RIO TINTO PLC
Form 20-F
March 16, 2012
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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 2011

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	**Commission file number: 001-34121**
	Rio Tinto Limited
Rio Tinto plc	**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	**Victoria, Australia**
(Jurisdiction of Incorporation or Organisation)	**(Jurisdiction of Incorporation or Organisation)**
2 Eastbourne Terrace **London, W2 6LG, United Kingdom**	**Level 33, 120 Collins Street** **Melbourne, Victoria 3000, Australia**
(Address of Principal Executive Offices)	**(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:

Title of Each Class	**Name of Each Exchange On Which Registered**	**Title of Each Class**	**Name of Each Exchange On Which Registered**
American Depositary Shares*	New York Stock Exchange		
Ordinary Shares of 10p each**	New York Stock Exchange		
5.875% Notes due 2013	New York Stock Exchange	5.875% Notes due 2013	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 New York Stock Exchange New York Stock Exchange	9.000% Notes due 2019	New York Stock Exchange New York Stock Exchange New York Stock Exchange
2.500% Notes due 2016		2.500% Notes due 2016	
4.125% Notes due 2021		4.125% Notes due 2021	
2.250% Notes due 2016	New York Stock Exchange	2.250% Notes due 2016	New York Stock Exchange
3.750% Notes due 2021	New York Stock Exchange	3.750% Notes due 2021	New York Stock Exchange

* Evidenced by American Depositary Receipts. Each American Depositary Share Represents one Rio Tinto plc Ordinary Shares 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	1,453,399,376	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 ¨ No ¨

* This requirement does not apply to the registrant until its fiscal year ending December 31, 2011.

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, 2011 of Rio Tinto plc and Rio Tinto Limited (the 2011 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. 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 2011 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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Form 20-F Cross Reference Table

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2011 Annual report

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Performance highlights

Record underlying earnings[a] of US$15.5 billion, 11 per cent above 2010.

Net earnings[a] of US$5.8 billion, 59 per cent below 2010, primarily as a result of an impairment charge of US$8.9 billion related to the Group s aluminium businesses.

Record underlying EBITDA[a] of US$28.5 billion, ten per cent above 2010.

Record cash flows from operations up 16 per cent to US$27.4 billion.

Capital expenditure of US$12.3 billion in 2011, compared with US$4.6 billion in 2010. Total capital expenditure for 2012 projects approved at date of this report and sustaining capital is expected to be US$16 billion. Further project approvals, mainly in the Pilbara, are likely to increase this level of investment as the growth programme continues.

Pilbara iron ore expansion to 283 million tonnes per annum (mtpa) now fully approved and on track to be in operation by end of 2013: second planned phase expansion of Pilbara capacity enhanced to 353 mtpa and completion brought forward by six months to first half of 2015.

Growth options enhanced in Mongolia, Mozambique and South Africa: Rio Tinto moves to majority stake in Ivanhoe, completes Riversdale acquisition providing entry to an emerging major coking coal resource and announces doubling of stake in Richards Bay Minerals.

34 per cent increase to full year dividend to 145 US cents per share, reflecting confidence in long-term outlook.

US$7 billion share buy-back programme on track for completion by end of the first quarter 2012.

Twelve months to 31 December (All amounts are US$ millions unless otherwise stated)	2011	2010	Change
Underlying EBITDA[a]	**28,521**	25,978	10%
Underlying earnings[a]	**15,549**	13,987	11%
Net earnings[a]	**5,826**	14,238	(59%)
Cash flows from operations	**27,388**	23,530	16%
Underlying earnings per share US cents	**808.5**	713.3	13%
Basic earnings per share from continuing operations US cents	**303.5**	731.0	(58%)
Ordinary dividends per share US cents	**145.0**	108.0	34%

The financial results are prepared in accordance with IFRS and EU IFRS.

(a)

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 to the 2011 financial statements. EBITDA is defined on page 212. Underlying EBITDA excludes the same items that are excluded from underlying earnings and is reconciled to the Income Statement in note 2 on page 154.

This *Annual report* and *Auditors report* comply with Australian and UK reporting requirements.

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

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 Securities Act of 1933, and Section 21E of the Securities Exchange Act of 1934. The words intend , aim , project , anticipate , estimate , plan , believes , expects , may , should , will , or similar expressions, commonly ide 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, 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 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

Despite continuing global economic uncertainty and volatility, Rio Tinto has had a record year. We have also strengthened the Group to meet anticipated challenges including those of growth and expansion.

Our overall safety performance indicators improved in 2011, although I was deeply saddened by the six fatalities at our managed operations and operations held for divestment.

Our underlying EBITDA rose ten per cent on 2010 to US$28.5 billion reflecting, in particular, higher prices and strong iron ore sales despite production being adversely affected by the weather in the early part of the year. We also achieved record underlying earnings of US$15.5 billion, up 11 per cent on 2010. However, our net earnings were US$5.8 billion, a fall of 59 per cent reflecting a US$8.9 billion impairment of some of our aluminium businesses.

Efficient capital management

Your board believes that the creation of long-term, sustainable shareholder value requires a prudent approach to investing in growth and returning excess capital to shareholders. We aim to do this by maintaining a strong balance sheet.

The board continues to see attractive and significant growth opportunities around the world, against a backdrop of short-term uncertainty in the financial markets, particularly in the eurozone. The anticipated doubling of demand over the next two decades will require unprecedented levels of investment across the mining and metals industry. With these prospects will come choices. Your board will dedicate a great deal of effort to screening opportunities. This will ensure we identify and progress the growth projects with the greatest potential to create value for shareholders over the longer term. However, the increasing capital intensity of growth projects is affecting the way we look at future projects and expansion.

We continue to balance the strategic driver of growth, wherever those opportunities may arise, with the equally important driver of financial and operational excellence investing in the business and returning excess capital to shareholders. Therefore, whilst we are committed to a capital expenditure programme in 2012 of US$16 billion, during 2011 we returned a total of US$7.7 billion to shareholders through the progressive dividend and share buy-back programme. Our confidence in our long-term prospects is reflected in the 34 per cent dividend increase to 145 cents a share.

Global economic uncertainty

The world continues to face uncertainty and we believe this will contribute to ongoing volatility. The unresolved sovereign debt crisis in Europe has not only weakened demand there, it has the potential for contagion in other markets. The pace of recovery in the US is slow but there have been some signs that the situation is improving.

Growth in China is not accelerating at the same pace as we have seen in recent years, but the rate is still favourable in comparison to the growth in global gross domestic product of around 3.3 per cent.

In recent years we have strengthened our balance sheet. This will serve as a buttress for us in more volatile times ahead.

Focus for the board in 2011

Managing the risks in our markets was a priority for the board last year. In addition to experiencing high degrees of global volatility, we have been assessing our increased exposure to non-OECD countries and the challenges presented by escalating resource nationalism and sovereign risk in the sector.

We have today published a comprehensive analysis of the US$10 billion in taxes we have paid worldwide during 2011. In recognition of our tax transparency initiative which we started in 2010, Rio Tinto was awarded the 2011 *PwC Building Public Trust* award for Tax Reporting in the FTSE100.

We have also retained our strong commitment to sustainable development which we believe gives us a competitive advantage. Not only does it reduce our environmental and community impact, but it helps us to attract high calibre individuals and ultimately deliver a better return to our shareholders.

As chairman of the board I have consistently felt it important to provide continuity through succession planning by ensuring the board is refreshed with new skills and greater diversity.

During the year, John Varley and Chris Lynch joined the board. We welcome the extensive experience they bring to board proceedings. John will succeed Andrew Gould as the senior independent non-executive director upon Andrew s retirement from the board at the conclusion of the Rio Tinto Limited annual general meeting in May. John has become chairman of the Remuneration committee, which I have also recently joined as a member. I would also like to take this opportunity to thank Andrew for his invaluable support provided to Rio Tinto since 2002.

Outlook

We believe the long-term outlook is strong. We have invested heavily, and continue to invest to meet the needs of emerging economies.

Despite the current volatility we are preserving our investment trajectory to meet the growing global demand for our metals and minerals. Our organic growth continues and we will make value-enhancing acquisitions as the opportunities arise. Where necessary we will refocus our activities to fit our strategic objectives of running large, low-cost operations.

During 2011, our people have again excelled. Their contribution to improvements in our operational and financial efficiency has made our record results possible and, on behalf of the board, I would like to thank them.

I would also like to thank our shareholders for their continued support. I extend my gratitude to the countries and communities that host our operations and for the opportunities they create for us to demonstrate our commitment to growing prosperity and operating sustainably.

Jan du Plessis

Chairman

5 March 2012

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Chief executive s statement

We have achieved record results in challenging markets during 2011. We made good progress during market volatility despite our Australian operations being disrupted by severe flooding. It is to the credit of our people that, as well as helping their communities in the crisis, they brought production back on line safely and met or exceeded output targets.

Our record underlying earnings, mainly driven by an outstanding year for our Iron Ore business, have put us in a strong position to navigate the uncertain environment we face. As Jan has said in his letter, this focus has demonstrated our commitment to financial and operational excellence whilst pursuing growth opportunities consistent with our strategy to create long-term, sustainable returns for shareholders.

During 2011, we approved a number of major growth projects. These include a substantial expansion of our Pilbara operations, investment in some of the most exciting mining projects in the world, and a commitment to transform some of our existing assets.

Although our all injury frequency rate continued to improve with a two per cent reduction in 2011, the achievement is significantly overshadowed by the six fatalities at our managed sites (and operations held for divestment) during the year. In a period of prolonged growth within the sector, these tragedies remind us of the importance of maintaining safety as a primary focus at all times, particularly during expansion.

We will be placing even greater emphasis in 2012 on simplifying systems, identifying and managing critical safety risks and engaging frontline leaders more in communicating safety messages to their teams.

Strategy

We remain committed to our vision to be the leading global mining and metals company through a strategy of developing long-life, cost-competitive, expandable assets. To achieve this we focus on a portfolio of Tier 1 assets diversified by commodity, market and geography. Please see page 6 for more information on our strategy and business model.

We are a long-term business and our strategy has consistently served us well over the years and will continue to do so in the challenging times ahead. In 2011, to support our strategy, we concentrated on five strategic drivers: financial and operational excellence, globalising the business, technology and innovation, licence to operate, and growth. We made significant progress in all of these areas.

Globalising and growing the business

Through a combination of growing the business and expanding our current operations, we will soon start to harvest the fruits of our long-term growth trajectory: the first copper from the Oyu Tolgoi mine in Mongolia is part of our contribution to the 2012 London Olympic and Paralympic Games where we take great pride in supplying the metals for the winners medals. We have increased our holding in Oyu Tolgoi by raising our stake in Ivanhoe, its major shareholder, to 51 per cent in January 2012: first commercial production is due in 2013.

The first coal from our Mozambican coalfields, acquired in 2011, will also be exported this year and our Simandou iron ore project is laying a path for sustainable, long-term growth. In buying the uranium exploration company Hathor and the proposal announced in February 2012 to double our stake in Richards Bay Minerals we have focused on acquisitions that add value and enhance our growth pipeline.

Our organic growth is also progressing: our iron ore capacity in the Pilbara, in Western Australia will increase to 230 million tonnes a year in the first quarter of 2012. Expansion plans to raise that to 283 mtpa have been approved and we have accelerated the target of 353 mtpa by six months to the first half of 2015, subject to board approval.

Licence to operate

While rising resource nationalism is creating investment uncertainty, we continue to believe that our strategy of improving our stakeholder engagement, transparency in tax payments and a focus on sustainable

development can assist us in gaining and maintaining our access to resources. Our aim is to be the developer of choice in an increasingly competitive environment.

When I meet with leaders around the world to discuss the challenges of resource nationalism and the opportunity presented by responsible mining, I convey to them how we earn our licence to operate through Rio Tinto s knowledge; the skills we can offer and our experience in both mining and marketing all of which can help bring prosperity to their regions. I also highlight the considerable contribution that we make to build the social and economic fabric in the communities where we operate and how we engage in environmental protection throughout our activities and regeneration when our mining is done.

Innovation and technology

Innovative technologies are making a substantial contribution to safety, operational and environmental efficiency and financial performance. For example, our Mine of the Future has brought us the Operations Centre in Perth controlling train, truck and shipping movements in the Pilbara, our autonomous truck programme and our recently announced AutoHaul™ automated train programme. Although innovation is not confined to technology: there are many parts of our business where innovative management plans, processes and work practices are also improving safety and efficiency.

Costs

As an industry, we are facing a period of historic cost inflation. Higher input costs and the strength of the Canadian and Australian dollars currencies in which we incur many of our costs are putting pressure on our margins.

Rising costs of exploration, development and extraction are, in part, a consequence of the lower ore grades that our industry faces. They also stem from the increasing remoteness of resources, difficult geographies, and increased social and economic commitments such as the Australian Minerals Resource Rent Tax and Australian carbon taxes.

The year ahead

During 2012 we have a clear objective to focus on controlling costs and improving productivity. We will achieve this whilst continuing to work on the transformation of the aluminium business through the disposal of assets that do not fit with our core strategy and continuing our efficiency measures. We will adapt our portfolio to concentrate on delivering our projects. We will also develop our marketing capability, improving our ability to react quickly and flexibly to our customers requirements.

Our people

As a global company we have the opportunity to develop and rely on the skills and cultures of our international workforce. We are committed to engaging with our people to foster diversity and leadership; providing them with the best opportunities to learn and develop with an industry leader.

I express my appreciation to our employees for the contributions they have made during the course of 2011, to our shareholders for their ongoing support and to the communities and countries who host our operations.

I believe that with Rio Tinto s financial strength, its committed workforce and our long-term projects and operations, we have set the scene for exciting achievements in 2012 and beyond.

Tom Albanese

Chief executive

5 March 2012

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Group overview

Aluminium product group

We are 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.

Products

Bauxite

Bauxite is the natural ore used to make aluminium. It is refined into alumina which is smelted into aluminium metal.

Alumina

Alumina (aluminium oxide) is extracted from bauxite via a refining process known as the Bayer process. Approximately four tonnes of bauxite are required to produce two tonnes of alumina, which in turn makes one tonne of aluminium metal.

Aluminium

Aluminium is light, strong, flexible, non-corrosive and infinitely recyclable. Aluminium is one of the most widely used metals and its largest markets are transportation, building and construction.

Key strengths

Largest bauxite producer in the industry.

Tier 1 operations across the value chain, from bauxite to alumina to aluminium.

The vast majority of Rio Tinto Alcan s operations draw on clean, renewable hydroelectric power.

Industry leading technologies including our proprietary AP Technology .

Full operating review on page 20.

Copper product group

With diverse assets and leading technology, our Copper group is uniquely positioned to supply growing global demand. In 2011, we produced 520 thousand tonnes of mined copper (Rio Tinto share), making us the world s seventh largest supplier. We also produced 669 thousand ounces of gold, 4,924 thousand ounces of silver and 14 thousand tonnes of molybdenum as by-products of our copper operations.

Products

Copper

The world uses more than 20 million tonnes of copper every year. Copper is found in nearly every home and vehicle, and in parts and appliances used in numerous aspects of infrastructure and technology. Copper s malleability, strength and resistance to corrosion make it useful in a broad range of building, construction and electrical applications.

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. Rio Tinto produces gold as a by-product of its copper production.

Silver

Silver is a good conductor of electricity and has non-corrosive 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 a metal of beauty, used to make lasting products for the home and person. Rio Tinto produces silver as a by-product of its copper production.

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. We produce molybdenum as a by-product of our copper operations.

Key strengths

Participation in and ownership of several world-class operating assets. Management of the Oyu Tolgoi project, scheduled to be a top ten copper producer and a significant gold producer.

Investment in substantial growth projects.

Industry leading technology and innovation.

Full operating review on page 22.

Diamonds & Minerals product group

The Diamonds & Minerals group comprises mining, refining and marketing operations across three 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. Rio Tinto Iron & Titanium is an industry leader in high grade titanium dioxide.

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 gem 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.

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 rutite.

Key strengths

- Poised to benefit from late-cycle demand growth.

- Substantial brownfield and greenfield development pipeline.

Full operating review on page 24.

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Group overview continued

Energy product group

We are a leading supplier of thermal and coking coal to the Asian seaborne market 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, Africa and Canada.

Products

Coal

Coal is abundant, relatively inexpensive, and safe and easy to transport. We are a large producer in 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 treated into coke, is used in furnaces with iron ore to produce 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 sent away for further processing into fuel rods for 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 expansion opportunities at our existing coal operations in Australia and recent acquisitions like Hathor Exploration in Canada.

Strong product stewardship strategy to ensure we contribute to the global solutions for the challenges our products raise.

Full operating review on page 26.

Iron Ore product group

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

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 mines are located in Australia and Canada with a major project under way in Guinea in West Africa.

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.

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.

Full operating review on page 28.

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Strategic context

Global economy

During the past year we have witnessed significant change and volatility in the global economy as economic and political events increased the risk of a derailment by crisis for short periods of time; a pattern we continue to call the saw-tooth economy . At any other time, the Japanese tsunami, the Arab Spring , and the US fiscal crisis and credit rating downgrade would have been major events, but when combined with the eurozone debt crisis, they provided a challenging environment for commodity markets. Despite these setbacks, during 2011 commodity prices generally averaged higher than in 2010. This was due to a combination of factors including: ongoing strong demand from China; commodity supply constraints coupled with weather and environmental disruption; and low interest rates facilitating direct investment in commodities.

Demand for commodities in 2012 will be supported by an improvement in global growth, although we cannot rule out periods of volatility similar to those in 2011. Consensus forecasts of economic growth around the world have moderated in recent months although global GDP is still forecast to grow at a rate of around 3.3 per cent in 2012. We expect Chinese economic growth to remain above eight per cent for 2012, while growth in other emerging markets is expected to remain relatively robust, albeit with weaker rates of growth than seen in recent years. It will be important to watch developments in the US where improvements in the labour market, manufacturing activity and equity markets are indicative of a strengthening recovery. The key concern for the global outlook continues to stem from the European sovereign debt crisis and the ability of the rest of the world to minimise contagion threats. However, central banks are vigilant to these risks and we believe they will continue to provide substantial liquidity to support the global financial system.

Over the longer term, global growth is expected to remain elevated as fast-growing emerging markets take up larger shares of the world economy. Our belief is that increasing prosperity in these countries, including China and India, with associated industrialisation and urbanisation, will continue to drive underlying growth in demand for commodities.

Commodity markets

Commodity prices generally averaged higher in 2011 than in 2010 although most prices peaked in the first quarter and troughed in the fourth, with prices finishing the year lower than they started. Commodity price movements can be broadly attributed to a slowing in demand, particularly in China, ongoing supply constraints and rising costs, expansionary monetary policy facilitating indirect investment demand for commodities, and finally, the sovereign debt crisis in Europe and a concern about global financial sector stability. Against this background of falling prices, operating margins have tightened due to rising costs of key raw materials and equipment and adverse exchange rate movements. Operating costs are on the rise partly due to a scarcity of key inputs such as labour and capital equipment and a noticeable deterioration in productivity. Moreover, the availability of capital is imposing constraints across some sectors of the industry.

A key feature of commodity markets in 2011 was the continued tightness in supply. Across many commodities, a range of factors have limited the growth in mine production. In general, the industry continued to face the challenges of declining grades, a lack of infrastructure in new jurisdictions, delays to expansion programmes and temporary disruptions from strikes, adverse weather conditions and environmental concerns.

Global copper mine production struggled to grow in 2011 despite several years of elevated prices. Secondary supply was also weak, particularly towards the end of the year, as Western world economic activity slowed. With a further market deficit recorded in 2011 end-users continue to investigate the potential substitution of copper for other materials such as aluminium. However, in the absence of new end-use technologies, significant replacements appear limited in the short-term.

In iron ore, supply disruptions in Australia, Brazil and India in the first half of the year proved to be temporary. Production increased in the second half of the year with a strong rise in Brazilian supply and record output from Australia. Despite this new supply, high iron ore prices were required to support increased levels of high-cost Chinese domestic production in 2011. A similar picture emerged in the thermal coal market, with production increasing by varying degrees, in Australia, Indonesia, Colombia and South Africa and new supply from the Illinois Basin supporting US East Coast exports. In the metallurgical coal market, supply was severely disrupted following flooding in Queensland. The resulting higher prices encouraged US suppliers to enter the seaborne market. 2011 also marked the significant entry of Mongolia to the market.

Apart from commodity specific constraints, our industry is facing increased demands from governments which will increase the cost, timing and uncertainty surrounding the operation of current projects and development of new capacity. By impacting investment, it will also affect supply which will lead to fewer projects coming on-stream and in an environment of high demand, will therefore result in higher prices. While recognising the right of governments to raise revenues from taxes and royalties, the growing trend of increased fiscal imposts on existing projects, mandated government shares, often as free carried options, on new projects and a raft of regulatory and infrastructure requirements is impacting on the ability of the industry to increase supply through new investment. Such measures have the potential to delay economic and social development in those countries.

Outlook

The outlook for global commodities remains robust, supported by a rising standard of living for the majority of the world s population. But the outlook also will be characterised by elevated volatility and scope for discontinuities. We expect a high average demand growth setting across our major commodities. Given the constraints on current and future supply growth, we expect to see higher real long-run prices than in the decade preceding the most recent six year period. However, the extent to which the industry is able to maintain existing margins will depend on trends in costs, productivity and the ability to limit the escalating capital costs of new developments.

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Group strategy

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