controlling interests		**126**	861	1,142

The notes on pages 146 to 215 are an integral part of these consolidated financial statements.

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Group cash flow statement

Years ended 31 December

	Note	**2012 US$m**	2011 US$m	2010 US$m
Cash flow from consolidated operations[(a)]		**15,928**	26,589	22,126
Dividends from equity accounted units		**522**	799	1,404
Cash flows from operations		**16,450**	27,388	23,530
Net interest paid		**(837)**	(613)	(696)
Dividends paid to holders of non-controlling interests in subsidiaries		**(422)**	(548)	(457)
Tax paid		**(5,823)**	(6,197)	(4,100)
Net cash generated from operating activities		**9,368**	20,030	18,277
Cash flow from investing activities				
Acquisitions of subsidiaries, joint ventures & associates	38	**(1,336)**	(4,156)	(907)
Disposals of subsidiaries, joint ventures & associates	38	**251**	387	604
Purchase of property, plant & equipment and intangible assets	2	**(17,458)**	(12,335)	(4,591)
Sales of financial assets		**693**	104	227
Purchases of financial assets		**(50)**	(146)	(145)
Other funding of equity accounted units		**(311)**	(745)	(154)
Other investing cash flows (including net proceeds from the disposal of assets held for sale)		**37**	53	3,255
Cash used in investing activities		**(18,174)**	(16,838)	(1,711)
Cash flow before financing activities		**(8,806)**	3,192	16,566
Cash flow from financing activities				
Equity dividends paid to owners of Rio Tinto		**(3,038)**	(2,236)	(1,754)
Own shares purchased from owners of Rio Tinto		**(1,471)**	(5,504)	
Proceeds from additional borrowings		**8,569**	4,704	1,947
Cash movement on equity accounted unit funded balances	25		1,683	
Repayment of borrowings		**(681)**	(496)	(11,307)
Purchase of non-controlling interests	38	**(76)**	(2,243)	
		2,945	424	250

Proceeds from issue of equity to non-controlling interests[(b)]				
Other financing cash flows		**77**	242	254
Net cash flow from financing activities		**6,325**	(3,426)	(10,610)
Effects of exchange rates on cash and cash equivalents		**49**	(71)	(139)
Net (decrease)/increase in cash and cash equivalents		**(2,432)**	(305)	5,817
Opening cash and cash equivalents less overdrafts		**9,654**	9,959	4,142
Closing cash and cash equivalents less overdrafts	22	**7,222**	9,654	9,959
(a) Cash flow from consolidated operations				
(Loss)/profit from continuing operations		**(2,997)**	6,775	15,195
Adjustments for:				
Taxation		**429**	6,439	5,296
Finance items		**(8)**	838	218
Share of profit after tax of equity accounted units		**(1,034)**	(704)	(1,101)
Impairment after tax of investments in equity accounted units		**2,457**	592	
Gain on consolidation and on disposal of interests in businesses	38	**(845)**	(185)	(753)
Impairment charges less reversals	6	**13,953**	9,174	982
Depreciation and amortisation		**4,441**	3,817	3,437
Provisions (including exchange differences on provisions)	27	**807**	961	907
Utilisation of provisions	27	**(835)**	(627)	(507)
Utilisation of provision for post retirement benefits	27	**(670)**	(678)	(1,110)
Change in inventories		**(432)**	(1,000)	(492)
Change in trade and other receivables		**465**	108	(1,316)
Change in trade and other payables		**262**	1,239	983
Other items		**(65)**	(160)	387
		15,928	26,589	22,126

(b) Cash proceeds from the issue of equity to non-controlling interests include US$1.8 billion from the transfer of a 47 per cent interest in Simfer Jersey Limited, a Rio Tinto subsidiary, to Chalco Iron Ore Holdings Limited, a consortium led by Chalco (and reimbursing Rio Tinto for historic project costs) plus subsequent cash calls to meet project costs, and US$0.9 billion of proceeds from subscription by non-controlling interests in a rights offering by Turquoise Hill Resources Ltd. Refer to the Statement of changes in equity on page 143, and to note 38.

The notes on pages 146 to 215 are an integral part of these consolidated financial statements.

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Group statement of financial position

At 31 December

	Note	2012 US$m	2011 US$m
Non-current assets			
Goodwill	12	**2,774**	8,187
Intangible assets	13	**6,628**	7,955
Property, plant and equipment	14	**75,131**	64,967
Investments in equity accounted units	15	**5,312**	9,833
Inventories	17	**423**	381
Trade and other receivables	18	**2,603**	2,365
Deferred tax assets	19	**3,358**	1,875
Other financial assets (including tax recoverable and loans to equity accounted units)	21	**1,151**	1,996
		97,380	97,559
Current assets			
Inventories	17	**6,136**	5,307
Trade and other receivables	18	**5,319**	6,058
Tax recoverable		**153**	278
Other financial assets (including loans to equity accounted units)	21	**533**	585
Cash and cash equivalents	22	**7,082**	9,670
		19,223	21,898
Assets of disposal groups held for sale	20	**970**	88
Total assets		**117,573**	119,545
Current liabilities			
Borrowings and other financial liabilities	23	**(2,228)**	(1,447)
Trade and other payables	26	**(9,244)**	(9,381)
Tax payable		**(827)**	(2,651)
Provisions including post retirement benefits	27	**(1,522)**	(1,487)
		(13,821)	(14,966)
Non-current liabilities			
Borrowings and other financial liabilities	23	**(24,591)**	(20,357)
Trade and other payables	26	**(539)**	(719)
Tax payable		**(383)**	(382)
Deferred tax liabilities	19	**(4,736)**	(6,210)
Provisions including post retirement benefits	27	**(15,069)**	(17,670)
		(45,318)	(45,338)
Liabilities of disposal groups held for sale	20	**(413)**	(33)
Total liabilities		**(59,552)**	(60,337)
Net assets		**58,021**	59,208

Capital and reserves			
Share capital			
Rio Tinto plc	28	**230**	234
Rio Tinto Limited	29	**5,715**	5,582
Share premium account		**4,244**	4,208
Other reserves	30	**14,849**	14,731
Retained earnings	30	**21,827**	27,784
Equity attributable to owners of Rio Tinto		**46,865**	52,539
Attributable to non-controlling interests		**11,156**	6,669
Total equity		**58,021**	59,208

The notes on pages 146 to 214 are an integral part of these consolidated financial statements.

The financial statements on pages 139 to 223 were approved by the directors on 6 March 2013 and signed on their behalf by

Jan du Plessis Chairman

Sam Walsh Chief executive

Guy Elliott Chief financial officer

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Group statement of changes in equity

Years ended

31 December 2012	**Attributable to owners of Rio Tinto**						
	Share capital (notes 28 and 29) US$m	**Share premium US$m**	**Other reserves (note 30) US$m**	**Retained earnings (note 30) US$m**	**Total US$m**	**Non-controlling interests US$m**	**Total equity US$m**
Opening balance	**5,816**	**4,208**	**14,731**	**27,784**	**52,539**	**6,669**	**59,208**
Total comprehensive loss for the year[a]			**98**	**(3,290)**	**(3,192)**	**126**	**(3,066)**
Currency translation arising on Rio Tinto Limited s share capital[b]	**133**				**133**		**133**
Dividends				**(3,038)**	**(3,038)**	**(422)**	**(3,460)**
Share buyback schemes	**(4)**		**4**	**(764)**	**(764)**		**(764)**
Own shares purchased/treasury shares reissued for share options and other items			**(62)**	**(41)**	**(103)**		**(103)**
Treasury shares reissued and other movements		**36**		**3**	**39**		**39**
Newly consolidated operations[c][d]						**2,902**	**2,902**
Change in equity held by Rio Tinto[e]				**1,128**	**1,128**	**166**	**1,294**
Equity issued to holders of non-controlling interests[f]						**1,595**	**1,595**
Employee share options and other IFRS 2 charges taken to the income statement			**78**	**45**	**123**	**120**	**243**
Closing balance	**5,945**	**4,244**	**14,849**	**21,827**	**46,865**	**11,156**	**58,021**

31 December 2011	Attributable to owners of Rio Tinto						
	Share capital (notes 28 and 29) US$m	Share premium US$m	Other reserves (note 30) US$m	Retained earnings (note 30) US$m	Total US$m	Non-controlling interests US$m	Total equity US$m
Opening balance	5,847	4,258	15,643	32,499	58,247	6,265	64,512
Total comprehensive income for the year[a]			(924)	4,428	3,504	861	4,365
Currency translation arising on Rio Tinto Limited s share capital[b]	(19)				(19)		(19)
Dividends				(2,236)	(2,236)	(548)	(2,784)
Share buyback schemes	(12)		12	(6,210)	(6,210)		(6,210)
Own shares purchased/treasury shares reissued for share options and other items		(50)	(71)	10	(111)		(111)
Newly consolidated operations[g]						1,555	1,555
Change in equity held by Rio Tinto[g][h][i]				(793)	(793)	(1,882)	(2,675)
Equity issued to holders of non-controlling interests						424	424
Company no longer consolidated						(6)	(6)
Employee share options			71	86	157		157
Closing balance	5,816	4,208	14,731	27,784	52,539	6,669	59,208

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Group statement of changes in equity continued

31 December 2010	Attributable to owners of Rio Tinto						
	Share capital (notes 28 and 29) US$m	Share premium US$m	Other reserves (note 30) US$m	Retained earnings (note 30) US$m	Total US$m	Non-controlling interests US$m	Total equity US$m
Opening balance	5,170	4,174	14,010	20,477	43,831	2,094	45,925
Total comprehensive income for the year[a]			1,645	13,705	15,350	1,142	16,492
Currency translation arising on Rio Tinto Limited s share capital[b]	677				677		677
Dividends				(1,754)	(1,754)	(457)	(2,211)
Own shares purchased/treasury shares reissued for share options and other items		84	(84)	(31)	(31)		(31)
Consolidation of Oyu Tolgoi[j]						3,236	3,236
Equity issued to holders of non-controlling interests						250	250
Employee share options			48	69	117		117
Cash settled share options reclassified as equity settled			24	33	57		57
Closing balance	5,847	4,258	15,643	32,499	58,247	6,265	64,512

(a) Refer to Statement of comprehensive income for further details.

(b) Refer to note 1 (d)

(c) Rio Tinto gained control of the non Oyu Tolgoi LLC (OT) assets of Ivanhoe Mines Limited (Ivanhoe) on 24 January 2012 when its share reached 51 per cent. The Group had gained control of OT in December 2010 by virtue of contractual rights which permit the exercise of control over certain policies and activities of OT. On

2 August 2012, Ivanhoe was renamed Turquoise Hill Resources Ltd. (Turquoise Hill). Within newly consolidated operations, US$2,678 million represents non-controlling interests in the non OT assets, of which US$1,439 million relates to the 49 per cent non-controlling interests portion of net loans receivable from Rio Tinto Group companies. Refer to note 38.

(d) Rio Tinto acquired a controlling interest in Richards Bay Minerals (RBM), with consolidation effective from 3 September 2012 (the acquisition date). US$224 million within newly consolidated operations relates to the provisional fair value of non-controlling interests at acquisition date. Refer to note 38.

(e) The majority of the adjustments to equity held by Rio Tinto arise from Chalco s acquisitions of shares in Simfer Jersey Limited, a Rio Tinto subsidiary, as set out in the Simandou Joint Development Agreement (SJDA). The Chalco consortium made a payment of US$1.35 billion on 24 April 2012 in exchange for an equity interest of 47 per cent in Simfer Jersey Limited, reimbursing Rio Tinto for historic project costs. The transfer on 24 April 2012 resulted in an adjustment to retained earnings attributable to owners of Rio Tinto of US$1.05 billion, relating to the amount received over the carrying value of Rio Tinto s interest transferred.

(f) Equity issued to holders of non-controlling interests include US$0.9 billion of proceeds from a rights offering by Turquoise Hill, and cash calls of US$480 million following the transfer described in (e), which resulted in the Chalco consortium being issued with additional equity interest in proportion to its interest.

(g) The purchase of Rio Tinto Coal Mozambique (RTCM, formerly Riversdale Mining Limited (Riversdale)), in 2011 was treated as a step acquisition. Non-controlling interests of US$1,498 million arose at the acquisition date, when Rio Tinto s share in Riversdale reached 52.6 per cent. These non-controlling interests reversed as Rio Tinto increased its interests in Riversdale to 100 per cent. An amount of US$479 million has been recognised directly in equity in relation to Rio Tinto s interests purchased after the acquisition date, representing the excess of consideration paid to acquire these additional shareholdings, over non-controlling interests acquired. Refer to note 38.

(h) A reduction of US$339 million in non-controlling interests arose as Rio Tinto increased its economic share in OT through the acquisition of additional interests in Ivanhoe. Adjustments to retained earnings attributable to owners of Rio Tinto of US$129 million related to the aggregate excess of consideration paid for the additional investments in Ivanhoe, over the value of the additional economic share acquired in OT. Refer to note 38.

(i) In relation to the Group s purchase of an additional stake in Coal & Allied, adjustments to retained earnings of US$185 million were made for the excess of consideration paid to acquire shareholdings of US$45 million from non-controlling interests.

(j) Rio Tinto consolidated Oyu Tolgoi LLC on 15 December 2010 following the signing of a new agreement with Turquoise Hill (formerly Ivanhoe Mines Limited).

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Reconciliation with Australian Accounting Standards

The Group s financial statements have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS) and conform to IFRS as adopted by the European Union (EU IFRS), which differ in certain respects from the version of IFRS 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 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$535 million at 31 December 2012 (2011: US$537 million; 2010: US$584 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 United Kingdom 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 United Kingdom 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 effectively 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 provides 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. 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.

The main consequence of adopting merger rather than acquisition accounting is that the statement of financial position 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 statement of financial position, 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 22 December 2010 (as amended on 17 February 2012). The main provisions of the order are that the financial statements are prepared in accordance with IFRS and include a reconciliation from IFRS to the Australian equivalents of IFRS (see above).

For further details of the ASIC Class Order relief see page 223.

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Notes to the 2012 financial statements

1 Principal accounting policies

Corporate information

The financial statements of the Group were authorised for issue in accordance with a directors resolution on 6 March 2013. Rio Tinto plc and Rio Tinto Limited are listed and incorporated respectively on Stock Exchanges in the United Kingdom and Australia. Rio Tinto plc s registered office is at 2 Eastbourne Terrace, London W2 6LG, United Kingdom. Rio Tinto Limited s registered office is at 120 Collins Street, Melbourne, Australia, 3000.

Rio Tinto s business is finding, mining and processing mineral resources. Major products are iron ore, aluminium, copper, diamonds, coal, uranium, gold and industrial minerals (borax, titanium dioxide and salt). Activities span the world but are strongly represented in Australia and North America with significant businesses in South America, Asia, Europe and Africa.

Basis of preparation

The basis of preparation and the accounting policies used in preparing the financial statements for the year ended 31 December 2012 are set out below.

The financial statements for the year ended 31 December 2012 have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IFRS) and conform to IFRS as adopted by the EU (EU IFRS) and interpretations issued from time to time by the IFRS Interpretations Committee (IFRIC) and adopted by the EU that are mandatory for the year ended 31 December 2012, the Companies Act 2006 applicable to companies reporting under IFRS and in accordance with applicable United Kingdom law, applicable Australian law as amended by the Australian Securities and Investments Commission Order dated 22 December 2010 (as amended on 17 February 2012) and Article 4 of the European Union IAS regulation. The financial statements are prepared on a going concern basis (page 126).

The IFRS financial information has been drawn up on the basis of accounting policies consistent with those applied in the financial statements for the year to 31 December 2011, except for the following:

Amendment to IFRS 7, Financial Instruments: Disclosures Transfers of Financial Assets . This amends required disclosures to help users of financial statements evaluate the risk exposures relating to transfers of financial assets and the effect of those risks on an entity s financial position. The amendment relates to disclosure only and has no impact on Group earnings or shareholders funds in the current or prior year.

The Group has not applied the following pronouncements which are not mandatory for 2012:

Mandatory for 2013

Amendment to IAS 1, Presentation of Financial Statements Presentation of items of other comprehensive income .

IAS 19 (revised 2011), Employee Benefits .

IAS 28 (revised 2011), Investments in Associates and Joint Ventures .

Amendments to IFRS 7, Financial instruments: Disclosures Offsetting Financial Assets and Financial Liabilities .

IFRS 10, Consolidated Financial Statements .

IFRS 11, Joint Arrangements .

IFRS 10 and 11 are mandatory for 2013 under IFRS.

IFRS 12, Disclosures of Interests in Other Entities .

IFRS 13, Fair Value Measurement .

Annual improvements 2011

IFRIC 20, Stripping Costs in the Production Phase of a Surface Mine .

Mandatory for 2014

Amendments to IAS 32 Financial instruments: Presentation Offsetting Financial Assets and Financial Liabilities

Mandatory for 2015

IFRS 9, Financial instruments

In relation to those pronouncements which are mandatory for 2013:

The amendment to IAS 19 only allows the expected return on assets to assume returns in line with the discount rate applied to the calculation of the pension liability whereas the current standard allows a higher assumed rate based on the assets actually held. The Group expects the annual pre-tax pension expense to be permanently higher under the revised standard by some US$100 to US$200 million, with the precise amount depending on the value of assets in the pension plans and the asset classes in which they are invested. The higher expense will be matched by lower actuarial gains and losses and there is therefore no impact on the statement of financial position.

IFRS 10 replaces the guidance on control and consolidation in IAS 27 Consolidated and Separate Financial Statements , and SIC 12 Consolidation Special Purpose Entities ; it provides a revised definition of control and establishes that as the basis for determining which entities are consolidated in the financial statements.

All entities within the Group have been reviewed to assess the impact of IFRS 10; there have not been any material reclassifications to or from controlled entities.

IFRS 11 replaces IAS 31 Interests in Joint Ventures . The classification and subsequent accounting for joint arrangements now depends on whether parties that share joint control of an arrangement have rights to the assets and

obligations for the liabilities of the arrangement, in which case it is a Joint Operation, or rights to the net assets of the arrangement, in which case it is a Joint Venture.

For Joint Operations the Group will account for its share of the assets, liabilities, revenues and expenses relating to its interest in the Joint Operation in accordance with applicable IFRSs. Joint Ventures will be accounted for using the equity accounting method.

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All arrangements within the Group have been reviewed to assess the impact of IFRS 11. It has been concluded that certain of the Group s operations (including Queensland Alumina Limited, New Zealand Aluminium Smelters Limited, and Pechiney Reynolds Quebec Inc.) that were previously equity accounted will now be accounted for as Joint Operations. As a result the Group will no longer recognise Investments in equity accounted units or Share of profit/(loss) after tax of equity accounted units for these arrangements, but will instead consolidate its share of their assets and liabilities (including its share of any assets held and liabilities incurred jointly), revenue from the sale of its share of the output arising from the joint operation, its share of the revenue from the sale of the output by the joint operation and its expenses (including its share of any expenses incurred jointly) on a line by line basis. The Group understands that practice is still developing in relation to the specific facts and circumstances which apply to some of the Group s other operations and is therefore currently considering the impact of adoption of IFRS 11 on these operations.

IFRS 13 is prospective in application. It establishes a single source of guidance for all fair value measurements. The standard provides guidance on how to measure fair value when fair value is required or permitted under other standards. It does not change when an entity is required to use fair value. The Group is currently assessing the impact of IFRS 13 but, based on preliminary analysis, it is not expected to be material.

IFRIC 20 specifies the accounting for post-production stripping costs. As explained in note (h) below the Group currently defers stripping costs incurred during the production stage of its operations, for those operations where this is the most appropriate basis for matching the costs against the related economic benefits and the effect is material. At 1 January 2011, which will be the earliest period presented in the Group s 2013 financial statements, the net book value carried forward in property, plant and equipment and in investments in jointly controlled entities and associates was US$1.3 billion (pre tax). Under the interpretation this balance can only be carried forward if it can be identified with a remaining component of the orebody. The Group is currently finalising its analysis but expects that approximately US$0.7 billion of that balance will be written off at 1 January 2011 (approximately US$0.4 billion net of taxation and non-controlling interests). The impact on 2011 and 2012 is not currently expected to exceed US$0.2 billion net of tax and non controlling interests.

The other standards which are mandatory for 2013 either relate to disclosure only or are not expected to be material to the Group s earnings or shareholders funds. The Group is currently evaluating the impact of those pronouncements which are mandatory beyond 2013.

Judgments in applying accounting policies and key sources of estimation uncertainty

Many of the amounts included in the financial statements involve the use of judgment and/or estimation. These judgments and estimates are based on management s best knowledge of the relevant facts and circumstances, having regard to previous experience, but actual results may differ from the amounts included in the financial statements. Information about such judgments and estimation is contained in the accounting policies and/or the Notes to the financial statements, and the key areas are summarised below.

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);

Review of asset carrying values, impairment charges and reversals and the recoverability of goodwill note 1(e) and (i), note 6 and note 12;

Estimation of asset lives note 1(e) and (i);

Determination of ore reserve estimates note 1(j);

Close down restoration and clean up obligations note 1(k);

Deferral of stripping costs note 1(h);

Recognition of deferred tax on mining rights recognised in acquisitions note 1(m);

Recoverability of potential deferred tax assets note 19 (d) and (f);

Capitalisation of exploration and evaluation costs note 1(f);

Identification of functional currencies note 1(d);

Basis of consolidation note 1(b) Acquisitions; and

Post retirement cost assumptions note 1(n).

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 note 1(e) and (i), note 6 and note 12;

Estimation of close down restoration and clean-up costs and the timing of expenditure note 1(k) and note 27;

Estimation of liabilities for post retirement costs note 46;

Recoverability of potential deferred tax assets note 19 (d) and (f);

Capitalisation of exploration and evaluation costs note 1(f); and

Contingencies note 32.

These areas of judgment and estimation are discussed further in critical accounting policies and estimates on page 156.

(a) Accounting convention

The financial information included in the financial statements for the year ended 31 December 2012, and for the related comparative periods, has been prepared under the historical cost convention, as modified by the revaluation of certain derivative contracts, financial assets and the accounting for post retirement assets and liabilities. The Group s policy in respect of these items is set out in the notes below.

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Notes to the 2012 financial statements continued

1 Principal accounting policies continued

(b) Basis of consolidation

The financial statements consist of the consolidation of the accounts of Rio Tinto plc and Rio Tinto Limited (together the Companies) and their respective subsidiaries (together the Group) together with the Group s share of joint ventures and associates accounted for as described below.

All intragroup transactions and balances have been eliminated on consolidation.

Subsidiaries: Subsidiaries are entities controlled by the Companies. Control is the power to govern the financial and operating policies of those entities in order to obtain benefits from their activities. Control is presumed to exist where the Companies own more than one half of the voting rights (which is not always the same as more than 50 per cent ownership) unless it can be demonstrated that this does not constitute control. Control does not exist where other parties hold veto rights over significant operating and financial decisions of an entity or where the Companies have the power to govern an entity but cannot obtain benefit from its activities. Control does exist where another party or parties own more than one half of the voting rights of an entity but the Group can control those voting rights either through a contractual arrangement or through board control.

Joint ventures: A joint venture is a contractual arrangement whereby two or more parties undertake an economic activity that is subject to joint control. Joint control is the contractually agreed sharing of control such that significant operating and financial decisions require the unanimous consent of the parties sharing control. In some situations, joint control exists even though the Group has an ownership interest of more than 50 per cent because of the veto rights held by joint venture partners. The Group has two types of joint venture:

Jointly controlled entities (JCEs): A JCE is a joint venture that involves the establishment of a corporation, partnership or other entity in which each venturer has a long term interest. JCEs are accounted for using the equity accounting method.

Jointly controlled assets (JCAs): JCAs do not involve the establishment of a corporation, partnership or other entity. A JCA is a joint venture in which the venturers have joint control over the assets contributed to or acquired for the purposes of the joint venture. This includes situations where the participants benefit from the joint activity through a share of the production, rather than by receiving a share of the results of trading. The Group s proportionate interest in the assets, liabilities, revenues, expenses and cash flows of JCAs are incorporated into the Group s financial statements under the appropriate headings.

Associates: An associate is an entity that is neither a subsidiary nor a joint venture, over which the Group has significant influence. Significant influence is presumed to exist where the Group has between 20 per cent and 50 per cent of the voting rights, unless it can be clearly demonstrated that this is not the case. Significant influence can also arise where the Group holds less than 20 per cent 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 method of accounting. Under this method of accounting 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 associates retained post-acquisition profit or loss and other comprehensive income.

The Group uses the term Equity accounted units to refer to associates and JCEs collectively. For all equity accounted units the carrying value will include any long term debt interests that in substance form part of the Group s net investment.

Where necessary, adjustments are made to the assets, liabilities and results of subsidiaries, joint ventures and associates to bring their accounting policies into line with those used by the Group.

Acquisitions

The acquisition method of accounting is used for acquisitions. This means that the purchase consideration is allocated to the identifiable assets acquired and liabilities assumed (the identifiable net assets) on the basis of fair value at the date of acquisition which is the date on which control is obtained. Provisional fair values allocated at a reporting date are finalised within 12 months of the acquisition date.

Costs related to the acquisition of a subsidiary are expensed as incurred.

On an acquisition by acquisition basis, the Group recognises any non-controlling interest in the acquiree either at the non-controlling interest s proportionate share of the acquiree s identifiable net assets or at fair value. Where required by accounting standards non-controlling interests are 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 acquisition date with any gain or loss being recognised in the income statement. The cash cost of such a purchase is included in Investing activities in the cash flow statement.

For purchases from non-controlling interests, the difference between the purchase price and the relevant carrying value of the share of net assets acquired is recorded in equity. The cash cost of such purchases is included in 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

Individual non-current assets or disposal groups (i.e. 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. Comparative statement of financial position information is not restated. Disposal groups acquired with a view to resale are held at 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.

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On classification as held for sale, the assets are no longer depreciated.

The results of businesses disposed of are taken out of the financial statements from the date on which control, joint control or significant influence ceases. The cash proceeds of such disposals are included in Investing activities in the cash flow statement. At this point 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. This fair value is the initial carrying amount for any retained interest which may be subsequently accounted for as an associate, joint venture or financial asset depending on the facts. Any 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, are accounted for as if the Group had directly disposed of the related assets or liabilities.

Gains or losses on disposals to non-controlling interests where control is retained are recorded in equity. The cash proceeds of such disposals are included in Financing activities in the cash flow statement.

(c) Sales revenue

Sales revenue comprises sales to third parties at invoiced amounts. Most sales are priced ex works, free on board (fob) or cost, insurance and freight (cif). Amounts billed to customers in respect of shipping and handling are classified as sales revenue where the Group is responsible for carriage, insurance and freight. All shipping and handling costs incurred by the Group are recognised as operating costs. 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 services are rendered and accepted by the customer.

Sales revenue excludes any applicable sales taxes. Mining royalties are presented as an operating cost or, where they are in substance a profit based tax, within taxes.

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 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.

These conditions are generally satisfied when title passes to the customer. 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 majority of 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.

Certain of the Group s products, such as iron ore, were previously sold under long term contracts at an annual benchmark price. Since 2010 pricing for all iron ore customers has changed to a quarterly basis reflecting the structural shift away from annual benchmark pricing. A proportion of iron ore volumes continued to be sold on the spot market in 2012. 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 , i.e. 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.

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 31.

(d) Currency translation

The functional currency for each entity in the Group, and for JCEs 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. The accounting for hedged transactions is discussed in note (p) below. 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 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 approximates the rate at the date of transactions. Statement of financial position items are translated into US dollars at year 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 foreign 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 Group statement of changes in equity.

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Notes to the 2012 financial statements continued

1 Principal accounting policies continued

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 foreign currency translation reserve. Except as noted above, or in note (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)

Where the fair value of consideration paid for a business combination exceeds the fair value of the Group s share of identifiable net assets acquired, the difference is treated as purchased goodwill. When the fair value of the Group s share of identifiable net assets acquired exceeds the cost of consideration, the difference is immediately recognised in the income statement.

In 1997 and previous years, goodwill was eliminated against reserves in the year of acquisition as a matter of accounting policy, as was then permitted under UK GAAP. Such goodwill was not reinstated under subsequent UK accounting standards or on transition to IFRS.

Goodwill is not amortised; it is tested annually for impairment. Investments in equity accounted units (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 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 determination 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

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. Evaluation expenditure arises from a detailed assessment of deposits or other projects that have been identified as having economic potential. Expenditure on exploration activity is not capitalised.

Capitalisation of evaluation expenditure commences when there is a high degree of confidence in the project s viability and therefore it is 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, there may be only mineralised material to form a basis for that review. The review is based on a status report summarising the Group s intentions for development. In some cases, the 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 reduced output which results when existing smelters and/or refineries are closed. It is often the case that technological and other improvements will allow successor smelters and/or refineries to more than replace the capacity of their predecessors.

(g) Property, plant and equipment

Property, plant and equipment are 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. Once an undeveloped mining project has been established as commercially viable, expenditure other than that on land, buildings, plant and equipment is capitalised under Mining properties and leases together with any amount transferred from Exploration and evaluation . Commercial viability is deemed to be achieved when the Group is confident that the project will provide a satisfactory return relative to its perceived risks and is likely to go ahead. Costs of an undeveloped smelter or refinery project are capitalised under Capital works in progress provided that the project is deemed to be commercially viable and likely to go ahead.

In open pit mining operations, it is necessary to remove overburden and other waste materials to access ore from which minerals can be extracted economically. The process of mining 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 investment in construction of the mine (or pit) and are subsequently amortised over the life of the mine (or pit) on a units of production basis.

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 until the point when substantially all the activities that are necessary to make the asset ready for its intended use are complete.

(h) Deferred stripping

Where a mine operates several open pits that are regarded as separate operations for the purpose of mine planning, 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 (i.e. overburden and other waste removal) of the second and subsequent pits is considered to be production phase stripping relating to the combined operation.

The Group s determination of whether multiple pit mines are considered separate or integrated operations depends on each mine s specific circumstances. The following factors would point towards the stripping costs for the individual pits being accounted for separately:

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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 in accounting for stripping costs.

The relative importance of each of the above factors is considered in each case to determine whether, on balance, the stripping costs should be attributed to the individual pit or to the combined output from several pits.

The Group defers stripping costs incurred during the production stage of its operations where this is the most appropriate basis for matching the costs against the related economic benefits and the effect is material. This is generally the case where there are fluctuations in stripping costs over the life of the mine (or pit). The amount of stripping costs deferred is based on the ratio (Ratio) obtained by dividing the tonnage of waste mined either by the quantity of ore mined or by the quantity of minerals contained in the ore. In some operations, the quantity of ore is a more practical basis for matching costs with the related economic benefits where there are important co-products or where the grade of the ore is relatively stable from year to year. Stripping costs incurred in the period are deferred to the extent that the current period Ratio exceeds the life of mine (or pit) Ratio. Such deferred costs are then charged against reported profits to the extent that, in subsequent periods, the current period Ratio falls short of the life of mine (or pit) Ratio.

The life of mine (or pit) Ratio is based on proven and probable reserves of the mine (or pit); it is a function of the mine (or pit) design(s) and therefore changes to that design will generally result in changes to the Ratio. Changes in other technical or economic parameters that impact on reserves will also have an impact on the life of mine (or pit) Ratio even if they do not affect the mine (or) pit design(s). Changes to the life of mine (or pit) Ratio are accounted for prospectively.

In the production stage of some mines (or pits), further development of the mine (or pit) requires a phase of unusually high stripping activity that is similar in nature to pre-production mine development. The costs of this unusually high level of stripping activity are deferred and charged against reported profits on a units of production basis in subsequent periods. This accounting treatment is consistent with that for pre-production mine development.

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 net operating costs or in the Group s share of the results of its equity accounted units, as appropriate.

(i) Depreciation and impairment

Depreciation of non-current assets

Property, plant and equipment is depreciated over its useful life, or over the remaining life of the mine if that is shorter and there is no 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 generally relate to 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. In the case of smelters, factors affecting the remaining service potential include smelter technology and electricity purchase contracts when the power is not sourced from the company s or certain local government s own electricity generating capacity.

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, the consumption of the economic benefits of the asset is linked to the production level. 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 using the quantity of material extracted from the mine in the period as a percentage of the total quantity of material to be extracted in current and future periods based on proven and probable reserves and, for some mines, other mineralisation. This other mineralised material may be included in depreciation calculations in limited circumstances and where there is a high degree of confidence in their economic extraction.

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.

Development costs that relate to a discrete section of an orebody, and which only provide benefit over the life of those reserves, are depreciated over the estimated life of that discrete section. Development costs incurred which benefit the entire orebody are depreciated over the estimated life of the orebody.

Impairment of non-current assets

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. All goodwill and intangible assets that are not yet ready for use or have an indefinite life are tested annually for impairment regardless of whether there has been any change in events or circumstances.

Impairment is assessed at the level of cash-generating units which, in accordance with IAS 36 Impairment of Assets , are identified as the smallest identifiable group of assets that generates cash inflows, which are largely independent of the cash inflows from other assets.

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Notes to the 2012 financial statements continued

1 Principal accounting policies continued

In some cases, the business units within product groups 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 is expected to benefit from the related business combination.

When 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 to sell (FVLCS). The best evidence of FVLCS is the value obtained from an active market or binding sale agreement. Where neither exists, FVLCS is based on the best information available to reflect the amount the Group could receive for the cash generating unit in an arm s length transaction. This is often estimated using discounted cash flow techniques.

Where recoverable amount is assessed using FVLCS based on discounted cash flow techniques, the resulting estimates are based on detailed life of mine and/or production plans. For value in use, recent cost levels are considered, together with expected changes in costs that are compatible with the current condition of the business and which meet the requirements of IAS 36.

The cash flow forecasts for FVLCS 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 clean-up. For the purposes of determining FVLCS 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 period. The cash flow forecasts may include net cash flows expected to be realised from extraction, processing and sale of mineralised material that does not currently qualify for inclusion in proven or probable ore reserves. Such non-reserve material is only included where 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 reserves. Typically, the additional evaluation to achieve reserve status for such material has not yet been done because this would involve incurring 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 fair value purposes are based on the current life-of-mine plan or long term production plan for the cash-generating unit. Because future cash flows are estimates for the asset in its current condition, value in use does not reflect future cash flows associated with improving or enhancing an asset s performance. Anticipated enhancements to assets may be included in FVLCS calculations.

Where the recoverable amount of a cash-generating unit is dependent on the life of its associated orebody, expected future cash flows reflect long term mine 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 is therefore the basis for forecasting production output and production costs in each future year.

Forecast cash flows for ore reserve estimation for Joint Ore Reserves Committee (JORC) purposes are generally based on Rio Tinto s price forecasts of commodity prices, 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. For the long run, the Group does not believe that forward prices quoted in the metals markets provide a good indication of future price levels since forward prices tend to be strongly influenced by spot price levels. Rio Tinto s price forecasts of commodity prices include an element of carbon pricing. These price forecasts are also 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 base them upon assumptions which a market participant would be expected to use under these economic conditions.

In some cases, prices applying to some part of the future sales volumes of a cash-generating unit are predetermined by existing sales contracts. The effects of such contracts are taken into account in forecasting future cash flows.

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 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 are used which are generally higher than the weighted average cost of capital.

For operations with a functional currency other than the US dollar, the impairment review is undertaken in the relevant functional currency. 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 (and vice versa). However, such compensating changes are not synchronised and do not fully offset each other. In estimating fair value, a forecast of the long term exchange rates, for the Australian and Canadian dollars, is made having regard to spot exchange rates, historical data and external forecasts, and is linked to price assumptions.

IAS 36 requires that value in use be based on exchange rates current at the time of the assessment.

Non-current assets other than goodwill that have suffered an impairment are tested for possible reversal of the impairment whenever events or changes in circumstances indicate that the impairment may have reversed.

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(j) Determination of ore reserve estimates

The Group estimates its ore reserves and mineralisation 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 2004 (the JORC code). Reserves and, for certain mines, other mineralisation determined in this way are used in the calculation of depreciation, amortisation and impairment charges, the assessment of life of mine stripping ratios and for forecasting the timing of the payment of close down and restoration costs and clean-up costs.

For the purposes of disclosure with this combined Annual report on Form 20-F estimates of ore reserves have been computed in accordance with the SEC s Industry Guide 7, rather than in accordance with the JORC code, and are shown on pages 51 to 60. Ore reserves presented in accordance with SEC Industry Guide 7 do not exceed the quantities that, it is estimated, could be extracted economically if future prices were to be in line with the average of historical prices for the three years to 30 June 2012, or contracted prices where applicable. For this purpose, contracted prices are applied only to future sales volumes for which the price is predetermined by an existing contract; and the average of historical prices is applied to expected sales volumes in excess of such amounts. Moreover, reported ore reserve estimates have not been increased above the levels expected to be economic based on Rio Tinto s own long term price assumptions. Therefore, a reduction in commodity prices from the three year average historical price levels would not necessarily give rise to a reduction in reported ore reserves.

In assessing the life of a mine for accounting purposes, mineralisation is only taken into account where there is a high degree of confidence of economic extraction.

(k) Close down, restoration and clean-up obligations

The Group has provisions for close down and restoration costs which include the dismantling and demolition of infrastructure and the removal of residual materials and remediation of disturbed areas for the mines and certain refineries and smelters.

Close down and restoration costs are a normal consequence of mining or production, and the majority of close down and restoration expenditure is incurred at the end of the life of the mine, refinery or smelter. Although the ultimate cost to be incurred is uncertain, the Group s businesses estimate their costs based on feasibility and engineering studies 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 estimated future costs with, where appropriate, probability weighting for the different remediation or closure outcomes which could realistically arise. This 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 updated annually during the life of the operation to reflect known developments, e.g. revisions to cost estimates and to the estimated lives of operations. The estimates are subject to formal review at regular intervals.

The initial closure provision is capitalised within property, plant and equipment. Subsequent movements in these closure provisions, including those resulting from new disturbance, updated cost estimates, changes to the estimated lives of operations 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.

The amortisation or unwinding of the discount applied in establishing the net present value of provisions is charged to the income statement in each accounting period. The amortisation of the discount is shown as a financing cost.

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 statement of financial position date and the cost is charged to the income statement.

Clean-up 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 statement of financial position date. These costs are charged to the income statement. Movements in these clean up provisions are presented as an operating cost, except for the unwinding of the discount which is shown as a financing cost.

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

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. Cost for raw materials and stores is the purchase price and for partly processed and saleable products is generally the cost of production. For this purpose the costs of production include:

- 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 inventory 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 when the stockpiled ore will be processed, the ore is expensed as mined. Where the future processing of this ore can be predicted with confidence, e.g. because it exceeds the mine s cut off grade, it is valued at the lower of cost and net realisable value. If the ore will not be processed within the 12 months after the statement of financial position 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

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 by the statement of financial position date. It includes adjustments for tax expected to be payable or recoverable in respect of previous periods.

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 taken into account in determining the deferred tax provision for the mining rights because it is expected that the carrying amount will be recovered primarily through use of the rights and not from disposal. Also, the Group is only entitled to a deduction for capital gains tax purposes if the mining rights are sold or formally relinquished.

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Notes to the 2012 financial statements continued

1 Principal accounting policies continued

(n) Post employment benefits

For defined benefit post employment plans, the difference between the fair value of the plan assets (if any) and the present value of the plan liabilities is recognised as an asset or liability in the statement of financial position.

Any asset recognised is restricted, if appropriate, to the present value of any amounts the Group expects to recover by way of refunds from the plan or reductions in future contributions.

Actuarial gains and losses arising in the year are taken to the statement of comprehensive income. For this purpose, actuarial gains and losses comprise both the effects of changes in actuarial assumptions and experience adjustments arising because of differences between the previous actuarial assumptions and what has actually occurred.

Other movements in the net surplus or deficit are recognised in the income statement, including the current service cost, any past service cost and the effect of any curtailment or settlements. The interest cost less the expected return on assets is also charged to the income statement. All of the amounts charged to the income statement in respect of these plans are included within operating costs or in the Group s share of the results of equity accounted units as appropriate.

The most significant assumptions used in accounting for pension plans are the long term rate of return on plan assets, the discount rate and the mortality assumptions. The long term rate of return on plan assets is used to calculate the expected return on pension assets, which is credited to the Group s income statement. The discount rate is used to determine the net present value of future liabilities. The discount rate used is the yield on high quality corporate bonds with maturity and terms that match those of the post employment obligations as closely as possible. Where there is no developed corporate bond market in a country, the rate on government bonds is used. Each year, the unwinding of the discount on those liabilities is charged to the Group s income statement as the interest cost. The mortality assumption is used to project the future stream of benefit payments, which is then discounted to arrive at a net present value of liabilities.

Valuations of liabilities 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 long term rate of return on pension plan assets is determined as management s best estimate of the long term return on the major asset classes, i.e. equity, debt, property and other, weighted by the actual allocation of assets among the categories at the measurement date. The expected rate of return is calculated using geometric averaging.

The values attributed to plan liabilities and the long term rate of return are assessed in accordance with the advice of independent qualified actuaries.

The Group s contributions to defined contribution pension plans are charged to the income statement in the period to which the contributions relate.

(o) Cash and cash equivalents

For the purposes of the statement of financial position, 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. For the purposes of the cash flow statement, cash and cash equivalents are net of bank overdrafts that are repayable on demand which are shown as current liabilities on the statement of financial position.

(p) Financial instruments

(i) Financial assets

The Group classifies its financial assets in the following categories: at fair value through profit or loss, loans and receivables, available-for-sale and held to maturity 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 31. 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 are included within financial assets at fair value through profit or loss unless they are designated as hedges. Assets in this category are classified based on their maturity.

(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, with the exception of items for which the Group may not recover substantially all of its investment for reasons other than credit deterioration, which are classified as available-for-sale. 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.

(d) Available-for-sale financial assets

Available-for-sale financial assets are non-derivatives 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 investment within 12 months of the statement of financial position date or the asset matures within less than twelve months.

(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.

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(iii) Derivative financial instruments and hedge accounting

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 subject to IAS 39 at their fair value at each statement of financial position date. The method of recognising the resulting gain or loss depends on whether or not the derivative is designated as a hedging instrument and, if so, 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 highly probable forecast transactions (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. Where derivatives are held with different counterparties or with the same counterparty and management has no intention to settle the derivatives and the underlying asset or liability or firm commitment, on a net basis, the fair values of the derivative assets and liabilities and the hedged asset or liability or firm commitment are shown separately in the statement of financial position as there is no legal right of offset.

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 where the hedged item is derecognised.

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 equity. 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 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 forecasted 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 when the forecast transaction is ultimately recognised in the income statement. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was reported in equity is immediately transferred to the income statement.

Derivatives that do not qualify for hedge accounting: Any derivative contracts that do not qualify for hedge accounting are marked to market at the statement of financial position date.

Embedded derivatives: Derivatives embedded in other financial instruments or other host contracts are treated as separate derivatives when their risks and characteristics are not closely related to their host contracts. In some cases, the embedded derivatives may be designated as hedges and will be accounted for as described above.

(iv) Fair value

Fair value is the amount at which a financial instrument could be exchanged in an arm s length transaction between informed and willing parties. Where relevant market prices are available, these have been used to determine fair values. In other cases, fair values have been calculated using quotations from independent financial institutions, or by using valuation techniques consistent with general market practice applicable to the instrument.

(a) 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.

(b) 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.

(c) Derivative financial assets and liabilities are carried at fair value based on quoted prices in an active market where available. Where no price information is available from a quoted market source, fair value is estimated based on the Group s views on relevant future prices using modelling techniques. The fair values of the various derivative instruments used for hedging purposes are disclosed in note 31. Movements on the hedging reserve are disclosed within note 30.

The Group assesses at each statement of financial position date whether there is objective evidence that a financial asset or a group of financial assets is impaired. 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 company invested in operates.

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 derecognition 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.

(q) Share based payments

The fair value of cash-settled share plans is recognised as a liability over the vesting period of the awards. Movements in that liability between accounting dates are recognised as an expense. The grant date fair value of the awards is determined from the market value of the shares at the date of award and adjusted for any market based vesting conditions attached to the award e.g. relative Total Shareholder Return (TSR) performance. Fair values are subsequently re-measured at the date of the statement of financial position to reflect the market value of shares at the measurement date and, where relevant, the number of awards expected to vest based on the current and anticipated TSR performance. If any awards are ultimately settled in shares, the liability is transferred directly to equity as part of the consideration for the equity instruments issued.

The Group s equity-settled share plans are settled either by the issue of shares by the relevant parent company, by the purchase of shares on market or by the use of shares previously acquired as part of a share buyback. The fair value of the 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.

If the cost of shares acquired to satisfy the plans exceeds the expense charged, the excess is taken to retained earnings or other reserves as appropriate. 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 (e.g. TSR).

The Group uses fair values provided by independent actuaries calculated using a lattice based option valuation model.

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Notes to the 2012 financial statements continued

1 Principal accounting policies continued

Non-market based vesting conditions (e.g. 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 statement of financial position 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 statement of financial position date. If a cash-settled plan changes to become equity-settled then the accumulated liability is transferred directly to equity at the date of change.

Further information about the treatment of individual share based payment plans is provided in note 45.

(r) Share capital

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 transaction costs and the related income tax effects, is included in equity attributable to owners of Rio Tinto.

Critical accounting policies and estimates

(i) Dual listed company reporting

As explained in detail in the Outline of dual listed companies structure and basis of financial statements , the consolidated financial statements of the Rio Tinto Group deal with the results, assets and liabilities of both of the dual listed companies, Rio Tinto plc and Rio Tinto Limited, and their subsidiaries. In other words, Rio Tinto plc and Rio Tinto Limited are viewed as a single parent company with their respective shareholders being the shareholders in that single company.

The 2012 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 22 December 2010 (as amended on 17 February 2012). The 2012 financial statements disclose the effect of the adjustments to the Group s consolidated profit, consolidated total comprehensive income and consolidated shareholders funds as prepared under IFRS that would be required under the version of IFRS 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) Impairment review of asset carrying values

Events or changes in circumstances can give rise to significant impairment charges or reversals of impairment in a particular year.

Where the recoverable amounts of the Group s cash generating units are assessed by analyses of discounted cash flows, the resulting valuations are particularly sensitive to changes in estimates of long term commodity prices including any carbon element, exchange rates, operating costs and discount rates.

Note 12 outlines the significant judgments and assumptions made in performing impairment testing of non-current assets.

(iii) Estimation of asset lives and determination of ore reserve 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 determination 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 mineralisation 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 2004 (the JORC code). The amounts presented under IFRS and AAS are based on the reserves, and in some cases mineralised material, determined under the JORC code.

For the purposes of disclosure with this combined Annual report on Form 20-F estimates of ore reserves have been computed in accordance with the SEC s Industry Guide 7, rather than in accordance with the JORC code, and are shown on pages 51 to 60. Ore reserves presented in accordance with SEC Industry Guide 7 do not exceed the quantities that, it is estimated, could be extracted economically if future prices were to be in line with the average of historical prices for the three years to 30 June 2012, or contracted prices where applicable. For this purpose, contracted prices are applied only to future sales volumes for which the price is predetermined by an existing contract; and the average of historical prices is applied to expected sales volumes in excess of such amounts. Moreover, reported ore reserve estimates have not been increased above the levels expected to be economic based on Rio Tinto s own long term price assumptions. Therefore, a reduction in commodity prices from the three year average historical price levels would not necessarily give rise to a reduction in reported ore reserves.

The estimation of ore reserves 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 numerous uncertainties inherent in estimating ore reserves 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 the above assumptions may change the economic status of reserves and may, ultimately, result in the reserves being restated. Such changes in reserves could impact on depreciation and amortisation rates, asset carrying values, deferred stripping calculations and provisions for close down and restoration costs.

(iv) Close down, restoration and clean-up obligations

Provision is made for environmental remediation costs when the related environmental disturbance occurs, based on the net present value of estimated future costs with, where appropriate, probability weighting for the different

remediation or closure outcomes which could realistically arise. The ultimate cost of environmental disturbance 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, the Group s environmental policies, the emergence of new restoration techniques, the timing of the expenditures and the effects of inflation. Experience gained at other mine or production sites is also a significant consideration.

Cost estimates are updated throughout the life of the operation. The accuracy range for operations with a remaining life of more than ten but less than 40 years is plus or minus 30 per cent. For operations with a remaining life of more than five but less than ten years the range is 20 per cent. Operations must produce a full decommissioning plan five years prior to the estimated date of closure. The accuracy range of the full decommissioning plan is plus or minus 15 per cent.

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The expected timing of expenditure included in cost estimates can also change, for example in response to changes in ore reserves, production rates, operating licence 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.

Cash flows must be discounted if this has a material effect. The selection of appropriate sources on which to base calculation of the risk free discount rate used for this purpose also requires judgment.

As a result of all of the above factors there could be significant adjustments to the provision for close down, restoration and clean-up costs which would affect future financial results.

(v) Deferral of stripping costs

Stripping of waste materials takes place throughout the production stage of the mine or pit. Some mining companies expense these production stage stripping costs as incurred, while others defer such stripping costs. In operations that experience material fluctuations in the ratio of waste materials to ore or contained minerals on a year to year basis over the life of the mine or pit, deferral of stripping costs reduces the volatility of the cost of stripping expensed in individual reporting periods. Those mining companies that expense stripping costs as incurred will therefore report greater volatility in the results of their operations from period to period.

The life of mine or pit waste-to-ore ratio is a function of an individual mine s pit design and therefore changes to that design will generally result in changes to the ratio. Changes in other technical or economic parameters that impact on reserves will also have an impact on the life of mine or pit ratio even if they do not affect the pit design. Changes to the life of mine or pit ratio are accounted for prospectively.

The Group s determination of whether multiple pit mines are considered separate or integrated operations depends on each mine s specific circumstances and the analysis requires judgment; another company could make the determination that a mine is separate or integrated differently than the Group, even if the fact pattern appears to be similar. To the extent the determination is different; the resulting accounting would also be different.

During 2012, production stage stripping costs capitalised by subsidiaries and equity accounted operations were US$411 million and the amounts charged against pre-tax profit was US$67 million (2011: production stage costs exceeded the amount charged against pre-tax profit by US$257 million; 2010: production stage costs exceeded the amount charged against pre-tax profit by US$123 million).

There was US$11 million impairment (net of reversals) of deferred stripping costs in both 2012 and 2011. In 2010, there was no impairment of deferred stripping costs.

The net book value of stripping costs in property, plant and equipment and in investments in equity accounted units at 31 December 2012 was US$1.9 billion (2011: US$1.6 billion; 2010: US$1.3 billion).

Information about the stripping ratios of the business units, including equity accounted units, that account for the majority of the deferred stripping costs at 31 December 2012, along with the year in which the deferred stripping costs are expected to be fully amortised, is set out in the following table:

	Actual stripping ratio for year

	Life of mine stripping ratio					
	2012	2011	2010	**2012**	2011	2010
Kennecott Utah Copper (2029)[a][b]	**3.31**	2.09	2.09	**2.07**	1.94	1.48
Grasberg Joint Venture (2016)[a]	**2.21**	3.52	4.15	**2.24**	2.54	3.13
Diavik (2012)[c]	**0.02**	0.64	1.21	**0.98**	0.96	0.95
Escondida (2091)[a][d]	**0.13**	0.17	0.13	**0.11**	0.13	0.14

(a) Stripping ratios shown are waste to ore for KUC and Grasberg and waste to pounds of copper mined for Escondida.

(b) KUC s actual stripping ratio for 2012 increased over the prior year due to waste stripping associated with the Cornerstone pushback in the south wall of the Bingham Canyon mine.

(c) Diavik s stripping ratio is disclosed as bench cubic metre per carat. The 2012 actual ratio has reduced because production is now from the bottom of the A418 pit requiring less movement of waste per carat. A418 deferred stripping costs are fully amortised as at 31 December 2012.

(d) Escondida is an equity accounted unit.

Rio Tinto Borax capitalised stripping costs during the production stage of the mine as part of a distinct period of new development which was completed in 2004. The capitalised costs will be fully amortised in 2042.

As noted in the Basis of preparation, IFRIC 20 will change the accounting for post production stripping costs. Implementation, which is mandatory in 2013, is expected to result in a write off to retained earnings of some US$0.4 billion at 1 January 2011, which is the date of transition.

(vi) Recognition of deferred tax on mining rights recognised in acquisitions

On transition to IFRS with effect from 1 January 2004, deferred tax was provided in respect of fair value adjustments on acquisitions in previous years. No other adjustments were made to the assets and liabilities recognised in prior year acquisitions. Accordingly, shareholders funds were reduced by US$720 million primarily as a result of deferred tax on fair value adjustments to mining rights.

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 taken into account in determining the deferred tax provision for the mining rights because it is expected that the carrying amount will be recovered primarily through use of the rights and not from disposal. Also, the Group is only entitled to a deduction for capital gains tax purposes if the mining rights are sold or formally relinquished. For acquisitions after 1 January 2004, provision for deferred tax on acquisition results in a consequential increase in the amounts attributed to goodwill under IFRS. Amounts attributed to goodwill for business combinations in 2011 and 2012 are shown in note 38.

(vii) Capitalisation of exploration and evaluation costs and other costs prior to the decision to mine/construct

Under the Group s accounting policy, exploration expenditure is not capitalised. Evaluation expenditure is capitalised when there is a high degree of confidence in the project s viability and it is therefore considered probable that future economic benefits will flow to the Group.

A project s viability is determined based on whether it will provide a satisfactory return relative to the perceived risks of the project and coincides with the point at which construction of the project/the decision to mine is approved at the appropriate authorisation level within the Group (the Investment

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Notes to the 2012 financial statements continued

1 Principal accounting policies continued

Committee; and the Board where appropriate). In determining whether to approve a project, the Investment Committee reviews the ore reserves estimate together with analyses regarding the net present value of the project and sensitivity analyses around key assumptions.

There are occasions when the Group concludes that the asset recognition criteria are met at an earlier stage than approval to construct/mine. In these cases, evaluation expenditure is capitalised if there is a high degree of confidence in the project s viability. 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) and less than virtually certain (that is less than 90 per cent certainty). Determining whether there is a high degree of confidence in an evaluation project s viability 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 around key assumptions; the main risks of the project. Development expenditure incurred prior to the decision to construct/mine is subject to the same criteria for capitalisation, being a high degree of confidence in a project s viability.

In accordance with IFRS 6 Exploration for and Evaluation of Mineral Resources , the criteria for the capitalisation of exploration and evaluation costs is applied consistently from period to period.

Subsequent recovery of the resulting carrying value depends on successful development or sale 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 written off.

(viii) Identification of functional currencies

The functional currency for each entity in the Group, and for equity accounted units, is the currency of the primary economic environment in which it operates. Determination of functional currency involves significant judgment and other mining companies may make different judgments based on similar facts. For many of Rio Tinto s entities, their functional currency is the currency of the country in which they operate. The Group reconsiders the functional currency of its entities if there is a change in the underlying transactions, events and conditions which determine their primary economic environment.

The determination of functional currency affects the carrying value of non-current assets included in the statement of financial position 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.

The majority of the ex-Alcan businesses acquired by the Group in 2007 changed from US functional currency to local functional currency for accounting purposes on 1 January 2011. The integration of the ex-Alcan businesses with the existing aluminium business of Rio Tinto changed the economic environment for these ex-Alcan businesses since acquisition in several ways. In particular, the divestment of the majority of the ex-Alcan downstream operations, the legal reorganisations that transferred ownership of certain ex-Alcan companies within the Rio Tinto group and the centralisation of certain functions such as procurement, pensions and shipping brought their business model closer to that for the rest of Rio Tinto s operations, the majority of which have the local currency as their functional currency. In addition, whilst financing is only a secondary indicator of functional currency, the magnitude of US dollar

denominated debt, which had been largely repaid by 1 January 2011, was a factor in the original determination of US functional currency at acquisition.

(ix) Estimation of liabilities for post retirement costs

The value of the Group s liabilities for post-retirement benefits will ultimately depend upon the amount of benefits paid out. This in turn will depend upon 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 most of the liabilities relate to former employees. As a consequence, the carrying value of the Group s post-retirement liabilities is less sensitive to the assumption about future salary increases than it is to the assumption regarding future inflation. The assumption regarding future inflation is derived using market yields on inflation-linked instruments where possible, combined with consensus views on future inflation. This assumption 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 country.

The discount rate used to value post-retirement liabilities is set in accordance with IAS 19 Post retirement benefits based upon the yields on high quality corporate bonds in the relevant currency and of a duration consistent with the nature of the liabilities. 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.

Details of the key assumptions, how they have moved since the previous statement of financial position date and the sensitivity of the carrying value to changes in the assumptions, are set out in note 46.

For 2012 the charge against income for post retirement benefits net of tax and non-controlling interests was US$535 million. This charge included both pension and post retirement healthcare benefits. The charge is net of the expected return on assets which was US$481 million after tax and non-controlling interests.

The average future increase in compensation levels was assumed to be 3.4 per cent in 2012 and will be 3.4 per cent for 2013. The average discount rate used was 4.3 per cent in 2012 and will be 3.9 per cent in 2013 reflecting the net impact of changes in corporate bond yields in the regions where the Group has pension obligations.

The weighted average expected long term rate of return on assets used to determine the 2012 pension cost was 5.0 per cent. Starting in 2013, the expected rate of return on assets will no longer be used to determine pensions cost, as it is replaced by interest income on assets, calculated using the discount rate, in accordance with the revisions to IAS 19.

Based on the known changes in assumptions noted above and other expected circumstances, and in the absence of the revisions to IAS 19 and IFRS 11, Joint Arrangements , which are effective on 1 January 2013, the expected impact of post retirement costs on the Group s IFRS net earnings in 2013 would be US$4 million less than in 2012. The actual charge will be impacted by the revisions to IAS 19 and IFRS 11 and other factors that cannot be predicted, such as the effect of changes in benefits, number of employees and exchange rates.

The revisions to IAS 19 do not have a material impact on the Group s statement of financial position.

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The table below sets out the potential change in the Group s 2012 net earnings (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 statement of financial position.

	US$ million
Sensitivity of Group s 2012 underlying and net earnings to changes in:	
Expected return on assets	
increase of 1 percentage point	94
decrease of 1 percentage point	(94)
Discount rate	
increase of 0.5 percentage points	(1)
decrease of 0.5 percentage points	4
Inflation	
increase of 0.5 percentage points	(33)
decrease of 0.5 percentage points	31
Salary increases	
increase of 0.5 percentage points	(8)
decrease of 0.5 percentage points	7
Demographic allowance for additional future mortality improvements	
participants assumed to have the mortality rates of individuals who are one year older	19
participants assumed to have the mortality rates of individuals who are one year younger	(19)

(x) Recoverability of potential deferred tax assets

The Group has tax losses, and other deductible temporary differences, mainly in UK, French, Canadian, US and Australian 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 projected future taxable profits of these taxable entities and after taking account of specific risk factors that affect the recovery of these assets.

The possible tax assets i.e. the amounts that would be recognised if there were no need to assess recoverability on losses and other temporary differences in these taxable entities, are shown in the table below and totalled US$18,512 million at 31 December 2012 (2011: US$3,834 million). Of these possible tax assets, US$3,358 million have been recognised as deferred tax assets (2011: US$1,875 million), leaving US$15,154 million (2011: US$1,959 million) unrecognised, as recovery is not considered probable.

The recognised amounts do not include deferred tax assets that have been offset against recognised deferred tax liabilities. This is a change in presentation for 2012 and comparatives have been restated accordingly. In previous years, with the exception of capital losses, tax losses have been shown at their full value before offsetting deferred tax liabilities.

US$ million	Recognised		Unrecognised	
At 31 December	**2012**	2011	**2012**	2011

UK	**212**	229	**235**	267
France[(a)]	**499**	515	**1,034**	797
Canada	**67**	21	**136**	131
US	**365**	340	**17**	20
Australia[(b)]	**2,093**	657	**12,913**	200
Other	**122**	113	**819**	544
Total	**3,358**	1,875	**15,154**	1,959

(a) The amount recognised takes account of legislation changes introduced in 2011 and 2012 which restrict the recovery of losses.

(b) The unrecognised amount includes temporary differences that are deductible for the purposes of Mineral Resources Rent Tax (MRRT).

(xi) Contingencies

Disclosure is made of material contingent liabilities unless the possibility of any loss arising is considered remote. Contingencies are disclosed in note 32.

(xii) Basis of consolidation

In determining whether the Group has control, joint control or significant influence over an entity, the Group considers whether other parties hold veto rights over significant operating and financial policies. In some instances, the Group has control of an entity where other parties own more than one half, or in some cases all, of the voting rights of an entity but the Group can control those voting rights through a contractual arrangement. In such circumstances, the Group considers, in particular, whether it obtains benefits, including non-financial benefits, from its power to govern the financial and operating policies of the entity.

In some cases, the Group makes acquisitions over a period of days, weeks or months. It is a matter of judgment as to whether the payments made during this period form part of one transaction or a number of separate transactions. In the latter case, the transactions will be treated as an acquisition in stages. The effect on the financial statements of treatment as an acquisition in stages is that any excess of consideration over identifiable net assets for transactions after control has been gained will be recorded as a reduction in equity. If the transactions were treated as one acquisition then all such excess consideration would be treated as goodwill. In addition, acquisitions of shares after the date on which control is gained and which are accounted for in stages are shown within Financing activities in the cash flow statement rather than in Investing activities.

Factors which are considered in this judgment are the length of time between the acquisition date and completion of the transaction and whether, at the time of the initial share purchase, it was clear what percentage ownership would ultimately be obtained.

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Notes to the 2012 financial statements continued

2 Operating segments

	2012	Restated[b] 2011	Restated[b] 2010
Sales revenue[a]	**US$m**	US$m	US$m
Iron Ore	**24,279**	29,475	23,582
Aluminium	**10,105**	12,159	11,313
Copper	**6,661**	7,634	7,797
Energy	**5,783**	7,003	5,446
Diamonds & Minerals	**4,056**	3,654	3,477
Other operations	**6,730**	8,246	10,151
Reportable segments total	**57,614**	68,171	61,766
Inter-segment transactions	**(2,048)**	(2,817)	(2,758)
Product Group Total	**55,566**	65,354	59,008
Items excluded from Underlying earnings	**31**	(56)	
Gross sales revenue	**55,597**	65,298	59,008
Less share of equity accounted units sales revenue	**(4,630)**	(4,761)	(3,837)
Consolidated sales revenue	**50,967**	60,537	55,171
Depreciation and amortisation[c]			
Iron Ore	**1,488**	1,169	960
Aluminium	**1,093**	1,098	1,062
Copper	**634**	538	568
Energy	**769**	520	367
Diamonds & Minerals	**444**	371	301
Other operations	**403**	535	587
Reportable segments total	**4,831**	4,231	3,845
Other items	**111**	113	114
Less: depreciation and amortisation of equity accounted units	**(501)**	(527)	(522)
Depreciation and amortisation per note 4	**4,441**	3,817	3,437
Underlying earnings[d]			
Iron Ore	**9,242**	13,267	10,313
Aluminium	**3**	442	611
Copper	**1,092**	1,932	2,530
Energy	**283**	1,074	1,187
Diamonds & Minerals	**119**	(162)	204
Other operations	**(528)**	(120)	237
Reportable segments total	**10,211**	16,433	15,082
Inter-segment transactions	**(8)**	40	(15)
Other items	**(698)**	(593)	(554)

Exploration and evaluation not attributed to product groups	**(97)**	(102)	(52)
Net finance costs	**(105)**	(229)	(474)
Underlying earnings	**9,303**	15,549	13,987
Items excluded from Underlying earnings[e]	**(12,293)**	(9,723)	251
Net (loss)/earnings attributable to owners of Rio Tinto per income statement	**(2,990)**	5,826	14,238
Tax charge			
Iron Ore	**4,271**	5,939	4,602
Aluminium	**(154)**	64	36
Copper	**(32)**	626	705
Energy	**(11)**	496	537
Diamonds & Minerals	**68**	29	(39)
Other operations	**(266)**	11	(136)
Reportable segments total	**3,876**	7,165	5,705
Other items	**(244)**	(370)	(216)
Exploration and evaluation not attributed to product groups	**(26)**	(28)	1
Net finance costs	**(78)**	(140)	(152)
	3,528	6,627	5,338
Tax credit excluded from Underlying earnings[e]	**(3,099)**	(188)	(42)
Tax charge per income statement	**429**	6,439	5,296

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	2012 US$m	Restated[b] 2011 US$m	Restated[b] 2010 US$m
Capital expenditure			
Iron Ore	**7,149**	4,004	1,702
Aluminium	**2,550**	1,957	963
Copper	**4,347**	3,784	990
Energy	**1,819**	1,327	685
Diamonds & Minerals	**1,785**	1,392	314
Other Operations	**637**	729	570
Reportable segments total	**18,287**	13,193	5,224
Other items	**159**	251	75
Less: capital expenditure of equity accounted units	**(1,028)**	(1,146)	(746)
Capital expenditure per Financial information by business units	**17,418**	12,298	4,553
Add: Proceeds from disposal of property, plant and equipment	**40**	37	38
Capital expenditure per statement of cash flow	**17,458**	12,335	4,591

Rio Tinto s management structure is based on the principal product groups shown 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.

Generally, business units are allocated to product groups based on their primary product. The Energy product group includes both coal and uranium businesses. The Diamonds & Minerals product group includes businesses with products such as 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 group includes certain gold operations in addition to copper.

The financial information by business unit provided on page 219 of these financial statements provide additional voluntary disclosure which the Group considers is useful to the users of the financial statements.

(a) Sales revenue

Gross sales revenue includes the sales revenue of equity accounted units (after adjusting for sales to subsidiaries) of US$5,068 million (2011: US$5,240 million, 2010: US$4,048 million) in addition to consolidated sales revenue. Consolidated sales revenue includes subsidiary sales of US$438 million (2011: US$479 million, 2010: US$210 million) to equity accounted units which are not included in gross sales revenue.

Intersegment transactions relate to sales between the Aluminium Product Group and Constellium (formerly Alcan Engineered Products) and Other Aluminum operations whose results are reported within Other operations.

(b) Restatements

Dampier Salt and the Simandou iron ore project were transferred from the Iron Ore product group to the Diamonds & Minerals product group following changes to the Group s management structure, and accordingly information for 2011

and 2010 has been reclassified.

Comparatives for gross revenue for 2011 and 2010 have been restated (2011: US$324 million, 2010: US$206 million) to exclude amounts relating to product sold by the Group to an equity accounted unit and subsequently sold to third parties. The amount was correctly included within consolidated sales revenue which remain unchanged.

(c) 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, which are excluded from Underlying earnings.

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Notes to the 2012 financial statements continued

2 Operating segments continued

(d) 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 earnings both represent amounts attributable to Rio Tinto shareholders. The following items are excluded from Net earnings in arriving at Underlying earnings each period irrespective of materiality:

- Profits less losses on acquisitions/disposal of interests in businesses.
- Impairment charges/reversal.
- 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 and losses on currency 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 judgemental 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 earnings of equity accounted units amount to US$1,008 million in 2012 (2011: US$834 million; 2010: US$1,202 million). This amount is attributable as follows: US$778 million profit to the Copper group and US$230 million profit to other product groups (2011: US$660 million profit attributable to the Copper product group and US$174 million profit to other product groups; 2010: US$1,016 million profit attributable to the Copper product group and US$186 million profit 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 bauxite and alumina. Tolling entities recharge the majority of their costs and generally have minimal earnings.

The Energy product group s Underlying earnings in 2012 included US$258 million profit after tax in relation to the divestments of equity interest in Extract Resources and Kalahari Minerals. 2010 included US$229 million profit after

tax in relation to the divestment of Maules Creek and Vickery coal projects. The Diamonds & Minerals product group s Underlying earnings in 2009 included US$797 million profit after tax in relation to the divestment of undeveloped potash assets in Argentina and Canada.

(e) Reconciliation of net earnings to Underlying earnings

Exclusions from Underlying earnings	**Pre-tax[j] 2012 US$m**	**Taxation 2012 US$m**	**Non-controlling interests 2012 US$m**	**Discontinued operations[j] 2012 US$m**	**Net amount 2012 US$m**	Net amount 2011 US$m	Net amount 2010 US$m
Impairment charges net of reversals (note 6)	**(16,410)**	**2,028**	**22**		**(14,360)**	(9,290)	(739)
Gains and losses on consolidation and disposal of interests in businesses[f]	**845**	**(18)**			**827**	167	619
Exchange and derivative gains/(losses):							
Exchange gains/(losses) on US dollar net debt and intragroup balances	**494**	**(78)**	**13**		**429**	(147)	434
Gains/(losses) on currency and interest rate derivatives not qualifying for hedge accounting	**103**	**(8)**	**(37)**		**58**	(19)	56
Gains on commodity derivatives not qualifying for hedge accounting	**80**	**(14)**			**66**	109	(61)
Deferred tax asset write off[g]		**(134)**			**(134)**	(342)	
MRRT[h]		**1,205**	**(75)**		**1,130**		
Other exclusions[i]	**(595)**	**118**	**175**	**(7)**	**(309)**	(201)	(58)
Total excluded from Underlying earnings	**(15,483)**	**3,099**	**98**	**(7)**	**(12,293)**	(9,723)	251
Net (loss)/earnings	**(2,568)**	**(429)**	**14**	**(7)**	**(2,990)**	5,826	14,238
Underlying earnings	**12,915**	**(3,528)**	**(84)**		**9,303**	15,549	13,987

(f) Net gains arising on the consolidation and disposal of interests in businesses for the year ended 31 December 2012 relate principally to consolidation of Richards Bay Minerals (RBM) and Turquoise Hill Resources Ltd. (formerly Ivanhoe Mines Limited). Refer to note 38.

Gains arising on the disposal of interests in businesses for the year ended 31 December 2011 relate principally to the divestment of the Group s talc business. Refer to note 38.

Gains arising on the disposal of interests in businesses for the year ended 31 December 2010 relate principally to the sale of the Group s 48 per cent interest in Cloud Peak Energy Inc.

(g) Deferred tax assets were written off as a result of restrictions on the utilisation of French losses introduced in 2011 and to eliminate the increase in deferred tax assets following the impairment of French aluminium assets in 2012.

(h) A deferred tax asset was recognised following the introduction of the Minerals Resource Rent Tax (MRRT) on 1 July 2012.

(i) In the period following consolidation of RBM, adjustments were made in respect of inventory on hand at the acquisition date which had been recognised at fair value on consolidation. These adjustments, which include amounts relating to inventory sold since 3 September 2012, totalled US$186 million (net of tax) and have been excluded from Underlying earnings.

Other charges excluded from Underlying earnings in 2012 comprise costs relating to acquisitions, potential divestments and similar corporate projects.

(j) Exclusions from Underlying earnings relating to both equity accounted units (EAUs) and discontinued operations are stated after tax. Exclusions from Underlying earnings relating to EAUs are included in the column Pre-tax .

Net (loss)/earnings relating to EAUs are included in the column Pre-tax and the results of discontinued operations are shown in the column Discontinued operations .

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3 Operating segments additional information

Sales revenue by destination[a]	2012 %	2011 %	2010 %	2012 US$m	Restated[b] 2011 US$m	Restated 2010 US$m
China	**32.3**	30.9	28.1	**17,948**	20,149	16,568
Japan	**15.8**	16.3	15.8	**8,787**	10,671	9,301
Other Asia	**15.2**	15.8	14.4	**8,464**	10,322	8,523
United States of America	**12.7**	13.8	15.2	**7,085**	9,019	8,975
Europe (excluding United Kingdom)	**11.5**	11.6	14.1	**6,380**	7,549	8,340
Canada	**3.3**	2.9	3.3	**1,823**	1,926	1,925
Australia	**2.6**	2.5	2.0	**1,420**	1,643	1,160
United Kingdom	**1.2**	1.4	2.3	**678**	922	1,334
Other	**5.4**	4.8	4.8	**3,012**	3,097	2,882
Gross sales revenue	**100**	100	100	**55,597**	65,298	59,008
Less share of equity accounted units sales revenue				**(4,630)**	(4,761)	(3,837)
Consolidated sales revenue				**50,967**	60,537	55,171

(a) Gross sales revenue by geographical destination are 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 passed. Rio Tinto is domiciled in both the United Kingdom and Australia.

(b) Comparatives for gross revenue have been restated (2011: US$324 million, 2010: US$206 million) to exclude amounts relating to product sold by the Group to an equity accounted unit and subsequently sold to third parties. The amount was correctly included within consolidated sales revenue which remain unchanged.

Sales revenue by product[c]

Gross sales revenues of the Group are derived from the following products sold to external customers:	2012 US$m	Restated 2011 US$m	Restated 2010 US$m
Iron Ore	**24,756**	29,867	23,834
Aluminium	**12,535**	14,327	12,721
Coal	**5,060**	6,026	5,154
Copper	**4,749**	5,144	5,716
Industrial Minerals	**3,460**	3,131	2,955
Gold	**614**	1,012	1,086
Diamonds	**754**	726	682
Other	**3,669**	5,065	6,860
Gross sales revenue	**55,597**	65,298	59,008

Share of equity accounted units sales and intra-subsidiary/equity accounted units sales	**(4,630)**	(4,761)	(3,837)
Consolidated sales revenue	**50,967**	60,537	55,171

(c) Gross sales revenues of the Group are derived from the above products sold to external customers.

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Notes to the 2012 financial statements continued

3 Operating segments additional information continued

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[d]	**2012 US$m**	2011 US$m
Australia	**39,789**	40,081
Canada	**18,216**	22,458
Mongolia	**14,759**	11,195
Africa	**4,872**	5,685
United States	**5,443**	5,012
South America	**2,875**	2,325
United Kingdom	**1,016**	894
France	**590**	1,095
Europe (excluding France)	**505**	1,000
Indonesia	**884**	770
Other countries	**1,719**	496
	90,668	91,011
Non-current assets excluded from analysis above:		
Deferred tax assets	**3,358**	1,875
Tax recoverable	**86**	74
Derivatives and other financial assets	**1,048**	1,454
Loans to equity accounted units[e]	**603**	1,695
Accounts receivable	**1,617**	1,450
Total non-current assets per statement of financial position	**97,380**	97,559

(d) Non-current assets by location exclude financial instruments, deferred tax assets, post-employment benefit assets and accounts receivable. Allocation is based on the location of the business units holding the assets, and includes investments in equity accounted units totalling US$4,726 million (2011: US$8,606 million) which represents the Group s share of net assets excluding quasi equity loans shown separately within Loans to equity accounted units above.

(e) Loans to equity accounted units comprise quasi equity loans of US$586 million (2011: US$1,227 million) included in Investments in equity accounted units on the face of the statement of financial position and non-quasi equity loans of US$17 million (2011: US$468 million) shown within other financial assets .

4 Net operating costs

	Note	**2012 US$m**	2011 US$m	2010 US$m
Raw materials and consumables		**9,597**	10,975	12,004
Amortisation of intangible assets	13	**300**	314	369
Depreciation of property, plant and equipment	14	**4,141**	3,503	3,068
Employment costs	5	**8,464**	6,908	6,406
Repairs and maintenance		**2,919**	2,533	1,946
Shipping costs		**1,896**	1,885	1,890
Other freight costs		**1,179**	959	838
Decrease/(increase) in finished goods and work in progress		**212**	(31)	(377)
Royalties		**2,374**	2,790	2,104
Amounts charged by jointly controlled entities[(a)]		**3,445**	3,730	2,934
Net foreign exchange (losses)/gains		**3**	(84)	(4)
Other external costs		**3,112**	2,901	3,304
Provisions (including exchange differences on provisions)	27	**807**	961	907
Research and development		**129**	148	187
Costs included above qualifying for capitalisation		**(534)**	(836)	(140)
Other operating income		**(508)**	(396)	(174)
Net operating costs (excluding items shown separately)		**37,536**	36,260	35,262

(a) Amounts charged by jointly controlled entities mainly relate to toll processing but also include purchases from jointly controlled entities 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 jointly controlled entity but in 2012, US$690 million (2011: US$849 million; 2010: US$564 million) related to purchases of the other venturer s share of production.

Information on auditors remuneration is included in note 40.

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5 Employment costs

	Note	**2012** **US$m**	2011 US$m	2010 US$m
Employment costs				
Wages and salaries		**8,149**	6,696	6,328
Social security costs		**156**	128	98
Net post retirement cost	46	**746**	604	573
Share option charge	45	**239**	156	124
		9,290	7,584	7,123
Less: charged within provisions		**(826)**	(676)	(717)
Total employment costs	4	**8,464**	6,908	6,406

6 Impairment charges

	Pre-tax 2012 US$m	Taxation 2012 US$m	Non-controlling interests 2012 US$m	**Net amount 2012** **US$m**	Net amount 2011 US$m	Net amount 2010 US$m
Aluminium[(a)]	(12,397)	1,397		**(11,000)**	(8,855)	
Rio Tinto Coal Mozambique[(b)]	(3,269)	409		**(2,860)**		
Diamonds[(c)]	(659)	199		**(460)**	(344)	(115)
Alcan Engineered Products[(d)]						(589)
Other	(85)	23	22	**(40)**	(91)	(35)
Total	(16,410)	2,028	22	**(14,360)**	(9,290)	(739)
Comprising:						
Impairment of consolidated balances[(e)]	(13,953)	2,028	22	**(11,903)**	(8,698)	(739)
Impairment of investments in equity accounted units[(e)]	(3,241)	784		**(2,457)**	(592)	
Total impairment in the Financial Information by Business Unit (page 220)[(e)]	(17,194)	2,812	22	**(14,360)**	(9,290)	(739)
Tax on impairment of investments in equity accounted units	784	(784)				
Total impairment in the income statement	(16,410)	2,028	22	**(14,360)**	(9,290)	(739)

(a) The annual impairment review of the Group s Aluminium businesses resulted in an impairment of US$6,056 million to goodwill (2011: US$7,405 million, 2010: no impairment charge). The review also resulted in a US$4,430 million pre-tax impairment of property, plant and equipment (2011: US$1,186 million, 2010: no impairment charge) related to Rio Tinto Alcan and Other Aluminium operations, a US$1,310 million post-tax impairment of investments in equity accounted units (2011: US$579 million, 2010: no impairment charge) relating to Rio Tinto Alcan and Other Aluminium operations, a US$407 million pre-tax impairment to intangible assets (2011 and 2010: no impairment charge), and a pre-tax adjustment of US$194 million to other assets and liabilities.

Details of the 2012 impairment review relating to the Group s aluminium businesses are set out in note 12.

(b) The annual impairment review of Rio Tinto Coal Mozambique resulted in an impairment of US$541 million to goodwill. The review also resulted in a US$1,581 million pre-tax impairment to exploration and evaluation assets held within intangible assets and a US$1,147 million post-tax impairment of investments in equity accounted units. Details of the 2012 impairment review relating to Rio Tinto Coal Mozambique are set out in note 12.

(c) Of the net impairment to the Group s diamond business during 2012, 2011 and 2010, US$659 million pre-tax (2011: US$643 million pre-tax; 2010: US$381 million pre-tax) relates to Argyle and was triggered by the announcement during the year of the Diamonds strategic review, as well as a change to the forecast ramp-up date for the underground project. In 2012, the estimate of value in use was based on the policy in note 1(i). In 2011 and 2010, recovery in prices resulted in a reversal of impairment relating to Diavik of US$176 million pre-tax and US$247 million pre-tax in 2011 and 2010 respectively.

(d) Impairment to the Alcan Engineered Product businesses arose following finalisation of the proceeds and terms of the proposed sales transaction, which affected the assessment of fair value less costs to sell. The estimated proceeds were assessed in line with the policy in note 1(i).

(e) In 2011, charges of US$9,290 million (2010: US$739 million) are reduced by net credits for tax of US$476 million (2010: US$243 million) and US$349 million (2010: nil) relating to impairment of consolidated balances and investments in equity accounted units respectively.

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Notes to the 2012 financial statements continued

7 Share of profit after tax of equity accounted units

	2012 US$m	2011 US$m	2010 US$m
Sales revenue: Rio Tinto share[a]	**5,499**	6,099	4,722
Operating costs	**(3,781)**	(4,872)	(2,818)
Profit before finance items and taxation	**1,718**	1,227	1,904
Finance items	**(103)**	(54)	(87)
Share of profit after tax of equity accounted units	**47**	38	21
Profit before taxation	**1,662**	1,211	1,838
Taxation	**(628)**	(507)	(737)
Profit for the year (Rio Tinto share)	**1,034**	704	1,101

(a) Sales revenue of equity accounted units excludes charges by equity accounted units to Group subsidiaries.

8 Finance income and finance costs

	Note	2012 US$m	2011 US$m	2010 US$m
Finance income from equity accounted units		**14**	35	33
Other finance income (including bank deposits and other financial assets)		**102**	80	130
Total finance income		**116**	115	163
Interest payable and similar charges[a]		**(1,043)**	(990)	(853)
Charges related to refinancing				(107)
Amounts capitalised	14	**767**	493	182
Total finance costs		**(276)**	(497)	(778)

(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 hedges of US$25 million (2011: US$311 million gain; 2010: US$186 million loss) and a fair value loss on bonds and notes attributable to interest rate risk of US$13 million (2011: US$308 million loss; 2010: US$196 million loss).

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9 Taxation

	Note	2012 US$m	2011 US$m	2010 US$m
Taxation charge				
Current		**3,876**	6,131	5,026
Deferred	19	**(3,447)**	308	270
		429	6,439	5,296

Prima facie tax reconciliation	2012 US$m	2011 US$m	2010 US$m
(Loss)/profit before taxation	**(2,568)**	13,214	20,491
Deduct: share of profit after tax of equity accounted units	**(1,034)**	(704)	(1,101)
Add: impairment after tax of investments in equity accounted units[a]	**2,457**	592	
Parent companies and subsidiaries (loss)/profit before tax	**(1,145)**	13,102	19,390
Prima facie tax payable at UK rate of 24% (2011: 26%; 2010: 28%)	**(275)**	3,407	5,429
Higher rate of taxation on Australian earnings at 30%	**845**	759	295
Items excluded in arriving at Underlying earnings:			
Impairment charges	**1,321**	1,909	(23)
Gains on disposal of businesses and on newly consolidated operations	**(185)**	(30)	(77)
Foreign exchange on excluded finance items	**(50)**	15	(32)
Impact of tax law changes on recognition of deferred tax assets[b]	**(1,205)**	342	
Other exclusions	**157**	(91)	13
Impact of changes in tax rates and laws	**(5)**	20	(96)
Other tax rates applicable outside the UK and Australia	**(71)**	112	110
Resource depletion and other depreciation allowances	**(121)**	(182)	(163)
Research, development and other investment allowances	**(57)**	(78)	(74)
Recognition of previously unrecognised deferred tax assets	**(84)**		(13)
Unrecognised current year operating losses	**202**	272	95
Foreign exchange differences		(3)	(63)
Withholding taxes	**6**	27	35
Other items	**(49)**	(40)	(140)
Total taxation charge[c]	**429**	6,439	5,296

(a) Impairment of investments in equity accounted units is net of tax credits of US$784 million (2011: US$349 million).

(b) Minerals Resource Rent Tax (MRRT) is an additional tax on profits from the mining of iron ore and coal in Australia, which came into effect on 1 July 2012. In computing MRRT liabilities, a deduction is given in respect of

the market value of the mining assets as at 1 May 2010. A deferred tax asset has been recognised in 2012 on the temporary difference between the amount that is deductible for tax purposes and the carrying value of the assets in the accounts, to the extent that its recovery is probable. This temporary difference will reverse over the life of the mines.

(c) This tax reconciliation relates to the Group s parent companies, subsidiaries and proportionally consolidated units. The tax credit/(charge) relating to components of other comprehensive income is as follows:

	2012	2011	2010
	Total	Total	Total
	US$m	US$m	US$m
Tax on exchange adjustments	**(1)**	13	27
Cash flow hedge fair value losses/(gains):			
Cash flow hedge fair value losses/(gains)	**26**	(24)	24
Cash flow hedge losses transferred to the income statement	**(50)**	(52)	(34)
Losses/(gains) on revaluation of available for sale securities	**6**	21	(25)
Gains on revaluation of available for sale securities transferred to the income statement	**1**	1	1
Currency translation reclassified		(3)	
Actuarial losses on post retirement benefit plans	**110**	567	216
Deferred tax on share options	**(8)**	(55)	47
	84	468	256
Share of tax on other comprehensive expense of equity accounted units		(3)	(3)
Tax relating to components of other comprehensive income/(expense) for the year[(a)]	**84**	465	253

(a) This comprises deferred tax credits of US$81 million (2011: US$511 million; 2010: US$226 million) and current tax credits of US$3 million (2011: charge of US$43 million 2010 credit of: US$30 million), plus share of tax on other comprehensive income of equity accounted units shown separately. See note 19.

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Notes to the 2012 financial statements continued

10 (Loss)/earnings per ordinary share

	2012 Earnings US$m	**2012 Weighted average number of shares (millions)**	**2012 Per share amount (cents)**	2011 Earnings US$m	2011 Weighted average number of shares (millions)	2011 Per share amount (cents)
Basic (loss)/earnings per share attributable to ordinary shareholders of Rio Tinto continuing operations	**(2,983)**	**1,849.1**	**(161.3)**	5,836	1,923.1	303.5
Basic loss per share attributable to ordinary shareholders of Rio Tinto discontinued operations	**(7)**	**1,849.1**	**(0.4)**	(10)	1,923.1	(0.5)
Total basic (loss)/earnings per share profit for the year[a]	**(2,990)**	**1,849.1**	**(161.7)**	5,826	1,923.1	303.0
Diluted (loss)/earnings per share attributable to ordinary shareholders of Rio Tinto continuing operations	**(2,983)**	**1,849.1**	**(161.3)**	5,836	1,935.5	301.5
Diluted loss per share attributable	**(7)**	**1,849.1**	**(0.4)**	(10)	1,935.5	(0.5)

to ordinary shareholders of Rio Tinto discontinued operations						
Total diluted (loss)/earnings per share profit for the year[b]	**(2,990)**	**1,849.1**	**(161.7)**	5,826	1,935.5	301.0

	2010 Earnings US$m	2010 Weighted average number of shares (millions)	2010 Per share amount (cents)
Basic earnings per share attributable to ordinary shareholders of Rio Tinto continuing operations	14,335	1,961.0	731.0
Basic loss per share attributable to ordinary shareholders of Rio Tinto discontinued operations	(97)	1,961.0	(4.9)
Total basic earnings per share profit for the year[a]	14,238	1,961.0	726.1
Diluted earnings per share attributable to ordinary shareholders of Rio Tinto continuing operations	14,335	1,972.6	726.7
Diluted loss per share attributable to ordinary shareholders of Rio Tinto discontinued operations	(97)	1,972.6	(4.9)
Total diluted earnings per share profit for the year	14,238	1,972.6	721.8

(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 1,413.4 million (2011: 1,487.3 million; 2010: 1,525.2 million) plus the average number of Rio Tinto Limited shares outstanding of 435.8 million (2011: 435.8 million; 2010: 435.8 million). 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 , the effects of anti-dilutive potential have not been included when calculating diluted loss per share for the year ended 31 December 2012. For the purposes of calculating diluted earnings per share, the effect of dilutive securities of 12.4 million shares in 2011 (2010: 11.6 million shares) 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 45.

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11 Dividends

	2012	2011	2010
	US$m	US$m	US$m
Rio Tinto plc previous year final dividend paid	**1,295**	955	686
Rio Tinto plc Interim dividend paid	**1,054**	778	664
Rio Tinto Limited previous year final dividend paid	**380**	279	206
Rio Tinto Limited Interim dividend paid	**309**	224	198
Dividends paid during the year	**3,038**	2,236	1,754
Dividends per share: paid during the year	**163.5c**	117.0c	90.0c
Dividends per share: proposed in the announcement of the results for the year	**94.5c**	91.0c	63.0c

	Dividends per share 2012	Dividends per share 2011	Dividends per share 2010
Rio Tinto plc previous year final (pence)	**57.33p**	39.14p	28.84p
Rio Tinto plc Interim (pence)	**46.43p**	33.14p	28.21p
Rio Tinto Limited previous year final fully franked at 30% (Australian cents)	**84.20c**	61.94c	51.56c
Rio Tinto Limited Interim fully franked at 30% (Australian cents)	**68.51c**	49.81c	49.27c

	Number of shares 2012 (millions)	Number of shares 2011 (millions)	Number of shares 2010 (millions)
Rio Tinto plc previous year Final	**1,416.7**	1,522.6	1,524.8
Rio Tinto plc Interim	**1,410.9**	1,479.5	1,526.0
Rio Tinto Limited previous year Final	**435.8**	435.8	435.8
Rio Tinto Limited Interim	**435.8**	435.8	435.8

The dividends paid in 2012 are based on the following US cents per share amounts: 2011 final 91.0 cents, 2012 interim 72.5 cents (2011 dividends paid: 2010 final 63.0 cents, 2011 interim 54.0 cents; 2010 dividends paid: 2009 final 45.0 cents, 2010 interim 45.0 cents).

The number of shares on which Rio Tinto plc dividends are based excludes those held as treasury shares. 2012, 2011 and 2010, no Rio Tinto Limited shares were held by Rio Tinto plc.

In addition, the directors of Rio Tinto announced a final dividend of 94.5 cents per share on 14 February 2013. This is expected to result in payments of US$1,745 million (Rio Tinto plc: US$1,333 million, Rio Tinto Limited: US$412 million). The dividends will be paid on 11 April 2013 to Rio Tinto plc shareholders on the register at the close of business on 8 March 2013 and to Rio Tinto Limited shareholders on the register at the close of business on 13 March 2013.

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 2013.

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 credits, that arose from net payments of income tax in respect of periods up to 31 December 2012 (after deducting franking credits expected to be utilised on the 2012 final dividend declared), is US$18,041 million.

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12 Goodwill

	2012	2011
	US$m	US$m
Net book value		
At 1 January	**8,187**	15,316
Adjustment on currency translation	**207**	(404)
Newly consolidated operations	**977**	680
Impairment charges	**(6,597)**	(7,405)
At 31 December	**2,774**	8,187
cost	**23,033**	22,125
accumulated impairment	**(20,259)**	(13,938)
At 1 January		
cost	**22,125**	21,906
accumulated impairment	**(13,938)**	(6,590)

At 31 December 2012, goodwill has been allocated as follows:

	2012	2011
	US$m	US$m
Net book value		
Copper Oyu Tolgoi (note 38)	**1,149**	983
Richards Bay Minerals	**806**	
Aluminium		5,864
Rio Tinto Coal Mozambique (note 38)		530
Other	**819**	810
	2,774	8,187

Impairment tests for goodwill

Post-tax discount rates

In arriving at fair value less costs to sell for each operation, a base post-tax discount rate of 6.9 per cent (2011: 6.6 per cent) has been applied to the post-tax cash flows expressed in real terms. The base discount rate used has been increased by a premium of between one and four per cent for operations in countries with a higher risk profile and has been decreased by up to 0.5 per cent for assets relating to commodities with a lower risk profile.

Aluminium

The annual impairment review of the Group s Aluminium businesses resulted in an impairment to the remaining goodwill relating to the former Alcan businesses of US$6,056 million (2011: US$7,405 million; 2010: no impairment charge). The recoverable amount has been assessed by reference to fair value less costs to sell, using discounted cash flows, in line with the policy set out in note 1(i).

Fair value less costs to sell (FVLCS) was determined by estimating discounted cash flows until the end of the life of each site based on long-term production plans, including closure restoration and environmental clean-up costs. Aluminium benefits from a global marketplace with substantial barriers to entry and there are a limited number of competitors who are able to access effectively the key resources necessary to make aluminium. In addition, continued global industrialisation is expected to support demand for aluminium in the long term. The industry has however been running with surpluses in production over the past several years. Limited constraints on the ability of Chinese production to meet domestic demand and London Metal Exchange (LME) inventories at all time high levels have both had a negative impact on the price outlook. The further deterioration in aluminium market conditions in the second half of 2012, together with strong currencies in certain regions and high raw material costs, has had a negative impact on the current market values of the aluminium industry. A current market participant s view of fair value might not include the full value of the Group s planned improvements in cash margins from existing operations and from the successful implementation of growth projects; however the Group s view is that a market participant would ascribe some value to these aspects of the business.

The key assumptions to which the calculation of FVLCS for the Aluminium businesses is most sensitive are the aluminium price; the Canadian dollar and Australian dollar exchange rates against the US dollar; operating costs; and discount rates. Aluminium prices and operating costs have been estimated in line with the policy in note 1(i).

Key assumptions

Aluminium prices

Short term prices are consistent with market observable prices, thereafter they are transitioned to a long-term price based on detailed analysis of market fundamentals.

Both prices and margins are kept constant in real terms from 2022 onwards. Alumina and bauxite prices are not considered a key assumption as they are typically priced as a percentage of aluminium prices. For the purposes of sensitivities any reasonable possible changes consider movements in both aluminium and alumina as a result of this relationship.

The long-term aluminium price for impairment testing purposes decreased by three per cent in real terms compared to prior year, marginally above the mid-point of the range published by market commentators of US$1,984 and US$2,932 per tonne, with an average of US$2,419 per tonne.

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Foreign exchange rates

In the determination of FVLCS, the Group uses the 30-day moving average spot exchange rates, kept constant in real terms, as a proxy for long-term future exchanges rates. For those currencies that show a strong correlation with world commodity prices, specifically the Australian and Canadian dollar, the spot exchange rate is adjusted to ensure consistency with the Group s view of long-term commodity prices. In 2013 and 2014, the 30 day moving average spot exchange rate is used and a linear annual increase or decrease is assumed over the period from 2014 to 2017. These long run exchange rate assumptions are applied from 2017. To determine the long run exchange rates used for the impairment assessment, an adjustment is made to account for the difference between internal commodity price forecasts and the market s expectation of commodity prices.

Operating costs

Operating costs are based on long-term production plans and known cost improvement strategies, both of which market participants are aware of. Underlying input cost assumptions are consistent with related output price assumptions. As noted above, margins are assumed to remain constant from 2022 onwards.

Goodwill sensitivity analysis

Since all of the goodwill within subsidiary companies relating to aluminium businesses has been impaired, an adverse change to any of the key assumptions would lead to a reassessment of impairment indicators which could lead to a further impairment to intangible assets, property, plant and equipment and investments in equity accounted units. It is estimated that adverse changes in key assumptions would lead to the following decreases in FVLCS which may lead to a further impairment within the Aluminium cash-generating units:

	US$ billion
0.5% increase in discount rate applied to post-tax cash flows	1.8
5% decrease in aluminium and alumina prices	4.0
5% strengthening of local currencies	2.0
5% increase in operating costs	3.1

Each of the sensitivities above has been determined by assuming that the relevant key assumption moves in isolation, except where modifying the aluminium price directly affects the price assumption for certain input costs and further assumes that there is no mitigating action by management.

Oyu Tolgoi

Goodwill of US$983 million arose following consolidation on 15 December 2010 of Oyu Tolgoi LLC, of which US$881 million was calculated in accordance with the requirement in IFRS 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. Subsequent to this date, a further US$166 million of goodwill was allocated to the Oyu Tolgoi cash-generating unit on consolidation of the remaining Turquoise Hill Resources Ltd. assets on 24 January 2012. Accordingly, US$1,149 million goodwill was tested for impairment within the Oyu Tolgoi cash-generating unit.

Oyu Tolgoi s annual impairment review did not result in an impairment charge for 2012 (2011 and 2010: no impairment charge). The recoverable amount has been assessed by reference to FVLCS, in line with the policy set out in note 1(i). FVLCS was determined by estimating cash flows until the end of the life of mine plan.

The key assumptions to which the calculation of FVLCS for Oyu Tolgoi is most sensitive are the long-term copper prices; discount rates; operating costs; and the timing of the underground project. Other assumptions include the long-term gold price, 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). Based on the assessment of FVLCS, the recoverable amount exceeds the carrying value of all assets by approximately 10.0 per cent.

A five per cent decrease in the long-term copper price, in isolation, would lead to a decrease in the FVLCS and lead to it being equal to its carrying amount. A 0.5 per cent increase in the discount rate, in isolation, would lead to a decrease in the FVLCS and also lead to it being equal to its carrying amount. A five per cent increase in operating costs, in isolation, would lead to a US$437 million decrease in the FVLCS which reduces the headroom to 3.7 per cent.

If the timing of the underground project is delayed, this could have an adverse impact upon the recoverable amount due to the delay in commencing full production. A twelve month delay would eliminate the excess above carrying value and result in an estimated US$150 million impairment to goodwill.

Richards Bay Minerals

The Group consolidated Richards Bay Minerals on 3 September 2012. The majority of goodwill of US$811 million arose in accordance with the requirement in IFRS to recognise a deferred tax asset or liability on the difference between the provisional fair value of newly consolidated assets and liabilities and their tax base. The recognition of Richards Bay Minerals identifiable assets and liabilities in the statement of financial position was based on fair values at the acquisition date determined with the assistance of an independent third party valuer. These fair values are provisional and will be finalised within one year of the acquisition.

Richards Bay Minerals annual impairment review resulted in no impairment charge for 2012 (2011 and 2010: no impairment charge). The recoverable amount has been assessed by reference to FVLCS, in line with the policy set out in note 1(i). FVLCS was determined by estimating cash flows until the end of the life of mine plan.

The key assumptions to which the calculation of FVLCS for Richards Bay Minerals is most sensitive are the long-term titanium slag prices and discount rates. Other assumptions include the long-term pig iron and zircon prices, the South African Rand exchange rate against the US dollar and operating costs. Future selling prices and operating costs have been estimated in line with the policy set out in note 1(i).

A five per cent decrease in the long-term titanium slag price, in isolation, would lead to a US$208 million decrease in the FVLCS which would still result in an excess of the recoverable amount over the carrying value of assets. A 0.5 per cent increase in the discount rate, in isolation, would lead to a US$167 million decrease in the FVLCS which would also result in an excess of the recoverable amount over the carrying value of assets.

Refer to note 38 for further information relating to the consolidation of Richards Bay Minerals.

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Notes to the 2012 financial statements continued

12 Goodwill continued

Rio Tinto Coal Mozambique (formerly Riversdale Mining Limited)

The Group acquired a controlling interest in Riversdale Mining Limited on 8 April 2011. Goodwill of US$530 million arose in accordance with the requirement in IFRS 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. The acquisition was based on a multi-mine development which assumed a low cost barging solution as a primary means to transport coal to export markets. The acquisition was predicated on the development of three mines, namely Benga, Zambeze and Tete East that would support an eventual annual production level of 29 million tonnes per annum.

The annual impairment review for Rio Tinto Coal Mozambique (RTCM) resulted in a full impairment of the goodwill of $541 million in 2012 (2011: no impairment charge). The recoverable amount has been assessed by reference to FVLCS, in line with the policy set out in note 1(i).

FVLCS was determined by estimating discounted cash flows until the end of the assets life based on long term production plans, including closure restoration and environmental clean-up costs. In Mozambique, the development of infrastructure to support the coal asset is more challenging than initially anticipated. The Group originally sought to transport coal by barge along the Zambeze River, however this option did not receive government approval. These infrastructure constraints combined with a downward revision to estimates of recoverable coking coal volumes on the RTCM tenements have caused a reduction to the overall scale and ramp up schedule of RTCM and consequently a downward revision of its FVLCS.

The key assumptions to which the calculation of FVLCS for RTCM is most sensitive are the thermal coal and hard coking coal price; operating costs; discount rates; and infrastructure assumptions. Coal prices and operating costs have been estimated in line with the policy set out in note 1(i).

Key assumptions

Coal prices

Short term prices are consistent with market observable prices, thereafter they are transitioned to a long-term price based on detailed analysis of market fundamentals.

For the purpose of sensitivity analyses any reasonable possible change considers movements in both long-term thermal coal and hard coking coal prices.

The long-term thermal coal price for impairment testing purposes was within the range published by market commentators of US$70 and US$112 per tonne, with an average of US$92 per tonne, albeit at the upper end of this range. While the long-term price assumption was near the top end of the range, the market commentator prices exclude the impact of carbon pricing, whereas the long-term prices used include an element of carbon pricing (see note 1(i)). The price used for impairment testing purposes is based on an assessment of future climate policy evolution and the range of carbon prices that could result from this process.

The long-term hard coking coal price for impairment testing purposes was marginally above the range published by market commentators of US$132 and US$203 per tonne. The market commentators price does not typically look beyond a five year period; whilst the Group believe that a willing market participant would consider long-term prices, with the long-term price increase resulting from the high level of uncertainty surrounding the hard coking coal supply availability, with the operating and incentive curve volumes insufficient to satisfy demand regardless of the price. If the long term (plus five years) price of US$203 per tonne published by market commentators was used to derive the FVLCS, then the recoverable amount would be lower by an amount estimated to be up to US$100 million.

Operating costs

Operating costs are based on long term production plans which a market participant would be aware of. Underlying input cost assumptions are consistent with related output price assumptions.

Infrastructure assumptions

The FVLCS is based upon RTCM reaching a total output of some 11.5 million tonnes per annum using the existing Sena-Beira railway network and that the current railway network is expanded to an overall capacity of 20 million tonnes per annum by the network owner. The FVLCS also assumes a constant user charge for the railway network which is based upon the best, currently available information. If the timing of the expansion to the network is delayed or does not occur, the annual production would be restricted to just the Benga asset which would lead to a decrease in the recoverable amount estimated to be up to US$300 million.

Goodwill sensitivity analysis

Since all of the goodwill related to RTCM has been impaired, an adverse change to any of the key assumptions would lead to a reassessment of impairment indicators which could lead to a further impairment to property, plant and equipment and investments in equity accounted units. It is estimated that adverse changes in key assumptions would lead to the following decreases in FVLCS which may lead to a further impairment within the RTCM cash generating unit:

	US$ million
0.5% increase in discount rate applied to post-tax cash flows	143
5% decrease in long-term thermal coal and hard coking coal prices	258
5% increase in operating costs	250
Infrastructure restriction (as described above)	311

Each of the sensitivities above was determined assuming the relevant key assumption moved in isolation.

Other

Other goodwill includes US$518 million (2011: US$506 million) relating to Australian Iron Ore which comprises the business units located in the Pilbara region of Western Australia that mine iron ore, namely Robe River and Hamersley Iron. The recoverability of the Other goodwill has been assessed by reference to FVLCS using discounted cash flows, which is in line with the policy set out in note 1(i). The recoverable amounts were determined to be in excess of carrying value, and there are no reasonably possible changes in key assumptions that would cause the remaining goodwill to be impaired by a significant amount.

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13 Intangible assets

Year ended 31 December 2012	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[d] US$m
Net book value					
At 1 January 2012	**2,857**	**228**	**4,335**	**535**	**7,955**
Adjustment on currency translation	**22**	**4**	**107**	**15**	**148**
Expenditure during the year	**923**	**1**		**84**	**1,008**
Amortisation for the year[c]		**(20)**	**(127)**	**(153)**	**(300)**
Impairment charges, net of reversals	**(1,581)**	**5**	**(412)**	**(7)**	**(1,995)**
Disposals, transfers and other movements	**(168)**	**(6)**	**(18)**	**4**	**(188)**
At 31 December 2012	**2,053**	**212**	**3,885**	**478**	**6,628**
cost	**3,634**	**322**	**5,165**	**1,248**	**10,369**
accumulated amortisation and impairment	**(1,581)**	**(110)**	**(1,280)**	**(770)**	**(3,741)**

Year ended 31 December 2011	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[d] US$m
Net book value					
At 1 January 2011	307	259	4,537	597	5,700
Adjustment on currency translation	14	(6)	(79)	(4)	(75)
Expenditure during the year	248			161	409
Amortisation for the year[c]		(24)	(123)	(167)	(314)
Impairment charges		(1)		(11)	(12)
Newly consolidated operations	2,425				2,425
Disposals, transfers and other movements	(137)			(41)	(178)
At 31 December 2011	2,857	228	4,335	535	7,955
cost	2,857	361	5,436	1,106	9,760
accumulated amortisation and impairment		(133)	(1,101)	(571)	(1,805)

(a) Exploration and evaluation assets useful life is not determined until transferred to property, plant & equipment. The impairment charge in 2012 of US$1,581 million (2011:nil) related to exploration and evaluation assets within Rio Tinto Coal Mozambique (RTCM) (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. These water rights constitute the majority of the Contract based intangible assets . The water rights have been allocated to cash generating units within Aluminium.

In 2012, the recoverable amount of these cash-generating units was determined based on fair value less costs to sell (FVLCS), using a methodology and assumptions consistent with those described in note 1(i) and note 12. Refer to note 12 for assumptions and sensitivities relating to the estimates of FVLCS for the Group s Aluminium businesses.

(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:

Trademark, patented and non-patented technology
Trademarks: 14 to 20 years
Patented and non-patented technology: 10 to 20 years

Contract based intangible assets
Power contracts: 2 to 39 years
Other purchase and customer contracts: 5 to 15 years

Other intangible assets
Internally generated intangible assets and computer software: 2 to 5 years
Other intangible assets: 2 to 20 years

(d) There are no intangible assets either pledged as security or held under restriction of title.

Exploration and evaluation expenditure

The charge for the year and the net amount of intangible assets capitalised during the year are as follows:

	2012 US$m	2011 US$m	2010 US$m
Net expenditure in the year (net of proceeds of US$217 million (2011: US$52 million; 2010: US$568 million) on disposal of undeveloped projects)	**(2,608)**	(1,604)	(135)
Changes in accruals (including impairment of undeveloped projects of US$nil (2011: US$37 million; 2010: nil) and non-cash proceeds on disposal of undeveloped projects)	**209**	8	(80)
Amount capitalised during the year	**923**	248	143
Net charge for the year	**(1,476)**	(1,348)	(72)
Reconciliation to income statement			
Exploration and evaluation costs	**(1,970)**	(1,437)	(594)
Profit on disposal of interests in undeveloped projects	**494**	89	522
Net charge for the year	**(1,476)**	(1,348)	(72)

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14 Property, plant and equipment

Year ended 31 December 2012	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 2012	**16,475**	**6,135**	**27,132**	**15,225**	**64,967**
Adjustment on currency translation	**227**	**101**	**561**	**251**	**1,140**
Adjustments to capitalised closure costs (note 27)	**(2,943)**				**(2,943)**
Interest capitalised[c] (note 8)			**1**	**766**	**767**
Additions	**210**	**172**	**1,062**	**15,718**	**17,162**
Depreciation for the year[a][d]	**(860)**	**(351)**	**(2,930)**		**(4,141)**
Impairment charges, net of reversals[e]	**(136)**	**(340)**	**(3,330)**	**(1,366)**	**(5,172)**
Disposals	**(2)**	**(8)**	**(89)**	**(11)**	**(110)**
Newly consolidated operations (note 38)	**2,525**	**277**	**735**	**241**	**3,778**
Subsidiaries no longer consolidated	**(3)**	**(37)**	**(44)**	**(21)**	**(105)**
Transfers and other movements[f]	**1,484**	**1,086**	**6,938**	**(9,720)**	**(212)**
At 31 December 2012	**16,977**	**7,035**	**30,036**	**21,083**	**75,131**
cost	**23,557**	**10,805**	**56,052**	**23,797**	**114,211**
accumulated depreciation and impairment	**(6,580)**	**(3,770)**	**(26,016)**	**(2,714)**	**(39,080)**
Non-current assets held under finance leases[g]		**16**	**29**		**45**
Other non-current assets pledged as security[h]	**1,877**	**226**	**2,023**	**158**	**4,284**

Year ended 31 December 2011	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 2011	14,029	6,299	28,615	7,081	56,024
Adjustment on currency translation	(96)	(88)	(354)	(189)	(727)
Adjustments to capitalised closure costs (note 27)	2,835				2,835
Interest capitalised[(c)] (note 8)				493	493
Additions	178	114	981	10,652	11,925
Depreciation for the year[(a)(d)]	(672)	(321)	(2,510)		(3,503)
Impairment charges, net of reversals[(e)]	(142)	(91)	(956)	(568)	(1,757)
Disposals		(12)	(66)	(33)	(111)
Newly consolidated operations (note 38)			19		19
Subsidiaries no longer consolidated	(90)	(68)	(118)	(6)	(282)
Transfers and other movements[(f)]	433	302	1,521	(2,205)	51
At 31 December 2011	16,475	6,135	27,132	15,225	64,967
cost	22,186	9,327	48,080	16,558	96,151
accumulated depreciation and impairment	(5,711)	(3,192)	(20,948)	(1,333)	(31,184)
Non-current assets held under finance leases[(g)]		18	24		42
Other non-current assets pledged as security[(h)]	13	29	1,674	977	2,693

(a) Mining properties include deferred stripping costs of US$1,431 million (2011: US$1,119 million). Amortisation of deferred stripping costs of US$67 million (2011: US$50 million; 2010: US$11 million) is included within Depreciation for the year . Impairment of deferred stripping costs of US$11 million is charged to the income statement in 2012 (2011: US$11 million; 2010: nil).

(b) At 31 December 2012, the net book value amount for land and buildings includes freehold US$6,919 million (2011: US$6,004 million); long leasehold US$93 million (2011: US$75 million); and short leasehold US$23 million (2011: US$56 million).

(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 4.6 per cent (2011: 4.8 per cent; 2010: 5.0 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: 5 to 50 years

Plant and equipment
Other plant and equipment: 3 to 35 years
Power assets: 25 to 100 years
Capital work in progress: Not depreciated

(e) During 2012, impairment charges primarily relate to the impairment of Alcan and other aluminium businesses and Argyle. During 2011 the impairment charge primarily relates to Alcan. Refer to note 6 for details.

(f) Transfers and other movements includes reclassifications between categories.

(g) The finance leases under which these assets are held are disclosed in note 24.

(h) Excludes assets held under finance leases. Non-current assets pledged as security represent amounts pledged as collateral against US$588 million (2011: US$202 million) of loans, which are included in note 23.

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15 Investments in equity accounted units

	2012	Restated[c] 2011
Summary statement of financial position (Rio Tinto share)	**US$m**	US$m
Rio Tinto s share of assets		
Non-current assets	**8,787**	13,374
Current assets	**2,356**	3,048
	11,143	16,422
Rio Tinto s share of liabilities		
Current liabilities	**(1,593)**	(2,084)
Non-current liabilities	**(4,238)**	(4,505)
	(5,831)	(6,589)
Rio Tinto s share of net assets[a][b]	**5,312**	9,833

(a) Further details of investments in jointly controlled entities and associates are set out in notes 35 and 36.

(b) The impact of impairment charges on the Group s investments in equity accounted units is summarised in note 6. At 31 December 2012, the Group had no investment in associates with shares listed on recognised stock exchanges (2011: the quoted value of such associates was US$6,412 million).

(c) For 2011, loan receivable balances of US$1,176 million due from Rio Tinto Group companies, previously netted within non-current liabilities, have been reclassified to Rio Tinto s share of non-current assets. Rio Tinto s share of net assets remain unchanged as a result of the reclassification.

16 Net debt of equity accounted units (excluding amounts due to Rio Tinto)

	Group interest 2012	**Rio Tinto share of net debt/ (funds) 2012**	Group interest 2011	Rio Tinto share of net debt/ (funds) 2011
	%	**US$m**	%	US$m

Jointly controlled entities				
Sohar Aluminium Company LLC	**20.0**	**367**	20.0	393
Minera Escondida Limitada	**30.0**	**47**	30.0	142
Richards Bay Minerals[(d)]			37.0	46
Associates				
Turquoise Hill Resources Ltd[(d)]			49.0	(278)
Port Waratah Coal Services	**29.2**	**410**	29.2	362
Mineração Rio do Norte S.A.	**12.0**	**29**	12.0	25
Other equity accounted units		**(72)**		(141)
		781		549

(a) In accordance with IAS 28 and IAS 31, the Group includes its net investment in equity accounted units in the consolidated statement of financial position. This investment is net of the Group s share of the net debt of such units, which is set out above. Further details of investments in jointly controlled entities and associates are set out in notes 35 and 36.

(b) Some of the debt of equity accounted units is subject to financial and general covenants.

(c) As 31 December 2012, US$15 million of the debt shown above is with recourse to Rio Tinto, with a maximum exposure of US$4m (2011: US$15 million with maximum exposure of US$5m).

(d) Richards Bay Minerals (RBM) and Turquoise Hill Resources Ltd. (Turquoise Hill, formerly Ivanhoe Mines Limited) were classified as subsidiaries at 31 December 2012. Net surplus of Turquoise Hill in 2011 excluded its share of the net debt of Oyu Tolgoi LLC. Refer to note 38 for further information relating to the consolidation of Turquoise Hill and RBM in 2012.

17 Inventories

	2012	2011
	US$m	US$m
Raw materials and purchased components	**1,310**	1,292
Consumable stores	**1,774**	1,385
Work in progress	**1,958**	1,814
Finished goods and goods for resale	**1,517**	1,197
	6,559	5,688
Comprising:		
Expected to be used within one year	**6,136**	5,307
Expected to be used after more than one year	**423**	381
	6,559	5,688

Inventory write downs, net of reversals, amounting to US$208 million (2011: US$184 million; 2010: US$115 million) were recognised during the year.

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Notes to the 2012 financial statements continued

18 Trade and other receivables

	Non current	Current	Non current	Current
	2012	**2012**	2011	2011
	US$m	**US$m**	US$m	US$m
Trade receivables		**3,218**	11	3,721
Provision for doubtful debts[a]		**(23)**		(35)
Trade receivables net		**3,195**	11	3,686
Amounts due from equity accounted units	**317**	**321**	318	422
Other receivables[b]	**1,140**	**1,470**	1,025	1,368
Pension surpluses (note 46)	**154**		88	
Prepayment of tolling charges to jointly controlled entities[c]	**755**		634	
Other prepayments	**237**	**333**	289	582
	2,603	**5,319**	2,365	6,058

(a) At 31 December 2012, trade and other receivables of US$23 million (2011: US$35 million) were impaired. The majority of these receivables were more than 90 days overdue.

(b) Non-current receivables at 31 December 2012 and 31 December 2011 included a US$700 million prepayment for an intangible asset, following signing of the agreement for the Simandou iron ore project. The prepayment is shown as a purchase of intangible assets in the cash flow statement for 2011.

(c) Rio Tinto Aluminium has made certain prepayments to jointly controlled entities for toll processing of bauxite and 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.

Due to their comparatively short term maturities, the fair value of current trade and other receivables including the majority of amounts classified as non-current assets, approximates their carrying value.

As of 31 December 2012, trade and other receivables of US$190 million (2011: US$159 million) were past due but not impaired. The ageing of these receivables is as follows:

	2012	2011

	US$m	US$m
less than 30 days overdue	**117**	104
between 30 and 60 days overdue	**22**	29
between 60 and 90 days overdue	**19**	22
more than 90 days overdue	**32**	4
	190	159

These relate to a number of customers for whom there is no recent history of default or other indicators of impairment.

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 Deferred taxation

	2012	2011
	US$m	US$m
At 1 January	**4,335**	3,359
Adjustment on currency translation	**56**	(13)
(Credited)/charged to the income statement	**(3,447)**	308
Credited to statement of comprehensive income[a]	**(81)**	(511)
Newly consolidated operations (note 38)[b]	**1,027**	1,187
Transfer to asset held for sale (note 20)	**(93)**	
Other movements[c]	**(419)**	5
At 31 December	**1,378**	4,335
Comprising:		
deferred tax liabilities[d][e]	**4,736**	6,210
deferred tax assets[d][f][g]	**(3,358)**	(1,875)

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Deferred tax balances for which there is a right of offset within the same jurisdiction are presented net on the face of the statement of financial position as permitted by IAS 12. The closing deferred tax liabilities and assets, prior to this offsetting of balances, are shown below.

	Total 2012 US$m	Total 2011 US$m
Deferred tax liabilities arising from:		
Accelerated capital allowances	**7,300**	8,424
Unrealised exchange gains	**738**	681
Capitalised interest	**683**	457
Unremitted earnings	**536**	480
Other temporary differences	**930**	844
	10,187	10,886
Deferred tax assets arising from:		
Capital allowances[(h)]	**(2,539)**	(502)
Tax losses	**(2,107)**	(1,454)
Post retirement benefits	**(1,791)**	(1,738)
Provisions	**(1,674)**	(2,057)
Unrealised exchange losses	**(246)**	(241)
Other temporary differences	**(452)**	(559)
	(8,809)	(6,551)
(Credited)/charged to the income statement		
Decelerated capital allowances	**(3,270)**	(172)
Tax losses	**(432)**	66
Provisions	**(45)**	(16)
Tax on unremitted earnings	**(26)**	39
Unrealised exchange losses	**58**	299
Post retirement benefits	**85**	117
Other temporary differences	**183**	(25)
	(3,447)	308

(a) The amounts credited directly to the Statement of comprehensive income relate to tax relief on share options, 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 post retirement healthcare plans.

(b) Deferred tax relating to newly consolidated operations is principally due to deferred tax liabilities arising on the difference between the fair value and the tax base of the assets of Richards Bay Minerals and Turquoise Hill Resources Ltd. in 2012 and Rio Tinto Coal Mozambique in 2011. Refer to note 38.

(c) 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.

(d) The deferred tax liability of US$4,736 million (2011: US$6,210 million) includes US$4,771 million (2011: US$6,036 million) due in more than one year. The deferred tax asset of US$3,358 million (2011: US$1,875 million) includes US$3,212 million (2011: US$1,767 million) receivable in more than one year.

(e) Deferred tax is not recognised on the unremitted earnings of subsidiaries and jointly controlled entities 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$198 million (2011: US$187 million) would be payable.

(f) US$15,154 million (2011: US$1,959 million) of potential deferred tax assets have not been recognised as assets in these financial statements. US$12,631 million (2011: $nil) of the potential assets relate to temporary differences that are deductible for the purposes of Minerals Resource Rent Tax (MRRT). US$1,034 million (2011: US$797 million) of the potential assets relate to trading losses in France, which were acquired as part of the Alcan acquisition. US$447 million (2011: US$595 million) of the potential assets relate to realised or unrealised capital losses, recovery of which depends on the existence of capital gains in future years. There is a time limit, the shortest of which is 2 years, for the recovery of US$116 million of these potential assets (2011: US$45 million).

(g) There is a limited time period, the shortest of which is 4 years, for the recovery of US$1,017 million (2011: US$896 million) of tax losses and other tax assets which have been recognised as deferred tax assets in the financial statements.

(h) Deferred tax assets arising from capital allowances include amounts arising following the introduction of the Minerals Resource Rent Tax (MRRT) on 1 July 2012. Refer to note 9.

20 Assets and liabilities held for sale

At 31 December 2012 assets and liabilities held for sale comprise Palabora Mining Company Limited and Zululand Anthracite Colliery, which was acquired with Riversdale Mining Limited. On 11 December 2012, Rio Tinto announced that it had reached a binding agreement to sell its 57.7 per cent effective interest in Palabora for $373 million. The purchaser is a consortium comprising South African and Chinese entities led by the Industrial Development Corporation of South Africa Limited and Hebei Iron & Steel Group. The sale is subject to customary regulatory approvals in South Africa and China which are expected to take four to six months.

In relation to Palabora, assets held for sale include: plant, property and equipment: $299 million, cash and other financial asset: $306 million and other assets: $275 million; liabilities held for sale include: provisions: $116 million, other financial liabilities: $100 million and other liabilities: $153 million. Other assets and liabilities held for sale relate to ZAC, which was classified as held for sale on acquisition.

At 31 December 2011 assets and liabilities held for sale comprise Zululand Anthracite Colliery, which was acquired with Riversdale Mining Limited.

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Notes to the 2012 financial statements continued

21 Other financial assets

	Non-current 2012 US$m	Current 2012 US$m	Total 2012 US$m	Non-current 2011 US$m	Current 2011 US$m	Total 2011 US$m
Loans to equity accounted units	**17**	**270**	**287**	468	121	589
Derivative financial instruments	**378**	**25**	**403**	358	120	478
Equity shares and quoted funds	**405**	**71**	**476**	549	153	702
Other investments, including loans	**265**	**167**	**432**	547	191	738
Tax recoverable (non-current)	**86**		**86**	74		74
	1,151	**533**	**1,684**	1,996	585	2,581

Detailed information relating to other financial assets is given in note 31.

22 Cash and cash equivalents

	Note	2012 US$m	2011 US$m
Cash at bank and in hand		**1,267**	2,167
Other short term deposits		**5,815**	7,503
Balance per Group statement of financial position		**7,082**	9,670
Bank overdrafts repayable on demand (unsecured)	23	**(94)**	(16)
Cash and cash equivalents included in Assets held for sale		**234**	
Balance per Group cash flow statement		**7,222**	9,654

Cash and cash equivalents include US$108 million (2011: US$305 million) for which there are restrictions on remittances. Other short term borrowings principally earn interest at a floating rate based on Libor plus a fixed spread.

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23 Borrowings and other financial liabilities

Borrowings at 31 December	Note	Non-current 2012 US$m	Current 2012 US$m	Total 2012 US$m	Non-current 2011 US$m	Current 2011 US$m	Total 2011 US$m
USD Commercial Paper			**200**	**200**			
Alcan Inc. Global Notes 4.875% due 2012[b]						498	498
Alcan Inc. Global Notes 4.50% due 2013[a][b]			**498**	**498**	489		489
Rio Tinto Finance (USA) Limited Bonds 5.875% 2013[a][b]			**595**	**595**	610		610
Rio Tinto Finance (USA) Limited Bonds 7.125% 2013[a][b]			**100**	**100**	100		100
Alcan Inc. Global Notes 5.20% due 2014[a][b]		**498**		**498**	488		488
Rio Tinto Finance (USA) Limited Bonds 8.95% 2014[a][b]		**1,935**		**1,935**	1,957		1,957
Rio Tinto Finance (USA) plc Bonds 1.125% 2015		**498**		**498**			
Alcan Inc. Global Notes 5.00% due 2015[a][b]		**501**		**501**	475		475
Rio Tinto Finance (USA) Limited Bonds 1.875% 2015		**500**		**500**	500		500
Rio Tinto Finance (USA) Limited Bonds 2.500% 2016		**696**		**696**	695		695
Rio Tinto Finance (USA) Limited Bonds 2.250% 2016		**497**		**497**	496		496
Rio Tinto Finance (USA) plc Bonds 2.0% 2017		**499**		**499**			
Rio Tinto Finance (USA) plc Bonds 1.625% 2017		**1,241**		**1,241**			
Rio Tinto Finance (USA) Limited Bonds 6.5% 2018[a][b]		**2,059**		**2,059**	2,066		2,066
Rio Tinto Finance (USA) Limited Bonds 9.0% 2019[a][b]		**1,456**		**1,456**	1,451		1,451
Rio Tinto Finance Plc Euro Bonds 2.0% due 2020[a][c]		**971**		**971**			
Rio Tinto Finance (USA) Limited Bonds 3.5% 2020		**994**		**994**	993		993
Rio Tinto Finance (USA) Limited Bonds 4.125% 2021		**997**		**997**	996		996
Rio Tinto Finance (USA) Limited Bonds 3.750% 2021		**1,143**		**1,143**	1,143		1,143
		992		**992**			

Rio Tinto Finance (USA) plc Bonds 3.5% 2022							
Rio Tinto Finance (USA) plc Bonds 2.875% 2022		**984**		**984**			
Rio Tinto Finance Plc Euro Bonds 2.875% due 2024[(a)(c)]		**636**		**636**			
Rio Tinto Finance (USA) Limited Bonds 7.125% 2028[(a)(b)]		**1,053**		**1,053**	1,048		1,048
Alcan Inc. Debentures 7.25% due 2028		**107**		**107**	107		107
Rio Tinto Finance Plc Sterling Bonds 4.0% due 2029[(a)(c)]		**804**		**804**			
Alcan Inc. Debentures 7.25% due 2031		**432**		**432**	433		433
Alcan Inc. Global Notes 6.125% due 2033		**738**		**738**	737		737
Alcan Inc. Global Notes 5.75% due 2035		**283**		**283**	282		282
Rio Tinto Finance (USA) Limited Bonds 5.20% 2040		**1,146**		**1,146**	1,147		1,147
Rio Tinto Finance (USA) plc Bonds 4.75% 2042		**489**		**489**			
Rio Tinto Finance (USA) plc Bonds 4.125% 2042		**725**		**725**			
Loans from equity accounting units[(e)]		**111**	**72**	**183**	3,171	301	3,472
Other secured loans		**918**	**78**	**996**	388	64	452
Other unsecured loans		**519**	**556**	**1,075**	379	349	728
Finance leases	24	**41**	**12**	**53**	34	35	69
Bank overdrafts	22		**94**	**94**		16	16
Total borrowings including overdrafts[(d)]		**24,463**	**2,205**	**26,668**	20,185	1,263	21,448

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Notes to the 2012 financial statements continued

23 Borrowings and other financial liabilities continued

Other financial liabilities

	Non-current 2012 US$m	**Current 2012 US$m**	**Total 2012 US$m**	Non-current 2011 US$m	Current 2011 US$m	Total 2011 US$m
Derivative financial instruments	**70**	**23**	**93**	115	184	299
Other financial liabilities	**58**		**58**	57		57
Total other financial liabilities	**128**	**23**	**151**	172	184	356
Total borrowings and other financial liabilities	**24,591**	**2,228**	**26,819**	20,357	1,447	21,804

Detailed information relating to other financial liabilities is given in note 31.

(a) As at 31 December 2012, US$5.4 billion US dollar notional of the fixed rate US dollar borrowings were swapped to floating US dollar rates, US$1.6 billion US dollar notional equivalent of Euro borrowings were fully swapped to floating US dollar rates and US$0.8 billion US dollar notional equivalent of Pound Sterling borrowings were fully swapped to fixed US dollar rates. The Rio Tinto Finance Plc Sterling Bonds 4.0% due 2029 has been designated as a cash flow hedge. Other borrowings have been swapped to floating rates and fair value hedge accounting has been applied except for US$100 million of the Rio Tinto Finance (USA) Limited Bonds 7.125% due 2013 which is swapped but not in a fair value hedge; US$87 million of the Rio Tinto Finance (USA) Limited Bonds 5.875% due 2013 which is swapped but not in a fair value hedge; US$250 million of the Rio Tinto Finance (USA) Limited Bonds 8.95% due 2014; US$750 million of the Rio Tinto Finance (USA) Limited Bonds 6.5% due 2018; US$75 million of the Rio Tinto Finance (USA) Limited Bonds 7.125% due 2028; and US$200 million of the Alcan Inc. Global Notes 5.20% due 2014. The fair value of interest rate and cross currency interest rate swap assets and liabilities at 31 December 2012 was US$347 million and US$44 million, respectively. These are included in other financial assets and other financial liabilities in the statement of financial position. Details of the major interest rate and cross currency interest rate swaps are shown in note 31. US$0.8 billion of borrowings were subject to financial covenants.

(b) As at 31 December 2011, US$6.1 billion notional of the fixed rate borrowings were fully swapped to floating rates and US$0.3 billion notional of the Rio Tinto Finance (USA) Limited 9.0% due 2019 was swapped for the first two years to floating rates. Fair value hedge accounting has been applied to the entire amounts borrowed except for US$500 million of the Alcan Inc. Global Notes 4.875%due 2012, US$87 million of the Rio Tinto Finance (USA) Limited bonds 5.875% due 2013, US$250 million of the Rio Tinto Finance (USA) Limited Bonds 8.95% due 2014, US$750 million of the Rio Tinto Finance (USA) Limited Bonds 6.5% due 2018, US$75 million of the Rio Tinto Finance (USA) Limited Bonds 7.125% 2028 and the Rio Tinto Finance (USA) Limited 9.0% due 2019. The fair value of interest rate swap assets and liabilities at 31 December 2011 was US$347 million and US$2 million, respectively. These are included in other financial assets and other financial liabilities in the statement of financial

position. Details of the major interest rate swaps are shown in note 31.

(c) Rio Tinto has a US$10 billion (2011: US$10 billion) European Debt Issuance Programme (EDIP) against which the cumulative amount utilised was US$2.4 billion equivalent at 31 December 2012 (2011:US$ nil). The carrying value of these bonds after hedge accounting adjustments amounted to US$2.4 billion (2011: US$ nil) in aggregate.

(d) The Group s borrowings of US$26.7 billion (2011: US$21.4 billion) include some US$4.1 billion (2011: US$7.0 billion) which relates to subsidiary entity borrowings that are without recourse to the Group, some of which are subject to various financial and general covenants with which the respective borrowers were in compliance as at 31 December 2012.

(e) At 31 December 2011 US$3.4 billion of unsecured US dollar loans from equity accounted units which incurred interest at a rate of LIBOR plus 6.5% (LIBOR plus 6.5% from February 2011; 9.9% in prior periods), were denominated in US dollars and repayable out of future profits. There were no such loans at 31 December 2012. Balances at 31 December 2011 included amounts due from Oyu Tolgoi LLC to Turquoise Hill Resources Ltd. (formerly Ivanhoe Mines Limited) which eliminated on consolidation of Turquoise Hill Resources Ltd. in 2012, refer to note 38.

24 Capitalised finance leases

	Note	**2012 US$m**	2011 US$m
Present value of minimum lease payments			
Total minimum lease payments		**55**	70
Effect of discounting		**(2)**	(1)
	14	**53**	69
Payments under capitalised finance leases			
Due within one year		**12**	35
Between 1 and 3 years			15
Between 3 and 5 years		**20**	10
More than 5 years		**21**	9
	14	**53**	69

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25 Consolidated net debt

	2012 US$m	2011 US$m
Analysis of changes in consolidated net debt		
Opening balance	**(8,451)**	(4,071)
Adjustment on currency translation	**(383)**	(39)
Exchange gains/(losses) credited/(charged) to the income statement[a]	**422**	(85)
Cash movements excluding exchange movements	**(10,405)**	(4,498)
Debt of acquired companies[b]	**(540)**	
Other movements	**96**	242
Closing balance	**(19,261)**	(8,451)
Total borrowings in statement of financial position (note 23)	**(26,668)**	(21,448)
Derivatives related to net debt (note 31)	**294**	345
EAU funded balances excluded from net debt[c]	**31**	2,982
Adjusted total borrowings	**(26,343)**	(18,121)
Cash and cash equivalents (note 22)	**7,082**	9,670
Consolidated net debt	**(19,261)**	(8,451)

	2012 US$m	2011 US$m	2010 US$m
Exchange gains/(losses) on US dollar net debt and intragroup balances excluded from Underlying earnings			
Exchange gains/(losses) on US dollar net debt	**421**	(175)	1,119
Exchange gains/(losses) on intragroup balances	**54**	36	(589)
Exchange gains on loans from equity accounted units	**4**	1	20
Exchange gains/(losses) on settlement of dividend	**18**	(16)	(21)
Credited/(charged) to income statement	**497**	(154)	529

(a) Exchange gains taken to the income statement include amounts excluded from Underlying earnings.
(b) Relates to the consolidation of Turquoise Hill Resources Ltd. (Turquoise Hill) on 24 January 2012 and of Richards Bay Minerals on 3 September 2012. Refer to note 38.
(c) Consolidated net debt is stated net of the impact of certain funding arrangements relating to EAUs and partially owned subsidiaries (EAU 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 EAU by the Group and subsequently on lent by the EAU to a consolidated Group subsidiary. Following consolidation of Turquoise Hill on 24 January 2012, EAU funded balances in respect of Turquoise Hill and Oyu Tolgoi LLC (OT) at 31 December 2011 have been eliminated.

Further information relating to the currency and interest rate exposures arising from net debt and related derivatives is given in note 31.

26 Trade and other payables

	Non current		Non current	
	2012	**Current 2012**	2011	Current 2011
	US$m	**US$m**	US$m	US$m
Trade payables		**3,214**		3,288
Amounts owed to equity accounted units	**106**	**408**	346	243
Other payables[(a)]	**83**	**1,082**	107	1,852
Employee entitlements	**55**	**860**		766
Royalties and mining taxes		**539**		653
Accruals and deferred income	**167**	**3,136**	126	2,572
Government grants deferred	**128**	**5**	140	7
	539	**9,244**	719	9,381

(a) Other payables include deferred consideration of US$82 million (2011: US$94 million) relating to certain assets acquired. 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.

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Notes to the 2012 financial statements continued

27 Provisions (including post retirement benefits)

	Pensions and post retirement healthcare[a]	Other employee entitlements[b]	Close down and restoration/ environmental[c][d][e][f]	Other	**Total 2012**	Total 2011
	US$m	US$m	US$m	US$m	**US$m**	US$m
At 1 January	5,955	871	11,654	677	**19,157**	14,484
Adjustment on currency translation	107	20	218	10	**355**	(236)
Adjustments to mining properties (note14)[f]						
changes in estimate			(1,854)		**(1,854)**	2,022
change in discount rate			(1,089)		**(1,089)**	813
Charged/(credited) to profit:						
increases to existing provisions	380	225	107	5	**717**	655
new provisions		241	37	61	**339**	285
change in discount rate			(130)		**(130)**	96
unused amounts reversed	(2)	(16)	(90)	(6)	**(114)**	(82)
exchange (gains)/losses on provisions			(6)	1	**(5)**	7
amortisation of discount		1	431		**432**	365
Utilised in year	(670)	(399)	(306)	(130)	**(1,505)**	(1,305)
Actuarial losses recognised in equity	466				**466**	1,925
Newly consolidated operations (note 38)	26		61		**87**	
Subsidiaries no longer consolidated		(3)	(90)		**(93)**	(125)
Transfers (to)/from assets held for sale	(52)		(83)		**(135)**	128
Transfers and other movements	(11)	(89)	30	33	**(37)**	125
At 31 December	6,199	851	8,890	651	**16,591**	19,157
Statement of financial position analysis:						
Current	135	601	410	376	**1,522**	1,487
Non-current	6,064	250	8,480	275	**15,069**	17,670
Total	6,199	851	8,890	651	**16,591**	19,157

(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 46.

(b) The provision for other employee entitlements includes a provision for long service leave of US$325 million (2011: US$313 million), based on the relevant entitlements in certain Group operations and includes US$77 million (2011: US$71 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 1(s)(iv), critical accounting policies and estimates . Close down and restoration costs are a normal consequence of mining, and the majority of

close down and restoration expenditure is incurred at the end of the relevant operation. Remaining lives of mines and infrastructure range from one to over 50 years with an average, weighted by closure provision, of around 21 years (2011: 19 years). Although the ultimate cost to be incurred is uncertain, the Group s businesses estimate their respective costs based on feasibility and engineering studies using current restoration standards and techniques. Provisions of US$8,890 million (2011: US$11,654 million) for close down and restoration costs and environmental clean up obligations include estimates of the effect of future inflation and have been adjusted to reflect risk. These estimates have been discounted to their present value at an average nominal rate of approximately four per cent per annum, based on an estimate of the long term, risk free, pre-tax cost of borrowing. Excluding the effects of future inflation and before discounting, this provision is equivalent to some US$13.0 billion (2011: US$14.8 billion).

(d) Non-current provisions for close down and restoration/environmental expenditure include amounts relating to environmental clean up of US$507 million (2011: US$327 million) expected to take place between one and five years from the statement of financial position date, and US$793 million (2011: US$1,028 million) expected to take place later than five years after the statement of financial position date.

(e) Close down and restoration/environmental liabilities at 31 December 2012 have not been adjusted for amounts of US$198 million relating to insurance recoveries and other financial assets held for the purposes of meeting these obligations.

(f) Close down and restoration/environmental remediation provisions decreased during the year following a Group wide review of estimated liabilities. The review included a re-evaluation of the methodology for estimating risk free discount rates in light of the impact of fiscal interventions and, where appropriate, probability weighting for the different remediation or closure outcomes which could realistically arise.

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28 Share capital Rio Tinto plc

	2012 Number (million)	2011 Number (million)	2010 Number (million)	**2012 US$m**	2011 US$m	2010 US$m
Issued and fully paid up share capital of 10p each						
At 1 January	**1,453.400**	1,529.004	1,529.004	**234**	246	246
Ordinary shares purchased but uncancelled on 1 January[b]	**(1.800)**					
Own shares purchased and cancelled[b]	**(26.224)**	(75.604)		**(4)**	(12)	
At 31 December	**1,425.376**	1,453.400	1,529.004	**230**	234	246
Shares held by public						
At 1 January	**1,436.542**	1,526.305	1,523.969			
Shares reissued from treasury[a]	**0.939**	0.875	2.336			
Shares purchased and cancelled[b]	**(26.224)**	(75.604)				
Shares purchased and held in treasury[c]		(13.234)				
Shares purchased and awaiting cancellation[b]		(1.800)				
At 31 December	**1,411.257**	1,436.542	1,526.305			
Shares repurchased and held in treasury[b]	**14.119**	15.058	2.699			
Shares repurchased and awaiting cancellation[b]		1.800				
Shares held by public	**1,411.257**	1,436.542	1,526.305			
Total share capital	**1,425.376**	1,453.400	1,529.004			
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) No new Ordinary shares were issued in 2012. 939,423 Ordinary shares were reissued from treasury during the year resulting from the exercise of options under Rio Tinto plc employee share based payment plans, with exercise prices between £10.43p and £39.46p per share (2011: no new ordinary shares were issued, and 875,057 Ordinary shares reissued from treasury with exercise prices between £10.43p and £47.12p per share; 2010: no new ordinary shares issued and 2,336,005 Ordinary shares reissued from treasury with exercise prices between £7.98p and £40.07p per share).

(b) The authority for the Company to buy back its Ordinary shares was renewed at the 2012 annual general meeting. From February to April 2011, 14,371,550 shares were bought back and held in treasury of which 1,137,550 were cancelled. From April to December 2011 76,266,945 shares were bought back of which 74,466,945 were cancelled in 2011. From January to March 2012 26,223,910 shares were bought back and cancelled and 1,800,000 shares purchased and awaiting cancellation at 31 December 2011 were cancelled.

(c) The aggregate consideration received for treasury shares reissued was US$39 million (2011: US$48 million; 2010: US$92 million). No new shares were issued as a result of the exercise of options under Rio Tinto plc employee share based payment plans in 2012, 2011 and 2010.

(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. Directors have the ability to issue an Equalisation Share if that is required under the terms of the DLC Merger Sharing Agreement. The DLC Dividend Share was issued to facilitate the efficient management of funds within the DLC structure.

During 2012, US$41 million of shares (2011: US$86 million of shares; 2010: US$39 million of shares) were purchased by the Employee Share Ownership Trust on behalf of Rio Tinto plc to satisfy future share options and awards as they vest.

Information relating to share options and other share based incentive schemes is given in note 45 on share based payments.

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Notes to the 2012 financial statements continued

29 Share capital Rio Tinto Limited

	2012 Number (million)	2011 Number (million)	2010 Number (million)	**2012 US$m**	2011 US$m	2010 US$m
Issued and fully paid up share capital (no par value)						
At 1 January	**435.76**	435.76	435.76	**5,582**	5,601	4,924
Adjustment on currency translation				**133**	(19)	677
At 31 December	**435.76**	435.76	435.76	**5,715**	5,582	5,601
Special Voting Share[(a)]	**1 only**	1 only	1 only			
DLC Dividend Share[(a)]	**1 only**	1 only	1 only			
Total share capital	**435.76**	435.76	435.76			

(a) 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. Directors have the ability to issue an Equalisation Share if that is required under the terms of the DLC Merger Sharing Agreement. The DLC Dividend Share was issued to facilitate the efficient management of funds within the DLC structure. No shares were bought back during 2012 and 2011. During the year ended 31 December 2010, Rio Tinto Limited purchased and cancelled 171,072,520 ordinary shares off-market, which were held by Tinto Holdings Australia Pty Limited (a wholly owned subsidiary of Rio Tinto plc). The selective buyback and cancellation were approved by shareholders at the 2010 Rio Tinto Limited annual general meeting. As a result of these transactions, no ordinary shares in Rio Tinto Limited are held by the above subsidiary of Rio Tinto plc.

Share options exercised during the year to 31 December 2012 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 45 on share based payments.

30 Other reserves and retained earnings

	2012 US$m	2011 US$m	2010 US$m
Capital redemption reserve[(a)]			
At 1 January	**24**	12	12
Own shares purchased and cancelled	**4**	12	
At 31 December	**28**	24	12
Hedging reserves[(b)]			

At 1 January	**(44)**	(155)	(128)
Parent and subsidiaries net cash flow hedge fair value (losses)/gains	**(60)**	84	(72)
Parent and subsidiaries net cash flow hedge losses transferred to the income statement	**46**	81	47
Net movement on equity accounted units cash flow hedges		2	(1)
Tax on the above	**(11)**	(56)	(1)
At 31 December	**(69)**	(44)	(155)
Available for sale revaluation reserves[c]			
At 1 January	**193**	427	247
(Losses)/gains on available for sale securities	**(25)**	(238)	213
Gains on available for sale securities transferred to the income statement	**(355)**	(19)	(10)
Tax on the above	**8**	23	(23)
At 31 December	**(179)**	193	427
Other reserves[d]			
At 1 January	**11,765**	11,785	11,776
Own shares purchased from Rio Tinto Limited shareholders to satisfy share options	**(62)**	(71)	(84)
Employee share options: value of services	**78**	71	48
Deferred tax on share options	**(3)**	(20)	21
Cash settled share options reclassified as equity settled			24
At 31 December	**11,778**	11,765	11,785
Foreign currency translation reserve[e]			
At 1 January	**2,793**	3,574	2,103
Parent and subsidiaries currency translation and exchange adjustments	**610**	(891)	1,230
Equity accounted units currency translation adjustments	**(108)**	54	208
Currency translation reclassified on disposal	**(3)**	46	6
Tax on the above	**(1)**	10	27
At 31 December	**3,291**	2,793	3,574
Total other reserves per statement of financial position	**14,849**	14,731	15,643

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	2012 US$m	2011 US$m	2010 US$m
Retained earnings[f]			
At 1 January	**27,784**	32,499	20,477
Parent and subsidiaries (loss)/profit for the year	**(3,528)**	5,720	14,229
Equity accounted units retained profit for the year	**538**	106	9
Actuarial losses[g]	**(398)**	(1,911)	(769)
Tax relating to components of other comprehensive income	**98**	513	236
Total comprehensive (loss)/income for the year	**(3,290)**	4,428	13,705
Share buyback scheme	**(764)**	(6,210)	
Dividends paid	**(3,038)**	(2,236)	(1,754)
Change in equity interest held by Rio Tinto	**1,128**	(793)	
Own shares purchased/treasury shares reissued for share options and other items[h]	**(38)**	10	(31)
Employee share options and other IFRS 2 charges taken to the income statement	**45**	86	69
Cash settled share options reclassified as equity settled			33
At 31 December	**21,827**	27,784	32,499

(a) The capital redemption reserve was set up to comply with section 733 of the Companies Act 2006 (previously 170 of the Companies Act 1985) when shares of a company are redeemed or purchased wholly out of the company s profits. The amount at 31 December 2012 and 31 December 2011 reflects 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 record 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 profit and movements in reserves of subsidiaries include those arising from the Group s share of proportionally consolidated units.

(g) There were no actuarial losses relating to equity accounted units during the year (2011: US$5 million; 2010: US$4 million).

(h) In 2011, this is stated net of a US$95 million reclassification between share premium and retained earnings, relating to the weighted average cost of shares held that was applied to the sale of shares in Rio Tinto plc to Rio Tinto Limited, and for the satisfaction of share options, in prior periods.

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Notes to the 2012 financial statements continued

31 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 proportionally consolidated units, and excludes those of equity accounted units. The information is grouped in the following sections:

A Financial assets and liabilities by categories

B Derivatives and financial instruments

C Fair values

A (a) Financial assets and liabilities by categories

At 31 December 2012	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	22	**7,082**	7,082			
Trade and other receivables[a]	18	**6,338**	6,338			
Equity shares and quoted funds	21	**476**		476		
Other investments, including loans	21	**432**	172		260	
Currency and commodity contracts: designated as hedges[c]	21	**10**			10	
Derivatives and embedded derivatives not related to net debt: not designated as hedges[c]	21	**46**			46	
Derivatives related to net debt[c]	21,23,25	**347**			347	
Loans to equity accounted units including quasi equity loans		**873**	873			
Total financial assets		**15,604**	14,465	476	663	
Financial liabilities						
Trade and other payables[b]	26	**(7,759)**				(7,759)
Short term borrowings and bank overdrafts	23	**(2,205)**				(2,205)
Medium and long term borrowings	23	**(24,463)**				(24,463)
Deferred consideration	26	**(82)**				(82)
Forward commodity contracts: designated as hedges[c]	23					

Derivatives related to net debt[c]	23,25	**(53)**	(53)	
Other derivatives and embedded derivatives not designated ashedges[c]	23	**(40)**	(40)	
Other financial liabilities	23	**(58)**		(58)
Total financial liabilities		**(34,660)**	(93)	(34,567)

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At 31 December 2011	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	22	9,670	9,670			
Trade and other receivables[a]	18	6,738	6,738			
Equity shares and quoted funds	21	702		702		
Other investments, including loans	21	738	140		338	260
Currency and commodity contracts: designated as hedges[c]	21	86			86	
Derivatives and embedded derivatives not related to net debt: not designated as hedges[c]	21	45			45	
Derivatives related to net debt[c]	21,23,25	347			347	
Loans to equity accounted units including quasi equity loans		1,816	1,816			
Total financial assets		20,142	18,364	702	816	260
Financial liabilities						
Trade and other payables[b]	26	(8,121)				(8,121)
Short term borrowings and bank overdrafts	23	(1,263)				(1,263)
Medium and long term borrowings	23	(20,185)				(20,185)
Deferred consideration	26	(94)				(94)
Forward commodity contracts: designated as hedges[c]	23	(210)			(210)	
Derivatives related to net debt[c]	23,25	(2)			(2)	
Other derivatives and embedded derivatives not designated as hedges[c]	23	(87)			(87)	
Other financial liabilities	23	(57)				(57)
Total financial liabilities		(30,019)			(299)	(29,720)

(a) This excludes pension surpluses, prepayment of tolling charges to jointly controlled entities, other prepayments and specific balances within other receivables.

(b) Trade and other payables includes trade payables, amounts owed to equity accounted units, other payables excluding deferred consideration disclosed separately and accruals.

(c) These financial assets and liabilities in aggregate agree to total derivative financial instruments disclosed in notes 21 (Other financial assets) and 23 (Borrowings and other financial liabilities).

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 further natural protection 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. 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 reserves the right to maintain a higher proportion of fixed rate funding. 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.

Treasury operations

Treasury operates as a service to the business of the Rio Tinto Group and not as a profit centre. Strict limits on the size and type of transactions permitted are laid down by the Rio Tinto board and are subject to rigorous internal controls. Senior management is advised of corporate cash and debt positions, as well as commodity, currency interest rate and interest rate derivatives through a monthly reporting framework.

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 ventures and associates. Derivatives are used to separate funding and cash management decisions from currency exposure and interest rate management. Bank counterparty exposures are managed within allocated credit limits. Investment, funding and cash management activities are managed and co-ordinated by Treasury.

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Notes to the 2012 financial statements continued

31 Financial instruments and risk management continued

(i) Foreign exchange risk

MANAGEMENT POLICY

Rio Tinto 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.

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 not held in 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 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 and 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 net debt, after taking into account relevant currency swaps:

Net (debt)/funds by currency	Cash and cash equivalents US$m	Total borrowings in statement of financial position US$m	Derivatives related to net debt US$m	EAU funded balances excluded from net debt US$m	**Net debt 2012 US$m**	Net debt 2011 US$m
United States dollar	5,993	(24,991)	294		**(18,704)**	(8,701)
Australian dollar	676	(908)		31	**(201)**	(124)

South African rand	90	(348)			**(258)**	104
UK sterling	100				**100**	322
Euro	43	(220)			**(177)**	(133)
Canadian dollar	36	(195)			**(159)**	(81)
Other	144	(6)			**138**	162
Total	7,082	(26,668)	294	31	**(19,261)**	(8,451)

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 Rio Tinto board. A monthly 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 currency forward, cross currency interest rate and option contracts used to manage the currency risk exposures of the Group at 31 December 2012.

SENSITIVITIES

The sensitivities below give the estimated effect of a ten per cent strengthening in the closing exchange rate of the US dollar against significant currencies on the value of financial instruments. The sensitivity associated with a ten per cent weakening of a particular currency would be 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 2012, where balances are not denominated in the functional currency of the subsidiary, and exclude financial assets and liabilities held by equity accounted units. These balances will not remain constant throughout 2013, and therefore the sensitivities should be used with care.

At 31 December 2012

Gains/(losses) associated with 10% 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**	**Impact directly on equity US$m**
Australian dollar	**104**	**(823)**	**83**	**1**
Canadian dollar	**100**	**(1,441)**	**32**	**1**
South African rand	**12**	**3**	**1**	
Euro	**132**	**27**	**(31)**	
New Zealand dollar	**82**	**53**		

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At 31 December 2011

Gains/(losses) associated with 10% 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	Impact directly on equity US$m
Australian dollar	101	(536)	78	(1)
Canadian dollar	98	(1,190)	41	
South African rand	12	(4)	(5)	
Euro	130	239	(22)	(1)
New Zealand dollar	77	52	4	

(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 instruments will fluctuate due to changes in market interest rates. Rio Tinto s interest rate management policy is generally to borrow and invest at floating interest rates. This approach is based on historical correlation between interest rates and commodity prices. In some circumstances, a higher proportion of fixed rate funding may be considered appropriate.

HEDGING STRATEGY

As noted above, Rio Tinto 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. During 2012, the Group closed out interest rate swaps with a notional principal of US$200 million (2011: US$1,325 million) giving rise to a net cash inflow of US$3 million (2011: US$96 million) including accrued interest of US$3 million (2011: US$15 million). The interest rate swaps were in fair value hedge relationships prior to close out. See section B for the details of currency and interest rate swaps relating to borrowings.

At the end of 2012, US$17.7 billion (2011: US$10.8 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 67 per cent fixed to 33 per cent floating (2011: 60 per cent fixed to 40 per cent floating). On a net debt basis, the fixed to floating debt ratio was 91 per cent fixed to 9 per cent floating (2011: 128 per cent fixed to (28) per cent floating). The weighted average effective interest rate on total adjusted borrowings as at 31 December 2012 was 4% (2011: 5%) and the weighted average maturity was around 9 years (2011: around 10 years).

The weighted average effective interest rate is based on interest rates and carrying value of gross borrowings at the year end. Interest rates, as at 31 December, are applied for debt at floating rates.

The net debt ratio at the end of 2012 and 2011 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 23 Borrowings for the details of debt outstanding at 31 December 2012.

SENSITIVITIES

Based on the Group s net debt (refer to note 25) and other floating rate financial instruments outstanding as at 31 December 2012, 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 decrease of US$9 million (2011: increase of US$8 million) reflecting the high level of cash at period end. The Group has an exposure to interest rate volatility within shareholders equity arising from fair value movements on derivatives in the cash flow reserve. The derivatives have an underlying exposure to Pound 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 2012, 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$126 million charge (2011: US$nil) for Pound Sterling and US$125 million credit (2011: US$nil) 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 2013, and therefore the sensitivities 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 Rio Tinto 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 , i.e. 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 recognised on provisionally priced sales is 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 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.

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Notes to the 2012 financial statements continued

31 Financial instruments and risk management continued

The marking to market of provisionally priced sales contracts is recorded as an adjustment to sales revenue.

At the end of 2012, the Group had 249 million pounds of copper sales (2011: 181 million pounds) that were provisionally priced at US 360 cents per pound (2011: US 344 cents per pound). The final price of these sales will be determined during the first half of 2013. A ten per cent change in the price of copper realised on the provisionally priced sales would increase or reduce net earnings by US$56 million (2011: US$41 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 2012 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 2012. The Group s sensitivity to changes in market prices, based on the assumption that the market price increases by ten per cent with all other variables held constant, would not be significant in terms of the resulting change in the Group s net earnings for the year or, where applicable, the change in equity. 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. The sensitivity does not include the impact arising from derivatives held by equity accounted units. Including equity accounted units primarily impacts the sensitivity to a 10% increase in aluminium prices and would result in a US$37 million reduction in net earnings (2011: US$85 million).

(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 Rio Tinto 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 2012, the Group had approximately 80 customers (2011: 108 customers) that owed the Group more than US$5 million each and these balances accounted for approximately 68 per cent (2011: 76 per cent) of all receivables owing. There were 25 customers (2011:46 customers) with balances greater than US$20 million accounting for just over 48 per cent (2011: just over 55 per cent) of total amounts receivable. Note 18 provides details of trade and other receivables past due but not impaired.

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 treasuries and funds) or AAA rated 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 and within credit limits assigned to each counterparty mainly based upon specific assessment criteria. Counterparty credit limits are reviewed by the Rio Tinto 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	**2012 US$m**	2011 US$m
Cash and cash equivalents	22	**7,082**	9,670
Trade and other receivables	18	**6,338**	6,738
Investments	21	**432**	738
Derivative assets	21	**403**	478
Total		**14,255**	17,624

(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 the companies shareholders. 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 the focus on the progressive dividend policy, whilst also striving to maintain the Group s overall credit rating. The resulting capital structure provides the Group with a high degree of financial flexibility at a low cost of capital.

To maintain an overall credit rating, the Group considers various financial metrics including 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.

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The Group s total capital, which is defined as equity attributable to owners of Rio Tinto plus equity attributable to non-controlling interests plus net debt, amounted to US$77 billion at 31 December 2012 (2011: US$68 billion).

	2012	2011
Total capital	**US$m**	US$m
Equity attributable to owners of Rio Tinto (see Group statement of financial position)	**46,865**	52,539
Equity attributable to non-controlling interests (see Group statement of financial position)	**11,156**	6,669
Net debt (note 25)	**19,261**	8,451
Total capital	**77,282**	67,659

Net debt is a measure used by management and the Board of Directors to manage the Group s capital structure and liquidity risks and therefore is linked to the Group s financial and operational excellence strategic driver. 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 25. Net debt increased from US$8.5 billion at 31 December 2011 to US$19.3 billion at 31 December 2012 as operating cash inflows were offset by outflows relating to capital expenditure, acquisitions, the increase in the dividend and the share buy-back programme. Net debt to total capital was 25 per cent at 31 December 2012 (2011: 12 per cent) and interest cover was 13 times (2011: 27 times).

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 Group has access to various forms of financing including its US Shelf Programme, European Debt Issuance Programme, Commercial Paper and credit facilities. In March 2012, under its US Shelf Programme, the Group issued four Rio Tinto Finance (USA) Plc bonds amounting to a US$500 million 1.125% bond due 2015, a US$500 million 2.0% bond due 2017, a US$1,000 million 3.5% bond due 2022 and a US$500 million 4.75% bond due 2042. In August 2012, the Group issued three Rio Tinto Finance (USA) plc bonds amounting to a US$1,250 million 1.625% bond due 2017, a US$1,000 million 2.875% bond due 2022 and a US$750 million 4.125% bond due 2042. In December 2012, under its European Debt Issuance Programme, the Group issued three Rio Tinto Finance plc bonds amounting to a EUR750 million 2.0% bond due 2020, a EUR500 million 2.875% bond due 2024 and a GBP500 million 4.0% bond due 2029. The Euro denominated bonds were swapped using cross currency interest rate swaps to US dollar floating rate bonds and the GBP bond was swapped to a US dollar fixed rate bond.

In May 2011, the Group issued three Rio Tinto Finance (USA) Limited bonds amounting to a US$700 million 2.5% bond due 2016, a US$1,000 million 4.125% bond due 2021 and a US$300m 5.2% bond due 2040. This was followed by the issuance of three further Rio Tinto Finance (USA) Limited bonds in September 2011 amounting to a US$500 million 2.25% bond due 2016, a US$1,150 million 3.75% bond due 2021 and a US$350 million 5.2% bond due 2040.

During the last quarter of 2012, the Group entered into bi-lateral bank facility agreements amounting to US$2 billion in aggregate. The facilities are denominated in US dollars and have a term of one year that is extendable, at the Group s option, by a further 364 days. At 31 December, the facilities were undrawn. Any borrowings under each facility are at prevailing LIBOR rates plus an agreed margin dependent on the amount of drawdown and the credit rating of the Group. The facilities are not subject to financial covenants.

In November 2010, the Group entered into a US$6 billion multi-currency committed revolving credit facility maturing in November 2015 with its relationship banks. At 31 December 2012, the facility was undrawn. Any borrowings under this facility are at prevailing LIBOR rates plus an agreed margin dependent on the amount of drawdown and the

credit rating of the Group. The facility is not subject to any financial covenants. The overall agreement also enables same day access to a US$ swing-line facility. The funds available under the facility agreement may be used for general corporate purposes of the Group.

In February 2011, the Group commenced a US$5 billion share buy-back programme which, subject to market conditions, was intended to be completed by the end of 2012. In August 2011, the share buy-back programme was increased by US$2 billion to US$7 billion and the completion date accelerated to March 2012. At 31 December 2011, 91 million Rio Tinto plc shares had been bought back at a total cost of US$5.5 billion. During 2012 a further 26 million Rio Tinto plc shares were bought back at a total cost of US$1.5 billion.

In 2011, Oyu Tolgoi LLC (OT) received additional funding through shareholder loans from wholly owned subsidiaries of Turquoise Hill Resources Ltd. (Turquoise Hill, formerly Ivanhoe Mines Limited, an EAU in 2011) which amounted to US$2.2 billion. Of this funding, Turquoise Hill (an EAU in 2011) was funded US$1.7 billion by Rio Tinto. Turquoise Hill became a subsidiary during 2012. For further details, refer to note 38 Purchases and sales of subsidiaries, joint ventures, associates and other interests in businesses .

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Notes to the 2012 financial statements continued

31 Financial instruments and risk management continued

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 statement of financial position 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 statement of financial position.

At 31 December 2012

(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	(7,612)	(147)					**(7,759)**
Borrowings before swaps	(2,199)	(2,627)	(1,798)	(1,342)	(2,054)	(16,328)	**(26,348)**
Expected future interest payments[(a)]	(1,072)	(970)	(878)	(847)	(821)	(6,891)	**(11,479)**
Other financial liabilities	(49)	(90)	(31)	(5)	(5)		**(180)**
Derivative financial liabilities[(c)]							
Derivatives related to net debt net settled[(a)]							
Derivatives related to net debt gross settled[(a)]:							
gross inflows	80	80	80	80	80	1,359	**1,759**
gross outflows	(71)	(71)	(71)	(71)	(71)	(1,297)	**(1,652)**
Total	(10,923)	(3,825)	(2,698)	(2,185)	(2,871)	(23,157)	**(45,659)**

At 31 December 2011

(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	(7,724)	(397)					**(8,121)**
Borrowings before swaps	(1,264)	(1,226)	(2,696)	(1,056)	(1,233)	(13,492)	**(20,967)**

Expected future interest payments[a]	(1,093)	(830)	(713)	(630)	(606)	(4,794)	**(8,666)**
Other financial liabilities	(246)	(255)	(27)	(15)	(16)	(4)	**(563)**
Derivative financial liabilities[c]							
Derivatives related to net debt net settled[a,b]	(1,400)	(1)					**(1,401)**
Derivatives related to net debt gross settled[a]:							
gross inflows							
gross outflows							
Total	(11,727)	(2,709)	(3,436)	(1,701)	(1,855)	(18,290)	**(39,718)**

(a) Interest payments have been projected using interest rates applicable at 31 December. Where debt is subject to variable interest rates, future interest payments are subject to change in line with market rates.

(b) In 2011, Turquoise Hill (formerly Ivanhoe Mines Limited) was treated as an EAU. In this financial year, the Group agreed to provide Turquoise Hill with an interim loan facility of US$1,800 million while Rio Tinto and Turquoise Hill work together to complete project financing for the development of the Oyu Tolgoi copper-gold project. At 31 December 2011, US$1,399 million of the facility remained undrawn and was reflected in amounts due within 1 year or on demand. During 2012, the company became a subsidiary and the facility is now reported as an intragroup borrowing.

(c) The maturity grouping is based on the earliest payment date.

(d) The maximum carrying value of borrowings repayable, after the impact of swaps, in any financial year is US$2.7 billion (2011: US$2.7 billion).

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B Derivative financial instruments

The Group s derivatives, including embedded derivatives, as at 31 December 2012, are summarised below:

	Total fair Value			
	2012		2011	
	Asset	**Liability**	Asset	Liability
Derivatives designated as hedges	**US$m**	**US$m**	US$m	US$m
Copper forward contracts[a]				(210)
Aluminium forward contracts[b]			72	
Aluminium forward contracts embedded in electricity purchase contracts[c]	**10**		14	
Interest rate swaps[d]	**346**		341	(1)
Cross currency interest rate swaps[e]		**(44)**		
Total derivatives designated as hedges	**356**	**(44)**	427	(211)
Derivatives not designated as hedges	**US$m**	**US$m**	US$m	US$m
Currency forward contracts and swaps	**4**	**(4)**	22	(6)
Aluminium forward contracts[b]	**17**	**(10)**	19	(34)
Aluminium options embedded in electricity purchase contracts[c]	**25**	**(15)**	1	(15)
Aluminium forward contracts embedded in electricity purchase contracts[c]			3	
Other embedded derivatives		**(11)**		(32)
Interest rate swaps[d]	**1**		6	(1)
Currency options embedded in borrowing contracts		**(9)**		
Total derivatives not designated as hedges	**47**	**(49)**	51	(88)
Total derivative instruments	**403**	**(93)**	478	(299)
Analysed by maturity:				
Less than 1 year	**25**	**(23)**	120	(184)
Between 1 and 5 years	**73**	**(17)**	104	(115)
More than 5 years	**305**	**(53)**	254	
Total	**403**	**(93)**	478	(299)
Total net derivative instruments	**310**		179	

	2012	2011
Reconciliation to statement of financial position	**US$m**	US$m
non-current assets (note 21)	**378**	358
current assets (note 21)	**25**	120
current liabilities (note 23)	**(23)**	(184)
non-current liabilities (note 23)	**(70)**	(115)
Total net derivatives instruments, detailed above	**310**	179

(a) The copper forward contracts were entered into as a condition of the refinancing of Palabora in 2005, and to reduce the Group s exposure to movements in the copper price. The balance at 31 December 2012 is included within assets

held for sale (see note 20).

(b) The aluminium forward contracts were entered into to convert aluminium sales made at a fixed price to LME cash and to hedge the sales from high cost smelters.

The ineffective portion arising from cash flow hedges recognised in the income statement was a gain of US$6 million pre tax.

The aluminium forward contracts which were taken out to convert aluminium sales made as a fixed price to LME cash are not designated as hedges as they largely offset.

(c) Aluminium embedded derivatives (forward contracts and options) are contained within certain aluminium smelter electricity purchase contracts. These contracts reduce the Group s exposure to movements in the aluminium price.

(d) The interest rate swaps are used to convert certain fixed rate borrowings to a floating rate. For further details, see note 23 Borrowings and other financial liabilities .

(e) 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 23 Borrowings and other financial liabilities .

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Notes to the 2012 financial statements continued

31 Financial instruments and risk management continued

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 are shown in the following table. The fair values of the Group s cash, short term borrowings 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 (see note 1(p)).

	31 December 2012		31 December 2011	
	Carrying value US$m	**Fair value US$m**	Carrying value US$m	Fair value US$m
Short term borrowings (note 23)	**(2,205)**	**(2,224)**	(1,263)	(1,265)
Medium and long term borrowings (note 23)	**(24,463)**	**(27,260)**	(20,185)	(21,863)

C (a) Valuation hierarchy

The table below shows the financial instruments carried at fair value by valuation method at 31 December 2012:

	Total	**Level 1[a]**	**Level 2[b]**	**Level 3[c]**	**Not held at fair value**
Assets					
Equity shares and quoted funds (note 21)	**476**	**300**	**16**	**160**	
Other investments, including loans (note 21)	**432**	**136**	**6**	**118**	**172**
	908	**436**	**22**	**278**	**172**
Derivatives[d]					
Forward contracts: designated as hedges (Section B)	**10**			**10**	
Forward contracts and option contracts, not designated as hedges (Section B)	**6**		**4**	**2**	
Derivatives related to net debt (Section B)	**294**		**294**		
	1,218	**436**	**320**	**290**	**172**

The table below shows the financial instruments carried at fair value by valuation method at 31 December 2011:

	Total	Level 1[a]	Level 2[b]	Level 3[c]	Not held at fair value
Assets					
Equity shares and quoted funds (note 21)	702	643	14	45	

Other investments, including loans (note 21)	738	145		193	400
	1,440	788	14	238	400
Derivatives[(d)]					
Forward contracts: designated as hedges (Section B)	(124)		(138)	14	
Forward contracts and option contracts, not designated as hedges (Section B)	(42)	1	(32)	(11)	
Derivatives related to net debt (Section B)	345		345		
	1,619	789	189	241	400

(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 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) The net asset or liability derivative balance for the three different categories reconcile to the net asset and liability balances presented in B.

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 2012 and 31 December 2011.

	31 December 2012 Level 3 financial assets and financial liabilities	31 December 2011 Level 3 financial assets and financial liabilities
Opening balance	**241**	185
Currency translation adjustments	**2**	(2)
Realised gains to income statement	**17**	17
Unrealised losses to income statement	**(1)**	30
Unrealised losses to comprehensive income	**(18)**	14
Additions	**17**	6
Disposals	**(75)**	(9)
Closing balance	**183**	241
Total losses for the year included in the income statement for assets and liabilities held at year end	**17**	26

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32 Contingent liabilities and commitments

	2012 US$m	2011 US$m
Capital commitments (including those related to joint ventures and associates)[(a)]		
Within 1 year	**11,487**	9,700
Between 1 and 3 years	**1,399**	3,300
Between 3 and 5 years	**127**	41
After 5 years	**38**	
Total	**13,051**	13,041

(a) Capital commitments incurred by the Group relating to joint ventures and associates amount to US$1,180 million (2011: US$215 million). Capital commitments incurred jointly with other venturers (Rio Tinto share) relating to joint ventures amount to US$208 million (2011: US$1,260 million).

Operating leases

The aggregate amount of minimum lease payments under non cancellable operating leases are as follows:

	2012 US$m	2011 US$m
Within 1 year	**415**	523
Between 1 and 3 years	**690**	766
Between 3 and 5 years	**555**	564
After 5 years	**852**	1,052
	2,512	2,905

Unconditional purchase obligations

The aggregate amount of future payment commitments for the next 5 years under unconditional purchase obligations outstanding at 31 December was:

	2012 US$m	2011 US$m
Within 1 year	**2,700**	2,578
Between 1 and 2 years	**2,321**	2,080
Between 2 and 3 years	**2,428**	1,748
Between 3 and 4 years	**2,239**	1,631
Between 4 and 5 years	**2,040**	1,580
After 5 years	**12,822**	12,303
	24,550	21,920

Unconditional purchase obligations relate to commitments to make payments in the future for fixed or minimum quantities of goods or services at fixed or minimum prices. The future payment commitments set out above have not been discounted and mainly relate to commitments under take or pay power and freight contracts. They exclude unconditional purchase obligations of jointly controlled entities, apart from those relating to the Group s tolling arrangements.

	2012	2011
	US$m	US$m
Contingent liabilities (excluding those relating to joint ventures and associates)		
Indemnities and other performance guarantees[(a)]	**766**	706
Contingent liabilities relating to joint ventures and associates[(b)]		
Share of contingent liabilities of joint ventures and associates	**225**	
Incurred in relation to interests in joint ventures	**309**	147
Incurred in relation to other venturers contingent liabilities	**64**	78

(a) Indemnities and performance guarantees represent the potential outflow of funds from the group for the satisfaction of obligations under contractual arrangements (for example undertakings related to rehabilitation activities and supplier agreements) not provided for in the statement of financial position, where the likelihood of the guarantees or indemnities being called is assessed as possible rather than probable or remote.

(b) Amounts disclosed include those arising as a result of the Group s investments in both jointly controlled assets and jointly controlled entities.

There are a number of legal claims currently outstanding against the Group. No material loss to the Group is expected to result from these claims.

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Notes to the 2012 financial statements continued

33 Average number of employees

	Subsidiaries and proportionally consolidated units			Equity accounted units (Rio Tinto share)[a]			Group Total		
	2012	2011	2010	**2012**	2011	2010	**2012**	2011	2010
The principal locations of employment were:									
Australia and New Zealand	**23,767**	20,875	18,772	**2,342**	2,544	2,428	**26,109**	23,419	21,200
Canada	**13,410**	13,689	13,418	**278**	295	295	**13,688**	13,984	13,713
Europe	**5,760**	6,601	15,205	**3,184**	3,377	223	**8,944**	9,978	15,428
Africa	**7,055**	6,107	5,451	**2,226**	2,328	2,204	**9,281**	8,435	7,655
United States	**4,564**	4,995	6,416	**375**	406	721	**4,939**	5,401	7,137
Mongolia	**2,904**	1,131			358	490	**2,904**	1,489	490
Indonesia	**2,467**	2,325	2,261			13	**2,467**	2,325	2,274
South America	**235**	347	430	**1,307**	1,221	1,175	**1,542**	1,568	1,605
Other countries	**1,143**	895	869	**202**	436	343	**1,345**	1,331	1,212
Discontinued operations			6,180						6,180
	61,305	56,965	69,002	**9,914**	10,965	7,892	**71,219**	67,930	76,894

(a) Employee numbers, which represent the average for the year, include 100 per cent of employees of subsidiary companies. Employee numbers for proportionally consolidated and equity accounted units are proportional to the Group s interest. 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.

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34 Principal subsidiaries and consolidated operations

At 31 December 2012

Company and country of incorporation/operation	Principal activities	Class of shares held	Proportion of class held (%)	Group interest (%)
Australia				
Argyle Diamond Limited	Mining and processing of diamonds	Ordinary	100	100
Coal & Allied Industries Limited[a]	Coal mining	Ordinary	80	80
Dampier Salt Limited	Salt production	Ordinary	68.40	68.40
Energy Resources of Australia Limited	Uranium mining	Class A	68.39	68.39
Hamersley Iron Pty Limited	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
Canada				
Rio Tinto Canada Uranium Corporation	Uranium projects	Common shares	100	100
Iron Ore Company of Canada Inc.[c]	Iron ore mining; iron ore pellets	Common shares	58.72	58.72
QIT-Fer et Titane Inc.	Titanium dioxide feedstock; high purity iron and steel	Common shares	100	100
		Class B preference shares	100	100
		CAD 0.01 preferred shares	100	100
Rio Tinto Alcan Inc.	Bauxite mining; alumina refining; production of specialty alumina; aluminium smelting; engineered products	Common shares	100	100
Turquoise Hill Resources Ltd[d]	Copper and gold mining	Common	50.82	50.82
Guinea				
Simfer S.A.	Iron ore project	Common	95	50.35
Madagascar				
QIT Madagascar Minerals SA[e]	Ilmenite mining		80	85
Mongolia				
Oyu Tolgoi LLC	Copper and gold mining (in development)	(f)		33.54
Mozambique				
Riversdale Mining Limited[g]	Coal mining (in development) and	Common shares	100	100

	exploration				
Namibia					
Rössing Uranium Limited[h]	Uranium mining	B N$1	71.16	}	68.58
		C N10c	70.59		
South Africa					
Palabora Mining Company Limited	Copper mining, smelting and refining	Ordinary R1	72.90		57.70
Richards Bay Titanium (Proprietary) Limited[i]	Titanium dioxide/high purity iron production	B Ordinary	100		
		B preference	100	}	74
		BHP Billiton preference	100		
Richards Bay Mining (Proprietary) Limited[i]	Ilmenite, rutile and zircon mining	B Ordinary	100		
		B Preference	100	}	74
		BHP Billiton 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

The Group comprises a large number of companies and it is not practical to include all of them in this list. The list therefore only includes those companies that have a more significant impact on the profit or assets of the Group. The Group s principal subsidiaries are mostly held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

(a) Of the Group s 80 per cent interest in Coal & Allied Industries Limited, an indirect share of 4.29 per cent, purchased during 2011, is held through its investment in an equity accounted unit.

(b) Queensland Coal Pty Limited is the main legal entity that owns the shares shown in note 37 of Hail Creek, Blair Athol, Clermont and Kestrel.

(c) This entity is incorporated in the United States of America but operates in Canada.

(d) The Group obtained a controlling 51 per cent stake in Ivanhoe Mines Limited (Ivanhoe) on 24 January 2012. Ivanhoe was renamed Turquoise Hill Resources Ltd. (Turquoise Hill) on 2 August 2012. Refer to note 38 for further details relating to the consolidation of Turquoise Hill.

(e) The Group s shareholding in QIT Madagascar Minerals SA carries 80 per cent of the total voting rights through common shares. The Group owns 85 per cent of the capital of QIT Madagascar Minerals SA through common shares and investment certificates (certificats d investissement).

(f) The Group holds no direct equity interest in Oyu Tolgoi LLC (OT). This entity is consolidated by virtue of contractual rights which permit the exercise of control over certain policies and activities of OT. The Group interest of 33.54 per cent arises through its 51 per cent investment in Turquoise Hill; Turquoise Hill owns 66 per cent of OT.

(g) This entity is incorporated in Australia but operates in Mozambique.

(h) The Group s shareholding in Rössing Uranium Limited carries 35.54 per cent of the total voting rights. Rössing is consolidated by virtue of Board control.

(i) 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.

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Notes to the 2012 financial statements continued

35 Principal jointly controlled entities

At 31 December 2012

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
Queensland Alumina Limited[a]	Alumina production	1,769,600	Ordinary	80		80
Chile						
Minera Escondida Limitada[b]	Copper mining and refining			30		30
Mozambique						
Rio Tinto Benga (Mauritius) Limited[a][c]	Coal mining (in development) and exploration	474,591,847	Class A	65		65
		65	Management	65		65
New Zealand						
New Zealand Aluminium Smelters Limited[a]	Aluminium smelting	24,998,400	Ordinary	79.4		79.4
Norway						
Sor-Norge Aluminium A.S.	Aluminium smelting	500,000	Ordinary B	50		50
Oman						
Sohar Aluminium Company L.L.C.	Aluminium smelting/power generation	37,500	Ordinary	20		20
United States of America						
Halco (Mining) Inc.	(d)	4,500	Common	45		45
Pechiney Reynolds Quebec Inc.	(e)	100	Common	50	}	50.3
		1	Preferred	100		

The Group has joint control of the above operations which are independent legal entities and therefore includes them in the financial statements using the equity accounting method.

The Group comprises a large number of operations and it is not practical to include all of them in this list. The list therefore only includes those jointly controlled entities that have a more significant impact on the profit or operating assets of the Group.

The Group s principal jointly controlled entities are held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

With the exception of footnotes (c) to (e), all jointly controlled entities operate mainly in the countries in which they are incorporated.

(a) While the Group holds more than a 50 per cent interest in these entities, other participants have veto rights over operating, financing and strategic decision making. Accordingly, the Group does not have the ability to unilaterally control, and therefore does not consolidate these entities.
(b) The year end of Minera Escondida Limitada is 30 June. However, the amounts included in the consolidated financial statements of Rio Tinto are based on accounts of Minera Escondida Limitada that are coterminous with those of the Group.
(c) This entity is incorporated in Mauritius but operates mainly in Mozambique, where it has a 100% interest in Riversdale Mozambique Limitada, a coal mine located in Tete, Mozambique.
(d) 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.
(e) Pechiney Reynolds Quebec has a 50.1 per cent interest in the Aluminerie de Becancour aluminium smelter, which is located in Canada.

36 Principal associates

At 31 December 2012

Company and country of incorporation/operation	Principal activities	Number of shares held	Class of shares held	Proportion of class held (%)	Group interest (%)
Brazil					
Mineração Rio do Norte S.A.[(a)]	Bauxite mining	25,000,000 47,000,000	Ordinary Preferred	12.5 11.8	12
Cameroon					
Compagnie Camerounaise de l Aluminum	Aluminium smelting	1,623,127	Ordinary	46.7	46.7

The Group s principal associates are held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

The Group comprises a large number of operations and it is not practical to include all of them in this list. The list therefore only includes those associates that have a more significant impact on the profit or operating assets of the Group.

(a) Mineração Rio do Norte S.A. is accounted for as an associated company because the Group has significant influence through representation on its Board of Directors.

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37 Principal jointly controlled assets and other proportionally consolidated units

At 31 December 2012

Name and country of operation	Principal activities	Group interest (%)
Australia		
Tomago Aluminium Joint Venture	Aluminium smelting	51.6
Bengalla[a]	Coal mining	32
Blair Athol Coal[b]	Coal mining	71.2
Clermont Coal	Coal mining	50.1
Hail Creek	Coal mining	82
Kestrel	Coal mining	80
Mount Thorley[c]	Coal mining	64
Warkworth[d]	Coal mining	44.5
Northparkes Mine	Copper/gold mining and processing	80
Gladstone Power Station	Power generation	42.1
Robe River Iron Associates[e]	Iron ore mining	53
Hope Downs Joint Venture	Iron ore mining	50
Brazil		
Consórcio de Alumínio Maranhão	Alumina production	10
Canada		
Alouette	Aluminium production	40
Diavik	Mining and processing of diamonds	60
Indonesia		
Grasberg expansion	Copper and gold mining	40

The Group comprises a large number of operations, and it is not practical to include all of them in this list. The list therefore only includes those proportionally consolidated units that have a more significant impact on the profit or operating assets of the Group.

The Group s proportionally consolidated units are held by intermediate holding companies and not directly by Rio Tinto plc or Rio Tinto Limited.

(a) The Group owns a 40 per cent interest in Bengalla through its 80 per cent investment in Coal and Allied, giving a beneficial interest to the Group of 32 per cent.
(b) The Group has a direct interest of 57.2 per cent in Blair Athol Coal, and an additional 14 per cent interest through its investment in an equity accounted unit.
(c) The Group owns an 80 per cent interest in Mount Thorley through its 80 per cent investment in Coal and Allied, giving a beneficial interest to the Group of 64 per cent.
(d) The Group owns an 55.6 per cent interest in Warkworth through its 80 per cent investment in Coal and Allied, giving a beneficial interest to the Group of 44.5 per cent.
(e) The Group holds 65 per cent of Robe River Iron Associates, of which 30 per cent is held through a 60 per cent owned subsidiary. The Group s net beneficial interest is therefore, 53 per cent, net of amounts attributable to outside equity shareholders.

38 Purchases and sales of subsidiaries, joint ventures, associates and other interests in businesses

2012 Acquisitions

Consolidation of Turquoise Hill Resources Ltd. (formerly Ivanhoe Mines Limited) excluding Oyu Tolgoi LLC

On 17 January 2012, Rio Tinto exercised its subscription right for anti-dilution. The subscription right entitled Rio Tinto to be issued 439,216 new shares in Ivanhoe Mines Limited (Ivanhoe) at a price of approximately US$19.38 per share, for total consideration of US$8 million, increasing the Group s share in Ivanhoe to 48.97 per cent (from the 48.94 per cent ownership at 31 December 2011) after dilutive activity.

On 24 January 2012 (the acquisition date), Rio Tinto purchased 15,100,000 shares of Ivanhoe from the market, (two sellers in a privately negotiated share purchase transaction), to increase its holding in Ivanhoe from 48.97 per cent to 51.01 per cent. The shares were purchased for an aggregate of US$299 million (C$302 million) at a price per share of US$19.79 (C$20.00). After completion of the share purchase, Rio Tinto owned 377,397,658 common shares in Ivanhoe.

The 24 January 2012 acquisition gave Rio Tinto control of the assets in Ivanhoe other than those relating to Oyu Tolgoi LLC (OT) (the non OT assets). The non OT assets are primarily copper, gold and coal mining properties along with other exploration properties. The Group had previously gained control of OT in December 2010 by virtue of its contractual rights which permit it to exercise control over certain policies and activities of OT.

Rio Tinto s move to a majority stake in Ivanhoe reinforced its commitment to developing OT as a low cost, long life asset in a sustainable and mutually beneficial manner with the Government and people of Mongolia. On 2 August 2012, Ivanhoe was renamed Turquoise Hill Resources Ltd. (Turquoise Hill).

100 per cent of the identifiable assets and liabilities of Ivanhoe not related to OT were consolidated from 24 January 2012.

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Notes to the 2012 financial statements continued

38 Purchases and sales of subsidiaries, joint ventures, associates and other interests in businesses continued

Provisional fair values on consolidation disclosed at 30 June 2012 have been revised to reflect new information that existed at the date of acquisition. This has reduced Rio Tinto s share of net assets by US$136 million with the corresponding entry being mainly represented by a US$129 million increase in the loss on consolidation. Final fair values are disclosed below.

	US$m
Property, plant & equipment	**1,115**
Cash	**693**
Debt including embedded derivatives related to debt	**(377)**
Other assets and liabilities	**481**
Non-controlling interests	**(1,239)**
Goodwill	**166**
Net attributable assets including goodwill at the acquisition date	**839**
Total consideration:	
Fair value of the Group s previous interest in Turquoise Hill (excluding OT)	**678**
Cash price for additional two per cent interest	**299**
Less: cash price attributed to OT	**(78)**
Less: cash price attributed to loans receivable from less payable to Rio Tinto Group companies	**(60)**
Total	**839**
Reconciliation of loss on consolidation	
Fair value of the Group s previous interest in Turquoise Hill (excluding OT)	**678**
Book value of the Group s previous interest in Turquoise Hill (excluding OT)	**(845)**
Loss on consolidation	**(167)**
Reconciliation of amount included in the cash flow statement	
Cash price paid for additional two per cent interest	**299**
Less: Cash acquired on acquisition	**(693)**
Net cash inflow included in the acquisition of subsidiaries line in the cash flow statement	**(394)**

As required by IFRS 3, the identifiable assets and liabilities exclude balances receivable by Turquoise Hill from OT and balances payable to Rio Tinto by Turquoise Hill. Under IFRS 3, such balances are deemed to be settled at acquisition as they eliminate on consolidation. There was, however, no actual settlement of the balances and they remain due and payable. The element of the US$299 million cost of the additional two per cent interest in Turquoise Hill acquired which is deemed to relate to these balances is included in the US$394 million cash inflow on the acquisition of subsidiaries line of the cash flow statement. Shareholder loans of US$3.3 billion due from OT to Ivanhoe were included in the Group s external borrowings at 31 December 2011 and there were other less material balances between the non OT assets and Rio Tinto subsidiaries which were included in the Group s receivables and payables at 31 December 2011. At the date of gaining control these amounts totalled US$2.9 billion and eliminated

with the newly consolidated balances of Turquoise Hill. Where applicable, the interest rate payable on these balances was determined to be a market rate and there was therefore no gain or loss on deemed settlement.

Non-controlling interests arise from the 49 per cent of the non OT assets of Turquoise Hill not owned by Rio Tinto and from the portions of the assets and liabilities of Turquoise Hill subsidiaries not owned 100 per cent by Turquoise Hill. Non-controlling interests are recognised at their proportionate share of the fair value of the identifiable assets and liabilities of the companies in which they hold an interest.

Goodwill arising on consolidation of US$166 million comprises control premium of US$129 million and US$37 million calculated in accordance with the requirement in IFRS to recognise a deferred tax liability on the difference between the fair value of newly consolidated assets and liabilities and their tax base. This goodwill is not deductible for tax purposes.

For the period since consolidation of Ivanhoe (excluding OT) on 24 January 2012, sales revenue and results for the non OT assets were not material to the consolidated income statement. The impact of consolidating the non OT assets on 1 January 2012 rather than 24 January 2012 would also not have been material.

Consolidation of Richards Bay Minerals

On 7 September 2012, Rio Tinto increased its holding in Richards Bay Minerals (RBM) to 74 per cent with consolidation effective from 3 September 2012, following the completion of its acquisition of BHP Billiton s entire interests in RBM including BHP Billiton s 37 per cent indirect equity voting interests in the RBM operating companies. The purchase price paid by Rio Tinto on completion was US$1.7 billion.

The acquisition price was US$1.9 billion before contractual adjustments for cash payments made by RBM to BHP Billiton since the acquisition trigger date of 1 February 2012. This price includes US$0.6 billion for BHP Billiton s 37 per cent indirect equity interest in the RBM operating companies, US$1.0 billion for a 50 per cent interest in outstanding RBM shareholder financing arrangements and US$0.3 billion for a royalty stream.

The acquisition was the result of BHP Billiton exercising a put option as at 1 February 2012, previously agreed with Rio Tinto as part of RBM s restructuring in 2009.

RBM is a South African mineral sands mining and processing operation located in Kwa-Zulu Natal. It is one of the world s lowest cost producers of titanium dioxide feedstock and has mineralisation to support 20 years of production. Rio Tinto manages the RBM business and markets all of its products.

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The remaining 26 per cent of RBM is owned by a consortium of local communities and businesses (24 per cent) and RBM employees (two per cent), in line with South Africa s Broad Based Black Economic Empowerment (BBBEE) legislation.

Fair values on consolidation are provisional and will be subject to further review during the 12 months from 3 September 2012, being the effective date of consolidation.

	Provisional fair value US$m
Property, plant & equipment	**2,663**
Inventory	**792**
Deferred tax liabilities	**(957)**
Borrowings	**(163)**
Cash less overdrafts	**(7)**
Other assets and liabilities	**22**
Non-controlling interests	**(224)**
Goodwill	**811**
Net attributable assets including goodwill at the acquisition date	**2,937**
Total consideration:	
Provisional fair value of the Group s previous interest in RBM	**1,237**
Option price	**1,700**
Total	**2,937**
Reconciliation of gain on consolidation	
Provisional fair value of the Group s previous interest in RBM	**1,237**
Book value of the Group s previous interest in RBM	**(258)**
Recycled currency translation	**(14)**
Gain on consolidation	**965**
Reconciliation of amount included in the Group cash flow statement	
Cash price paid under option	**1,700**
Add: Net overdrafts acquired on acquisition	**7**
Net cash outflow included in the acquisition of subsidiaries line in the Group cash flow statement	**1,707**

The majority of the goodwill arising on consolidation represents the amount calculated in accordance with the requirement in IFRS 3 to recognise a deferred tax liability on the difference between the provisional fair value of newly consolidated assets and liabilities and their tax base. This goodwill is not deductible for tax purposes.

For accounting purposes, the BBBEE shareholders interest in RBM is treated as an equity option and has been included in the table of provisional fair values on that basis within the non-controlling interests line.

Sales revenue of US$372 million and loss after tax of US$134 million is included in the 2012 income statement from 3 September 2012. In the period following consolidation of RBM, adjustments were made in respect of inventory on hand at the acquisition date which had been recognised at fair value on consolidation. These adjustments, which

included amounts relating to inventory sold since 3 September 2012, totalled a charge of US$186 million (net of tax) and have been excluded from Underlying earnings. The pro forma consolidated results of the Group, if control had been gained on 1 January 2012, would have been US$51.9 billion sales revenue and the loss after tax would have been US$2.9 billion. In preparing the pro forma results, revenue and costs have been included from 1 January 2012 and intragroup transactions have been eliminated. A full year of depreciation has been charged on the provisional fair values determined at 3 September 2012. The actual RBM inventory write down included in the Group s 2012 results has not been adjusted. A full year of interest charge has been assumed on the acquisition cost. Tax charge/relief has been assumed where relevant.

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Notes to the 2012 financial statements continued

38 Purchases and sales of subsidiaries, joint ventures, associates and other interests in businesses continued

2011 and 2010 Acquisitions

Rio Tinto Coal Mozambique (formerly Riversdale Mining Limited)

On 8 April 2011 (the acquisition date), Rio Tinto acquired a controlling 52.6 per cent interest in Riversdale Mining Limited (Riversdale) for US$1,713 million net of cash acquired. Subsequent to the acquisition date, Rio Tinto continued to increase its interest in Riversdale and on 7 July 2011, its interest increased to 100 per cent; consideration paid for the remaining 47.4 per cent was US$1,977 million. Riversdale was delisted on 7 July 2011 and subsequently renamed Rio Tinto Coal Mozambique (RTCM). Due to the mutual proximity of the dates of individual increases in Rio Tinto s shareholding prior to the acquisition date, the transactions were accounted for as an acquisition taking place in only two stages, first the acquisition of a controlling interest on 8 April 2011, and second the purchase of additional interests after the acquisition date.

Provisional fair values on consolidation were determined for RTCM at 30 June 2011. The fair values were finalised by 8 April 2012, 12 months after the acquisition date. No adjustments were made.

Cash flows relating to the Group s purchase of its interest in RTCM during 2011 were allocated between investing and financing activities in accordance with the presentation requirements for staged acquisitions under IAS 7, Cash flow statements .

Hathor Exploration Limited

During 2011, between April and October, Rio Tinto built up a 5.8 per cent interest in Hathor Exploration Limited (Hathor), an uranium exploration company listed on the Toronto Stock Exchange. In October, an all cash offer was made for the remaining shares. On 30 November 2011 the conditions of the offer were satisfied and Rio Tinto acquired a controlling interest of 70.2 per cent of Hathor. By 31 December 2011 the Group s ownership had reached 88.0 per cent; by 12 January 2012 the remaining 12.0 per cent was acquired and Hathor has since been delisted from the Toronto Stock Exchange. Due to the mutual proximity of the dates of individual increases in Rio Tinto s shareholding subsequent to the acquisition date, and before the end of the year, these transactions were accounted for as taking place in one stage, at 30 November (the acquisition date), resulting in an ownership interest of 88 per cent being recognised.

Fair values recognised on acquisition were finalised by 30 November 2012, 12 months after the acquisition date. No adjustments were made.

Goodwill arising on acquisition comprised US$150 million, being Rio Tinto s 88 per cent share of the amount calculated in accordance with IFRS to recognise a deferred tax liability on the difference between the provisional fair value of newly consolidated assets and liabilities with their tax base.

Turquoise Hill Resources Ltd. (formerly Ivanhoe Mines Limited)

During the year ended 31 December 2011, Rio Tinto increased its ownership of shares in Ivanhoe Mines Limited by 132.7 million (2010: 145.6 million), for aggregate consideration of US$1,860 million (2010: US$1,189 million), increasing its ownership from 40.3 per cent to 49.0 per cent (2010: from 19.7 per cent to 40.3 per cent).

Consolidation of Oyu Tolgoi

On 15 December 2010, Rio Tinto consolidated provisional fair values relating to OT, following the signing of a new agreement with Ivanhoe, under which Rio Tinto obtained contractual control over certain policies and activities of OT. No direct equity interest was acquired under the agreement and the existing equity arrangements were not changed as a result of the agreement. OT is owned 66 per cent by Ivanhoe and 34 per cent by the Government of Mongolia. The signing of the agreement did not affect the Government of Mongolia s economic interest in OT.

The fair values were finalised by 15 December 2011, 12 months after the effective date of the agreement with Ivanhoe. During the course of the year ended 31 December 2011, certain reallocations between balance sheet categories were identified as additional information became available. An amount of US$1,087 million was reclassified to loans and borrowings, with corresponding adjustments of US$676 million to non-controlling interests and US$352 million to Investments in Equity Accounted Units.

The restatement arising from reallocation between balance sheet categories at 31 December 2010 resulted in an increase to Goodwill of US$20 million and a reduction of US$86 million to both the non-cash gain on consolidation recognised in the income statement, and to equity attributable to owners of Rio Tinto. Fair values have not been restated other than for the impact of the reallocation. The reallocation did not result in an impairment.

Ivanhoe Mines Ltd

In addition to the agreement described above, during the year ended 31 December 2010 Rio Tinto also entered into the transactions described below, in relation to its investment in Ivanhoe Mines Ltd (Ivanhoe).

					Ownership after transaction	
Date	**Description**	**Shares acquired (million)**	**Price per Share C$**	**Aggregate consideration US$ million**	**Shares (million)**	**%**
1 March 2010	Share purchase	**15.0**	**16.31**	**241**	**98.6**	**22.4**
30 June 2010	Warrant exercise	**46.1**	**US$8.54**	**393**	**144.7**	**29.6**
13 September 2010	Debt facility conversion	**40.1**	**US$10.00**	**(a)**	**184.8**	**34.9**
13 September 2010	Anti-dilution warrants	**0.6**	**3.15**	**2**	**185.4**	**34.9**
15 December 2010	Series B warrants (partial)	**33.8**	**US$8.88**	**300**	**219.2**	**38.6**
15 December 2010	Share purchase from Robert Friedland	**10.0**	**(b)**	**253**	**229.2**	**40.3**
Total		**145.6**		**1,189**		

(a) On 13 September 2010, Rio Tinto increased its ownership to 34.9 per cent following automatic conversion of the US$350 million convertible debt facility Rio Tinto made available to Ivanhoe in 2007, which was fully drawn down by mid 2008. The outstanding principal and accrued interest (US$400 million) under the credit facility automatically converted on maturity into common shares at a price of US$10 per share.

(b) The Robert Friedland share purchase has a price equal to the simple average of the closing price of Ivanhoe shares in the NYSE on the 20 days preceding 8 December 2010.

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2012 Disposals

Alcan Cable

On 21 May 2012, Rio Tinto reached an agreement to sell Alcan Cable to General Cable Corporation. Divestment of the North American portion was completed on 5 September 2012 for US$171 million, with divestment of the Tianjin, China operation completing on 3 December 2012 for US$58 million. Disposal proceeds include initial working capital adjustments. Finalisation of working capital adjustment will take place in 2013.

Chalco Joint Venture and Settlement Agreement with Government of Guinea for the Simandou Iron Ore Project

On 24 April 2012, Rio Tinto and Chinalco s listed subsidiary, Chalco, completed the formation of their joint venture (the JV) to develop and operate the Simandou iron ore project in Guinea, following the completion of all Chinese regulatory approvals. To complete their earn in, a consortium led by Chalco made a payment of US$1.35 billion, in line with an agreement reached with Rio Tinto on 29 July 2010.

Rio Tinto and the Chalco consortium now hold a 53 per cent and 47 per cent interest respectively in the JV through their investment in Simfer Jersey Ltd., a Rio Tinto subsidiary; this translates into a 50.35 per cent and 44.65 per cent interest in the Simandou project, through the JV s 95 per cent interest in Simfer S.A. (Simfer), the Rio Tinto subsidiary which currently undertakes the various aspects of the Simandou project. The remaining five per cent is held by the International Finance Corporation, part of the World Bank.

Under the Settlement Agreement signed by Rio Tinto and the Government of Guinea (GoG) on 22 April 2011, the Government has an option to take an interest of up to 35 per cent in Simfer, which will undertake the mining portion of the Simandou project in stages over a 20 year period.

The Settlement Agreement also provides for the transfer of ownership of railway and port infrastructure from Simfer to a newly formed Infrastructure SPV (InfraCo), with GoG entitled to take a 51 per cent interest in InfraCo. The other Simfer participants will take up an interest in the remaining portion of InfraCo equity in proportion to their relative interests in Simfer.

The infrastructure will be transferred to GoG ownership after 25 to 30 years. Simfer will retain its status as a foundation customer.

Certain provisions of the Settlement Agreement, including the GoG participation regime changes, require amendment to Simfer s current mining convention (Mining Convention), requires legislative ratification in order for these provisions to have full effect.

Both prior to and post participation by Chalco and GoG, Rio Tinto will retain control of Simfer and, therefore, the mining portion of the Simandou project. As such, Rio Tinto will continue to consolidate its interest in Simfer as a subsidiary. Contributions to funding made by Chalco to acquire its interest in the JV by purchasing a 47 per cent interest in Simfer Jersey Ltd during 2012, were credited to equity and included within financing cash flows in the Group cash flow statement. The effect on the Group of the options granted to GoG will be recognised upon legislative ratification of the amendments to the Mining Convention discussed above.

The eventual basis of consolidation of InfraCo remains to be determined pending finalisation of the detailed infrastructure agreements.

Other disposals

On 1 August 2012, Rio Tinto completed divestment of its Specialty Alumina businesses to H.I.G., and on 19 December 2012, sold the Lynemouth Power Station in the UK to RWE. The terms of these transactions are confidential. Together these disposals resulted in a post tax profit of US$16 million.

2011 Disposals

Constellium (formerly Alcan Engineered Products)

On 4 January 2011, Rio Tinto completed the divestment of 61 per cent of Alcan Engineered Products (AEP) to certain investment funds affiliated with Apollo Global Management, LLC (Apollo) and the Fonds Strategique d Investissement (FSI). The terms of the transaction are confidential. AEP was rebranded as Constellium on 3 May 2011.

Apollo is now the majority shareholder in Constellium (formerly AEP) with a 51 per cent stake in a new holding company for AEP, with the FSI holding 10 per cent. Rio Tinto holds a 36 per cent stake and accounts for its interest in Constellium as an equity accounted unit.

Divestment of the talc business

On 1 August 2011, Rio Tinto completed the divestment of its talc business to Imerys for gross consideration based on an enterprise value of US$340 million before any deductions or tax.

2010 Disposals

Rio Tinto completed the sale of Alcan Packaging global pharmaceuticals, global tobacco, food Europe and food Asia divisions to Amcor for a total consideration of US$1,948 million on 1 February 2010. The consideration was adjusted to exclude Medical Flexibles operations and to reflect actual business performance over the six months preceding completion.

Rio Tinto s 75.7 per cent owned subsidiary Coal & Allied sold the Maules Creek project to Aston Resources, a private Australian company, for A$480 million (US$427 million).

The sale was completed on 18 February 2010. Coal & Allied s Vickery asset was sold to Whitehaven Coal (ASX listed) for A$31.5 million (US$28 million), with an effective date of 4 February 2010.

The sale of the Alcan Packaging Food Americas division to Bemis Company Inc., for a total consideration of US$1.2 billion was completed on 1 March 2010.

On 5 July 2010, Rio Tinto completed the divestment of the remainder of its Alcan Packaging business with the closing of the sale of the Medical Flexibles business acquired by Amcor for US$66 million and of the sale of the Alcan Beauty Packaging business acquired by Sun European Partners LLP for an undisclosed sum.

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Notes to the 2012 financial statements continued

39 Directors and key management remuneration

Aggregate remuneration, calculated in accordance with the Companies Act 2006, of the directors of the parent companies was as follows:

	2012	2011	2010
	US$ 000	US$ 000	US$ 000
Emoluments	**11,165**	10,145	11,384
Long term incentive plans		3,215	3,334
	11,165	13,360	14,718
Pension contributions: defined contribution plans	**66**	61	54
Gains made on exercise of share options	**1,668**		17,265

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 (PGCEOs) and Group executives.

The aggregate remuneration incurred by Rio Tinto plc in respect of its directors was US$7,357,000 (2011: US$9,059,000; 2010: US$10,510,000). The aggregate pension contribution to defined contribution plans was nil (2011: nil, 2010: nil). The aggregate remuneration, including pension contributions and other retirement benefits, incurred by Rio Tinto Limited in respect of its directors was US$3,874,000 (2011: US$4,362,000; 2010: US$4,262,000). The aggregate pension contribution to defined contribution plans was US$66,000 (2011: US$61,000; 2010: US$54,000).

During 2012, three directors (2011: three; 2010: three) accrued retirement benefits under defined benefit arrangements, and one director (2011: one; 2010: one) accrued retirement benefits under defined contribution arrangements.

Emoluments included in the table above have been translated from local currency at the average 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 5, on pages 92 to 125 of the 2012 Annual report.

Aggregate compensation, representing the expense recognised under IFRS, of the Group s key management, including directors, was as follows:

	2012	2011	2010
	US$ 000	US$ 000	US$ 000
Short term employee benefits and costs	**27,164**	25,122	28,487

Post employment benefits	**5,121**	4,542	3,984
Share based payments	**32,435**	28,190	20,822
	64,720	57,854	53,293

The figures shown above include employment costs which comprise social security and accident premiums in 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$2,863,000 (2011: US$2,010,000; 2010: US$2,020,000) and although disclosed here, are not included in Table 1 of the Remuneration report.

Alan Davies received an interest free advance of A$55,600 (net) for home sale assistance in accordance with the terms and conditions of his international secondment, prior to his appointment to the Executive Committee. This advance is reimbursable to Rio Tinto if Mr Davies has not sold his home by 30 August 2014.

More detailed information concerning the remuneration of key management is shown in the *Remuneration report*, including Tables 1 to 5 on pages 114 to 125 of the 2012 Annual report.

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40 Auditors remuneration

	2012 US$m	Restated[f] 2011 US$m	Restated[f] 2010 US$m
Group Auditors remuneration[a]			
Audit of the company	**3.1**	2.8	2.7
Audit of subsidiaries	**14.1**	11.6	13.0
Total audit	**17.2**	14.4	15.7
Audit related assurance services	**1.5**	1.1	1.0
Other assurance services[b]	**3.8**	3.3	9.9
Total assurance services	**5.3**	4.4	10.9
Tax compliance[c]	**0.3**	0.3	0.1
Tax advisory services[c]	**0.4**	1.2	0.4
Services related to corporate finance transactions not covered above			
services in connection with bond issues/capital raising	**0.6**	0.5	0.3
services in connection with divestment programme	**0.3**	2.0	5.0
Other non-audit services not covered above	**0.5**	1.1	0.9
Total non-audit services	**2.1**	5.1	6.7
	24.6	23.9	33.3
Remuneration payable to other accounting firms[d]			
Audit of the accounts of the Group s subsidiaries	**2.9**	2.6	2.6
Taxation services[c]	**9.8**	12.0	6.6
Financial systems design and implementation	**0.5**	0.8	
Internal audit	**9.5**	10.5	6.5
Litigation services	**0.1**	0.3	0.4
Other services[e]	**58.1**	37.6	18.6
	80.9	63.8	34.7
Fees in respect of pension scheme audits	**0.1**	0.1	
	81.0	63.9	34.7

(a) The remuneration payable to PricewaterhouseCoopers, 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 PricewaterhouseCoopers by the Companies and their subsidiaries, together with the Group s share of the payments made by proportionally consolidated units. Non-audit services arise largely from assurance and/or regulation related work.

(b) Other assurance services are mainly related to carve-out financial statements, sustainability assurance and limited assurance over the Taxes paid report.

(c) Taxation services includes tax compliance and advisory services. Tax compliance involves the preparation or review of returns for corporation, income, sales and excise taxes. Tax advisory services includes advice on non recurring acquisitions and disposals, advice on transfer pricing and advice on employee global mobility.

(d) Remuneration payable to other accounting firms does not include fees for similar services payable to suppliers of consultancy services other than accountancy firms.

(e) Other services in 2012, 2011 and 2010 in respect of other accounting firms includes costs relating to capital raising, divestments and similar corporate services, pension fund and payroll administration, advice on accounting matters, secondments of accounting firms staff, forensic audit and other consultancy.

(f) Comparatives have been restated to include payments to accounting firms for global expatriate tax services which are recharged to the Group by our relocation consultants.

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Notes to the 2012 financial statements continued

41 Related party transactions

Information about material related party transactions of the Rio Tinto Group is set out below:

Subsidiary companies and proportionally consolidated units

Details of investments in principal subsidiary companies are disclosed in note 34. Information relating to proportionally consolidated units can be found in note 37.

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 jointly controlled entities for toll processing of bauxite and alumina. Sales relate largely to charges for supply of coal to jointly controlled marketing entities for onward sale to third party customers.

	2012	2011	2010
Income statement items	**US$m**	US$m	US$m
Purchases from equity accounted units	**(3,687)**	(4,211)	(3,009)
Sales to equity accounted units	**3,454**	4,079	3,038

Cash flow statement items	**US$m**	US$m	US$m
Cash movement on EAU funded balances (note 25)		1,683	
Net funding of equity accounted units	**(311)**	(745)	(154)

Statement of financial position items	**US$m**	US$m
Investments in equity accounted units (note 15)[(a)]	**5,312**	9,833
Loans to equity accounted units	**287**	589
Loans from equity accounted units	**(183)**	(3,472)
Trade and other receivables: amounts due from equity accounted units (note 18)	**1,393**	1,374
Trade and other payables: amounts due to equity accounted units (note 26)	**(514)**	(589)

(a) 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 disclosed in note 46.

Directors and key management

Details of directors and key management remuneration are set out in note 39 and in the Remuneration report on pages 92 to 125.

42 Exchange rates in US$

The principal exchange rates used in the preparation of the 2012 financial statements are:

	Annual average			Year end		
	2012	2011	2010	**2012**	2011	2010
Sterling	**1.58**	1.60	1.55	**1.62**	1.54	1.55
Australian dollar	**1.04**	1.03	0.92	**1.04**	1.01	1.02
Canadian dollar	**1.00**	1.01	0.97	**1.00**	0.98	1.00
South African rand	**0.12**	0.14	0.14	**0.12**	0.12	0.15
Euro	**1.29**	1.39	1.33	**1.32**	1.30	1.33

43 Bougainville Copper Limited (BCL)

Mining has been suspended at the Panguna mine since 1989. Safe mine 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 undertaken in 2008 indicates that costs in a range of US$2 billion to US$4 billion would be required to reopen the mine assuming all site infrastructure is replaced. The directors consider that the Group does not currently realise a benefit from its interest in BCL and therefore BCL information continues to be excluded from the financial statements. BCL reported a net loss of US$2 million for the financial year (2011: net loss of US$2 million). This is based upon actual transactions for the financial year. The aggregate amount of capital and reserves reported by BCL as at 31 December 2012 was US$137 million (2011: US$139 million). The Group owns 215,920,089 shares in BCL, representing 53.8 per cent of the issued share capital. The investment of US$195 million was fully provided against in 1991. At 31 December 2012, the number of shares in BCL held by the Group, multiplied by the share price as quoted in the Australian Securities Exchange, resulted in an amount of US$111 million (2011: US$164 million).

44 Events after the statement of financial position date

On 13 February 2013, Turquoise Hill Resources Ltd. (Turquoise Hill) signed a binding agreement with Sumeru Gold BV for the sale of its 50 per cent interest in Altynalmas Gold Ltd (Altynalmas), which was acquired with Turquoise Hill on 24 January 2012, for a total cash consideration of US$300 million. Completion of the transaction is subject to customary closing conditions, including regulatory approvals from the Republic of Kazakhstan s competent authorities. Altynalmas owns the Kyzyl Gold Project in north eastern Kazakhstan. The transaction is expected to close in the second quarter of 2013.

Other than the items above, no events were identified after the statement of financial position date which could be expected to have a material impact on the consolidated financial statements.

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45 Share-based payments

Rio Tinto plc and Rio Tinto Limited (the Companies) have a number of share based payment 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/(credit) that has been recognised in the income statement for Rio Tinto s share-based compensation plans, and the related liability (for cash-settled plans), is set out in the table below.

	Charge/(credit) recognised for the year			Liability at the end of the year	
	2012	2011	2010	**2012**	2011
	US$m	US$m	US$m	**US$m**	US$m
Equity-settled plans	**242**	157	119		
Cash-settled plans	**(3)**	(1)	5	**2**	2
Total	**239**	156	124	**2**	2

As noted in note 38, the Group gained control of Turquoise Hill Resources Ltd. (Turquoise Hill), which is a publicly quoted company, from 24 January 2012. Turquoise Hill has its own share based payment plans. Turquoise Hill also has two publicly quoted subsidiaries, Ivanhoe Australia Limited and South Gobi Resources Limited which have their own share based payment plans. The share based payment charge for all of these plans under Rio Tinto accounting policies and adjusted for acquisition accounting was US$76 million. The 2012 charge reflected costs associated with management changes at Turquoise Hill in the first half of the year. Such costs are not expected to recur. The plans are not material to the Group s income statement or statement of financial position. Turquoise Hill plans were not replaced with Rio Tinto plans on acquisition and as such their historical plans still apply.

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.

No awards were granted under the Share Savings Plans in 2012 as these plans have been replaced by the Global Employee Share Plan.

Share Option Plan (SOP)

The Group has a policy of settling awards made under the SOP 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 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.

Share Ownership Plan

The fair values of awards of Matching and Free Shares made by Rio Tinto are taken to be the market value of the shares on the date of purchase. These awards are settled in equity. The total fair value of shares awarded during the year was US$3 million (2011: US$3 million).

Performance Share Plan

Participants are assigned shares in settlement of their awards and therefore the Plan is accounted for in accordance with the requirements applying to equity-settled share-based payment transactions. The fair value of the awards was calculated using a Monte Carlo simulation model taking into account the TSR performance conditions. In each case fair values were adjusted for non receipt of dividends between grant date and date of vesting (excluding awards for executive directors and product group CEOs). Forfeitures are assumed prior to vesting at three per cent per annum of outstanding awards (except for the 2009 awards which applied to senior executives only with no allowance for forfeitures).

Management Share Plan

The Management Share Plan was introduced during 2007 to provide conditional share-based awards to management. The vesting of these awards is dependent on service and/or performance based conditions being met. 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 share price on the day of grant less a small adjustment for the timing of dividends. Forfeitures are assumed prior to vesting at five per cent per annum of outstanding awards.

Bonus Deferral Plan

The Bonus Deferral Plan was originally introduced during 2009 for the mandatory deferral of the 2008 bonuses for executive directors, product group executives and for other executives. Additional Bonus Deferral Awards were made in 2010 and 2011 for the mandatory deferral of 50 per cent of the bonuses for executive directors and product group executives and 10 per cent of the bonuses for other executives.

The vesting of these awards is dependent only on service conditions being met. 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 share price on the day of grant less a small adjustment for the timing of dividends vesting. Forfeitures are assumed prior to vesting at three per cent per annum of outstanding awards.

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Notes to the 2012 financial statements continued

45 Share-based payments continued

Lattice-based option valuation model

The fair value of share options is estimated as at the date of grant using a lattice-based option valuation model. The significant assumptions used in the valuation model are disclosed below. Expected volatilities are based on the historical volatility of Rio Tinto s share returns under the UK and Australian listings. Historical data was used to estimate employee forfeiture and cancellation rates within the valuation model. Under the Share Option Plans, it is assumed that after options have vested, 20 per cent per annum of participants will exercise their options when the market price is at least 20 per cent above the exercise price of the option. Participants in the Share Savings Plans are assumed to exercise their options immediately after vesting.

The implied lifetime of options granted is derived from the output of the option valuation model and represents the period of time that options granted are expected to be outstanding. The risk-free rate used in the valuation model is equal to the yield available on UK and Australian zero-coupon government bonds (for Rio Tinto plc and Limited options respectively) at the date of grant with a term equal to the expected term of the options.

The key assumptions used in the valuations are noted in the table below:

Awards made in 2012	Risk-free interest rate %	Expected volatility %	Dividend yield %	Forfeiture rates %	Implied lifetime Years
Share Option Plan					
Rio Tinto plc	1.2	46.0	2.6		4.7
Rio Tinto Limited	4.0	37.0	2.1		5.4

Summary of options outstanding

A summary of the status of the Companies equity-settled share option plans at 31 December 2012 is presented below.

Options outstanding at 31 December 2012	Number	Weighted average exercise price per option £/A$	Weighted average remaining contractual life Years	Aggregate intrinsic value 2012 US$m
Rio Tinto plc Share Savings Plan (£21 £32)	1,046,692	26.19	1.7	15

Rio Tinto Limited Share Savings Plan (A$48 A$67)	1,770,782	53.65	2.0	24
Rio Tinto plc Share Option Plan (£10 £ 43)	3,306,883	24.47	5.3	63
Rio Tinto Limited Share Option Plan (A$17 A$82)	918,458	47.49	5.1	20
	7,042,815			122

As at 31 December 2011 there were 8,475,949 options outstanding with an aggregate intrinsic value of US$117 million.

Options exercisable at 31 December 2012

Rio Tinto plc Share Option Plan (£10 £23)	1,999,254	15.59	3.4	63
Rio Tinto Limited Share Option Plan (A$17 A$55)	664,632	36.89	4.1	21
	2,663,886			84

As at 31 December 2012, there were no options (2011: no options) exercisable under either the Rio Tinto plc or the Rio Tinto Limited Share Savings Plans.

The Management Share Plan, Performance Share Plan and Bonus Deferral Plan together represent 83% of the total IFRS 2 charge for Rio Tinto plc and Rio Tinto Limited plans.

A summary of the status of these plans at 31 December is presented overleaf.

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Performance Share Plan

	Rio Tinto plc Awards				Rio Tinto Ltd Awards			
	2012 Number	**Weighted average fair value at grant date 2012 £**	2011 Number	Weighted average fair value at grant date 2011 £	**2012 Number**	**Weighted average fair value at grant date 2012 A$**	2011 Number	Weighted average fair value at grant date 2011 A$
Non-vested shares at 1 January	**2,473,203**	**33.67**	2,475,349	27.37	**1,204,561**	**71.24**	1,289,576	57.09
Awarded	**711,701**	**24.67**	782,919	31.28	**531,937**	**44.79**	466,965	62.26
Forfeited	**(44,625)**	**29.88**	(36,018)	32.37	**(24,794)**	**60.49**	(24,040)	69.76
Failed performance conditions	**(358,026)**	**40.69**	(366,574)	10.49	**(126,498)**	**89.65**	(254,234)	28.96
Vested	**(76,708)**	**35.08**	(382,473)	10.35	**(43,430)**	**82.61**	(273,706)	28.64
Non-vested shares at 31 December	**2,705,545**	**30.40**	2,473,203	33.67	**1,541,776**	**60.46**	1,204,561	71.24

	2012 Number	**Weighted average share price 2012 £**	2011 Number	Weighted average share price 2011 £	**2012 Number**	**Weighted average share price 2012 A$**	2011 Number	Weighted average share price 2011 A$
Shares issued in respect of vested awards during the year	**76,708**	**36.40**	382,473	43.27	**43,430**	**67.01**	273,706	87.81

In addition to the equity-settled awards shown above, there were 2,405 Rio Tinto plc cash-settled awards outstanding at 31 December 2012. The total liability for these awards at 31 December 2012 was less than US$1 million (2011: less than US$1 million).

Management Share Plan and Bonus Deferral Plan

	Rio Tinto plc Awards	Rio Tinto Ltd Awards

	2012 Number	**Weighted average fair value at grant date 2012 £**	2011 Number	Weighted average fair value at grant date 2011 £	**2012 Number**	**Weighted average fair value at grant date 2012 A$**	2011 Number	Weighted average fair value at grant date 2011 A$
Non-vested awards at 1 January	**2,565,372**	**30.05**	2,758,763	27.58	**1,574,088**	**65.23**	1,475,544	62.46
Awarded	**819,564**	**35.48**	828,730	39.83	**749,616**	**64.16**	544,812	79.60
Forfeited	**(135,133)**	**37.68**	(179,131)	30.92	**(62,583)**	**71.73**	(67,699)	61.31
Expired	**(3,411)**	**17.32**	(382)	46.13	**(4,032)**	**48.32**		
Vested	**(1,173,263)**	**20.34**	(842,608)	31.39	**(682,936)**	**48.60**	(378,569)	75.81
Non-vested awards at 31 December	**2,073,129**	**37.21**	2,565,372	30.05	**1,574,153**	**71.73**	1,574,088	65.23
Comprising of								
Management Share Plan	**1,838,633**	**37.12**	2,446,784	29.56	**1,409,513**	**71.96**	1,521,599	64.29
Bonus Deferral Plan	**234,496**	**37.90**	118,588	40.13	**164,640**	**69.74**	52,489	80.36

	2012 Number	**Weighted average share price 2012 £**	2011 Number	Weighted average share price 2011 £	**2012 Number**	**Weighted average share price 2012 A$**	2011 Number	Weighted average share price 2011 A$
Shares issued in respect of vested awards during the year (including dividend shares applied on vesting)								
Management Share Plan	**1,251,063**	**35.63**	599,902	42.88	**697,695**	**65.30**	176,881	80.28
Bonus Deferral Plan	**7,533**	**33.87**	245,928	32.65	**372**	**69.74**	117,160	65.66

In addition to the equity-settled awards shown above, there were 5,680 Rio Tinto plc cash-settled awards and 966 Rio Tinto Limited cash settled awards outstanding at 31 December 2012. The total liability for the Rio Tinto plc awards at 31 December 2012 was less than US$1 million (2011: less than US$1 million) and for Rio Tinto Limited awards was less than US$1million (2011: less than US$1million).

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Notes to the 2012 financial statements continued

46 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. Valuations of these plans are produced and updated annually to 31 December by qualified actuaries.

Pension plans

The majority of the Group s pension obligations are in Canada, the UK, the US, Switzerland and the Eurozone. There are some defined benefit obligations in Australia but the retirement arrangements there are predominantly defined contribution. In general the Group has a policy of moving towards defined contribution plans.

A number of defined benefit pension plans are sponsored by the Canadian entities. The two main plans are for salaried and bargaining employees.

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.

There are a number of pension arrangements in the UK. The defined benefit sections of these arrangements are linked to final pay and are closed to new members, with new employees being admitted to defined contribution sections.

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.

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.

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 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 proportions of the total fair value of assets in the pension plans for each asset class at the statement of financial position date were:

	2012	2011
Equities	**49.1%**	47.9%
Bonds	**37.8%**	39.5%
Property	**8.0%**	8.1%
Other	**5.1%**	4.5%
	100.0%	100.0%

The assets of the plans are generally 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$47 million (2011: US$22 million).

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Main assumptions (rates per annum)

The main assumptions for the valuations of the plans under IAS 19 are set out below. Information on the sensitivity of the results to the main assumptions is set out in the sensitivity section on page 214.

	UK	Australia[a]	US	Canada	Eurozone	Switzerland	Other (mainly Africa)[b]
At 31 December 2012							
Rate of increase in salaries	4.5%	3.9%	3.9%	3.3%	2.7%	2.3%	8.7%
Rate of increase in pensions	2.4%	2.2%		0.8%	1.5%		6.7%
Discount rate	4.3%	2.9%	4.0%	3.9%	3.1%	1.7%	8.3%
Inflation[c]	2.9%	2.2%	2.4%	2.0%	2.1%	1.3%	6.7%
At 31 December 2011							
Rate of increase in salaries	4.4%	3.8%	3.7%	3.3%	2.4%	2.4%	4.9%
Rate of increase in pensions	2.5%	2.1%		0.8%	1.5%		2.9%
Discount rate	4.7%	3.2%	4.3%	4.5%	4.2%	2.0%	5.4%
Inflation[c]	3.0%	2.1%	2.2%	2.0%	2.0%	1.4%	2.9%

(a) The discount rate shown for Australia is after tax.

(b) The assumptions vary by location for the Other plans. Assumptions shown are for Southern Africa.

(c) The inflation assumption shown for the UK is for the Retail Price Index. The assumption for the Consumer Price Index at 31 December 2012 was 2.2 per cent (2011: 2.0 per cent).

The main financial assumptions used for the healthcare plans, which are predominantly in the US and Canada, were: discount rate: 4.0 per cent (2011: 4.3 per cent), medical trend rate: 6.7 per cent reducing to 5.1 per cent by the year 2018 broadly on a straight line basis (2011: 6.7 per cent, reducing to 5.0 per cent by the year 2017), 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 Statement of financial position date has a weighted average expected future lifetime of 25 years (2011: 25 years) and that a man aged 60 in 2032 would have a weighted average expected future lifetime of 27 years (2011: 27 years).

	UK	Australia	US	Canada	Eurozone	Switzerland	Other (mainly Africa)[a]
Long term rate of return expected at 1 January 2012							

Equities	6.9%	7.2%	7.2%	6.7%	7.1%	5.4%	9.5%
Bonds	3.3%	3.5%	3.7%	3.3%	3.6%	1.9%	5.2%
Property	4.8%	5.0%	5.0%	4.5%	4.9%	3.2%	7.3%
Other	2.8%	2.2%	2.8%	2.4%	2.7%	1.1%	3.7%
Long term rate of return expected at 1 January 2011							
Equities	7.6%	8.4%	7.8%	7.2%	7.0%	5.7%	8.6%
Bonds	4.4%	4.9%	4.6%	4.2%	4.4%	2.5%	4.8%
Property	5.8%	6.3%	5.9%	5.3%	5.2%	3.8%	6.7%
Other	3.5%	2.7%	3.1%	3.2%	2.8%	1.9%	3.1%

(a)The assumptions vary by location for the Other plans. Assumptions shown are for Southern Africa.
The expected rate of return on pension plan assets is determined as management s best estimate of the long term returns of the major asset classes equities, bonds, property and other weighted by the allocation of assets among the categories at the measurement date. The expected rate of return is calculated using geometric averaging. The expected rates of return shown have been reduced to allow for plan expenses including, where appropriate, taxes incurred within pension plans on investment returns.

Based on the assumptions made and the distribution of assets the weighted average expected return on assets as at 1 January 2012 was 5.0 per cent (2011: 5.9 per cent). Under the revised IAS 19 this assumption will not be needed for 2013.

The sources used to determine management s best estimate of long term returns are numerous and include country-specific bond yields, which may be derived from the market using local bond indices or by analysis of the local bond market, and country-specific inflation and investment market expectations derived from market data and analysts or governments expectations as applicable.

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Notes to the 2012 financial statements continued

46 Post retirement benefits continued

Total expense recognised in the income statement

	Pension benefits	Other benefits	**2012 Total US$m**	2011 Total US$m	2010 Total US$m
Current employer service cost for defined benefit plans	(255)	(14)	**(269)**	(250)	(233)
Interest cost	(773)	(46)	**(819)**	(910)	(974)
Expected return on assets	664		**664**	783	777
Past service cost	(3)	(2)	**(5)**	(2)	(29)
Gains on curtailment and settlement	28	6	**34**	61	111
Total defined benefit expense	(339)	(56)	**(395)**	(318)	(348)
Current employer service cost for defined contribution and industry-wide plans	(349)	(2)	**(351)**	(286)	(225)
Total expense recognised in the income statement	(688)	(58)	**(746)**	(604)	(573)

The above expense amounts are included as an employee cost within net operating costs. In 2012, US$34 million (pre-tax) of curtailment and settlement gains relating to the sale of businesses have been excluded from Underlying earnings (2011: US$21 million, 2010: US$88 million).

Total amount recognised in other comprehensive income before tax

	2012 US$m	2011 US$m	2010 US$m
Actuarial losses	**(433)**	(1,948)	(719)
(Loss) on currency translation on plans using US dollar functional currency			(67)
Gain/(loss) on application of asset limit	**13**	(13)	
Total loss recognised in other comprehensive income[(a)]	**(420)**	(1,961)	(786)
Cumulative amount recognised in Other Comprehensive Income at 31 December	**(4,967)**	(4,547)	(2,586)

(a) There was no loss related to equity accounted units in 2012 (2011: US$5 million loss; 2010: US$4 million loss).

(Deficits)/surpluses in the plans

The following amounts were measured in accordance with IAS 19 at 31 December:

			2012	2011	2010	2009	2008
	Pension benefits	Other benefits	**Total US$m**	Total US$m	Total US$m	Total US$m	Total US$m
Total fair value of plan assets	14,599		**14,599**	13,075	13,144	12,407	9,306
Present value of obligations funded	(18,340)		**(18,340)**	(16,798)	(15,507)	(15,148)	(11,044)
Present value of obligations unfunded	(1,056)	(1,250)	**(2,306)**	(2,135)	(2,002)	(2,385)	(1,784)
Present value of obligations total	(19,396)	(1,250)	**(20,646)**	(18,933)	(17,509)	(17,533)	(12,828)
Unrecognised past service cost	5	(3)	**2**	4	3	(7)	(12)
Effect of asset limit				(13)			(19)
Aggregate (deficit) to be shown in the statement of financial position	(4,792)	(1,253)	**(6,045)**	(5,867)	(4,362)	(5,133)	(3,553)
Comprising:							
Deficits	(4,946)	(1,253)	**(6,199)**	(5,955)	(4,472)	(5,150)	(3,713)
Surpluses	154		**154**	88	110	17	160
Net (deficits) on pension plans	(4,792)		**(4,792)**	(4,660)	(3,238)	(3,803)	(2,648)
Unfunded post retirement healthcare obligation		(1,253)	**(1,253)**	(1,207)	(1,124)	(1,330)	(905)

The surplus amounts shown above are included in the statement of financial position as Trade and other receivables. See note 18. Deficits are shown in the Statement of financial position as Post retirement benefits. See note 27.

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Contributions to plans

Contributions to defined benefit pension plans during 2012 totalled US$658 million (2011: US$610 million; 2010: US$1,036 million). Contributions of US$329 million (2011: US$269 million; 2010: US$212 million) were made to defined contribution arrangements and US$20 million (2011: US$16 million; 2010: US$12 million) to industry-wide plans; these are charged against profits and are included in the figures for defined contribution current employer service costs shown on the previous page.

Contributions for other benefits totalled US$62 million (2011: US$72 million; 2010: US$79 million).

Contributions to defined benefit pension plans for 2013 are estimated to be around US$143 million more than for 2012. This is kept under regular review and actual contributions will be determined in line with the Group s wider financing strategy. Healthcare plans are generally unfunded and contributions for future years will be equal to benefit payments and therefore cannot be predetermined.

Movements in the present value of the defined benefit obligation and in the fair value of assets

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 operations that are proportionally consolidated or equity accounted. 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	**2012 Total US$m**	2011 Total US$m
Change in present value of obligation:				
Present value of obligation at start of the year	(17,730)	(1,203)	**(18,933)**	(17,509)
Current employer service cost	(255)	(14)	**(269)**	(250)
Interest cost	(773)	(46)	**(819)**	(910)
Contributions by plan participants	(40)	(3)	**(43)**	(47)
Experience gain	34	55	**89**	33
Changes in actuarial assumptions (loss)	(1,243)	(111)	**(1,354)**	(1,674)
Benefits paid	1,019	63	**1,082**	1,048
Arrangements divested	41	29	**70**	19
Inclusion of arrangements		(16)	**(16)**	(2)
Past service cost	(1)	(3)	**(4)**	(3)
Curtailments	28	6	**34**	61
Settlements	6		**6**	1
Currency exchange rate (loss)/gain	(482)	(7)	**(489)**	300
Present value of obligation at end of the year	(19,396)	(1,250)	**(20,646)**	(18,933)

Gains and losses on obligations	**2012**	2011	2010	2009	2008
	89	33	146	(139)	(37)

Experience gains/(losses): (i.e. variances between the estimate of obligations and the subsequent outcome)					
As a percentage of the present value of the year end obligations	**0%**	0%	1%	(1%)	0%
Change in assumptions (loss)/gain (US$m)	**(1,354)**	(1,674)	(1,207)	(1,671)	1,684

			2012	2011
			Total	Total
	Pension benefits	Other benefits	**US$m**	US$m
Change in plan assets:				
Fair value of plan assets at the start of the year	13,075		**13,075**	13,144
Expected return on plan assets	664		**664**	783
Actuarial gain/(loss) on plan assets	832		**832**	(320)
Contributions by plan participants	40	3	**43**	47
Contributions by employer	666	60	**726**	695
Benefits paid	(1,019)	(63)	**(1,082)**	(1,048)
Arrangements divested	(13)		**(13)**	(5)
Settlements	(6)		**(6)**	(1)
Currency exchange rate gain/(loss)	360		**360**	(220)
Fair value of plan assets at the end of the year	14,599		**14,599**	13,075
Actual return on plan assets			**1,496**	463

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Notes to the 2012 financial statements continued

46 Post retirement benefits continued

	2012	2011	2010	2009	2008
Difference between the expected and actual return on plan assets:					
Gain/(loss) (US$m)	**832**	(320)	346	891	(3,308)
As a percentage of year end plan assets	**6%**	(2%)	3%	7%	(36%)

Sensitivity

The values reported for the defined benefit pension obligations are sensitive to the actuarial assumptions used for projecting future benefit payments and discounting those payments. The approximate sensitivities to the principal assumptions used to measure the obligations are:

		Approximate (increase)/ decrease in obligations	
		Pensions	**Other**
Assumption	Change in assumption	**US$m**	**US$m**
Discount rate	increase of 0.5 percentage points	**1,276**	**79**
	decrease of 0.5 percentage points	**(1,367)**	**(85)**
Inflation	increase of 0.5 percentage points	**(682)**	**(38)**
	decrease of 0.5 percentage points	**651**	**35**
Salary increases	increase of 0.5 percentage points	**(139)**	**(4)**
	decrease of 0.5 percentage points	**135**	**4**
Demographic allowance for future improvements in longevity	participants assumed to have the mortality rates of individuals who are one year older	**504**	**25**
	participants assumed to have the mortality rates of individuals who are one year younger	**(504)**	**(25)**

Post-retirement healthcare sensitivity to changes in assumptions

An increase of one per cent in the assumed medical cost trend rates would increase the aggregate of the current service cost and interest cost components of the post retirement healthcare expense by US$4 million (2011: US$5 million; 2010: US$7 million), and increase the benefit obligation for these plans by US$74 million (2011: US$71 million; 2010: US$72 million). A decrease of one per cent in the assumed medical cost trend rates would decrease the aggregate of the current service cost and interest cost components of the post retirement healthcare expense by US$4 million (2011: US$4 million; 2010: US$6 million), and decrease the benefit obligation for these plans by US$67 million (2011: US$60 million; 2010: US$62 million).

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Rio Tinto financial information by business unit

Twelve months ended 31 December

		Sales revenue[a]			EBITDA[b]			Net earnings[c]		
	Rio Tinto interest	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	2010
	%	**US$m**	US$m	US$m	**US$m**	US$m	US$m	**US$m**	US$m	US$m
Iron Ore										
Hamersley	100.0	**17,832**	21,626	16,746	**11,989**	15,942	11,841	**7,588**	10,621	7,924
Robe River[d]	53.0	**4,353**	5,229	4,322	**3,150**	4,084	3,328	**1,549**	2,172	1,771
Iron Ore Company of Canada	58.7	**1,972**	2,471	2,447	**665**	1,329	1,379	**230**	491	491
Product group operations		**24,157**	29,326	23,515	**15,804**	21,355	16,548	**9,367**	13,284	10,186
Evaluation projects/other		**122**	149	67	**(129)**	(22)	129	**(125)**	(17)	127
		24,279	29,475	23,582	**15,675**	21,333	16,677	**9,242**	13,267	10,313
Aluminium	(e)									
Bauxite & Alumina		**3,038**	2,834	2,490	**146**	360	321	**(197)**	(12)	(32)
Primary Metal		**5,624**	6,985	6,415	**805**	1,385	1,354	**69**	450	496
Other Integrated Operations		**35**	46	46	**(55)**	(142)	(14)	**(24)**	(128)	(42)
Intersegment		**(1,401)**	(1,786)	(1,422)	**3**	2	(10)	**3**	3	(6)
Integrated Operations		**7,296**	8,079	7,529	**899**	1,605	1,651	**(149)**	313	416
Other Product Group Items		**2,650**	3,923	3,592	**124**	127	190	**92**	95	129
Product group operations		**9,946**	12,002	11,121	**1,023**	1,732	1,841	**(57)**	408	545
Evaluation projects/other		**159**	157	192	**62**	31	47	**60**	34	66
		10,105	12,159	11,313	**1,085**	1,763	1,888	**3**	442	611
Copper										
Kennecott Utah Copper	100.0	**2,412**	3,470	3,342	**1,004**	1,944	2,174	**567**	1,224	1,338
Escondida	30.0	**2,566**	2,167	2,699	**1,466**	1,203	1,806	**814**	659	1,013
Grasberg joint venture	(f)	**17**	406	611	**2**	262	403	**(17)**	129	206
Palabora	57.7	**1,072**	1,110	837	**64**	346	205	**3**	100	52

Northparkes	80.0	**453**	402	308	**247**	212	193	**144**	127	112
Product group operations		**6,520**	7,555	7,797	**2,783**	3,967	4,781	**1,511**	2,239	2,721
Evaluation projects/other		**141**	79		**(1,047)**	(573)	(282)	**(419)**	(307)	(191)
		6,661	7,634	7,797	**1,736**	3,394	4,499	**1,092**	1,932	2,530
Energy										
Rio Tinto Coal Australia	(g)	**4,998**	5,872	4,397	**1,030**	2,318	1,731	**402**	1,240	940
Rio Tinto Coal Mozambique	(h)	**10**			**(64)**	(8)		**(92)**	(7)	
Rössing	68.6	**352**	450	493	**(56)**	(83)	23	**(47)**	(48)	(3)
Energy Resources of Australia	68.4	**416**	675	533	**65**	77	118	**(131)**	(53)	22
Product group operations		**5,776**	6,997	5,423	**975**	2,304	1,872	**132**	1,132	959
Evaluation projects/other		**7**	6	23	**218**	(72)	427	**151**	(58)	228
		5,783	7,003	5,446	**1,193**	2,232	2,299	**283**	1,074	1,187
Diamonds & Minerals										
Diamonds	(i)	**741**	727	682	**103**	180	157	**(43)**	10	69
RTIT	(j)	**2,232**	1,580	1,331	**774**	345	255	**397**	151	74
Rio Tinto Minerals	(k)	**656**	901	1,015	**215**	239	209	**140**	144	199
Dampier Salt	68.4	**416**	434	442	**23**	23	79	**(4)**	(1)	29
Product group operations		**4,045**	3,642	3,470	**1,115**	787	700	**490**	304	371
Simandou iron ore project	(l)				**(328)**	(426)	(151)	**(262)**	(413)	(153)
Evaluation projects/other		**11**	12	7	**(129)**	(61)	(15)	**(109)**	(53)	(14)
		4,056	3,654	3,477	**658**	300	534	**119**	(162)	204

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Rio Tinto financial information by business unit continued

		Sales revenue[a]			EBITDA[b]			Net earnings[c]		
	Rio Tinto interest									
		2012	2011	2010	**2012**	2011	2010	**2012**	2011	2010
	%	**US$m**	US$m	US$m	**US$m**	US$m	US$m	**US$m**	US$m	US$m
Other Operations	(m)	**6,730**	8,246	10,151	**(242)**	411	757	**(528)**	(120)	237
Intersegment transactions		**(2,048)**	(2,817)	(2,758)	**(10)**	58	(34)	**(8)**	40	(15)
Product Group Total		**55,566**	65,354	59,008	**20,095**	29,491	26,620	**10,203**	16,473	15,067
Other items					**(852)**	(843)	(594)	**(698)**	(593)	(554)
Exploration and evaluation					**(118)**	(127)	(48)	**(97)**	(102)	(52)
Net interest								**(105)**	(229)	(474)
Underlying earnings					**19,125**	28,521	25,978	**9,303**	15,549	13,987
Share of equity accounted unit sales and intra-subsidiary/equity accounted units sales		**(4,630)**	(4,761)	(3,837)						
Items excluded from Underlying earnings		**31**	(56)		**286**	115	575	**(12,293)**	(9,723)	251
Consolidated sales revenue/EBITDA/net earnings		**50,967**	60,537	55,171	**19,411**	28,636	26,553	**(2,990)**	5,826	14,238
Depreciation & amortisation in subsidiaries excluding capitalised depreciation					**(4,380)**	(3,817)	(3,437)			
Impairment charges[r]					**(17,194)**	(10,115)	(982)			
Depreciation & amortisation in equity accounted units					**(501)**	(527)	(522)			
Taxation and finance items in equity accounted units[r]					**88**	(125)	(903)			
(Loss)/profit on ordinary activities before finance items and tax					**(2,576)**	14,052	20,709			

Refer to notes (a) to (r) on page 222.

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	Rio Tinto interest	Capital expenditure[o] for the year to 31 December			Depreciation & amortisation for the year to 31 December			Operating assets[p] as at 31 December			Employees as at 31 Decem		
		2012	2011	2010	**2012**	2011	2010	**2012**	2011	2010	**2012**	2011	20
	%	**US$m**	US$m	US$m	**US$m**	US$m	US$m	**US$m**	US$m	US$m	**Number**	Number	Num
Ore													
ersley	100.0	**4,828**	2,328	1,227	**1,051**	810	630	**14,647**	8,415	7,974	**9,129**	8,010	7,4
e River[d]	53.0	**1,579**	1,023	222	**308**	249	222	**4,731**	2,935	2,612	**1,784**	1,557	1,4
Ore pany of ada	58.7	**742**	653	253	**129**	110	108	**1,674**	1,177	847	**2,591**	2,361	2,
r								**16**	4	41	**18**	19	
		7,149	4,004	1,702	**1,488**	1,169	960	**21,068**	12,531	11,474	**13,522**	11,947	11,
minium	(e)												
kite & hina		**550**	665	428	**358**	351	324	**6,008**	9,504	8,249	**4,570**	4,649	4,3
ary Metal		**1,975**	1,211	531	**708**	725	716	**12,275**	15,726	21,525	**10,471**	11,075	11,4
r													
grated rations		**25**	81	4	**27**	22	22	**1,323**	974	1,041	**1,008**	1,128	1,
grated rations		**2,550**	1,957	963	**1,093**	1,098	1,062	**19,606**	26,204	30,815	**16,049**	16,852	16,9
per													
hecott Copper	100.0	**926**	561	259	**237**	227	296	**2,677**	2,025	1,870	**2,438**	2,291	2,0
ndida	30.0	**634**	481	206	**152**	135	119	**2,028**	1,548	1,468	**1,151**	1,077	1,0
berg joint ure	(f)	**136**	161	102	**31**	37	49	**679**	596	540	**2,463**	2,312	2,2
bora	57.7	**45**	64	33	**71**	86	69	**(q)**	3		**2,290**	2,292	2,
hparkes	80.0	**61**	56	53	**44**	32	32	**405**	406	403	**373**	257	
Tolgoi	(n)	**2,264**	2,225	290	**67**	3		**8,023**	5,049	2,489	**2,431**	1,131	
r		**281**	236	47	**32**	18	3	**(1,130)**	2,467	948	**1,230**	852	
		4,347	3,784	990	**634**	538	568	**12,682**	12,094	7,718	**12,376**	10,212	8,5
rgy													
Tinto Australia	(g)	**1,527**	1,016	609	**432**	349	266	**5,630**	3,993	3,145	**3,954**	3,874	3,
Tinto ambique	(h)	**109**	172		**29**			**556**	3,363		**312**	137	
ing	68.6	**17**	39	35	**29**	28	31	**85**	153	201	**1,528**	1,637	1,5
gy urces of ralia	68.4	**166**	100	41	**279**	143	70	**129**	137	348	**624**	547	
r								**596**	518		**19**	14	
		1,819	1,327	685	**769**	520	367	**6,996**	8,164	3,694	**6,437**	6,209	5,3

monds & erals													
monds	(i)	**680**	445	186	**168**	146	70	**1,307**	1,170	1,185	**1,622**	1,218	1,0
T	(j)	**245**	144	91	**204**	155	145	**5,288**	2,930	2,708	**4,426**	3,804	3,3
Tinto erals	(k)	**97**	50	23	**31**	36	53	**593**	465	682	**1,246**	1,796	2,3
pier Salt	68.4	**46**	53	14	**30**	25	23	**291**	249	196	**497**	510	4
ndou ore ect	(l)	**717**	700		**10**	9	10	**567**	588	(42)	**977**	1,172	1
r					**1**			**3**	5	5	**88**	73	
		1,785	1,392	314	**444**	371	301	**8,049**	5,407	4,734	**8,856**	8,573	8,1
er rations	(m)	**637**	729	570	**403**	535	587	**1,967**	3,830	7,160	**9,924**	9,953	16,9
duct up Total		**18,287**	13,193	5,224	**4,831**	4,231	3,845	**70,368**	68,230	65,595	**67,164**	63,746	67,0
segment actions								**213**	79	221			
assets of osal ps held ale	(q)							**351**	55	(101)			6,1
r items		**159**	251	75	**111**	113	114	**(4,775)**	(4,392)	(2,097)	**4,055**	4,184	3,0
: jointly rolled ies and ciates		**(1,028)**	(1,146)	(746)	**(501)**	(527)	(522)						
l		**17,418**	12,298	4,553	**4,441**	3,817	3,437	**66,157**	63,972	63,618	**71,219**	67,930	76,8
back: eeds from of fixed s		**40**	37	38									
l capital nditure luding eeds)		**17,458**	12,335	4,591									
: Net								**(19,261)**	(8,451)	(4,071)			
: EAU ed nces uded from ebt								**(31)**	(2,982)	(1,300)			
ity butable io Tinto eholders								**46,865**	52,539	58,247			

Refer to notes (a) to (r) on page 222.

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Rio Tinto financial information by business unit continued

Business units have been classified according to the Group s management structure. Generally, business units are allocated to product groups based on their primary product. The Aluminium group excludes Pacific Aluminium, Other Aluminium and Constellium (formerly Alcan Engineered Products excluding Cable) which are included in Other Operations . Comparative amounts for 2011 and 2010 have been restated to be consistent with the 2012 presentation.

(a) Gross sales revenue includes 100 per cent of subsidiaries sales revenue and the Group s share of the sales revenue of equity accounted units (after adjusting for sales to subsidiaries).

(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. Underlying EBITDA excludes the same items that are excluded from Underlying earnings.

(c) Net earnings represent profit after tax for the period attributable to the owners of the Rio Tinto Group. Earnings of subsidiaries and equity accounted units 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) The Group holds 65 per cent of Robe River Iron Associates, of which 30 per cent is held through a 60 per cent owned subsidiary. The Group s net beneficial interest is, therefore, 53 per cent, net of amounts attributable to outside equity shareholders.

(e) Aluminium is presented on an integrated operations basis splitting activities between Bauxite and Alumina, Primary Metal 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 joint venture 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.

(g) Includes Rio Tinto s 80 per cent interest in Coal and Allied (prior to 16 December 2011 Rio Tinto s interest was 75.7%) which is managed by Rio Tinto Coal Australia, a 100 per cent subsidiary of Rio Tinto. Coal and Allied owns a 40 per cent interest in Bengalla, an 80 per cent interest in Mount Thorley and a 55.6 per cent interest in Warkworth, giving the Group a beneficial interest at 31 December of 32 per cent, 64 per cent and 44.5 per cent respectively.

(h)

Rio Tinto Coal Mozambique (RTCM) owns and operates a number of exploration and early development stage projects, specialising in coal opportunities in southern Africa. Its principal interests are the Benga project, a 65:35 joint venture with Tata Steel Limited, which is equity accounted, and the wholly owned Zambeze coal project. These projects are located contiguously in the Tete and Moatize provinces of Mozambique. RTCM also has several prospective exploration tenements in the region.

(i) Diamonds includes Rio Tinto s interests in Argyle (100 per cent), Diavik (60 per cent) and Murowa (77.8 per cent).

(j) Includes Rio Tinto s interests in Rio Tinto Fer et Titane (RTFT) (100 per cent), QMM (80 per cent) and Richards Bay Minerals (RBM) (attributable interest of 74 per cent). During the year, the Group completed the acquisition of BHP Billiton s entire interests in RBM, increasing its stake from 37 per cent to 74 per cent. Operating assets at 31 December 2011 have been adjusted for amounts reclassified from Other items in respect of shareholder loans at RBM (refer to note 38).

(k) Includes Rio Tinto s interests in Rio Tinto Borax (100 per cent). Rio Tinto completed the sale of its 100 per cent interests in its talc operations on 1 August 2011.

(l) Following finalisation of the Simandou Joint Development Agreement, and subsequent earn-in by Chalco on 24 April 2012, Rio Tinto s interest in the Simandou Iron Ore project reduced from 95 per cent to 50.35 per cent (Refer to note 38). Following changes to Rio Tinto s management announced in July 2012, the Simandou iron ore project is now reported within Diamonds & Minerals.

(m) Other operations include Rio Tinto s 100 per cent interests in Pacific Aluminium, Other Aluminium, Rio Tinto Marine and its 36.33 per cent interest in Constellium (formerly Alcan Engineered Products excluding the Cable division). During the year, the Group completed the sale of Alcan Cable, with divestment of the North American portion completed on 5 September 2012 and the Tianjin, China operation on 3 December 2012. Rio Tinto completed the sale of its Colowyo coal mine on 1 December 2011.

(n) Rio Tinto s interest in Oyu Tolgoi LLC (OT) is held indirectly through its investment in Turquoise Hill Resources Ltd. (Turquoise Hill). The Group s remaining interests in the assets of Turquoise Hill, unrelated to OT, are reported in the Copper group within Other . On 24 January 2012, the Group took a majority stake in Turquoise Hill and has consolidated Turquoise Hill from 1 January 2012 (refer to note 38).

(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 equity accounted units. Amounts relating to equity accounted units not specifically funded by Rio Tinto are deducted and proceeds from disposals are added before arriving at total capital expenditure reported in the Group cash flow statement.

(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 (i.e. inclusive of such companies debt and amounts due to or from Rio Tinto Group companies).

(q) Net assets of disposal groups held for sale at 31 December 2012 comprise Palabora Mining Company Ltd., following the reaching of a binding agreement to sell on 11 December 2012, and the Riversdale s Zululand Anthracite Colliery (ZAC) which was acquired with a view to resale. Net assets held for sale at 31 December 2011 related to ZAC.

Net assets of disposal groups held for sale in the Financial Information by Business Unit are presented after deducting amounts attributable to holders of non-controlling interests, including the non-controlling interests share of third party net debt and balances owed to/from Rio Tinto Group subsidiaries.

(r) Impairment charges in the reconciliation of EBITDA to (loss)/profit on ordinary activities are stated before tax credits of US$784 million (2011: US$349 million) on impairment of investments in equity accounted units, which is presented net of tax on the face of the Group Income Statement. Comparative amounts for 2011, previously presented net of tax, have been adjusted accordingly.

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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 22 December 2010 (as amended on 17 February 2012) 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 financial years and half-years ending between 31 December 2010 and 30 June 2014 (inclusive).

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 issued by the International Accounting Standards Board (IFRS) and conforming to IFRS 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 United Kingdom 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 profit for the financial year, total consolidated income for the financial year and total consolidated equity at the end of the financial year (see page 145).

Those consolidated financial statements must also be audited in accordance with relevant Australian and United Kingdom 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 92 to 125) prepared in accordance with 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 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.

However, Rio Tinto Limited must 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.

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Report of Independent Registered Public Accounting Firms

To the Board of Directors and Shareholders of Rio Tinto plc and Rio Tinto Limited

In our opinion, the accompanying Group statement of financial position and the related Group income statement, the Group statement of comprehensive income, the Group cash flow statement, the Group statement of changes in equity, present fairly, in all material respects, the financial position of the Rio Tinto Group at 31 December 2012 and 2011, and the results of their operations and their cash flows for each of the three years in the period ended 31 December 2012 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of 31 December 2012 based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Rio Tinto Group s management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management s report on internal control over financial reporting. Our responsibility is to express opinions on these financial statements and on the Rio Tinto Group s internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

London, United Kingdom

14 March 2013

In respect of the Board of Directors and

Shareholders of Rio Tinto plc

/s/ PricewaterhouseCoopers

PricewaterhouseCoopers

Melbourne, Australia

14 March 2013

In respect of the Board of Directors and

Shareholders of Rio Tinto Limited

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Financial calendar

2013	
15 January	Fourth quarter 2012 operations review
14 February	Announcement of results for 2012
6 March	Rio Tinto plc and Rio Tinto Limited shares and Rio Tinto plc ADRs quoted ex-dividend for 2012 final dividend
8 March	Record date for 2012 final dividend for Rio Tinto plc shares and ADRs
13 March	Record date for 2012 final dividend for Rio Tinto Limited shares
15 March	Publication of 2012 Annual report, 20-F, Annual review and Notices of annual general meetings
19 March	Plan notice date for election under the dividend reinvestment plan and date for electing dividends paid in alternate currency for the 2012 final dividend
4 April	Dividend currency conversion date (Rio Tinto plc holders electing to receive Australian dollars and Rio Tinto Limited holders electing to receive pounds sterling)
11 April	Payment date for 2012 final dividend to holders of ordinary shares and ADRs
16 April	First quarter 2013 operations review
18 April	Annual general meeting for Rio Tinto plc
9 May	Annual general meeting for Rio Tinto Limited
16 July	Second quarter 2013 operations review
8 August	Announcement of half year results for 2013
14 August	Rio Tinto plc and Rio Tinto Limited shares and Rio Tinto plc ADRs quoted ex-dividend for 2013 interim dividend
16 August	Record date for 2013 interim dividend for Rio Tinto plc shares and ADRs
20 August	Record date for 2013 interim dividend for Rio Tinto Limited shares
21 August	Plan notice date for election under the dividend reinvestment plan and date for electing dividends paid in alternate currency for the 2013 interim dividend for Rio Tinto plc
22 August	Plan notice date for election under the dividend reinvestment plan and date for electing dividends paid in alternate currency for the 2013 interim dividend for Rio Tinto Limited
5 September	Dividend currency conversion date (Rio Tinto plc holders electing to receive Australian dollars and Rio Tinto Limited holders electing to receive pounds sterling)
12 September	Payment date for 2013 interim dividend to holders of ordinary shares and ADRs
15 October	Third quarter 2013 operations review
2014	
January	Fourth quarter 2013 operations review
February	Announcement of results for 2013

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Useful information

Registered offices

Rio Tinto plc

2 Eastbourne Terrace

London

W2 6LG

Registered in England No. 719885

Telephone: +44 (0) 20 7781 2000

Fax: +44 (0) 20 7781 1800

Website: 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

Website: 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 6ZY

Telephone: +44 (0) 870 703 6364

Fax: +44 (0) 870 703 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

Website: www.adr.com

Email: 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:

1800 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: +1 514 982 7555

North American residents only,

toll free: +1 (866) 624 1341

Website: www.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

www.investorcentre.co.uk/riotinto

Rio Tinto Limited shareholders

www.investorcentre.com

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Get more information online

Visit our reporting centre at riotinto.com/reportingcentre2012

Find out more about our business and performance

View our full 2012 Annual review

View our full 2012 Sustainable development report

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Item 19. Exhibits

Exhibits marked * have been filed as exhibits to this Annual report on Form 20-F and other exhibits have been incorporated by reference as indicated.

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Exhibit Number	Description
1.1	Articles of Association of Rio Tinto plc (adopted by special resolution passed on 20 April 2009 and amended on 1 October 2009) (incorporated by reference to Exhibit 1.1 of Rio Tinto plc Annual report on Form 20-F for the fiscal year ended 31 December 2009, File No. 1-10533)
1.2	Constitution of Rio Tinto Limited (ACN 004 458 404) (as adopted by special resolution passed on 24 May 2000 and amended by special resolution on 18 April 2002, 29 April 2005, 27 April 2007, 24 April 2008 and 20 April 2009) (incorporated by reference to Exhibit 1.2 of Rio Tinto plc Annual report on Form 20-F for the fiscal year ended 31 December 2009, File No. 1-10533)
3.1	DLC Merger Implementation Agreement, dated 3 November 1995 between CRA Limited and The RTZ Corporation PLC relating to the implementation of the DLC merger (incorporated by reference to Exhibit 2.1 of Rio Tinto plc s Annual report on Form 20-F for the financial year ended 31 December 1995, File No. 1-10533)
3.2	DLC Merger Sharing Agreement, dated 21 December 1995 and amended on 14 April 2005, 29 April 2005 and 18 December 2009 between CRA Limited and The RTZ Corporation PLC relating to the ongoing relationship between CRA and RTZ following the DLC merger (incorporated by reference to Exhibit 3.2 of Rio Tinto plc Annual report on Form 20-F for the fiscal year ended 31 December 2009, File No. 1-10533)
3.3	RTZ Shareholder Voting Agreement, dated 21 December 1995 and amended on 18 January 2010 between The RTZ Corporation PLC, RTZ Shareholder SVC Pty. Limited, CRA Limited, R.T.Z. Australian Holdings Limited and The Law Debenture Trust Corporation p.l.c (incorporated by reference to Exhibit 3.3 of Rio Tinto plc Annual report on Form 20-F for the fiscal year ended 31 December 2009, File No. 1-10533)
3.4	CRA Shareholder Voting Agreement, dated 21 December 1995 and amended 18 January 2010 between CRA Limited, CRA Shareholder SVC Limited, The RTZ Corporation PLC and The Law Debenture Trust Corporation p.l.c., relating to the RTZ Special Voting Share (incorporated by reference to Exhibit 3.4 of Rio Tinto plc Annual report on Form 20-F for the fiscal year ended 31 December 2009, File No. 1-10533)
4.01	Rio Tinto plc - Share Option Plan 2004 (incorporated by reference to Exhibit 4.3 of Rio Tinto s Registration statement on Form S-8, File No. 333-147914)
4.02	Rio Tinto Limited - Share Option Plan 2004 (incorporated by reference to Exhibit 4.6 of Rio Tinto s Registration statement on Form S-8, File No. 333-147914)
4.03	Rules of the Rio Tinto plc Performance Share Plan 2004 (formerly known as the Rio Tinto plc - Mining Companies Comparative Plan 2004) (incorporated by reference to Exhibit 4.03 of Rio Tinto plc Annual report on Form 20-F for the fiscal year ended 31 December 2011, File No. 1-10533)
4.04	Rules of the Rio Tinto Limited Performance Share Plan 2004 (formerly known as the Rio Tinto Limited - Mining Companies Comparative Plan 2004) (incorporated by reference to Exhibit 4.04 of Rio Tinto plc Annual report on Form 20-F for the fiscal year ended 31 December 2011, File No. 1-10533)
8.1*	List of subsidiary companies.
12.1*	Certifications pursuant to Rule 13a-14(a) of the Exchange Act.
13.1*	Certifications furnished pursuant to Rule 13a-14(b) of the Exchange Act (such certifications are not deemed filed for purpose of Section 18 of the Exchange Act and not incorporated by reference in any filing under the Securities Act).
15.1*	Consent of Independent Accountants to the incorporation of the audit report relating to the Rio Tinto Group and effectiveness of internal control over financial reporting of the Rio Tinto Group by reference in registration statements on Form F-3 and Form S-8.

99.1* Mine safety and health administration safety data.

* Filed herewith.

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Signature

The Registrants hereby certify that they meet all of the requirements for filing on Form 20-F and that they have duly caused and authorised the undersigned to sign this Annual Report on their behalf.

Rio Tinto plc

(Registrant)

/s/ Ben Mathews
Name: **Ben Mathews**
Title: Secretary

Date: 14 March 2013

Rio Tinto Limited

(Registrant)

/s/ Ben Mathews
Name: **Ben Mathews**
Title: Joint Secretary

Date: 14 March 2013