2007 Operating and financial report

BUSINESS ENVIRONMENT AND MARKETS

Competitive environment

Rio Tinto is a major producer in all the metals and minerals markets in which it operates. It is generally among the top five global producers by volume. It has market shares for different commodities ranging from five per cent to 40 per cent. The competitive arena is spread across the globe.

Most of Rio Tinto's competitors are private sector companies which are publicly quoted. Several are, like Rio Tinto, diversified in terms of commodity exposure, but others are focused on particular commodity segments. Metal and mineral markets are highly competitive, with few barriers to entry. They can be subject to price declines in real terms reflecting large productivity gains, increasing technical sophistication, better management and advances in information technology.

High quality, long life mineral resources, the basis of good financial returns, are relatively scarce. Rio Tinto's ownership of or interest in some of the world's largest deposits enables it to contribute to long term market growth. World production volumes are likely to grow at least in line with global economic activity. The emergence of China and eventually India as major economies requiring metals and minerals for development could mean even higher market growth.

Economic overview

The world economy grew by 5.2 per cent in 2007 on a purchasing power parity basis, marking the fifth successive year of global growth in excess of four per cent.

This extended global economic boom has inevitably not been without its stresses and strains. The implications of some of the excesses driven by previous loose monetary conditions and easy credit availability emerged last year. The full implications of the US housing downturn which started in the second half of 2005 began to be felt last year and this has led to financial market volatility and asset writedowns by some of the major banking institutions. Despite this, the manufacturing sector of the US economy performed well during 2007 and growth across the country averaged 2.2 per cent.

Growth in the rest of the developed world was reasonably supportive for the mining sector. European Union economies, which in general are not subject to same imbalances as the US, grew above their long run trend rate for the second year in a row. The Japanese economy, whilst volatile and still dependent for growth on external demand, expanded by 1.8 per cent.

The developed world accounts for around half of global metals demand but its importance to commodity markets is much less than it was as recently as the start of this decade. Changes in demand in other regions – most notably in China, but also increasingly in other emerging countries – has become much more important to the mining sector than cyclical fluctuations in consumption in the developed world.

So whilst weaker economic growth in the US, Europe and Japan acted to hold down growth in commodity demand last year, the effect of this was more than offset by accelerating economic activity elsewhere. China has been the principal driver behind this change. Its economy expanded 11.4 per cent last year and apparent copper demand in the country rose by close to 30 per cent. Aluminium demand was up a remarkable 40 per cent. Other emerging markets also achieved buoyant growth. The Asia region excluding Japan expanded by eight per cent and Latin America grew by five per cent.

Given that 2007 started with already depleted stocks, and with the mining industry still struggling to add capacity despite increased levels of capital investment, the macroeconomic conditions outlined above were more than sufficient to generate some further increases in what were already high prices at the start of the year. A number of historic price highs were breached. Slower growth and additions to supply caused some metals prices to fall back in the second half of the year, but a number of bulk and energy commodities prices continued their upwards trajectory.

Amongst the base metals, lead, tin and nickel registered the greatest increase in annual average prices in 2007 (up 82 per cent, 59 per cent and 65 per cent year on year respectively). Aluminium and copper saw more modest increases of three per cent and six per cent, respectively. Zinc was the only LME metal to return a 2007 average price lower than in 2006, following a sharp sell off through the year.

Iron ore benchmark prices increased by 9.5 per cent in April but with additions to low cost supply still not keeping pace with demand the market has become even more dependent on high cost Indian and Chinese production. As a result of this and higher freight costs, spot prices for iron ore to China doubled over the course of the year. Benchmark prices are likely to see more of the benefit of these strong market conditions in 2008.

In February 2008, Rio Tinto noted the announced settlements between another iron ore producer and steelmakers, and indicated it would continue to negotiate for a freight premium to reflect Australia's proximity to Asia and major customers.

Australian thermal coal export prices ended the year on a high note of US$90 per tonne due to tight market conditions resulting from diminishing Chinese exports and infrastructure constraints on supply. The average annual price of US$65 per tonne was one third up on the 2006 level. In contrast, average US coal prices in the Powder River Basin were down some 20 per cent on their 2006 level, reflecting softer demand in the US. The star performer amongst energy prices was uranium, with average reported spot prices doubling year on year. Most trade in uranium takes place on longer contracted terms, and these have begun to reflect stronger market conditions.

Demand for industrial minerals such as borates and titanium minerals has held up well with prices holding steady. The same applies to the diamond market, where supply trends have been supportive of prices.

One of the beneficiaries of financial uncertainty are often precious metals prices. The average gold price rose 15 per cent in 2007 to US$691 per ounce. Most of this increase took place later in the year and gold finished 2007 selling at record levels of over US$830 per ounce, compared to a 2006 average of around US$602 per ounce.

Many less widely traded metals have also continued to benefit from firm demand. In particular, the molybdenum price continued its remarkable performance, averaging US$30 per pound in 2007, close to its record level in 2005.

Trend information

The demand for the Group's products is closely aligned with changes in global Gross Domestic Product. Changes in the GDP of developing countries will have a greater impact on materials such as iron ore and coal that can be used to improve infrastructure, whereas changes in the GDP of developed countries will a have greater impact on industrial minerals that have many applications in consumer products. Copper is used in a wide range of applications from infrastructure to consumer electronics and demand for it has tended to grow in line with or slightly faster than global GDP. Trends in production of the Group's minerals and metals, gross sales revenue and underlying earnings are set out in this *Operating and financial report*.

GROUP FINANCIAL PERFORMANCE

The Group uses a number of key performance indicators ('KPI's) to monitor financial performance. These are summarised below and discussed later in this report.

KPI	Description	Results 2007 US$m	2006 US$m	2005 US$m
Underlying earnings	Underlying earnings is the key financial performance indicator which management use internally to assess performance. It is presented here as an additional 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 2007 *Full financial statements*. The Group's underlying earnings for the past three years are discussed below.	**7,443**	7,338	4,955
Gearing (net debt to total capital)	The Group's total capital is defined as Rio Tinto's shareholders' funds plus net debt and outside equity shareholders' interests. The Group's approach to capital management is discussed in the Liquidity and capital resources section on page 53 of the Annual Report.	**63%**	11%	8%
Capital investment	Continuing investment in value adding growth projects.	The Group's capital projects are listed on pages 17 and 18 of the *Annual report*		
Total shareholder return ('TSR')	Total shareholder return measures the Group's performance in terms of generating shareholder wealth through dividends and the share price. The Group's TSR performance compared to the FTSE 100 index, the ASX All Ordinaries index and the HSBC Global Mining Index is shown on page 108 of the Remuneration report. The relationship between TSR and executive remuneration is also discussed on page 108 of the Remuneration report.	**91.8%**	7.6%	78.4%

Acquisition of Alcan

During 2007, the Rio Tinto Group acquired 100 per cent of the issued share capital of Alcan Inc. The total cost of acquisition amounted to US$38.7 billion, including fees. Alcan's results are included within the Group's results from 24 October 2007.

Alcan Inc. is the parent company of an international group of companies involved in bauxite mining, alumina refining, aluminium smelting, engineered products, flexible and specialty packaging, as well as related research and development.

The Group has decided to dispose of Alcan Packaging, which is presented in the balance sheet in the lines: 'Assets held for sale' and 'Liabilities of disposal groups held for sale'. Therefore, the income and cash flow statements for the year exclude amounts relating to Alcan Packaging. Following a company wide strategic review of the combined Rio Tinto and Alcan assets, on 26 November 2007 the intention to divest the Engineered Products business was also announced.

Net earnings and underlying earnings

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

	2007 US$m	2006 US$m	2005 US$m
Profit for the year	**7,746**	7,867	5,498
Less: attributable to outside equity shareholders	**(434)**	(429)	(283)
Attributable to equity shareholders of Rio Tinto (net earnings)	**7,312**	7,438	5,215
Less: exclusions from underlying earnings	**131**	(100)	(260)
Underlying earnings attributable to shareholders of Rio Tinto	**7,443**	7,338	4,955

2007 financial performance compared with 2006

Net earnings of US$7,312 million in 2007 were US$126 million below 2006, a decrease of two per cent. Underlying earnings of US$7,443 million were US$105 million above 2006, an increase of one per cent. Underlying earnings per share increased by five per cent in 2007 reflecting the lower number of shares resulting from the share buyback programme in the first half of the year. The principal factors explaining the changes in underlying earnings are shown in the table below.

Changes in underlying earnings 2006 -2007

	US$m
2006 Underlying earnings	7,338
Effect of changes in:	
Prices	1,364
Exchange rates	(403)
Volumes	516
General inflation	(218)
Cash costs	(442)
Non-cash costs	(201)
Exploration, evaluation and technology costs	(309)
Tax/other	(202)
2007 Underlying earnings	**7,443**

The effect of price movements on all major commodities was to increase earnings by US$1,364 million. Prices for the major products remained strong throughout the year and were higher overall than those experienced in 2006: average copper prices were six per cent higher whilst average aluminium prices were three per cent higher. The strength of the global iron ore market was reflected in the 9.5 per cent increase in the benchmark price, mainly effective from 1 April 2007. The seaborne thermal and coking coal markets were also strong and strengthened further in the second half.

Molybdenum prices averaged US$30/lb throughout 2007, an increase of 20 per cent compared with the prior year.

There was significant movement in the US dollar in 2007 relative to the currencies in which Rio Tinto incurs the majority of its costs. The Australian dollar was 11 per cent stronger, the Canadian dollar was six per cent stronger and the South African rand four per cent weaker. The effect of all currency movements was to decrease underlying earnings relative to 2006 by US$403 million.

Higher sales volumes predominantly from growth projects increased underlying earnings by US$516 million compared with

2006. The ramp up of new projects in iron ore (including the Yandicoogina and brownfields expansions), higher volumes of copper in concentrate at Escondida from improved grades, higher refined copper sales from the Kennecott Utah Copper ('KUC') smelter operating at close to capacity and higher diamond grades at Diavik were the main contributors.

The Group continued to invest further in the future development of the business with an increased charge to underlying earnings of US$309 million from exploration, evaluation and technology costs. Higher freight and demurrage costs and increased energy costs reduced underlying earnings by US$163 million and US$82 million, respectively. Significant shipping congestion at the port of Newcastle affected coal sales with a resulting impact on costs at Rio Tinto Coal Australia, through higher demurrage and a higher unit cost of sale. General inflation and mining inflation increased costs by US$218 million and US$140 million respectively as higher contractor, maintenance and input costs were experienced throughout the Group, notably in the iron ore and copper operations, as industry supply constraints persisted.

An increase in non cash costs reduced 2007 earnings by US$201 million compared with 2006, following the completion of several large capital investment projects.

The effective tax rate on underlying earnings, excluding equity accounted units, was 25.7 per cent compared with 24.2 per cent in 2006. The tax charge in 2007 was reduced by US$392 million as a result of the impact of the reduction in the Canadian tax rate enacted in December 2007 on deferred tax provisions. The 2006 tax rate benefited from US$335 million of US Alternative Minimum Tax credits, which were recognised on the balance sheet as a result of improved prospects for recovery of these from future taxable earnings from the Group's US operations, as well as the utilisation of US$140 million of previously unrecognised tax assets.

Alcan's contribution to underlying earnings for the nine weeks to 31 December 2007 was US$424 million, including a benefit relating to the change in the Canadian tax rate as described above. Exploration divestments increased 2007 underlying earnings by US$139 million relative to 2006. A higher interest charge from an increase in net debt following the Alcan acquisition reduced earnings by US$248 million relative to 2006. These variances and the tax variances referred to above are included within the US$202 million adverse variance for 'Tax/other'.

2006 financial performance compared with 2005

Net earnings of US$7,438 million in 2006 were US$2,223 million above 2005, an increase of 43 per cent. Underlying earnings of US$7,338 million were US$2,383 million above 2005, an increase of 48 per cent. Underlying earnings per share, which increased by 52 per cent, also reflected the lower number of shares resulting from the share buyback programme. The principal factors explaining the changes in underlying earnings are shown in the table below.

	US$m
2005 Underlying earnings	4,955
Effect of changes in:	
Prices	3,068
Exchange rates	(35)
General inflation	(174)
Volumes	(135)
Cash costs	(629)
Non cash costs	(66)
Exploration, evaluation and technology costs	(46)
Tax/other	400
2006 Underlying earnings	**7,338**

The effect of price movements on all major commodities was to increase earnings by US$3,068 million. Prices for the major products remained strong throughout the year and were considerably higher than those experienced in 2005: average copper prices were 84 per cent higher whilst average aluminium prices were 35 per cent higher. The strength of the global iron ore market was reflected in the 19 per cent increase in the benchmark price, mainly effective from 1 April 2006. The seaborne thermal coal market was also strong, although it weakened in the second half.

Molybdenum prices averaged US$25/lb throughout 2006, a decline of 20 per cent compared with the prior year.

The net effect of changes in average levels of exchange rates against the US dollar for those currencies influencing the Group's costs was to reduce underlying earnings relative to 2005 by US$35 million.

Lower sales volumes decreased underlying earnings by US$135 million compared with 2005. As anticipated, significantly reduced volumes from lower grades at Grasberg impacted earnings by US$355 million year on year. This more than offset higher volumes at other operations. The ramp up of new projects in iron ore (including the Yandicoogina and brownfields expansions), higher copper in concentrate volumes from improved grades and throughput at Northparkes, higher ore grades and the commencement of sulphide leach production at Escondida, along with higher molybdenum and gold production at KUC, were the main contributors. Record volumes of thermal coal sales at Rio Tinto Energy America and alumina at Yarwun, also contributed to higher volumes. Lower sales volumes were recorded at Argyle with a build up of diamond inventories due to softer market conditions, at Kennecott Minerals from lower grades at Cortez, and at Hail Creek from lower coking coal volumes in response to lower customer demand.

Excluding the effects of general inflation, higher costs reduced earnings by US$741 million, of which US$77 million was the result of higher energy costs. Ongoing acute shortages in the mining industry, in particular in the Pilbara, continued to put pressure on costs. Costs at KUC were affected by an extended, scheduled smelter maintenance shutdown whilst Escondida experienced higher wages, following the strike in August. Significant shipping congestion at the port of Newcastle affected coal sales in the second half of the year with a resulting impact on costs at Rio Tinto Coal Australia, through higher demurrage and a higher unit cost of sale.

The effective tax rate on underlying earnings, excluding equity accounted units, was 24.2 per cent compared with 29.2 per cent in 2005, following the recognition of US$335 million of US Alternative Minimum Tax (AMT) credits expected to be utilised in future years. This reflected improved projections of long term taxable earnings from the Group's US operations. Additionally, the high levels of profit generated by the Group's US operations in 2006 resulted in the realisation of US$140 million of previously unrecognised deferred tax assets in the year. Deferred tax provisions decreased by US$46 million as a result of a reduction in Canadian tax rates. These favourable tax variances are included within the favourable variance of US$400 million for 'Tax/other'.

Exclusions in arriving at underlying earnings 2005–2007

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.

	2007 US$m	2006 US$m	2005 US$m
Profit less losses on disposal of interests in businesses	**1**	3	311
Impairment reversals less (charges)	**(113)**	44	4
Exchange gains/(losses) on US$ net debt and intragroup balances (including those relating to equity accounted units)	**156**	(14)	(99)
Gains/(losses) on currency and interest rate derivatives not qualifying for hedge accounting (including those relating to equity accounted units)	**34**	30	(40)
Other exclusions	**(209)**	37	84
Total excluded in arriving at underlying earnings	**(131)**	100	260

In 2007 an impairment charge of US$328 million after tax was recognised at Argyle following a decline in value as a result of large increases in the estimated capital costs of the underground project. This was partly offset by the reversal of the residues of the impairments of Tarong Coal and Palabora.

Other exclusions from underlying earnings in 2007, a charge of US$209 million, mainly comprised non-recurring consequences of the Alcan acquisition, including integration costs. Of this total, US$146 million resulted from the sale of Alcan inventories that were revalued based on selling prices at the date of acquisition.

Net earnings in 2006 included net impairment reversals totalling US$44 million. Impairments were reversed at KUC and IOC which more than offset impairment charges at Argyle and Tarong Coal.

Exchange gains and losses on US dollar net debt and intragroup balances that are recorded in the Group's income statement, together with gains and losses on currency and interest rate derivative contracts that do not qualify as hedges under EU IFRS, are excluded from underlying earnings. In 2007, these items produced a gain of US$190 million (2006: a gain of US$16 million) reflecting the weakening of the US dollar against the Australian and Canadian dollars.

In 2005, gains from disposals of interests in businesses amounted to US$311 million, relating mainly to the sale of Rio Tinto's interests in the Labrador Iron Ore Royalty Income Fund and in Lihir Gold.

CAPITAL PROJECTS

Rio Tinto is investing heavily in future growth opportunities from the Group's broad portfolio of assets. Major projects completed in 2007, together with ongoing projects are summarised below.

Project	Estimated cost (100% basis)	Status/Milestones
Completed in 2007		
Iron ore – Expansion of Hamersley's (Rio Tinto share 100%) Mount Tom Price mine to 28 million tonnes per annum capacity.	US$226m	Project completed in March 2007.
Iron ore – Brownfields mine expansion of Hamersley's (Rio Tinto 100%) Yandicoogina mine from 36 million tonnes per annum to 52 million tonnes per annum.	US$530m	First ore was produced in May 2007, with the project completed at the end of the third quarter of 2007 on time and on budget.
Iron ore – Expansion of Hamersley's (Rio Tinto 100%) Dampier port (Phase B) from 116 million tonnes per annum to 140 million tonnes per annum capacity and additional rolling stock and infrastructure.	US$803m	This project was completed at the end of 2007 on schedule and on budget.
Iron ore – Hope Downs development (Rio Tinto share: 50% of mine and 100% of infrastructure). Construction of 22 million tonnes per annum mine and related infrastructure.	US$980m	First production occurred in November 2007, three months ahead of schedule. The first train load took place in December 2007.
Ongoing		
Copper – Kennecott Utah Copper (Rio Tinto 100%) East 1 pushback. The project extends the life of the open pit to 2017 while retaining options for further underground or open pit mining thereafter.	US$170m	The project was approved in February 2005 and work on the pushback continues. The pebble crushing unit was commissioned in the third quarter of 2006.
Titanium dioxide – Construction by QMM (Rio Tinto 80%) of a greenfield ilmenite operation in Madagascar and associated upgrade of processing facilities at QIT in Canada.	US$1.0bn	Construction is under way. The budget was revised in 2007. First production is expected at the end of 2008.
Alumina – Expansion of the Gove Alumina Refinery (Rio Tinto 100%) from 2.0 to 3.8 million tonnes per annum.	US$2.3bn	Approved in September 2004, the expansion is expected to reach full nameplate capacity by the end of 2008.
Aluminium – Development of the 370,000 tonne per annum greenfield Sohar smelter in Oman (Rio Tinto 20%).	US$1.7bn	Approved in February 2005, first production is expected in the third quarter of 2008.
Aluminium – Aluminium spent pot lining recycling plant in Quebec (Rio Tinto 100%).	US$180m	Approved in September 2006, the plant is expected to begin pot lining treatment operations in the second quarter of 2008.
Gold – Development of Cortez Hills (Rio Tinto 40% as at 31 December 2007; on 21 February 2008, Rio Tinto entered into an agreement to sell its interest in Cortez).	US$504m	Approved in September 2005, the project continues to focus on permitting requirements. The project is on time and on budget.
Uranium – Rössing (Rio Tinto 68.6%) uranium mine life extension to 2016.	US$112m	Approved in December 2005, works are on schedule and on budget to prolong the life of the mine to 2016 and beyond. The mine life extension estimate remains at US$82 million with US$30 million of sustaining capital expenditure.
Diamonds – Argyle (Rio Tinto 100%) development of underground mine and open pit cutback, extending the life of the mine to 2018.	US$1.5bn	Approved in December 2005, the underground development consisting of 34 km of tunnels and excavations is currently 40% complete. Construction of the major underground infrastructure will commence in February 2008. Full production from the underground mine is on schedule to be achieved by December 2010.
Copper – Northparkes (Rio Tinto 80%) E48 block cave project extending mine life to 2016.	US$160m	Approved in November 2006. Underground development has commenced and is on schedule for May 2009 production start.
Energy – Clermont (Rio Tinto 50.1%) will produce 12.2 million tonnes per annum, replacing Blair Athol.	US$750m	Approved in January 2007, first shipments are expected in the second quarter of 2010 with full capacity being reached in 2013.

Estimated	Estimated cost (100%)	Status/Milestones
Ongoing (continued)		
Iron ore – Cape Lambert port expansion (Rio Tinto 53%) from 55 to 80 million tonnes per annum and additional rolling stock and infrastructure.	US$952m	Approved in January 2007, the project is forecast to be complete by the end of 2008, with progressive capacity ramp up in the first half of 2009. The estimated capital cost now includes US$92m for additional rolling stock and infrastructure.
Iron ore – Wharf upgrade and shiploader replacement at East Intercourse Island (Rio Tinto 100%).	US$65m	The project is in progress and is expected to be complete by May 2009.
Alumina – Expansion of Yarwun Alumina Refinery from 1.4 to 3.4 million tonnes per annum.	US$1.8bn	Approved in July 2007, the expansion will more than double annual production at Yarwun and is expected to come onstream by 2011.
Iron ore – Expansion of Hope Downs Stage 2 (Rio Tinto 50%) from 22 to 30 million tonnes per annum.	US$350m	Approved in August 2007, the expansion will be complete by early 2009.
Recently approved		
Diamonds – Construction at Diavik (Rio Tinto 60%) of an underground mine.	US$787m	Capital investment of US$563 million was approved in November 2007 in addition to US$224 million invested in 2006-2007 for the feasibility studies and related capital projects. First production from the underground mine is expected to commence in 2009.
Iron ore – Mesa A development (Rio Tinto 53%): constructionof a 25 million tonne per annum mine and related infrastructure.	US$901m	Approved in November 2007, the mine is forecast to be complete by 2010 with a progressive ramp up to 25 million tonnes per annum by 2011.
Iron ore – Brockman 4 development (Rio Tinto 100%): construction of a 22 million tonne per annum mine (Phase A) and related infrastructure.	US$1,521m	Approved in November 2007, Phase A of the project, to 22 million tonnes is forecast to be complete by 2010, with scope to expand further to 36 million tonnes per annum by 2012.
Coking coal – extension and expansion of Kestrel mine (Rio Tinto share 80%).	US$991m	Approved in December 2007, the investment will extend the life of the mine to 2031 and increase production to an average of 5.7mtpa.
Nickel – Development of Eagle nickel mine in Michigan, US.	US$300m	Approved in December 2007, this high grade nickel and copper mine is expected to commence production in late 2009, delivering 16,000 tonnes of nickel per annum over a seven year period.
Aluminium – Replacement of overhead cranes and upgrade of crane runways on Lines 1 and 2 at Boyne Smelters (Rio Tinto 59.4%).	US$270m	Approved in January 2008, the mobile cranes and associated runways on reduction Lines 1 and 2 will be replaced. The project is estimated to be completed by late 2010.
Aluminium – Replacement of Lines 1 and 2 carbon bake furnace at Boyne Smelters (Rio Tinto 59.4%).	US$347m	Approved in January 2008, the carbon baking furnace that supplies anodes to Lines 1 and 2 will be replaced. The project is estimated to be completed by mid 2011.

Group financial results by product group

The table below summarises the Group's underlying earnings by product group for each of the three years to 2007. These are discussed on pages 19 to 51 of the *Annual report*.

	2007 US$m	2006 US$m	2005 US$m
Iron Ore	**2,651**	2,251	1,722
Energy	**484**	706	730
Aluminium	**1,097**	746	392
Copper	**3,479**	3,538	1,987
Diamonds and Industrial Minerals	**488**	406	438
Other operations	**15**	33	40
Other items	**(526)**	(241)	(186)
Exploration and evaluation	**20**	(84)	(124)
Net interest	**(265)**	(17)	(44)
Group underlying earnings	**7,443**	7,338	4,955
Exclusions from underlying earnings	**(131)**	100	260
Net earnings	**7,312**	7,438	5,215