

# Mine\*

As good as it gets?



Cover photography: Ruben Rivera, Mexico

Location: Grupo Mexico's Nacozari Mine

# Foreword

Welcome to PricewaterhouseCoopers' fifth annual review of global trends in the mining industry—*Mine*. These reviews provide a comprehensive analysis of the financial performance and position of the global mining industry.

2007 saw the margins generated by the Top 40 mining companies reduced from the prior year. While lower, these margins remain at high levels. We predict 2008 will reflect production growth, albeit, with results that reflect growing cost pressures. Commodity prices will remain volatile; however, recent significant price rises for bulk commodities will positively impact the bottom line. Consistent with the prior year, the industry leaders will continue to spread out from their geographical homes to operate assets globally.

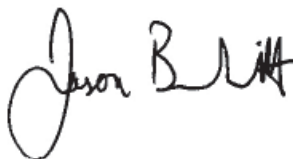
Building on our knowledge and experience from previous publications, this year's report, *Mine—As good as it gets?*, provides an aggregated view of the global mining industry in 2007, represented by 40 of the world's largest mining companies. The results show a significant increase in market capitalisation driven by acquisitions and continued overall strength in commodity prices.

The results aggregated in this report have been sourced from publicly available information, primarily annual reports. Our analysis covers major mining companies from across the globe and based in 14 countries.

We trust you will find this year's publication informative, and encourage you to send us your feedback.



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# Financial highlights



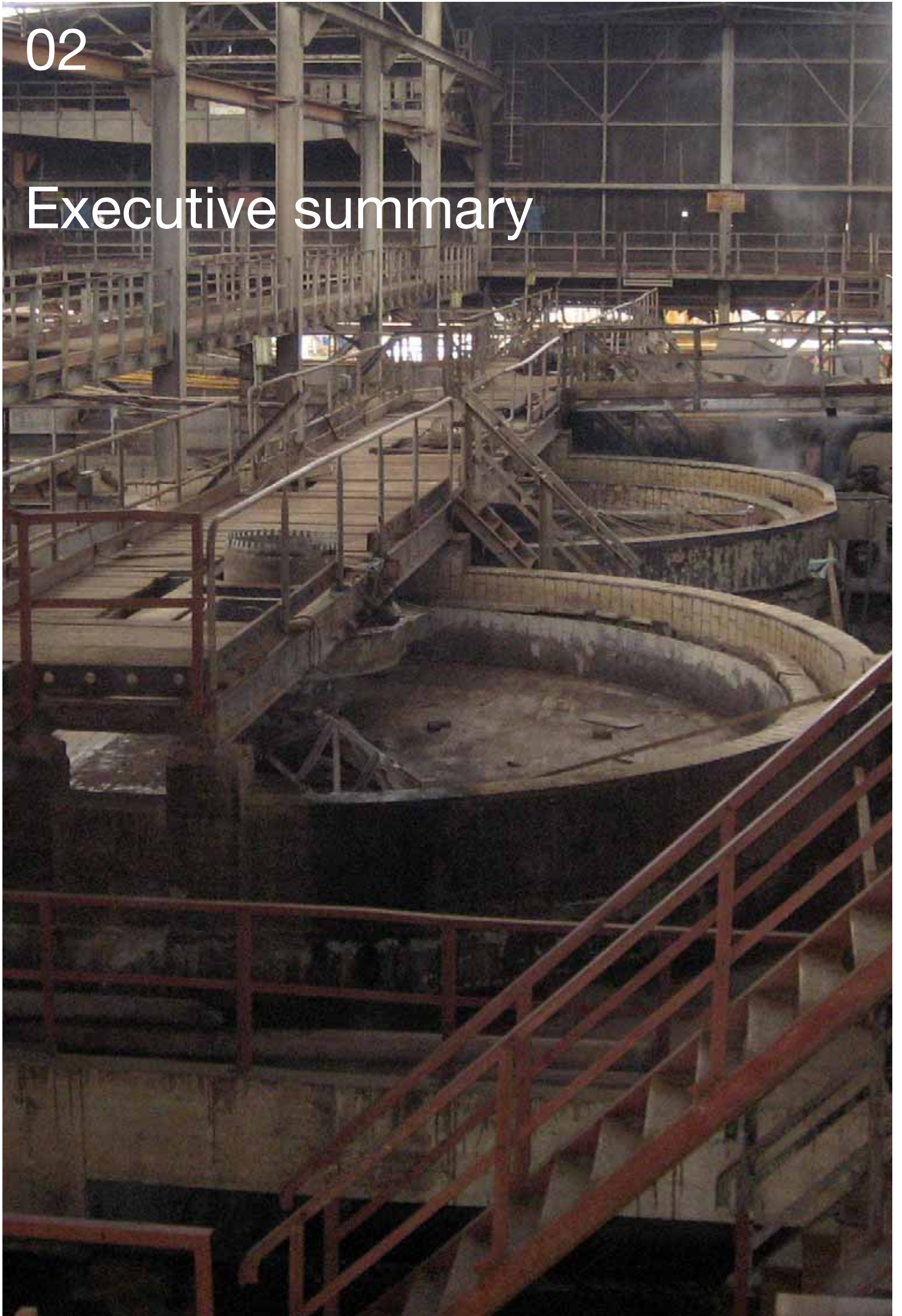
# Financial highlights

<b>Key financials</b>	<b>2007 \$ billion</b>	<b>2006 \$ billion</b>	<b>% Change</b>
Revenue	312	237	32
EBITDA	136	109	25
Net profit	80	66	21
Net operating cash inflows	95	76	25
Capital expenditure	51	37	38
Net debt	107	55	95
Distributions to shareholders	38	33	15

<b>Key ratios</b>	<b>2007 (%)</b>	<b>2006 (%)</b>
EBITDA margin	44	46
Net profit margin	26	28
Effective tax rate	29	28
Return on capital employed	22	23
Return on equity	29	33
Gearing ratio	25	19

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# Executive summary





# Executive summary

2007 started with strong growth across most of the global economy. Signs of a slow-down began to hit certain markets by mid-year when the credit contagion started to take effect, first in the United States and then into Europe.

For the global miners, the economic slowdown pushed gold prices to new all time highs as many investors sought out a safer haven for their investments. Meanwhile, strong demand for other base metals and bulk commodities continued to grow, especially in China, India and other emerging markets.

Our analysis has revealed:

- Market capitalisation of the industry grew by 54%, with noted strength from the diversified giants and emerging market companies;
- Top 40 revenue grew by 32%, but was overshadowed by cost increases of 38%, thereby eroding net margins;
- For the first year since 2002, our initial year analysed, cash flows from operations were insufficient to cover the increased levels of investment activities; significant external financing has been obtained to fund the various growth ambitions; and
- Total shareholder returns for the Top 40 averaged 119% in 2007, compared to 55% in 2006.

Our financial review highlights the success of global diversification; of the Top 40, gold companies have experienced the weakest margins.

The composition and ranking of the Top 40 continues to change, especially in terms of globally diversified and emerging markets. Emerging market companies have shown especially high growth, with these companies now comprising 36% of the Top 40's market capitalisation.

But the boom for mining companies does not come without local challenges, especially for those living and those operating in mining towns. Higher costs of living and a shortage of skilled labour are proving to be challenges for those living and operating in these cities and towns. We look at the specific difficulties that exist in Perth, Australia as an example of a mining boom town.

A new breed of CEO has been quick to capitalise on the increased operating cash in-flows, with many young CEOs (both in age and tenure) undertaking dramatic transactions within months of taking on these top positions. How well they can maintain these so far impressive growth rates will ultimately determine their survival.

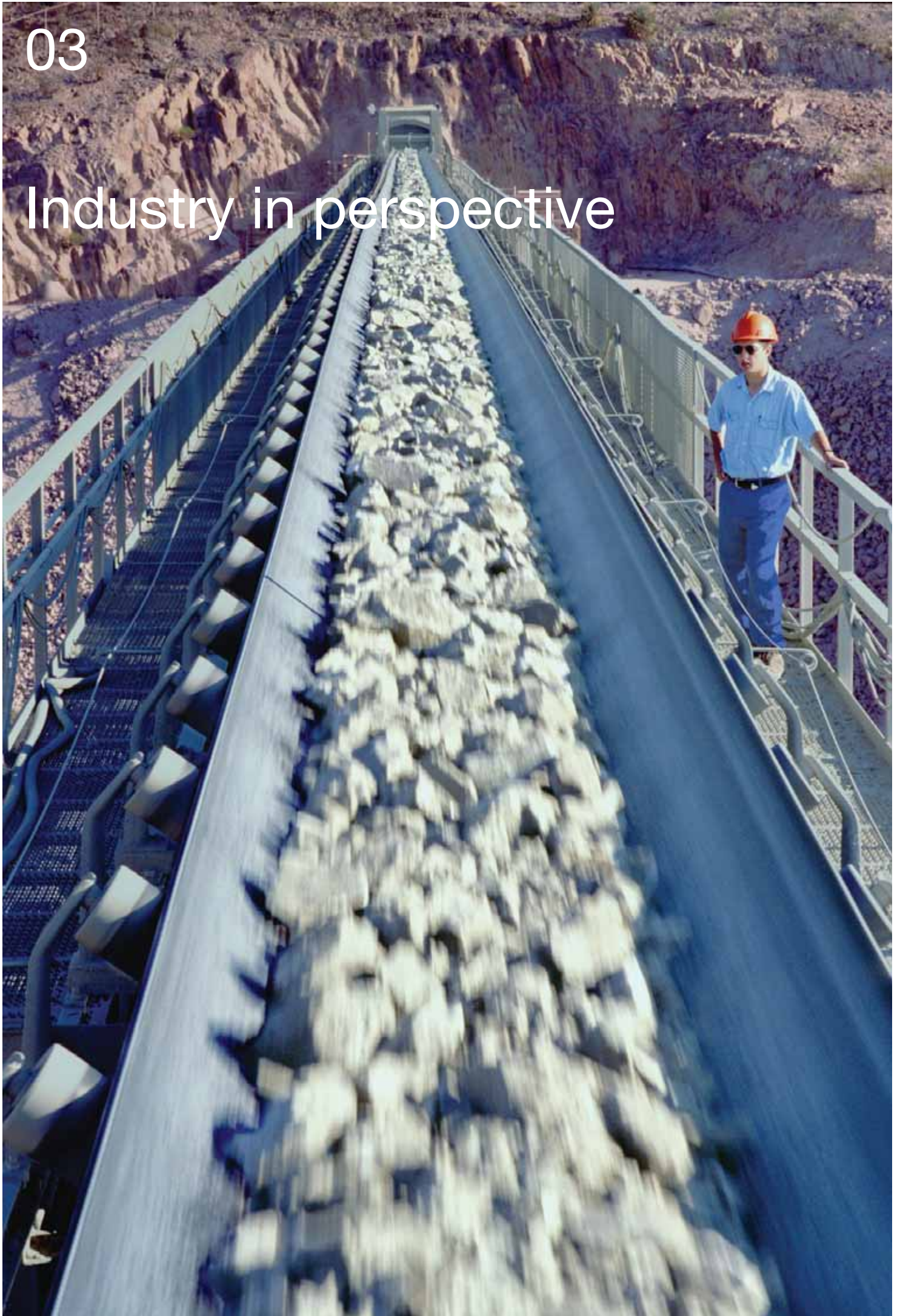
To help achieve such growth all CEOs must now more than ever be attuned to managing people, power and procurement (the "other 3 P's"). With constraints in these critical areas, planning and project management are essential to ensure success.

In addition to these 3 P's, companies are now facing increased risk as they look to further expand into and compete with emerging markets. With greater significance of operations and companies in these markets, the geopolitical landscape for global mining companies has shifted, as our article by guest contributor Eurasia Group suggests.

While most indicators still show exceptional growth, there are signs that some areas are tapering off and may be close to a current peak. Net profit margins, ROE and ROCE indicate that companies' relative earnings have maintained or slightly reduced compared to previous years as cost pressures escalate. Those that cannot control these climbing costs will struggle to keep pace with their peers. This leaves some wondering whether this is as good as it gets?

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# Industry in perspective



# Industry in perspective

## Market capitalisation

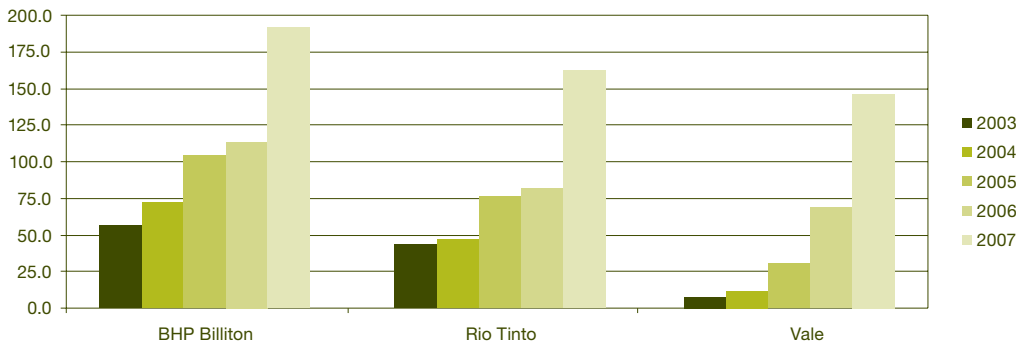
The total market capitalisation of the global mining industry has continued its strong performance in 2007, achieving 54% growth as measured by the HSBC Global Mining Index. This continues to be an outstanding result given the already impressive annualized growth rate of 49% since 2003. The mining industry is really powering ahead.

The top three companies by market capitalisation (“Top 3”) continued to lead by example. Vale continues

to strengthen its presence at the top of the industry, surpassing Anglo American in 2007 and recording the fastest growth of the Top 3, achieving an annualized growth in market capitalisation of 79% since 2003. This growth has been assisted by acquisitions, the largest of which was the 2006 purchase of Inco, as well as continued strength in iron ore and nickel prices. Vale’s successful negotiation of 2008 iron ore contracts should benefit all iron ore producers.

2007 saw the market reward the majors.

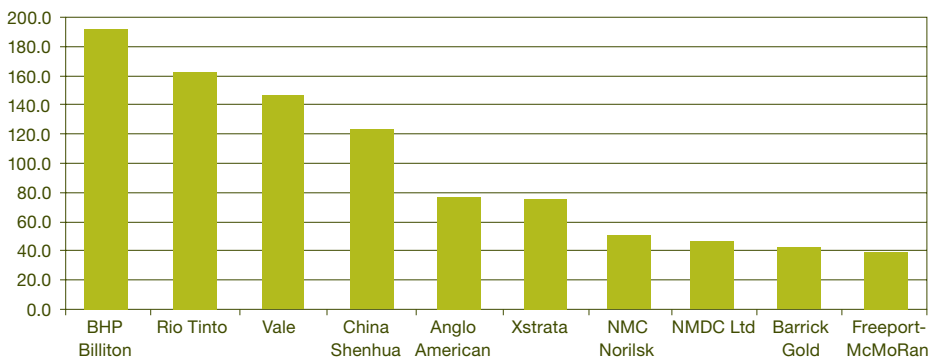
**Market capitalisation (\$ billion)—31 December 2007**



BHP Billiton has made a scrip bid for its next largest rival, Rio Tinto. At this time, the Rio Tinto Boards have unanimously rejected the bid. The market caps of

these two giants could reflect market reaction to the bid as much as the ongoing operating results of each company. Time will tell.

**Top ten market capitalisation (\$ billion)—31 December 2007**



# Industry in perspective

Anglo American fell from third to fifth position as it continues to divest non-mining assets.

Xstrata's impressive acquisition-fuelled growth has helped it establish itself close to the ranks of the large diversified giants. With its annualised growth in market capitalisation of 57% since 2003, Xstrata's trajectory suggests it will continue its ascendancy.

Freeport-McMoRan has made its debut in the top ten, following the successful completion of its acquisition of Phelps Dodge, last year's tenth largest. Note, however, BHP Billiton at number one is 4.9 times Freeport's market capitalisation, demonstrating the relative size of number one BHP Billiton.

Chinese and Indian companies have continued their impressive growth as they look to secure supplies for other industries and gain access to critical technologies. As these companies often limit their publicly floated share holdings, debate exists as to whether their total market capitalisations are representative of real value. In particular, some of their free floats are traded on the Shanghai Stock Exchange and Indian exchanges which recorded exceptional growth in 2007, but which have begun to show signs of weakness and volatility in early 2008.

While not reflected in these numbers, some of the Top 40 companies are not always in sole control of their strategic decisions. The press speculated that Vale's proposed purchase of Xstrata was abandoned as a result of an inability to reach a marketing rights deal with Glencore, Xstrata's significant shareholder. Some Chinese and Indian companies in the Top 40 are ultimately extended arms of their respective governments, with transactions guided by strategic government decisions. Oligarchs created during the Russian privatisation era often still have strong influence over the Russian based companies.

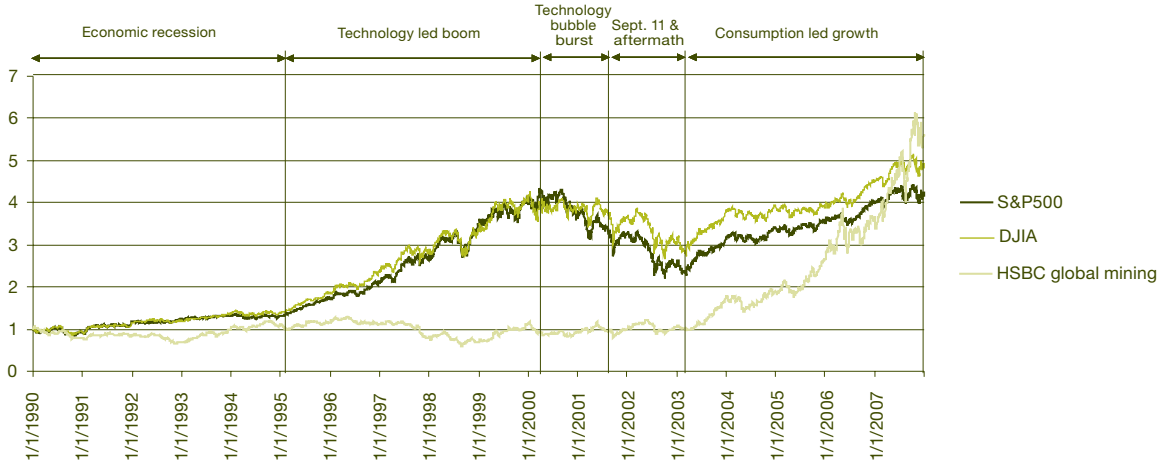
## Industry performance

The HSBC Global Mining Index underperformed against the S&P 500 and the Dow Jones Indices from 1985 to 2003. The commodity price boom helped narrow the gap from early 2004, with the mining index surpassing these benchmark indices in late 2005 and early 2006.

While recent years have seen a rise in all three indices, mining stocks have enjoyed returns that have clearly outperformed the S&P 500 and Dow Jones. Whilst it is magnificent to see the miners outperforming other industries, 2008 may bring choppy waters as the credit contagion spreads to all companies' market valuations.

# Industry in perspective

Global indices (January 1990 = 1)



The mining industry underperformed the markets during the technology-led boom. The industry began its impressive growth in early 2003 when strong demand, primarily from the emerging markets, helped push commodity prices higher.

Global indices (January 2005 = 1)



Last year we suggested that the miners were undervalued by stock markets and we saw this addressed, at least in part, in the last 12 months. While the trends suggest that an undervaluation remains intact, global negativity in stocks suggests that market capitalisations may be as good as they get, at least for the short term.

# Industry in perspective

## Commodity prices

	Copper \$/Tonne	Nickel \$/Tonne	Gold \$/oz
2003 (Avg)	1,789	9,616	364
2004 (Avg)	2,793	13,765	410
2005 (Avg)	3,508	14,551	445
2006 (Avg)	6,675	23,265	605
2007 (Avg)	7,096	36,168	697
2007 (Close)	6,715	26,050	834

Many commodities have experienced tremendous price increases in recent years. Growth in the current year has continued, albeit at lower rates, as many prices stabilised at relatively strong levels. Notwithstanding this, volatility in commodity prices is at record levels and in 2008 we have seen new price records as some of the speculative money has moved from depressed stock markets to commodities.

Early 2008 has also been notable for bulk commodity price increases. Iron ore price increases of 65% and higher have been agreed to by Vale with certain customers, while at the time of writing BHP Billiton and Rio Tinto continue to hold out for more. Coking coal prices have increased by some 200% with other seaborne coal prices increasing in excess of 100%.

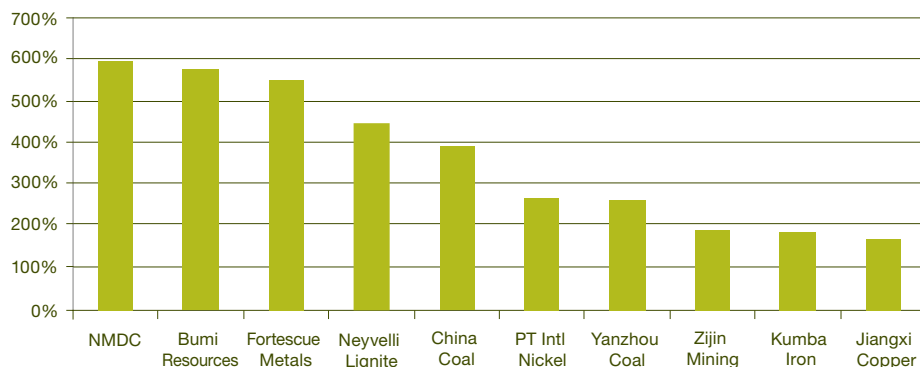
# Industry in perspective

## Total Shareholder Return (“TSR”)

The average one year TSR through December 2007 for companies in the Top 40 was 119% compared to 55% for the prior year. The current year TSRs ranged from a high of 595% to a low of negative 22%. Fourteen companies (compared to six in 2006) in the

Top 40 had a one year TSR greater than 100%, and only five companies had negative TSRs. These numbers are spectacular, particularly when accumulated with other recent years’ TSRs. This obviously highlights that the stock markets have continually undervalued mining stocks and have been trying to catch up.

### One year TSR 2007



It is interesting to note the location of these companies. They are primarily from emerging market nations.

When further analysing the one year TSRs through 31 March 2008 for these same companies above, it is noted that TSRs are on average 55% lower, highlighting the volatility of the Asian markets in early 2008.

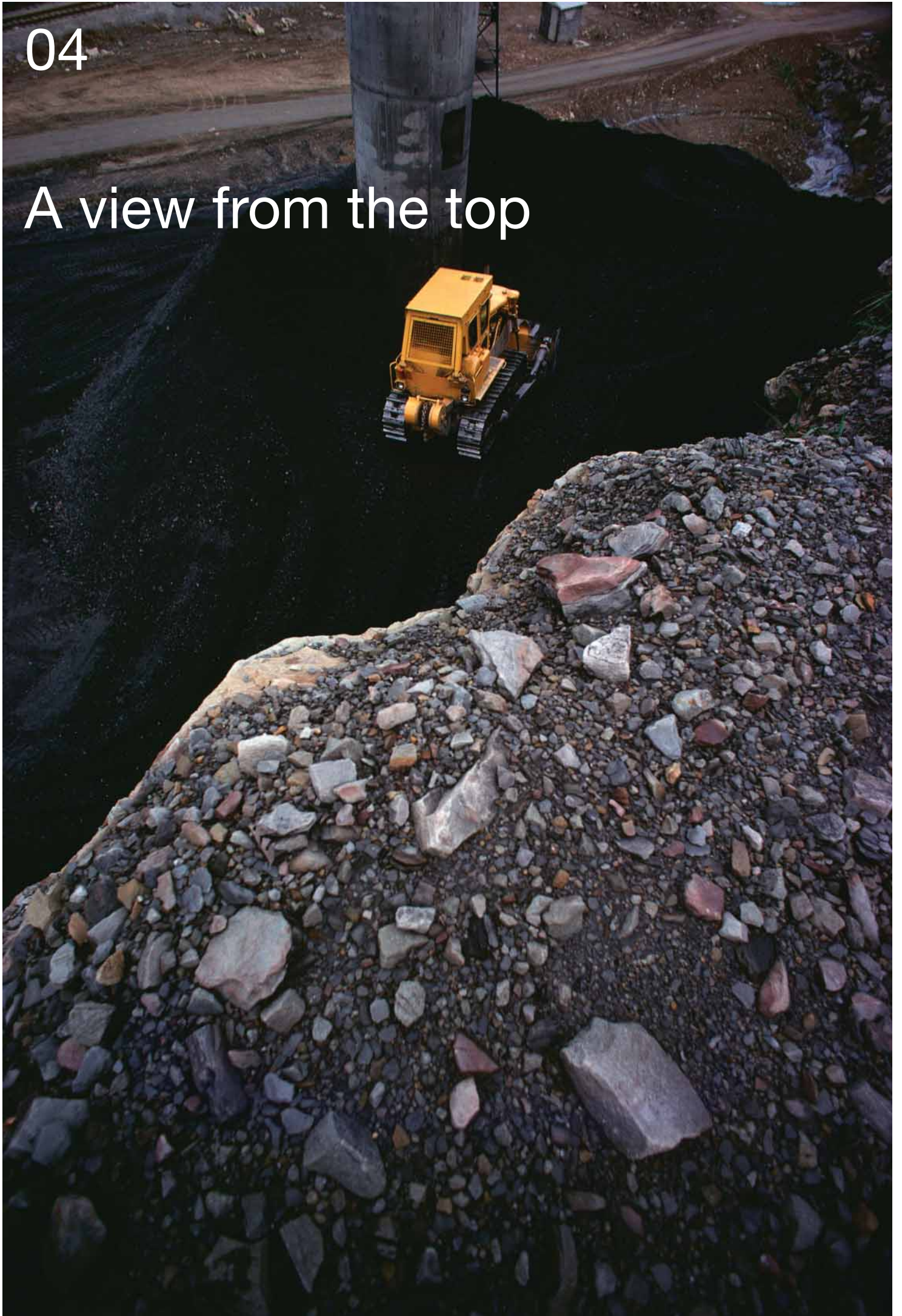
## China

In accordance with the Provisional Regulations Relating to Corporate Reorganization of Enterprises and Related Management of State-owned Capital and Financial Treatment (the Provisional Regulations) issued by the Chinese Ministry of Finance, State-owned companies are required to make a distribution (the “Pre-establishment Distribution”) to its shareholders prior to its listing.

For instance, China Coal was required to distribute to ChinaCoal Group, its sole shareholder prior to listing, special dividends amounting to the difference in its net asset value as at 1 October 2005, the date immediately following its last valuation date, and as at 21 August 2006, the date immediately prior to the date on which it was incorporated. In the case of Shenhua, as part of the arrangement of its 2007 listing on the Shanghai stock exchange, Shenhua earmarked RMB 22,544 million (USD \$2,962 million)—the Group’s entire distributable reserves at 30 June 2007—to be distributed as special dividends to its shareholders.

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A view from the top





## A view from the top

In this section, PwC presents a summary of views expressed by leading CEOs through interviews and discussions conducted during the past year.

This has been a busy 12 months for the CEOs of the major mining companies, with many involved in transactions that are company transforming. Those that are not involved with transactions are either on the look out, or peering over their shoulders. This is the year that has seen the majors look closely at each other, and in the example of BHP Billiton, has lead to a takeover offer for Rio Tinto. We also saw Vale and Xstrata talk seriously about a combination, albeit one they did not consummate. What is driving this change and will it continue?

The answer behind the change in attitude by the large miners with respect to their peers rests with one word: "value". The CEOs believe that the market has still not properly grasped the China story (and of course the fast developing countries which include India) and the future increase in demand that will occur over the next decade. They also have learned, often the hard way, that bringing on new capacity is difficult and costly. Thus the supply / demand gap will continue and potentially grow. This should lead to high commodity prices over time.

There is a general view among the CEOs that analysts have been too conservative in their valuations of miners due to the usage of commodity prices that do not fully take into account future potential. This has lead to significant premiums being put on the table when a transaction occurs, as we saw when Rio Tinto acquired Alcan, and this is by no means an isolated example.

The CEOs are suggesting that mining companies are being undervalued and, therefore, there are good long term bargains to be had by undertaking transactions. This becomes obvious when viewing the commodity prices needed to support the prices being paid for individual assets, as they are often considerably higher than analyst's forecasts. It is notable that even when this premium is paid for one company it is not then picked up in the valuations of similar companies, leaving them vulnerable to a deal to unlock the value.

The advent of the credit contagion has led to a bout of stock price reductions in the industry and, therefore, while investors were starting to more properly value

the miners, this has since disappeared. Again we find ourselves with miners valued at a level that does not offer the blue sky that all those involved in the industry talk about regularly. It is certainly a positive outlook that is offered by the CEOs and one that is different to what is heard from other sectors at the moment.

Indeed the credit contagion has a silver (or maybe golden) lining for the big miners. Many of the projects that were on the development table of juniors will now be much harder for them to finance. Consequently, forecasters' supply expectations may not be met, driven by project delays from a lack of finance or labour, maintenance and other issues (such as weather, water and power), negatively impacting production. While analysts include uninterrupted supply expectations in their forecasts, this remains an unrealistic assumption, particularly in an industry that has been flat out delivering the maximum product possible over recent years. This is contrasted with demand assumptions that do not take a circa 10% GDP per annum growth in China into account.

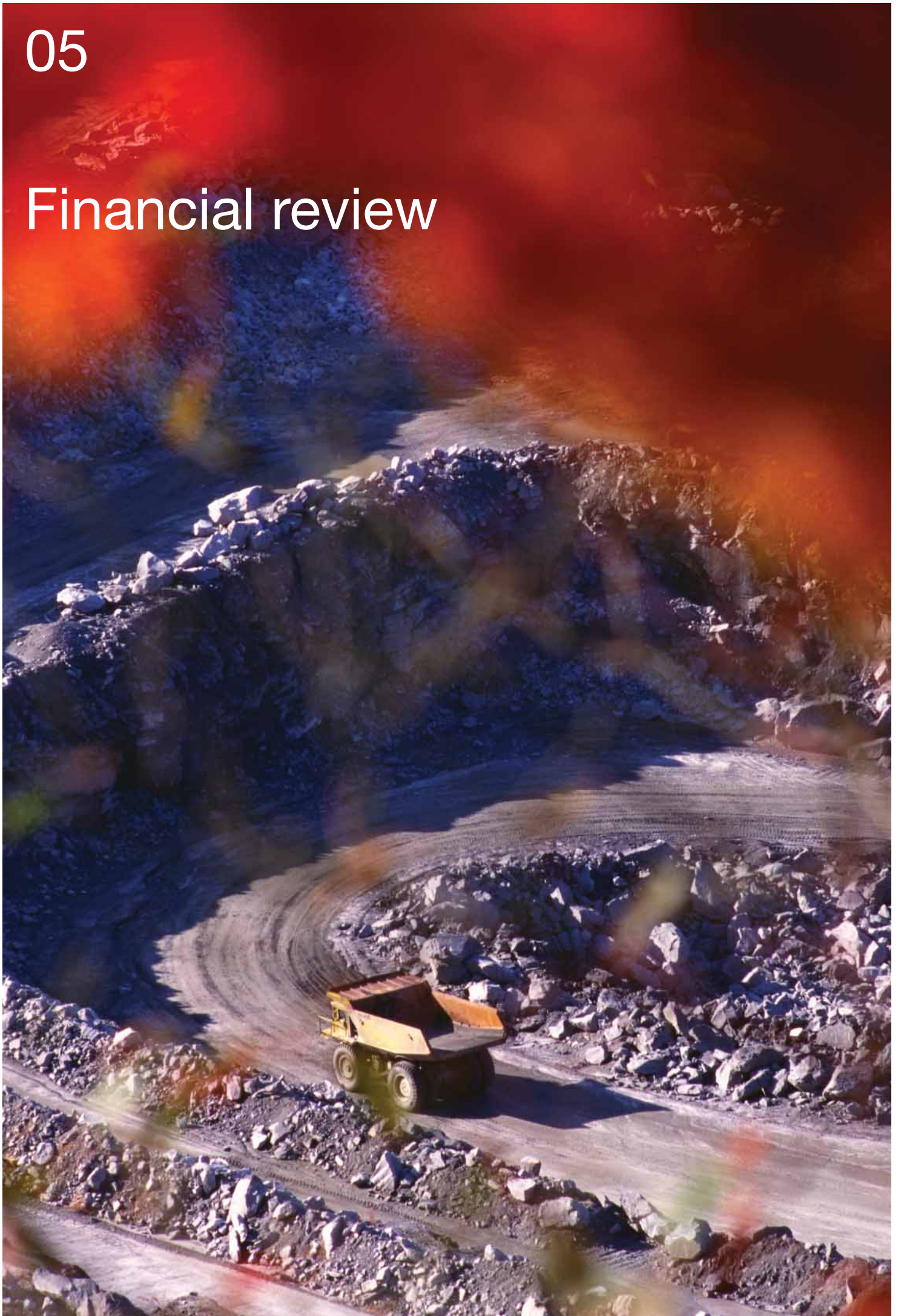
The other big positive that the CEOs point to is the level of cash that is generated at the top of the industry. This provides the leaders with many options. Another great sign of their confidence is the increase in ordinary dividends that have been declared. Industry leaders expect progressive dividend policies and when they increase the dividend, there is every expectation that it will be sustainable and indeed, will be able to grow in the future.

CEOs believe that the structure at the top of the industry is changing. It will never again be the sole domain of western world companies. Vale has already seen to this; further, champions from Russia, China and India will also emerge in the years ahead. Indeed the make up of the top ten miners is expected to continue its rapid evolution and if anything, accelerate its pace.

In summary, CEOs remain extremely confident in the future of the industry. They recognise that tomorrow's leading companies will be different from what we have seen in the past and they want to ensure that their company remains in this group of leaders. They suggest that now is not as good as it gets. Only time will tell if this view is correct.

05

# Financial review



# Financial review

## Income statement

	2007 \$ billion	2006 \$ billion	Change %
Revenue	312	237	32
Operating expenses	(176)	(128)	38
EBITDA	136	109	25
Depreciation & amortisation	(19)	(14)	36
PBIT	117	95	23
Net interest costs	(5)	(3)	67
PBT	112	92	22
Income tax expense	(32)	(26)	23
Net profit	80	66	21

# Financial review

## Top line

The Top 40 companies reported a 32% increase in total revenues in 2007, compared to a 37% increase in 2006. Metal prices have predominantly driven the current year's growth, however relative price growth in key commodities such as copper, iron ore, and gold were lower than the prior year.

Commodity (quantity)	2007	
	Production	% change from the prior year
Gold (Moz)	40	9%
Platinum (Moz)	5	(9%)
Copper (Mt)	10	4%
Zinc (Mt)	4	11%
Coal (Mt)	1,162	6%
Iron ore (Mt)	664	7%
Nickel (Mt)	1	8%

Production has marginally increased for most commodities with zinc and gold recording the highest growth, increasing 11% and 9% respectively. This illustrates that whilst commodity prices remain high, the time required to bring mines on stream is still extensive, and the significant investment spending has yet to add sufficient new net production to balance the increases in demand.

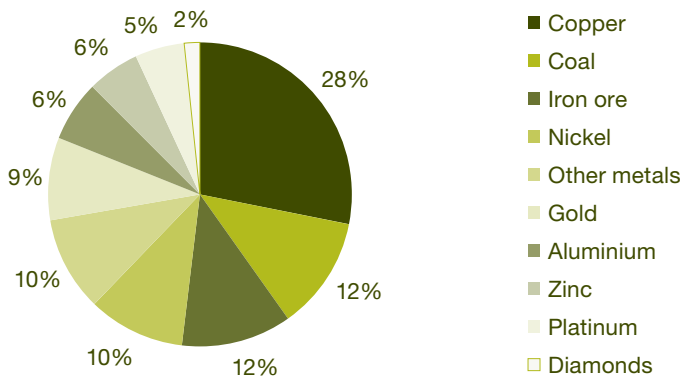
Top 4 by revenue	2007 \$ billion	2006 \$ billion	2007 net profit margin (%)	2007 EBITDA margin %
BHP Billiton	40.0	32.8	34	52
Vale	35.7	20.9	33	50
Rio Tinto	29.7	22.5	26	41
Xstrata	28.5	17.1	21	39

# Financial review

The four companies previously noted account for 43% of total Top 40 revenue and 47% of profit before interest and tax. Anglo American recorded the highest revenue figure in 2006, and is now 5th largest by revenue following disposals of some non-mining assets. Rio Tinto's acquisition of Alcan will bring a significant

revenue increase next year, however due to the timing of the transaction, revenue from the acquired business had little impact in 2007. Both Vale and Xstrata's revenues have seen full year benefits from significant 2006 acquisitions.

## 2007 revenue by commodity

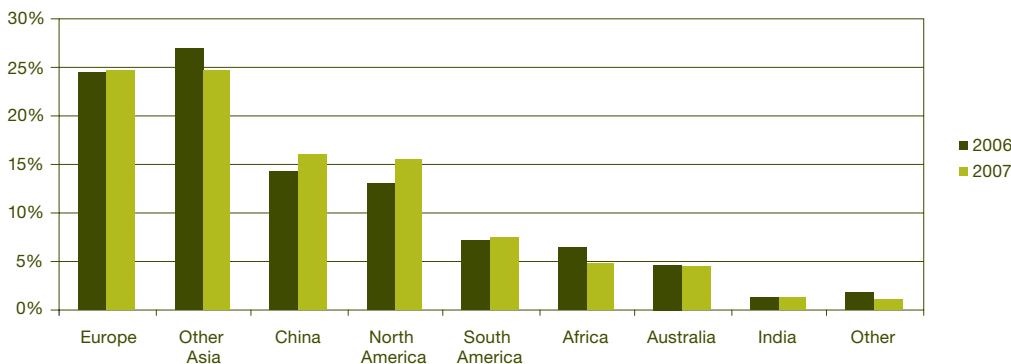


As with prior years, copper remains the dominant source of revenue for the Top 40, accounting for 28% of total revenue. Coal and iron ore have maintained consistent shares of total Top 40 revenue. With some bulk commodity price increases agreed to in early 2008 for certain seaborne coal and iron ore, both of these commodities should see their respective revenue shares increase next year. Nickel has experienced significant growth driven by a 50% average price

increase in 2007. It contributed 10% of the Top 40's revenue, compared to 5% in the prior year, although current nickel prices are far below last year's average so some of this gain may be given up in 2008.

The share of revenue by customer location has not changed significantly, which at first glance, appears surprising. Revenue from customers in China and India appear lower than we expected.

## Share of total revenue by customer location



# Financial review

## Margins and operating costs

Net profit margins have decreased for the Top 40, from 28% in 2006 to 26% in 2007, the first time this has happened since we began our analysis in 2003.

Increases in operating costs have outweighed the rise in commodity prices. The 38% increase in operating costs is driven by higher energy, labour, materials, transportation and contractor costs.

	2007 (%)	2006 (%)
Net profit margin	26	28
EBITDA margin	44	46
Return on equity (ROE)	29	33
Return on capital employed (ROCE)	22	23
Operating cash flow margin	30	32

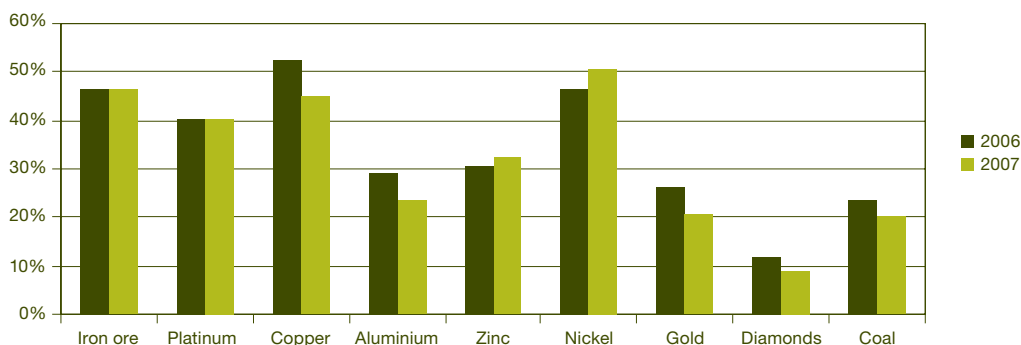
The rush to cash in on high commodity prices continues to put pressure on infrastructure and critical supplies across the industry. For example, our publication for the junior mining industry in Canada shows recently recorded production cost increases of 76% from the prior year, with the Australian mid-tier sector recording a 56% increase. While these increases exaggerate the issue (due to production increases), the message is that costs are clearly rising rapidly. Maintaining a focus on costs is essential for all miners. Commodity prices can fall quickly whereas operating costs are often more rigid over time.

Operating costs excluding depreciation for the top four revenue earners have increased on average 46% in 2007, while the other companies on average have only experienced 33% cost increases. While these four are geographically diverse, more of their operations are in developed markets and they are finding it difficult to compete with some of the more recent entrants to the

Top 40 that operate solely in emerging markets with cheaper input costs. The weakening of the US dollar has further exacerbated the margin problem in the current year, as average exchange rates for EUR, CAD and AUD all strengthened substantially over the last 12 months.

All mining companies need to remain vigilant in their efforts to manage spiralling costs and investigate innovative ways to keep them in check. Compared to the oil and gas industry, mining companies typically take on greater risk and reward profiles via sole ownership of projects. A number of mining companies are investigating more joint venture structures or establishing shared service functions to reduce costs. Companies with mature operations are even starting to investigate sharing infrastructure such as mills, where capacity is available. Companies will clearly continue to explore different ways of pursuing risk and cost reduction initiatives.

## Margin by commodity



# Financial review

<b>Net profit margins</b>	<b>2007 (%)</b>	<b>2006 (%)</b>
Antofagasta	69	68
NMDC	51	45
Norilsk Nickel	45	52
Buenaventura	49	85

Margins by commodity continue to remain strong, although slight decreases have taken place in a number of metals. Despite the reduction in net profit margins across the Top 40, some companies have continued to record remarkable profitability. The net profit margin of Antofagasta PLC leads the Top 40. This is assisted by negative cash costs from molybdenum offsets at their flagship Los Pelambres mine. Furthermore, results from both National Mineral Development Corporation (NMDC) and Norilsk Nickel appear to benefit from an ageing asset base with depreciation charges being very low.

	<b>2007 ROE (%)</b>	<b>2007 ROCE (%)</b>
Top 40 average	29	22
BHP Billiton	49	39
Vale	41	25
Rio Tinto	34	21

Return on Equity (ROE) and Return on Capital Employed (ROCE) remain strong, although both have declined from 2006 levels. Diversified majors are returning quite strong ROE and ROCE, and typically the high performers by this measure are also recording consistently high net profit margins. Rio Tinto's ROCE for 2007 is lower as a result of its acquisition of Alcan.

<b>Gold sector</b>	<b>2007 ROE (%)</b>	<b>2007 ROCE (%)</b>
AngloGold Ashanti	(23)	(14)
Barrick	8	10
Gold Fields	9	8
Gold Corp	4	3
Kinross Gold	11	11
Newcrest	16	3
Newmont	(19)	(21)
Polyus	6	6

In contrast to the diversified companies, the gold sector in particular has experienced weaker ROE and ROCE. In 2007, a number of gold companies have continued to exit their hedging commitments in an attempt to allow their companies to receive greater exposure to higher prices. Gold continues to be a higher cost sector, reflected in the returns achieved relative to the rest of the mining industry. Despite its relative weaker performance, gold companies typically have a higher price earnings multiple than other miners. The higher price earnings ratios are partially explained by the role of gold as a store of wealth, which makes it subject to different market forces.

# Financial review

## Depreciation

Depreciation and amortisation increased in the current year by 36%. The key drivers have been the impact of acquisitions on the fair values of assets in addition to higher cost projects being brought on stream.

## Exploration

Exploration expenditure has increased by 22% in 2007, but this is not necessarily indicative of an increase in exploration activity as related labour and equipment costs have been increasing significantly. The continuing story of a return to exploration by the majors (and others) is unlikely to lead to a rush of new mines any time soon as the lead time from exploration to mining is a decade or more in many cases.

## Interest

Net interest costs have increased by 67%, driven by increased gearing in the Top 40 primarily incurred to fund cash acquisitions and project development. Although in absolute terms, net interest remains a low proportion of mining company costs.

## Tax and royalties

Total income tax expense has increased proportionally with pre-tax profits. The effective tax rate has increased marginally from 28.4% to 29.1%.

Royalty expense represents 2.8% of operating revenues and 8% of pre-tax and pre-royalty-profits for those companies that disclose royalty expenses separately. When tax and royalties are combined, the Top 40 contribute to governments an amount equal to approximately the entire revenue of the largest miner, BHP Billiton, a massive contribution by anyone's standards. Nevertheless, many countries are continuing to consider whether they are achieving an adequate share of net profits.



# Financial review

## Cash flow

	2007 \$ billion	2006 \$ billion	Change %
<b>Cash flows related to operating activities</b>			
Cash generated from operations	129	98	32%
Taxation paid	(36)	(25)	44%
Other	2	3	(33%)
<b>Net operating cash flows</b>	<b>95</b>	<b>76</b>	<b>25%</b>
<b>Cash flows related to investing activities</b>			
Purchases of property, plant and equipment	(51)	(37)	38%
Purchases of investments	(84)	(45)	87%
Sales of investments	10	15	(33%)
Other net investment-related cash flows	(1)	-	(100%)
<b>Net investing cash flows</b>	<b>(126)</b>	<b>(67)</b>	<b>88%</b>
<b>Cash flows related to financing activities</b>			
Issue of shares	22	11	100%
Increase in borrowings	116	74	57%
Repayment of borrowings	(64)	(46)	39%
Distributions to shareholders	(38)	(33)	15%
Other	-	(2)	100%
<b>Net financing cash flows</b>	<b>36</b>	<b>4</b>	<b>800%</b>
<b>Net increase in cash and cash equivalents</b>	<b>5</b>	<b>13</b>	<b>(62%)</b>
Cash and cash equivalents at beginning of period	39	26	
Effect of foreign currency exchange rate changes	1	-	
<b>Cash and cash equivalents at end of period</b>	<b>45</b>	<b>39</b>	

# Financial review

## Operating cash flows

While the outstanding growth in net operating cash flows achieved in previous years (2006: 40%, 2005: 35%, 2004: 88%) was not matched in 2007, the Top 40 continue to cash in on rising commodity prices. The fall in growth is driven largely by a slow down in price increases, in combination with ongoing battles to control escalating operating costs. As predicted last year, governments worldwide have benefited from higher income taxes paid, as payments catch up with tax expenses recorded in previous years.

## Investing cash flows

Net investing cash flows have increased 88% from 2006 and have exceeded net operating cash flows for the first time since the inaugural Mine publication in 2003. Companies are exploring, developing and acquiring at unprecedented levels, at least in expenditure terms.

M&A activity in the sector continues at pace. Acquisitions and other investments increased by 87%. Rio Tinto's successful acquisition of Alcan for total consideration of \$38.7 billion, represented the mining sector's largest ever transaction, overshadowing Freeport-McMoRan's \$25.8 billion purchase of Phelps Dodge earlier in the year. Some other significant transactions included Norilsk Nickel's \$5.4 billion acquisition of LionOre and Teck Cominco's \$3.8 billion acquisition of Aur Resources. For more detail on transactions in the mining industry refer to *Mining Deals* which can be downloaded at [www.pwc.com/mining](http://www.pwc.com/mining).

Fixed asset and development activities increased by 38% from 2006. Growth in spend for the Top 3 was 32% while the remaining companies in our Top 40 increased outflows by 42%. Outside of the Top 3 Fortescue Metals has made significant advances in construction and development of its iron ore operations (\$1.1 billion spend) since raising debt and equity in late 2006. For China Coal Energy, investment in a number of key projects intensified including the Antaibao underground mine. Additionally, Eurasia Natural Resources Corporation (ENRC) commenced the first phase of its aluminium smelter construction.

## 2007 growth in capital expenditure (%)

BHP Billiton	21
Rio Tinto	25
Vale	50
China Coal Energy	98
ENRC	107

The increase in spend not only represents expansion activities but includes significant development cost overruns on existing projects as a result of higher labour, materials and other input costs. Given the current high cost environment, companies must critically monitor their project management.

## Financing cash flows

The majority of deals completed in 2007 have had significant cash components, such as Rio's purchase of Alcan and Freeport's acquisition of Phelps Dodge. The acquisitions, as well as significant development activity, have resulted in proceeds of borrowings increasing by \$42 billion compared to 2006 as operating cash flows were insufficient to cover this spend. Partially offsetting the increase in funding has been the rapid repayment of outstanding debt driven by excellent operational performance.

The Top 40 have increased returns directly to shareholders, through dividends and share buybacks. Special dividends such as those paid by Rio Tinto and Anglo American in 2006 have not been repeated in 2007, but sustained rapid ordinary dividend growth is continuing, again signalling that the majors expect their returns to continue growing.

Global capital markets have demonstrated an increased appetite for the mining industry with proceeds from share issues increasing by 100% from last year. Leading these issuances were China Shenhua Energy (\$9.0 billion), Freeport-McMoRan (\$5.6 billion) and ENRC (\$3.1 billion), which debuted on the London Stock Exchange in December 2007.

# Financial review

## Balance sheet

	2007 \$ billion	2006 \$ billion	Change %
<b>Current assets</b>			
Cash	45	39	15%
Inventories	39	28	39%
Accounts Receivable	36	30	20%
Other	27	14	93%
<b>Total current assets</b>	<b>147</b>	<b>111</b>	<b>32%</b>
<b>Non-current assets</b>			
Property, plant and equipment	371	260	43%
Goodwill and intangibles	60	29	107%
Other	77	51	51%
<b>Total non-current assets</b>	<b>508</b>	<b>340</b>	<b>49%</b>
<b>Total assets</b>	<b>655</b>	<b>451</b>	<b>45%</b>
<b>Current liabilities</b>			
Accounts payable	43	33	30%
Borrowings	25	13	92%
Other	33	22	50%
<b>Total current liabilities</b>	<b>101</b>	<b>68</b>	<b>49%</b>
<b>Non-current liabilities</b>			
Borrowings	127	81	57%
Other	101	70	44%
<b>Total non-current liabilities</b>	<b>228</b>	<b>151</b>	<b>51%</b>
<b>Total liabilities</b>	<b>329</b>	<b>219</b>	<b>50%</b>
<b>Total equity</b>	<b>326</b>	<b>232</b>	<b>41%</b>
<b>Total equity and liabilities</b>	<b>655</b>	<b>451</b>	<b>45%</b>

Ratios	2007	2006
Gearing %	24.7	19.2
Current (times)	1.5	1.6
Quick (times)	1.1	1.2
Net debt (\$ billion)	107	55

# Financial review

## The big picture

The size of the Top 40 companies in terms of assets and liabilities has grown substantially since the prior year due partially to large acquisitions accounted for at fair value, such as the purchase of Alcan by Rio Tinto, Phelps Dodge by Freeport and LionOre by Norilsk Nickel. If BHP Billiton consummates a deal with Rio Tinto, the aggregated balance sheet for the Top 40 will change significantly.

Rio Tinto's cash acquisition was funded by debt where as Freeport's acquisition of Phelps Dodge utilised both funding from issuing shares and taking on debt, showing the flexibility the large players have in raising cash for acquisitions. Companies from emerging markets, however, may find difficulty in making share based bids due to the limited global appetite for these companies' shares and may need to tap home markets for share issues that may not be quite as liquid.

## Goodwill and intangibles

Goodwill and intangibles increased by 107%. This significant rise reflects the premium, in the form of goodwill, paid by companies that made acquisitions. It also reflects the value of a variety of intangibles, such as contracts, licences and water rights acquired.

## Overall borrowings

Overall borrowings by the Top 40 have increased by over 61% and much of the debt will not come due for several years. Companies have also been able to repay debt more quickly due to the favourable

commodity price environment. These factors indicate that the difficulties inherent with the global credit contagion, such as the refinancing and restructuring of existing debt, may not significantly impact this segment of the industry. The trend of increased borrowings in 2007 holds true for the junior mining sector as well. However, without the benefit of production and cash flows to pay down debt and fund exploration and development, raising new debt will become more difficult.

## Impact of gearing ratio and covenants

The credit crunch along with the overall increase in debt may have an impact on future opportunities for large scale acquisitions by the Top 40 players. The increase in the gearing ratio indicates that the Top 40 have become increasingly more leveraged, although at 24.7% this is well below other industries.

Debt covenants for some companies restrict the ability to take on additional debt, therefore, raising the question whether they will have the ability to raise large amounts of additional cash through debt for future deals.

## Impact of costs

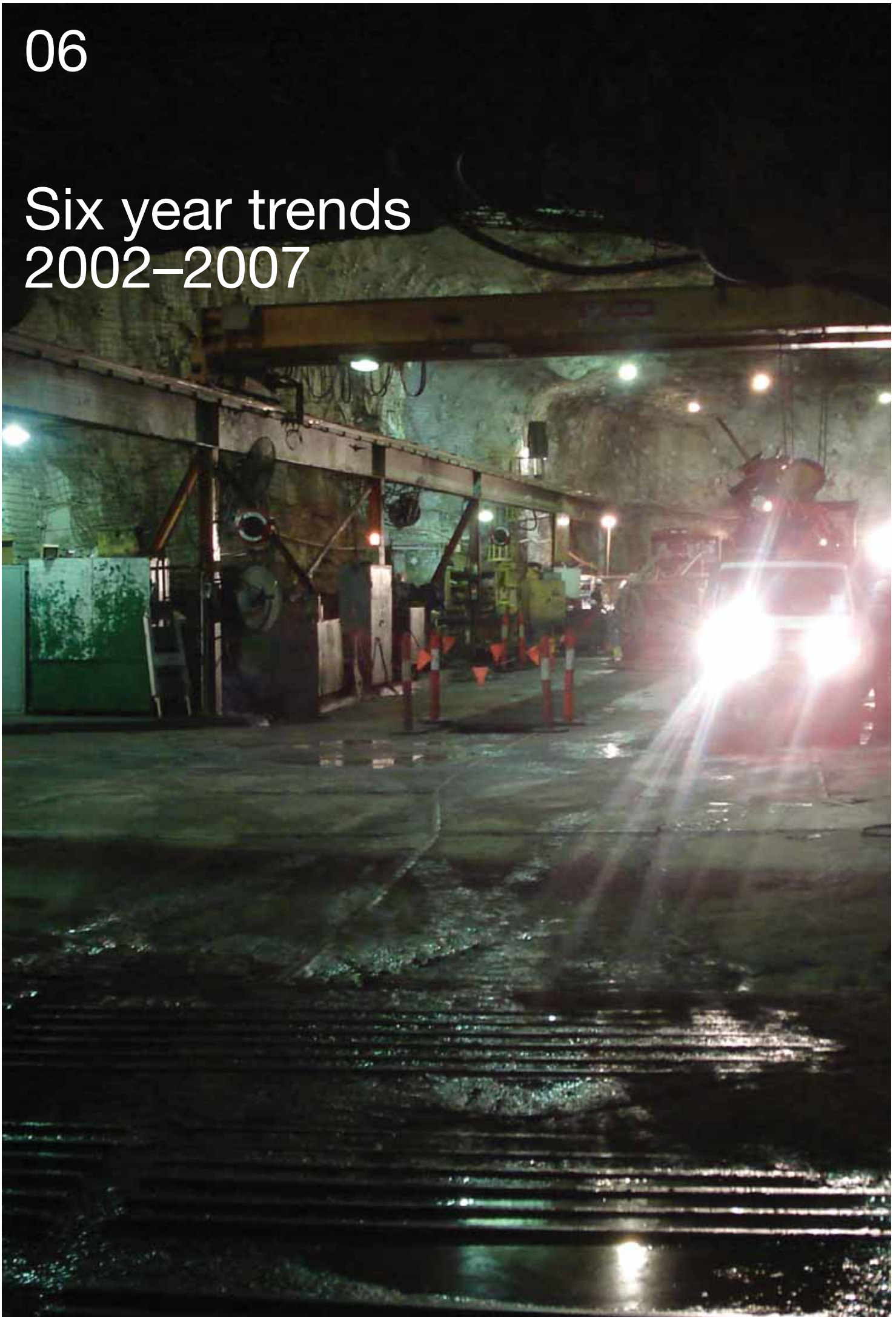
Further restricting the future growth potential of the Top 40 are costs. The continuing rise in costs of labour, power and other input costs could make existing operations less profitable and affect the capital costs of new projects. The result could be a slowdown of operating results which will affect the ability to repeat the magnitude of the overall growth of the 2007 balance sheets.

## Project development costs

Many of the Top 40 companies are battling against rising costs of development. In November 2007, Teck Cominco and NovaGold Resources announced they were suspending construction activities at the Galore Creek copper-gold-silver project. Reviews performed after the first season of construction indicated substantially higher capital costs and a longer construction schedule would be needed. Freeport-McMoRan's development of their Tenke Fungurume project in the Democratic Republic of Congo estimated capital costs of \$1.75 billion, announced in April 2008, more than double the original forecast. While this reflects industry-wide escalations in construction costs, the project also required further electrical power-generating capacity for improved power reliability (we expand on this topic further in "The impact of the other 3 P's"). Spiralling development costs will remain a real challenge in the years ahead.

06

# Six year trends 2002–2007



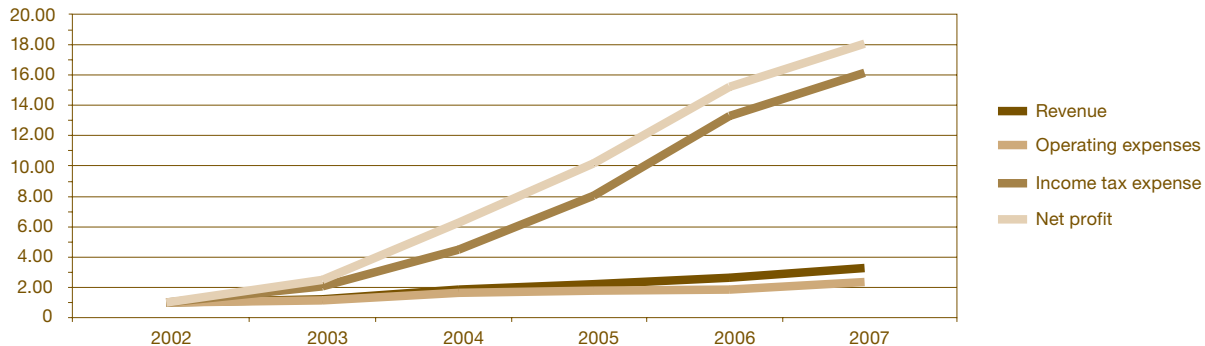
## Six year trends 2002–2007

	2007 \$ billion	2006 \$ billion	2005 \$ billion	2004 \$ billion	2003 \$ billion	2002 \$ billion
<b>Aggregated Income Statement</b>						
Revenue	312	249	213	178	114	95
Operating expenses	176	141	134	125	85	75
EBITDA	136	108	79	53	29	20
Amortisation and depreciation	19	12	15	14	10	9
PBIT	117	96	64	39	19	11
Net interest cost	5	3	4	3	3	5
PBT	112	93	60	36	16	6
Income tax expense	32	27	16	9	4	2
Net profit	80	66	44	27	12	4
Year on year increase in revenue	25%	17%	20%	56%	20%	
Cumulative increase in revenue since 2002	228%	162%	124%	87%	20%	
Year on year increase in net profit	21%	50%	63%	125%	200%	
Cumulative increase in net profit	1900%	1550%	1000%	575%	200%	
EBITDA margin	44%	43%	37%	30%	25%	21%
Net profit margin	26%	27%	21%	15%	11%	4%
<b>Aggregated Cash Flow</b>						
Operating activities	95	77	58	43	22	
Investing activities	(126)	(67)	(38)	(27)	(20)	
Financing activities	36	4	(11)	(9)	1	
<b>Aggregated Balance Sheet</b>						
Property, plant and equipment	371	262	214	187	140	117
Other assets	284	192	141	116	85	73
Total assets	655	454	355	303	225	190
Total liabilities	329	217	170	144	114	102
Total equity	326	237	185	159	111	88
Return on equity	29%	33%	25%	19%	12%	6%

Aggregated results of 40 of the largest mining companies in each year as explained on page 52.

# Six year trends 2002–2007

## Indexed growth (2002 = 1)



A number of the Top 40 companies have continued to be acquired and consolidated within the current Top 40 since the publication of the first edition of *Mine*. Some striking trends include:

- Revenues have grown in line with continued strength in commodity prices and increased production. Revenue in 2007 is 3.3 times that of 2002;
- EBITDA margins have grown through 2006, with 2007 margins stabilizing for the first time since 2002 as a result of increased cost pressures faced by the Top 40;
- Net profit is 20 times that of 2002, achieving almost linear growth over this time. However net profit margins have fallen for the first time since 2002 as growth in operating costs outstripped revenue growth across the sector;
- Combined net profit of the Top 3 in 2007 is 7 times the aggregate net profit of the top 40 companies analysed in 2003, with BHP Billiton, Rio Tinto and Vale's 2007 net profits each individually surpassing that of the total 2002 top 40;
- Operations have generated 3.2 times more cash for the Top 40 than in 2003. Reinvestment of this cash continues to increase, with 2007 investing activities exceeding cash generating activities, thereby requiring significant additional external financing to maintain support for the many acquisitions and asset developments; and
- The carrying amount of property, plant and equipment has increased by 217% since 2002. This increase reflects the significant reinvestment in the industry, but also highlights attributed fair values of merger and acquisition activities.

# Six year trends 2002–2007

## Market capitalisation

The industry has experienced significant development and consolidation since our first analysis in 2003, funded primarily by strong commodity demand and resultant price increases, as well as continued investment in the industry. This has resulted in a number of fundamental changes to the composition of the Top 40 companies which we expect to continue in the future.

Of 2003's top 40 companies, only 25 remain in this year's listing. Eight of the 2003 top 40 companies (Falconbridge, Glamis Gold, Inco, Noranda, Phelps Dodge, Placer Dome, Wheaton River, and WMC Resources) have been acquired by those that remain. In addition, other transactions have brought value into the Top 40 such as Rio Tinto's 2007 acquisition of Alcan, an integrated aluminium producer which has traditionally fallen outside the scope of our analysis.

The market capitalisation of the Top 40 has shown exceptional growth. The 40th company in 2007, having a market capitalisation of \$9.1 billion, would have been 10th largest in 2003, based on its current market value. The lowest market capitalisation has increased by 5.7 times and that of the largest 3.4 times.

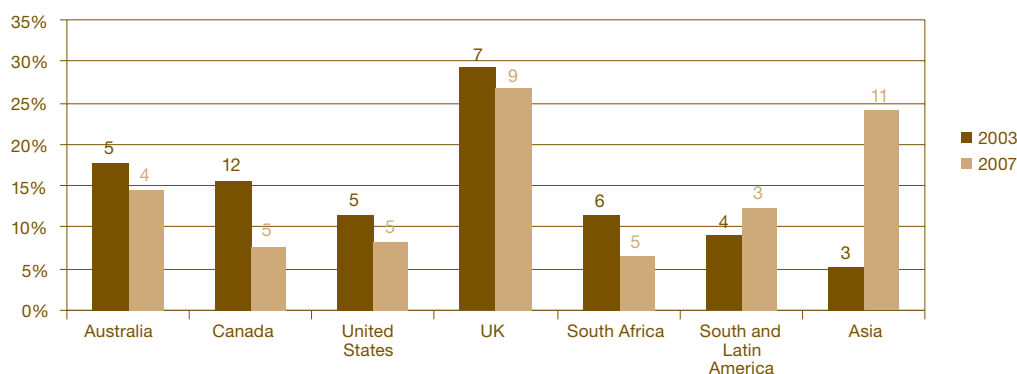
The most striking change in composition is the relative reduction in the market capitalisations of the traditional

mining powers (Canada, United States, Australia, and South Africa) and the growth and emergence into the Top 40 of the emerging markets' companies in the BRIC and South American regions as geopolitical risk appetites change. In 2003, the market capitalisations for these emerging markets' companies made up 14% of the total Top 40 market capitalisation; in 2007 this relative weight grew to 36%.

The UK listed companies have only fallen marginally, however this "consistency" has predominantly been maintained by Xstrata's acquisition-based growth, and by recent UK listings by such companies as ENRC and Kazakhmys, operating solely in emerging markets.

Although Canadian and Australian based companies' market capitalisation strength in the Top 40 has diminished, both nations are currently well positioned for growth and resurgence with their strengths in the junior and mid-tier mining sectors. Toronto's venture-exchange listed Top 100 junior mining companies have experienced a 135% growth in market capitalisation since 2005, with Australia's Top 50 mid-tier mining companies (under \$5 billion) showing 122% growth. Only time will tell if this next generation of emerging companies will continue their successful growth, or whether they will fall prey to the other global Top 40 players' acquisition and diversification strategies.

## % of Top 40 total market capitalisation by geographic listing

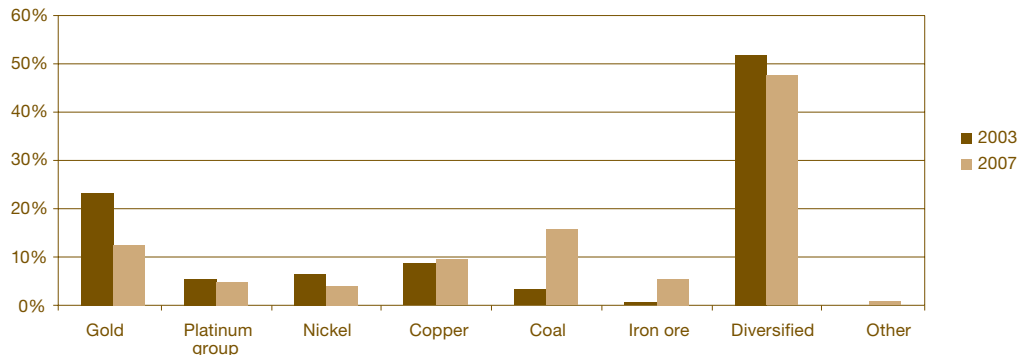


# of Top 40 companies by geographic listing noted above each bar



# Six year trends 2002–2007

Market capitalisation by commodity (%)



An interesting development is the growth in representation of the coal and the iron ore companies, also accounting for the majority of the growth by Asian listed companies. The diversified giants are likely to continue enjoying strong results in 2008, especially with their significant exposures to iron ore and coal. Vale has already been successful at increasing its 2008 negotiated iron ore prices by 65% or more; and broadly speaking, various export coal prices have experienced recent spikes with price increases exceeding 100% for 2008.

Gold producers continue to experience a reduction in their share of the total market capitalisation. Although surpassing the magical \$1,000/oz gold price barrier in early 2008 has helped support individual company growth, the recent retreat to \$900/oz coupled with weaker margins experienced by gold miners, have reduced their growth relative to the other commodity producers.

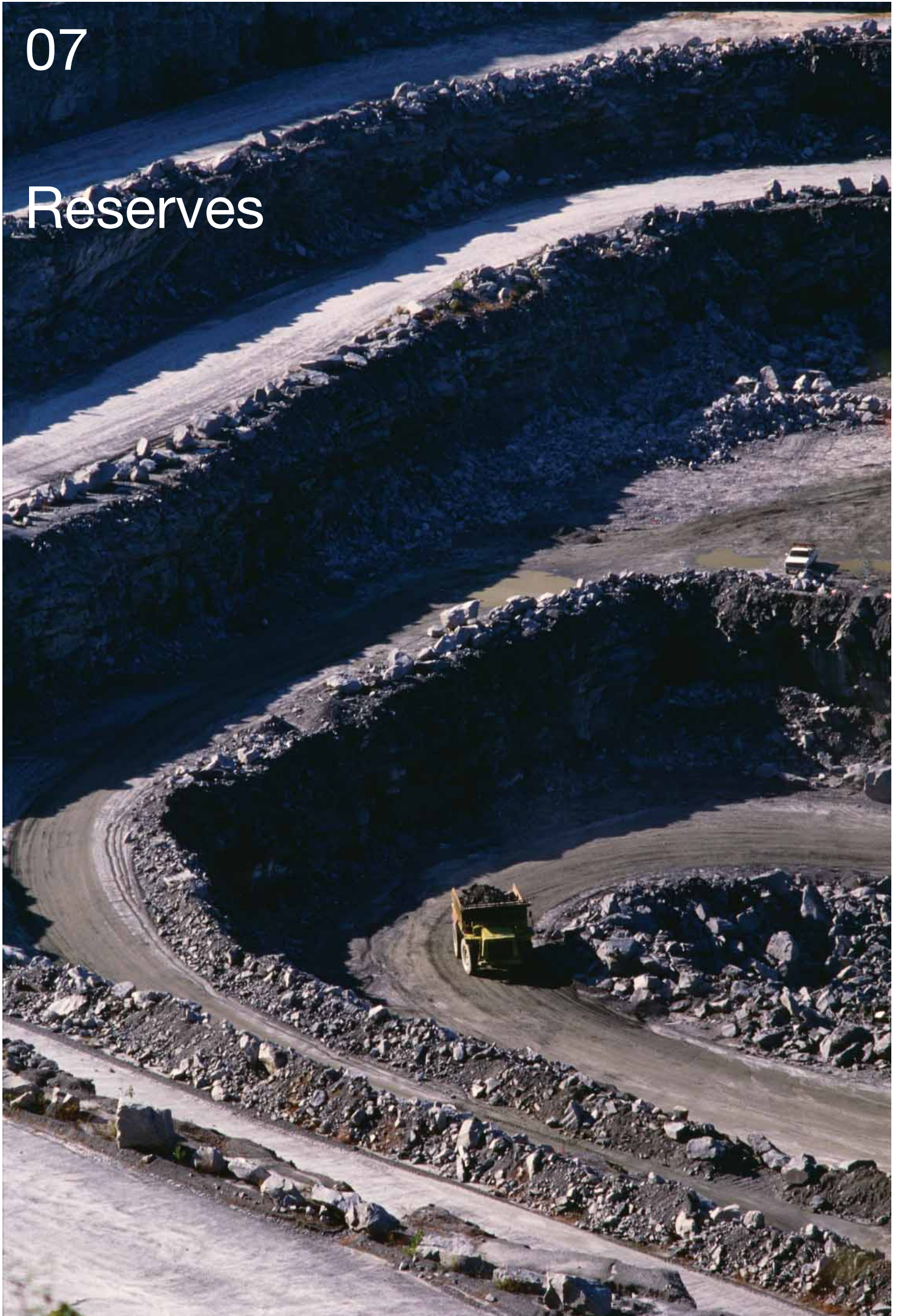
Even though nickel prices have experienced significant growth since 2003, nickel companies have reduced their presence in the Top 40 as companies such as Inco and Falconbridge have been purchased by diversified global miners.

## IPO – The rush to list

There has been vigorous activity in IPO markets by mining companies, particularly by those from the emerging economies, albeit for widely varying motivations. Chinese corporate titans were encouraged by the Chinese authorities to list in Chinese stock exchanges with a view to help develop and strengthen the stock exchanges and to mop up excessive liquidity in China's booming capital market. Indian companies tap markets for leveraging higher levels of liquidity to fund expansion plans. Public listing helps the Indian companies mitigate political risks as public ownership may help shield against adverse statutory and regulatory amendments by the government. Both the Chinese and Indian companies float minor stakes in government owned companies in their bid to retain government control. The Russian companies venture into the financial markets to fuel their merger and acquisition activities, and also to facilitate transactions through share swaps. Indonesian companies, coal miners in particular, have raised funds from the markets to fund capacity additions to meet growing demand from China and India.

07

# Reserves



# Reserves

To date, many organisations have become involved and joined the debate of the IASB's Extractive Activities project. We support this activity as early participation is the best opportunity to influence the outcome. Currently, little tangible progress has been made on this initiative, with the effective date of the new accounting standard only being earmarked for 2013. For more information on this subject see the PwC publication called *Need to know—The future of IFRS for the extractive industries*, which can be downloaded from [www.pwc.com/mining](http://www.pwc.com/mining).

## Reserves analysis

There is still a wide range of acceptable standards for public reporting of mineral reserves and resources. The most commonly used codes by global mining companies include JORC, CIM, SAMREC, SEC-IG7, and with the number of companies in emerging markets joining the Top 40, other national based codes will begin to take greater prevalence in international reports.

The uninitiated reader may therefore not be able to compare reserve information between the major miners. For instance, Indian companies are not required to publicly disclose information on their most valuable and important assets, and the information is not always readily available for some of the Chinese companies.

As a result of the variety of detail in public disclosures, it is not possible to accurately analyse the total reserves for the Top 40 companies. For 34 companies in the Top 40 that have publicly disclosed their reserves for 2007 and 2006, we have analysed the following aggregate figures by commodity.

The remaining life of reserves disclosed below does not take into account the extensive resources available for these commodities.

Continuity of reserves	Gold (million oz)	Platinum (million oz)	Copper (million tonnes)	Zinc (million tonnes)	Coal (million tonnes)	Iron ore (million tonnes)	Nickel (million tonnes)
Number of companies	12	4	17	8	13	6	5
2006 reserves	510	306	334	41	38,706	18,137	22
- Depletion	(40)	(5)	(10)	(4)	(1,162)	(664)	(1)
+ Acquisitions	50	-	-	-	160	-	-
+ Other net additions/ (reductions)	91	5	(1)	5	1,242	391	2
2007 reserves	611	306	323	42	38,946	17,864	23
% change	20%	-	(3%)	2%	1%	(2%)	5%
Remaining life	15	61	32	11	34	27	23

# Reserves

## Gold

2007 was a strong year for the gold price, with its price steadily rising during the year, from \$640/oz to a closing price of over \$834/oz on 31 December 2007. Its price has continued to increase in 2008 and broke through \$1,000/oz, although it has since retreated to \$900/oz.

Part of the increase in reserves of 101 million ounces is a result of higher price assumption in reserve determinations, typically allowing for the expansion of the pit shell designs and the inclusion of other lower grade material that becomes economically feasible at these higher prices. However, as shown below, there has also been activity on the acquisition front, thus leading to gold having a 20% increase in reserves, net of annual production:

- 45 million ounces of reserves were added by Polyus Gold, mainly through completion of exploration work at Natalka;
- 33 million ounces of reserves were added by Gold Fields, primarily from the acquisition of South Deep mine in South Africa;
- Kinross added reserves of 17.4 million ounces with its Bema acquisition, and another 4.8 million ounces through successful exploration results; and
- Offset by 40 million ounces of production.

Consistent with findings from our *2007 Global Gold Price Survey Results*, price assumptions used by many gold producers in determining reserves ranged between \$500 and \$650 per ounce with an average price utilized of \$575 per ounce. This compares with an average price of \$475 per ounce based on a range of \$400 to \$550 per ounce in the prior period.

## Coal

Coal reserves increased by 240 million tonnes, net of depletion from the prior year. Contributing factors include:

- Net increases of 1,402 million tonnes in reserves reported before accounting for production depletion, mainly as a result of:
  - Consol Energy increased reserves by 319 million tonnes, primarily with its acquisition of AMVEST Corporation;
  - China Shenhua added reserves of 1,518 million tonnes, primarily as a result of receipt of a new mine permit;

- Depletion of Peabody's reserve base by 668 million tonnes from the spin-off of 1.2 billion tonnes to Patriot Coal Corporation and purchase of 345 million tonnes of reserves in the Illinois basin; and
- Increase in coal price assumptions used in reserve determinations.

- Offset by production of 1,162 million tonnes.

## Iron ore

Total iron ore reserves decreased by 273 million tonnes, primarily as a result of:

- Net increases of 391 million tonnes in reserves reported, driven primarily by:
  - Increased commodity price assumptions for 2007 reserve determination purposes;
  - Continued expansion of operations in Western Australia for BHP Billiton; and
  - Rio Tinto's reserves increased as a result of various expansion projects such as in the Pilbara region of Australia and favourable economic study results at its Canadian operations.
- Offset by 664 million tonnes of production.

## Production and life of reserves

Higher commodity prices supplemented by marginal increases in production contributed to the 32% increase in revenue reported by the Top 40. Companies will continue to be faced with pressures resulting from shortages in skilled labour, increase in lead times for receipt of specialised equipment, and other higher input costs, which will challenge their ability to maintain record high production levels.

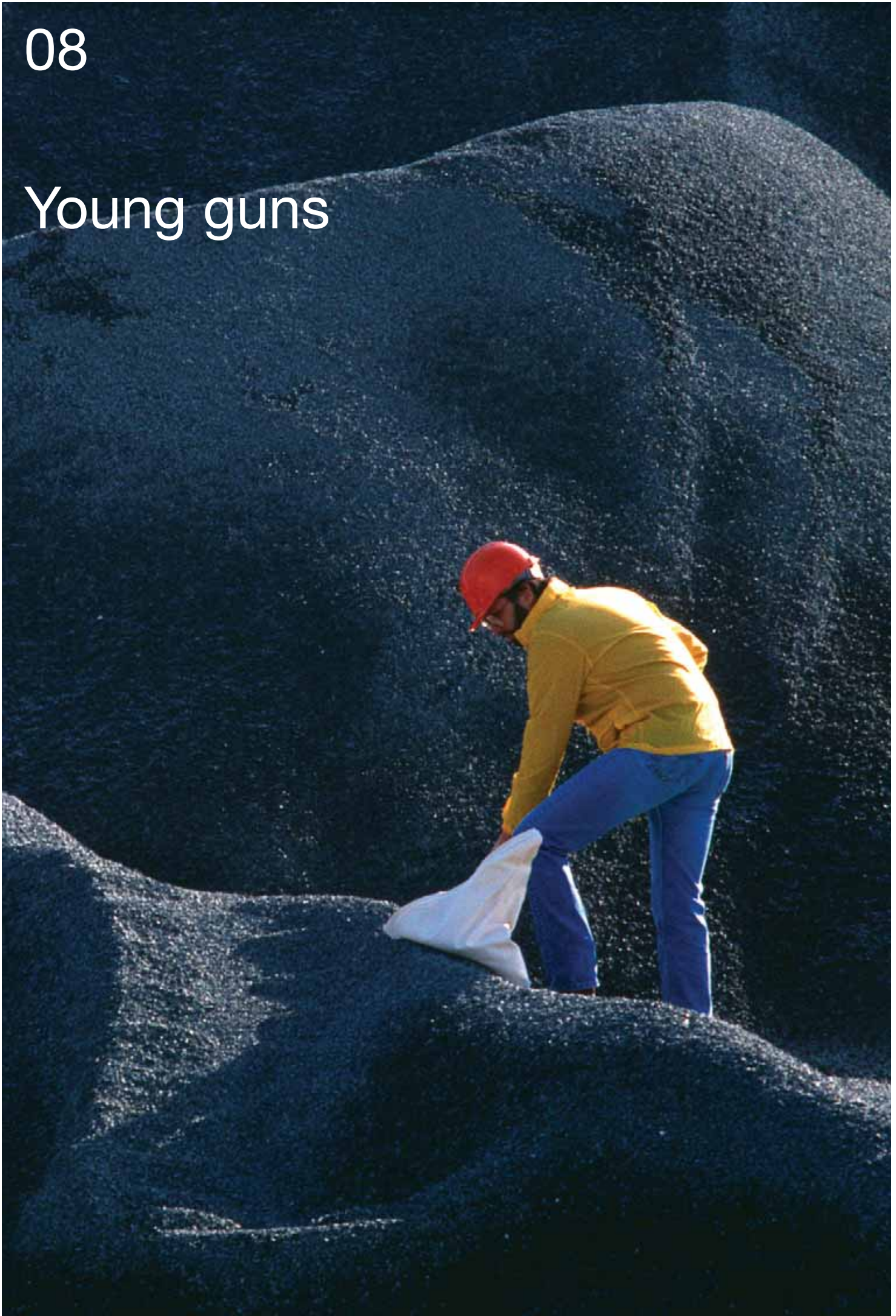
Overall, life of reserves for the Top 40 has marginally increased due to higher commodity price assumptions used in reserve determination calculations, supplemented by acquisitions and successful exploration activities during the year.

## Conclusion

Even though exploration based growth by the Top 40 has helped increase reserves during 2007, companies continue to rely primarily on acquisition based strategies to add to their reserve base, in addition to rising commodity prices, leading to more reserves being declared.

08

# Young guns



## Young guns

Deal activity in the mining industry is running at unprecedented high levels. PricewaterhouseCoopers' recent publication, *Mining Deals\* 2007* (which can be downloaded at [www.pwc.com/mining](http://www.pwc.com/mining)), includes details of the magnitude of some of this activity and the rationale and trends behind the wave of super consolidation that is taking place.

As the business sections of the national newspapers continue to speculate where the next deal will come from, what is clear is that the success or failure of a mining company will largely depend on the ability and skill of the CEO to take the company to the next stage of its development. More than ever, the role of CEO is focussed on managing the company assets to produce even greater value—capitalising resources to take advantage of the high prices, whilst battling the ever increasing cost base and long lead times for equipment. At the same time the CEOs must be mindful of competitors, making sure they are prepared should a rival approach them. The CEOs need to be hungry for success, possess ever greater levels of energy and business acumen, and have eyes in the back of their heads! It is therefore not surprising that increased activity in the industry has coincided with an influx of new 'young guns' at the top of many of the major players, keen to make their mark.

It was one of the new generations of CEOs, Tom Albanese, who at the age of 50, and with only 2 months at the post of CEO, albeit with many years of mining experience, announced Rio Tinto's bid for Alcan. Similarly, BHP Billiton's announcement of its interest to acquire Rio Tinto was spearheaded by Marius Kloppers (45-years-old), who had only been in his post for one month. In fact, of the top 3 deals in 2007, based on transaction value, the average length of time the CEO had been in the role before the deal was announced was only 4 months. Both Albanese and Kloppers are examples of people considered by their boards to have the requisite energy, appetite and strategic guile to take up the challenge of a company transforming deal, characteristics which have been tested already during the punishing itinerary of investor presentations and analyst briefings across the globe that both protagonists have undertaken in the last 6 months.

The current average length of tenure of the CEOs of the top 10 mining companies is 2 years with an average age of 50, compared to their predecessors who left their posts at an average age of 56, having spent 6 years in their role. The period of unprecedented change in the industry has been coupled with a number of changes at the top. Indeed, the current dynamic business environment in the mining sector requires leadership that is agile and has a passion to succeed. It appears that the weather beaten faces are making way for savvy mint-fresh young minds. Presence of Denis Morozov, 34 at the helm of affairs at Norilsk Nickel, confirms the paradigm shift. Anglo American plc Chairman, Sir Mark Moody-Stuart, alluded to the impact of such a change at the top in his 2008 AGM address stating that, "There is a new vigour and vitality in the company," and the fresh approach with which Cynthia Carroll has started her term as Anglo American's CEO is well documented.

Not only are the mining leaders increasingly younger, they have skill sets different from the traditional chief executives. A review of the background of today's mining leaders highlights a shift. Of the top 10 company CEOs this year, more than half of them have a commercial background, although almost the same proportion continue to have specialisation in mining and earth sciences.

In an arena where the ability of a CEO to deliver value to shareholders is under the spotlight and often being directly compared to rivals, the CEO must be the master of all trades if they are to survive. The current new, energetic leaders are well positioned and qualified to go into battle in this arena. It will be interesting to see which one of the young guns makes the next move.

09

# Life in a boom town



# Life in a boom town

The recent spectacular rise of commodity prices and economic growth attributable to the mining industry has given rise to the next generation of boom towns. From Antofagasta, Chile to Sudbury, Canada, the boom in commodities prices has driven local economic growth. Some may see benefits, but there are also a range of negatives that go along with the boom.

The western Australian city of Perth (pop. 1.5 million) is one such location. Western Australia (WA) is a key territory in the global mining industry, producing a significant and varied range of minerals for the global economy.

Below are some of the associated effects of life in a boom town.

## Basic economic impacts and side-effects

Basic economic impacts in a community with rapid growth are well known. Soaring house prices, lower unemployment and higher CPI increases compared to other parts of Australia have had a significant impact on residents of Perth. The state's domestic product per capita is currently more than a third higher than the average for Australia, generating greater disposable income. There are now more listed companies in Perth than anywhere else in Australia. Sales of luxury cars and boats have gone through the roof as Perth residents enjoy the good times.

People both within Australia and from overseas are hearing the good news story in Perth and want to be a part of it. In 2006 only 65% of WA residents reported being born in Australia, which is 4% lower than the same statistic ten years earlier. In recent years, more workers have arrived from South Africa and New Zealand into Perth and with good reason. The Chamber of Commerce and Industry of WA has predicted 400,000 additional workers will be required to fill vacant positions over the next decade. When you compare this to the current estimate of the WA population (approximately 2 million people), it is easy to see the burden this places on the state's human resources.

This phenomenon is not just restricted to the mining industry. Other industries and professions are feeling the pinch as their employees give up their jobs and seek more lucrative earnings working in the mines. Young Perth residents that would normally take up

work in restaurants and teaching in schools are leaving for the prospect of entry-level positions in mining that pay double the wages than other vocations, without requiring any skilled training. The Australian Government released a report in 2006 listing WA "skills in demand". The extent of professions in WA with state-wide shortages is remarkable. Virtually all professions and roles associated with mining operations (e.g. geologists, metallurgists and engineers) have critical shortages, despite the attractiveness of these jobs. Other industries are currently faring no better with similar shortages in health specialists, education and construction trades.

## Keeping up with the boom-growth inhibitors

The rapidly changing demands of the boom have come up against a number of hurdles. Perth's infrastructure is simply struggling to keep up. Examples of this include:

- Perth airport is recording higher than ever in-bound passengers. Extended security queues and taxi lines at the airport are a common sight.
- A recent report on Perth's hotel occupancy rate has revealed that, for the first time in over 40 years, Perth is likely to experience a long-term undersupply of rooms. Development costs have skyrocketed and there is seemingly a lack of willingness by local developers and investors to commit to financing new hotels in Perth.
- The Perth central business district (CBD) vacancy rate for property available for commercial rent is currently 0.5%. A number of mining companies are based in the suburb West Perth, which is adjacent to the CBD. West Perth itself has a vacancy rate of 0.0%, the only such market of its kind in Australia.
- The combination of a growing population and recent years of drought conditions have meant Perth residents have had water restrictions imposed on them. Securing sources of fresh water supply for the city has become a priority as water storage currently sits at around one third of capacity.

Approvals and construction lead times for significant new infrastructure projects are generally extensive, and are subject to government responsiveness. There has been some criticism of the WA state government



# Life in a boom town

for not doing enough to help support the growth in the industry in relation to the timeliness of project approvals.

To help put things into context as to the rapid pace of change in Perth, this is still a place that is making the transition from a small city to a fully fledged participant in the global economy. The city still has restrictions on Sunday trading, and retailers typically close at 5:00 PM.

## Innovation and responsiveness

Mining companies have had no choice but to adapt, or risk falling behind in the boom. Workplace initiatives in mining companies are being developed thick and fast to combat the skills shortage. Changes in the composition of shifts at fly-in fly-out mines are regularly made to position one location as being more flexible to attract workers. Competition is fierce, and it is not uncommon to hear one site change its scheduling, and for its competitor to mimic the change a few weeks later.

Larger employers such as Rio Tinto have recently established fly-in fly-out routes to their Pilbara mines that go direct to regional centres such as Busselton (over 200 kilometres south of Perth). While getting direct access to another potential work-force, the impacts in these smaller country towns are similar to those described above.

On a broader scale, the Australian government has recently revealed plans to offer special visas to foreign skilled workers to come to Australia to help deal with the skills shortage.

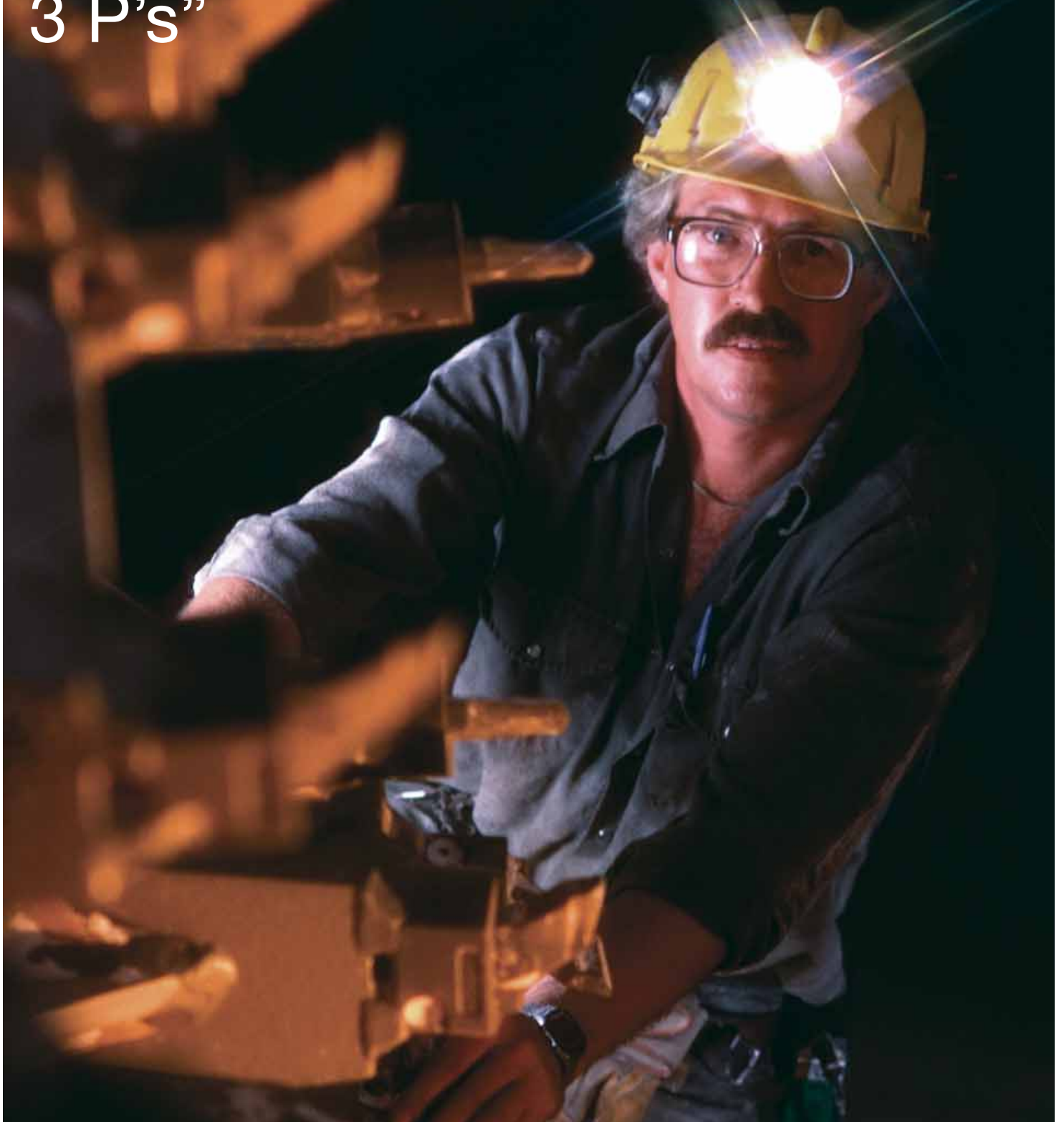
## Surviving after the boom

One of the largest challenges facing Perth as a boom town is how and where to invest the earnings being derived from the mining boom. State mining royalties have more than doubled in the last 5 years in Western Australia, and when combined with federal royalties and income taxes levied on companies' record profits, government coffers are filling up fast. Apart from necessary updates to infrastructure, the WA government has recently announced an urban re-development to re-invest in the city of Perth as a way of putting the funds to good use.

It has been commented in the local media that there is little evidence of active government planning to avoid the longer-term economic phenomenon of "Dutch disease," first experienced in the Netherlands in the 1970s. This phenomenon has taken place in a number of countries affected by a resources windfall that will eventually come to an end. Commodity exports rocket up, and the flood of money from these sales into the domestic economy inflates the currency, resulting in both general price increases and destroying other exports in the long term. Perth is showing the classic indicators of this problem. Regional mining communities most directly impacted by mining operations are not guaranteed to receive their fair share of government investment. Without active management, such as investing mining taxes wisely to the long term betterment of WA, Perth may be at risk of damage to its long-term economy.

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# Resource constraints and responses: the impact of the “other 3 P’s”



# Resource constraints and responses: the impact of the “other 3 P’s”

Sometimes known as “Proven, Probable and Possible,” this article identifies another set of key “3 P’s” affecting the industry: “People, Power and Procurement.”

With the mining industry well into the midst of a commodities super-cycle, the strain on resources to support the industry is one of the most critical issues facing mining companies today. In the rush to capitalise on soaring mineral prices, companies are rapidly expanding existing locations, revitalising mothballed locations and aggressively looking to acquire producing assets.

Given this rush of activity, it is not surprising to find that resources to support the industry are in critical shortage. To address the challenges of the 3 P’s, today’s mining companies must think strategically and innovatively to secure supplies that will underpin their growth ambitions.

We have analysed the following key shortages and found a number of innovative initiatives have been developed to counter these critical constraints. More will need to be done, however.

## People

The availability of professionals and skilled labour is an extremely pressing issue. Professional roles such as metallurgists and mining engineers are not being filled to the extent the industry requires. Degrees required to learn these professions take a number of years to obtain at a university, which is time the industry can ill afford.

The University of British Columbia in Canada has recently developed an industry supported cross-border response to the professional shortage in China by announcing a new 12-month Masters of Engineering Program, with a Chinese International Option. This program offers Chinese students the opportunity of studying at a dedicated mining school in North America, with the aim of building up the level of engineers.

There are lifestyle issues in addition to education aspects of the labour shortage. Companies are making significant efforts to attract people to the industry by offering continually improving benefit packages and providing affordable housing to employees living either near or at mine sites. The mining industry is currently seen as one of the most innovative industries

in terms of facilitating employment arrangements and schedules, which applies equally to skilled and unskilled workers.

Working collaboratively with state and federal governments is a way the mining industry is looking to address the skills shortage. For example, in 1996 the Australian federal government founded the Mining Industry Skills Centre to address future training needs in mining. Prior to the establishment of this centre, there was no central point to assess workforce data and industry needs. Today, by utilising data from industry participants, the Centre uses the “Heartbeat Project” to assist in identifying roles and specific skill shortages from a whole industry perspective. This has included mapping out workforce demand and supply over a 3-5 year period so that efforts to mitigate skills shortages can be made in a structured approach. Initiatives like this provide specific market-facing data to help the industry plan for a sustainable future.

## Power

Many regions, including South Africa and South America, have recently experienced the crippling effects of a lack of electricity for their operations. South Africa in particular has been widely impacted with load shedding and the uncertainty around continual power supply is hindering the ability of mining companies to operate at normal levels of production without having to secure costly power alternatives, such as diesel fuel generators.

The lack of electricity supply in South Africa may result in a direct impact on the local labour market. For example, late in January 2008, Eskom (the South African power utility) warned the industry it could not guarantee power supply and that operations should be restricted to 90% of capacity. Gold Fields and Harmony responded to this by announcing potential lay-offs of employees. The South African Department of Minerals and Energy is now looking at revisiting the request of miners to reduce operating capacity, given the potential widespread impact on employment. This scenario is indicative of the critical importance of consistent power supply to mining operations.

Active electricity management, something many companies had never deemed to be necessary, is now a reality. Mining companies are building their own

# Resource constraints and responses: the impact of the “other 3 P’s”

power plants as another way of coping. While this may seem a more expensive option, building a guaranteed power supply for operations can be very valuable, if only for its reliability and accessibility.

Similarly, energy issues in Chile have arisen from a lack of available natural gas imports. This has forced Chile to resort to more expensive alternatives, such as diesel, to power its generators. Chile is now constructing new regassification terminals, which when completed are expected to ease the energy crunch in the northern part of the country. Construction of this terminal in Northern Chile was driven by the power needs of mining companies operating in that region, including Codelco, BHP Billiton, Freeport-McMoRan, Xstrata and Anglo American.

## Procurement

The ability to procure critical mining equipment and supplies is increasingly difficult. One of the biggest procurement challenges impacting the industry is the global tyre shortage. Since 2004, it has been estimated that demand for tyres has more than doubled. With longer lead times and generally lower availability of tyres across the industry, mining companies have resorted to a number of ways to address this challenge. These include:

- Buying tyres at auctions;
- Forming relationships with designated “tyre-brokers” to act as a procurement agent;
- Assessing tyre usage patterns and attempting to extend tyre lives by reducing the weight of loads or reducing truck speeds. Mine roads and ore loading areas are now kept free of fallen rock debris to reduce damaging cuts into rubber.
- Forging long-term contracts with tyre manufacturers. A recent example of this is the 10-year deal with Yokohama announced by Barrick, which will procure approximately 1,300 tyres a year. Part of the deal involves Barrick partially financing an expansion at one of Yokohama’s plants.

Some countries, such as India, Australia and Indonesia have recently been hit with water shortage issues. Negotiating long term supply agreements with water utilities can be difficult with such shortages being prevalent. Mining companies are often criticised by local residents, as they are perceived to be significant water users, contributing to the problem of low water reserve levels.

Procuring heavy mining equipment such as shovels, trucks and boggers presents unique challenges. Specifically for these types of assets, maintenance schedules and usage patterns are being scrutinised to look for any possible opportunity to extend the life of existing equipment.

Where extending the life of existing equipment is not an option, mining companies are looking at ways to improve relationships with suppliers. It is not uncommon for miners to share forecasted equipment needs with suppliers to proactively manage equipment purchases for future years.

We are increasingly hearing of heavy equipment being ordered before development decisions are made. This is a concerning trend and could easily backfire.

## Planning for the future—the fourth P

The shortage of resources impacting the industry will not be immediately resolved in this time of high commodity prices. It appears those that will be best placed to meet this challenge going forward will be strong in their ability to plan long-term, taking into account both internal and external factors. Companies with the vision to explore innovative methods to address the 3 P’s will be rewarded. Even now, green alternative power sources are considered viable alternatives to help secure power while potentially also helping manage future costs with carbon and other environmental penalties looming in the near future. Ultimately, assessing internal opportunities for efficiency and forming win-win strategic relationships with suppliers and employees will help mining companies best deal with critical shortages facing the industry.

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# The rise of emerging market multinationals in the global mining industry



# The rise of emerging market multinationals in the global mining industry<sup>1</sup>

The global mining industry is experiencing significant consolidation. Moreover, much like in the oil and gas industries, the mining industry in recent years has seen emerging market giants increasingly rise to dominance. What sets mining apart is that there is a strong mix of private and public sector investment. It is the public sector and sovereign wealth funds that are primarily changing the dynamic. These investors are able to pursue investments beyond just the financial return to securing resources for their national businesses and infrastructure to the local government. Nevertheless, even private companies in developing countries enjoy special privileges in their home markets and policy support from their home governments in their international ambitions, akin to the benefits that national oil companies receive. Consequently, many of the political risks that international oil companies have faced in the past decade as a result of the rise of the national oil companies are becoming apparent in the mining sector.

Thus far, the global mining industry has seen a more or less smooth transition to emerging market companies becoming larger players in developed markets. Recent acquisitions by emerging market multinationals of junior mining companies in the US, Australia and Canada have raised concerns of emerging market companies bringing over risky and non-transparent practices from their home countries. Although movement into developed countries is a recent trend, such deals to date have not supported this worry. For example, Chinalco's purchase of bauxite mines in Australia, and Norilsk's purchase of Canada's LionOre have all been made on market terms, in fair competition with international mining companies. Therefore, all indications so far suggest that these new emerging market players will abide by prevailing rules in developed countries and make business decisions on commercial rather than political considerations, in a manner not different from international mining companies.

However, there are examples of emerging market multinationals using the political, and in some cases financial, backing of their home states to win a competitive edge in securing mining assets in other developing countries. This trend is most prominent in Africa, where governments are often willing to sign away mining concessions in exchange for development assistance, infrastructure spending, or political cover. In such an environment, international mining companies may find themselves unable to provide the same

enticing terms. For instance, the Chinese in January 2008 finalized a deal to provide loans of around \$5bn to the DRC for infrastructure projects in an unconventional exchange for majority stakes in two Congolese copper-cobalt deposits for Chinese firms. Additionally, loans from the Chinese Development Bank helped finance Chinalco's purchase of 9% of the Rio Tinto Group, and the bank's deep pockets could help Chinese mining companies bid for other lucrative assets in the future.

Nonetheless, it should also be noted that many deals by emerging market mining companies in developing countries have been made on commercial and transparent terms. For instance, state-owned China Metallurgical Group Corporation in November 2007 outbid several international mining companies in open competition for development of copper fields in Afghanistan. This example highlights the growing competition that international mining companies are facing in securing projects, as an increasing number of cash rich companies pursue a limited number of assets.

There is also the special case of emerging market companies from countries that are themselves major consumers of metals. In this case, mining companies could be used as a tool for host countries to lock up resources abroad. China and Chinese companies are the most prominent example of this. From Kazakhstan to Guinea, Chinese companies have been eager to secure mining assets to feed the country's voracious appetite for commodities. For instance, China has offered up formerly protected stakes in its nuclear industry to Kazakhstan in exchange for access to Kazakh uranium. In addition, sovereign wealth funds from large metals consumers like China could conceivably take large stakes in mining assets to secure commodities for the state, although this has yet to take place in practice.

Finally, host countries of emerging market multinationals are often themselves large producers of mining commodities. In such an environment, the domestic national champions are likely to secure an advantage in acquiring mining assets. Russia represents the best example of this situation, where the government has vocalized its desire to retain strategic mining assets in Russian hands at the same time that it is promoting consolidation in the sector toward the creation of one or a few national mining champions.

<sup>1</sup> By Divya Reddy Analyst, Metals & Commodities, Eurasia Group. Eurasia Group is the world's leading global political risk research and advisory firm, specializing in the emerging and frontier markets of Europe and Eurasia, Latin America, the Middle East, Africa, and Asia—where understanding politics is critical to business success. Eurasia Group has a full-time staff of 85 with fluency in 25 languages and a global network of in-country experts and partners.

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# For whom the bell tolls: Total Tax Contribution (TTC)



# For whom the bell tolls: Total Tax Contribution (TTC)

Riding on the back of continued strength in commodity prices, governments and other stakeholders are taking notice of the relatively high revenue and profits of the mining industry and considering whether they are entitled to a greater share of the mining pie.

There are several examples where governments have already acted to increase their levies on mining companies, often on grounds that the mining industry is not paying its “fair share” of taxes. Having said that, 2007 saw the Top 40 mining companies paying \$35.9 billion in cash taxes, a significant 46% jump from 2006. This is before taking into account royalties and other governmental payments that mining companies are obliged to pay. This debate between the mining industry and governments is likely to continue as both sides seek the proper analysis. We believe an examination of this issue should be undertaken including all payments to governments, not just income taxes.

The Zambian Government amended its Mining Act to abolish tax concessions and increase various mining taxes, on grounds that mining taxes in Zambia are “below international standards”. The Democratic Republic of Congo, Guinea and Ghana have also signalled a review of mining lease terms with a view to increasing obligatory governmental payments such as royalties.

This increased emphasis on taxes paid by mining companies is also causing greater interest on how tax revenues are distributed within a country. In Colombia, for instance, the debate has moved on from the quantum of tax contributions by mining companies to how the tax contributions are being allocated and administered by the governments that collected these contributions.

## Tax contributions by mining companies

Determining whether the mining industry is contributing its “fair share” of taxes is, we believe, most fairly evaluated by considering all payments the mining industry pays to government coffers. And the debate may be broader still; paying the appropriate level of tax is considered a component of sustainability by many people.

The Organization for Economic Cooperation and Development (“OECD”) defines “taxes” as including all mandatory contributions to governments for no return of value to the company. In most cases, the definition would exclude licence fees and similar payments from being classified as a tax, as there is a return of value (i.e. the right to exploit). A royalty per unit, on the other hand, will normally rank as a tax.

Income taxes are often computed by the head office and reported separately in the financial statements, while indirect taxes are often calculated and paid from mine sites. Such indirect taxes are not separately reported in the financial statements, and the head office often lacks a complete picture of those taxes and they are completely invisible to the financial statement reader. This impedes a company’s communications to stakeholders of its real tax contributions to the federal and local communities in which it operates.

Financial statements, isolating only income tax, provide a narrow picture of a mining company’s tax obligations. There are many indirect taxes paid by mining companies: royalties, severance taxes, property taxes, value-added tax, and others. These indirect taxes can be very material, often larger than a company’s income taxes. These indirect taxes are but one component of operating expense, not visible to the financial statement reader and, in many cases, company management.



# For whom the bell tolls: Total Tax Contribution (TTC)

## Total Tax Contribution Study for Mining Industry

As a result, PwC's Total Tax Contribution ("TTC") Group is undertaking a global mining TTC study. The study will gather information on all types of governmental payments made by the Top 40 mining companies, in the countries where their largest mining operations occur. The country-specific survey findings could help the companies decide amongst competing projects, especially in cases where differences in the total tax burden in each country could be a significant deciding factor in the investment decision.

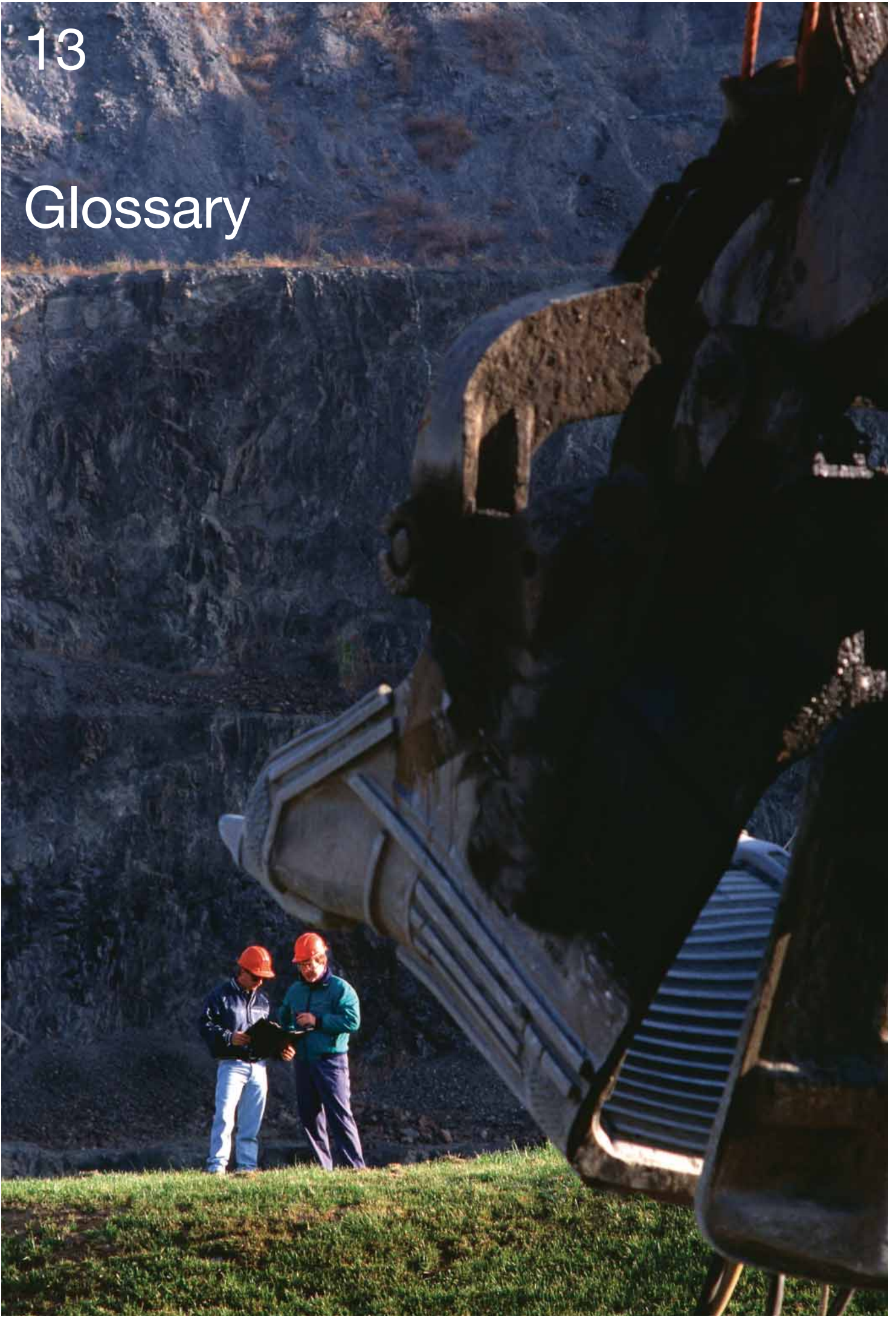
We anticipate the TTC study will provide a benchmark for the industry. This benchmark could have many uses. For example, consider mining projects which were offered mining tax concessions by a government, and those concessions are being threatened to be withheld; TTC information can be relevant to the government, the mining company who sought the concession, as well as mining companies considering

future investments in that country. Mining companies might hesitate to explore and invest in a country which levies higher total taxes than comparable territories.

TTC data could be used by mining companies in their Corporate Social Responsibility (CSR) reporting and in influencing governmental tax policy issues. The survey findings could also provide insights on internal tax risk management and comparisons of tax environments in each of the major mining countries.

We believe this methodology of including all tax obligations of a mining company is the method of considering if the mining industry is paying "enough" taxes. We look forward to sharing the results of the TTC study later in 2008 as the next important step in this debate.

# Glossary



# Glossary

<b>BRIC</b>	Brazil, Russia, India and China
<b>CIM</b>	Canada's National Instrument 43-101
<b>Current ratio</b>	Current assets / Current liabilities
<b>EBITDA</b>	Earnings before interest, tax, depreciation and amortisation. A measure that is close to the underlying cash earning stream of the company before servicing the capital base.
<b>PBIT</b>	Profit before interest and tax
<b>PBT</b>	Profit before tax
<b>EBITDA margin</b>	EBITDA / Revenue
<b>Gearing ratio</b>	Net borrowings / Net borrowings plus shareholders' equity
<b>IASB</b>	International Accounting Standards Board
<b>JORC</b>	Joint Ore Reserves Committee
<b>Market capitalisation</b>	The market value of the equity of a company, calculated as the share price multiplied by the number of shares outstanding
<b>Net Borrowings</b>	Borrowings less cash
<b>Net profit margin</b>	Net profit / Revenue
<b>Operating cash flow margin</b>	Net operating cash flows / Revenue
<b>Profit before interest and tax margin</b>	Profit before interest and tax / Revenue
<b>Quick ratio</b>	Current assets less inventory / Current liabilities
<b>Return on capital employed ("ROCE")</b>	Net profit / Average property plant and equipment plus current assets less current liabilities
<b>Return on equity ("ROE")</b>	Net profit / Average shareholders' equity
<b>SAMREC</b>	South African Code for Reporting of Mineral Resources
<b>SEC-IG7</b>	Security Exchange Commission's Industry Guide 7
<b>Top 3</b>	BHP Billiton, Rio Tinto and Vale
<b>Top 40</b>	40 of the world's largest mining companies by market capitalisation
<b>TSR</b>	Total shareholder return: as measured by dividends and capital gain in a given period over the opening share price.

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Top 40  
companies  
analysed



## Top 40 companies analysed

Company	Country *	Year end
Anglo American plc	UK	31-Dec
Anglo Platinum Limited	South Africa	31-Dec
AngloGold Ashanti Limited	South Africa	31-Dec
Antofagasta plc	UK	31-Dec
Barrick Gold Corporation	Canada	31-Dec
BHP Billiton	Australia / UK	30-Jun
Cameco Corporation	Canada	31-Dec
China Coal Energy Company Limited	China	31-Dec
China Shenhua Energy Company Limited	China / Hong Kong	31-Dec
Corporacion Nacional del Cobre de Chile (Codelco)	Chile	31-Dec
Compania de Minas Buenaventura SA	Peru	31-Dec
Consol Energy Incorporated	United States	31-Dec
Eurasian Natural Resources Corporation plc	UK	31-Dec
Fortescue Metals Group Limited	Australia	30-Jun
Freeport-McMoRan Copper & Gold Inc.	United States	31-Dec
Gold Fields Limited	South Africa	30-Jun
Goldcorp Inc.	Canada	31-Dec
Impala Platinum Holdings Limited	South Africa	30-Jun
Jiangxi Copper Company Limited	China / Hong Kong	31-Dec
Kazakhmys plc	UK	31-Dec

\* Refers to the country of listing where the shares are publicly traded.

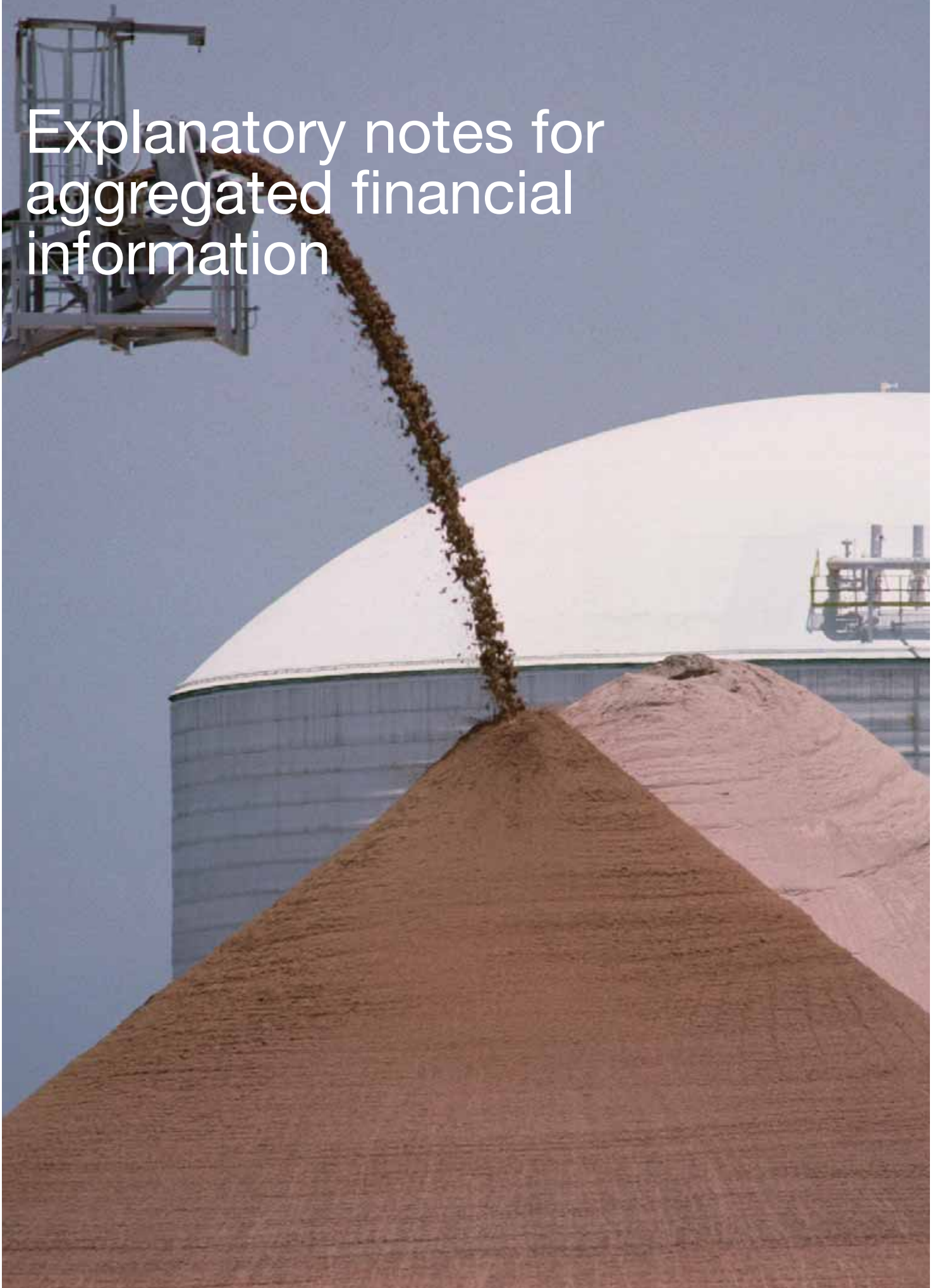
## Top 40 companies analysed

Company	Country *	Year end
Kinross Gold Corporation	Canada	31-Dec
Kumba Iron Ore Limited	South Africa	31-Dec
Lonmin plc	UK	30-Sep
National Mineral Development Corporation Limited	India	31-Mar
Newcrest Mining Limited	Australia	30-Jun
Newmont Mining Corporation	United States	31-Dec
Neyveli Lignite Corporation Limited	India	31-Mar
MMC Norilsk Nickel	Russia	31-Dec
OJSC Polyus Gold	Russia	31-Dec
Peabody Energy Corporation	United States	31-Dec
PT Bumi Resources Tbk	Indonesia	31-Dec
PT International Nickel Indonesia Tbk	Indonesia	31-Dec
Rio Tinto	Australia / UK	31-Dec
Southern Copper Corporation	United States	31-Dec
Teck Cominco Limited	Canada	31-Dec
Vale	Brazil	31-Dec
Vedanta Resources plc	UK	31-Mar
Xstrata plc	Switzerland	31-Dec
Yanzhou Coal Mining Company Limited	China / Hong Kong	31-Dec
Zijin Mining Group Co Ltd.	Hong Kong	31-Dec

\* Refers to the country of listing where the shares are publicly traded.

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# Explanatory notes for aggregated financial information



# Explanatory notes for aggregated financial information

We have analysed 40 of the largest mining companies by market capitalisation. Our analysis includes major companies in all parts of the world.

The results aggregated in this report have been sourced from publicly available information, primarily annual reports and financial reports available to shareholders. Companies have different year-ends and report under different accounting regimes. 23 of the 40 Companies prepared their financial information under International Financial Reporting Standards (IFRS), nine under US Generally Accepted Accounting Practice (US GAAP), four under Canadian GAAP, two each under Indian GAAP and Indonesian GAAP.

Information has been aggregated for the financial years of individual companies and no adjustments have been made to take into account different reporting requirements and year-ends. As such, the financial information shown for 2007 covers reporting periods from 1 April 2006 to 31 December 2007, with each company's results included for the 12-month financial reporting period that falls into this timeframe.

All figures in this publication are reported in US dollars, except when specifically stated. The results of companies that report in currencies other than the US dollar have been translated at the average US dollar exchange rate for the financial year, with balance sheet items translated at the closing US dollar exchange rate.

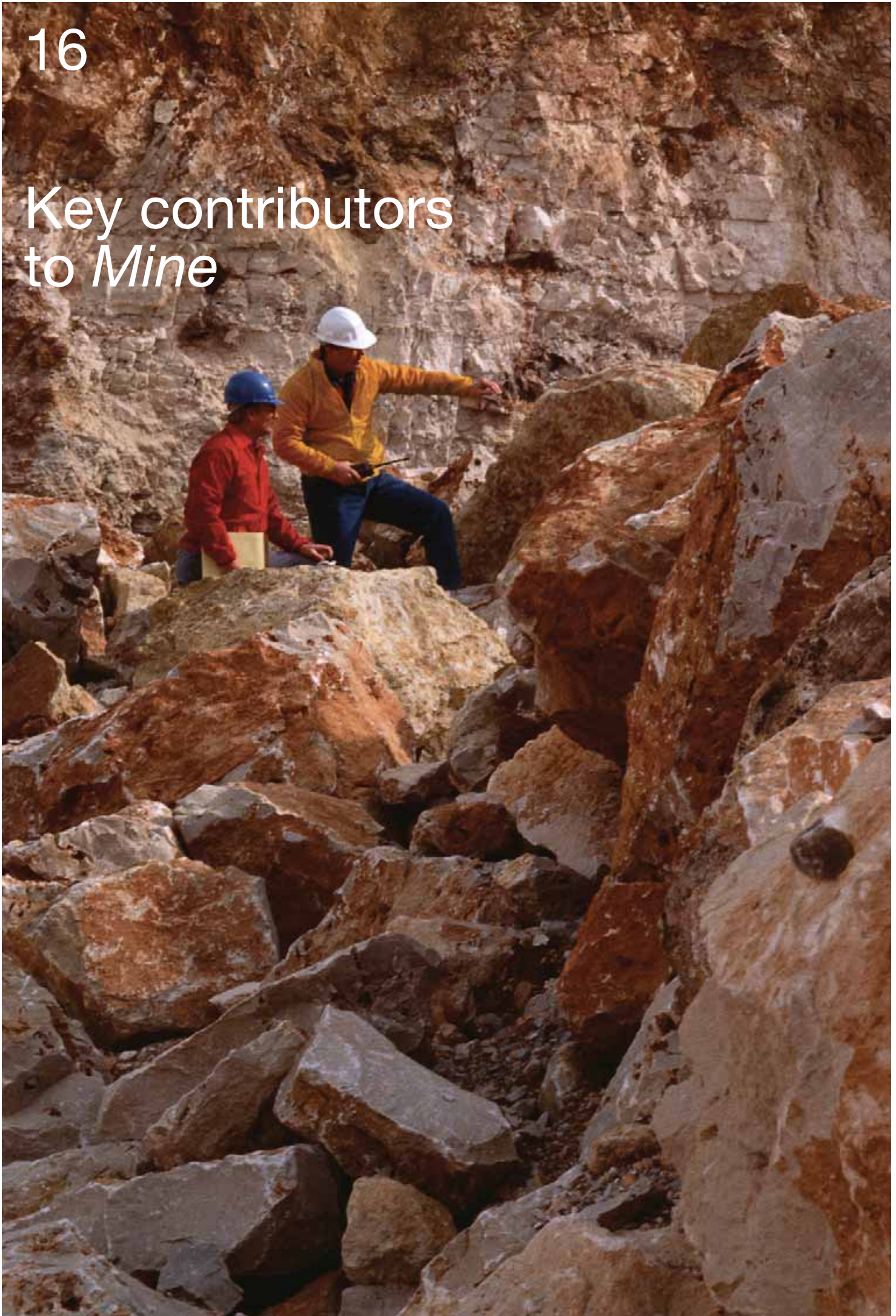
Some diversified companies undertake part of their activities outside the mining industry, such as the petroleum businesses of BHP Billiton and PT Bumi Resources, and power generation business of Neyveli Lignite. No attempt has been made to exclude such non-mining activities from the aggregated financial information.

The six year trend information (on page 26) differs from our main analysis as it includes the aggregated results of 40 of the largest companies in each of the years disclosed. As such, the 2006 financial information differs from the information included in the main Financial Review section in respect of 2006 as it relates to the 40 companies that were included in our previous *Mine* publication.



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# Key contributors to *Mine*

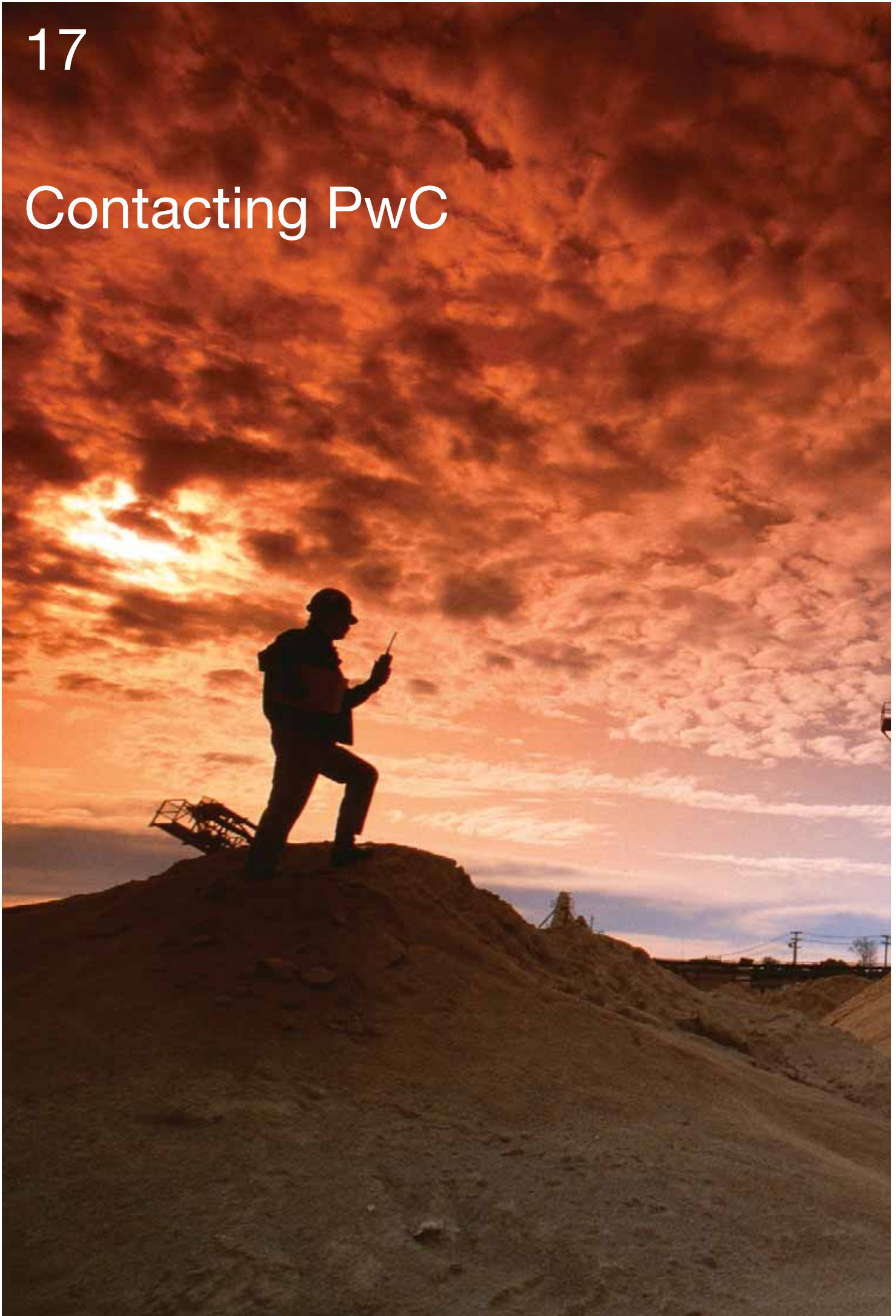


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# Contacting PwC



# Contacting PwC

PricewaterhouseCoopers ([www.pwc.com](http://www.pwc.com)) provides industry-focused assurance, tax and advisory services to build public trust and enhance value for its clients and their stakeholders. More than 130,000 people in 148 countries work collaboratively using connected thinking to develop fresh perspectives and practical advice.

PricewaterhouseCoopers is a leading adviser to the global mining industry, working with a wide variety of explorers, producers and related service providers to ensure we meet the challenges of the global mining industry into the future.

Our strength in serving the global mining industry comes from our skills, our experience, and our seamless global network of dedicated professionals who focus their time on understanding the industry and working on solutions to the mining industry issues.

For more information on this publication or how PricewaterhouseCoopers can assist you in managing value and reporting, please speak to your current PricewaterhouseCoopers contact or telephone/ e-mail the individuals below who will put you in contact with the right person.

Visit our website: [www.pwc.com/mining](http://www.pwc.com/mining)

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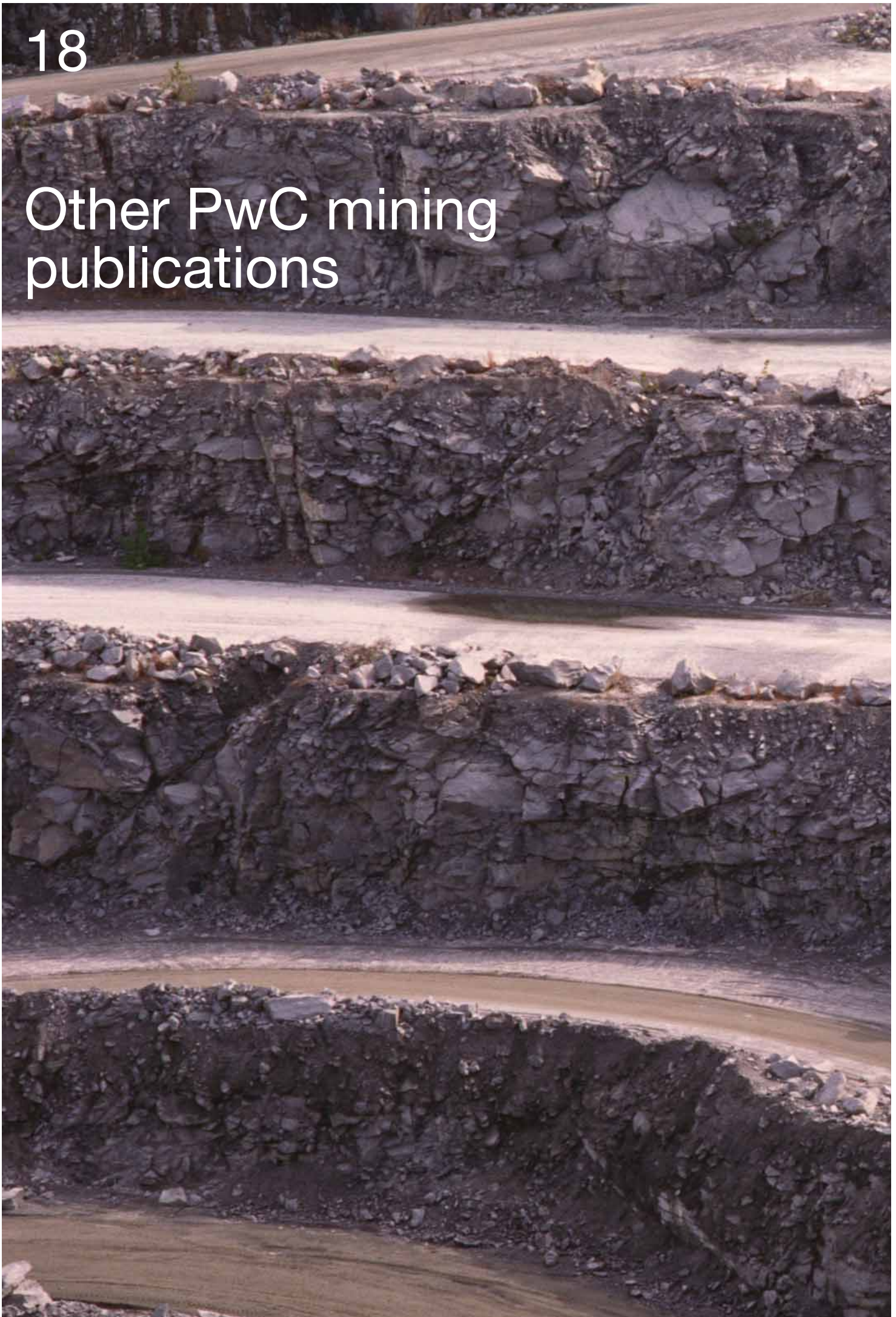
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### United States

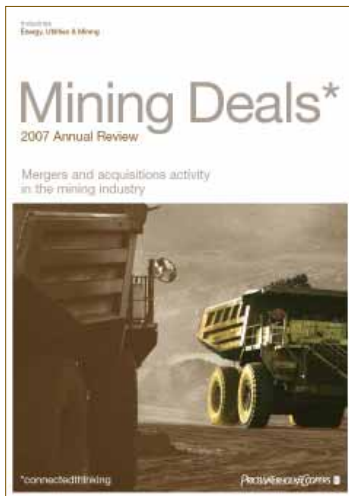
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# Other PwC mining publications



# Other PwC mining publications



## Mining Deals—2007 Annual Review

They face considerable competition from fast-growing companies emerging from India, Russia and China. The industry landscape is set to change dramatically. These changes are accompanying consolidation among all sizes of company and, in some parts of the world, vertical integration moves by metals and power companies are also shaping the sector.

We examine both the rationale behind the overall trends and look at the key individual deals. We look at the year under review, the context of the preceding two years, and ahead to the future direction of deal-making in the sector. We also highlight, in a series of deal dialogues throughout the report, some of the critical issues for companies engaging in deal activity within the sector. Drawing on our global experience as an adviser to mining industry M&A players, our commentary addresses all key markets in the sector.

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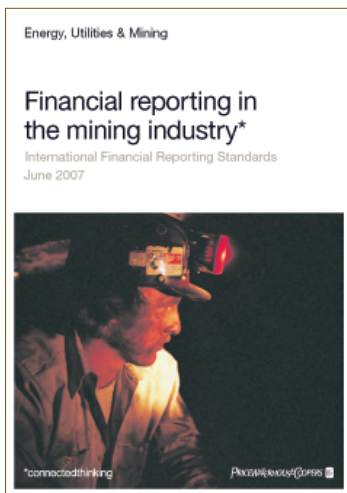
## Global mine bulletin—quarterly

Global mine\* bulletin is a quarterly publication discussing trends and issues in the mining sector. In this edition, the impact that the sub-prime crisis will have on the mining industry is discussed, as well as performance improvement in the area of management reporting. PwC's new acquisition of GEM, an Australian-based consultancy focussing on strategy, operating effectiveness and profit maximisation in the mining industry is introduced in this newsletter.

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## Other PwC mining publications



### Financial reporting in the mining industry—International Financial Reporting Standards

This edition of *Financial reporting in the mining industry* describes the financial reporting implications of IFRS across a number of areas selected for their particular relevance to the mining industry.

The International Accounting Standards Board (IASB) has formed an Extractive Activities working group; however, formal guidance on many issues facing mining companies is unlikely to be available for some years.

Other developments taking place are the ongoing convergence with US GAAP and interest from the Securities and Exchange Commission (SEC) in how US GAAP should be applied to the mining industry.

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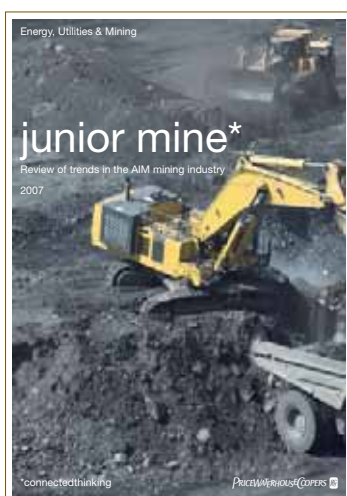
### Aussie mine

*Aussie mine* aggregates the results of the largest 50 mining companies listed on the Australian Stock Exchange (ASX) with market capitalisation below AUD\$5 billion at 31 December 2007. It includes an analysis of the financial performance of the industry in 2007 using aggregated profit and loss accounts and cash flow statements and it also presents an assessment of the industry's financial position using an aggregated balance sheet.

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### junior mine

*junior mine* is a must read for companies in the junior mining industry and for those with an interest in it. The publication provides a consolidated view of the AIM mining industry, as represented by 50 of the largest AIM mining companies.

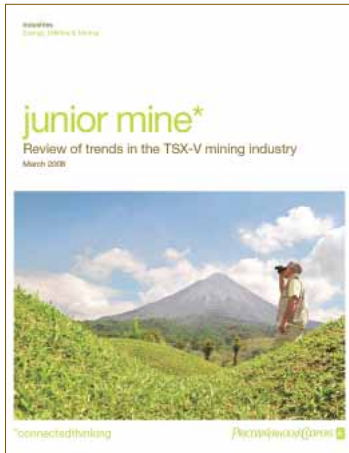
The companies covered by the report represent more than 80% of the AIM mining industry by market capitalisation. The report includes an analysis of the financial performance of the industry using aggregated income and cash flow statements, and also presents an assessment of the industry's financial position using an aggregated balance sheet.

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## Other PwC mining publications



### junior mine—Review of trends in the TSX-V mining industry

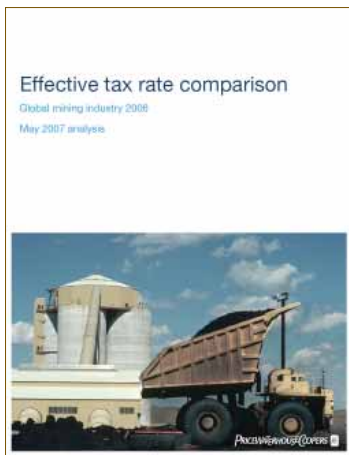
PricewaterhouseCoopers LLP's (PwC) report on Canada's junior mining industry—This edition of *Review of trends in the TSX-V mining industry* examines the top 100 mining companies on the TSX Venture Exchange (TSX-V) based on market capitalisation as at June 30, 2007 and compares the information with our 2006 report.

It is interesting to note that more than 80% of mining companies examined in 2007 were in the riskier exploration and development phase while the remaining companies were revenue-generating producing companies.

Review in trends in the TSX-V mining industry will paint a useful picture to help you gain a better understanding of where the industry has been and where it might be headed.

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### Effective Tax Rate Comparison of the Global Mining Industry 2006—May 2007 Analysis

This edition of our comparison of effective income tax rates in the global mining industry includes 51 companies operating throughout the world which are mining precious metals, base metals, industrial minerals (including cement) and coal. The companies presented are headquartered in a variety of countries from every continent.

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# Other PwC mining publications



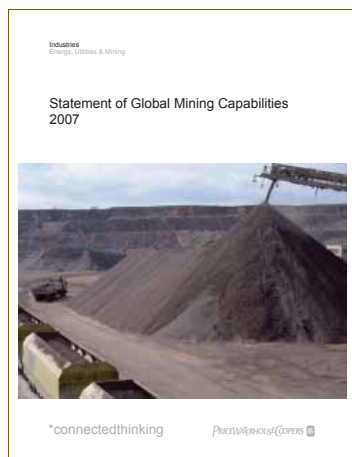
## 2007 Global Gold Price Survey Results

This year's survey covers 25 gold mining and development companies. These companies have reported expected production of 30.9 million ounces in 2007.

It was a strong year for gold, with the price steadily rising over the year from US\$640 on January 2 to a closing London Fix price of over US\$836 on December 31, 2007. Prices have continued to increase in the new year to record highs of over US\$900 by mid-January 2008.

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## Statement of Mining Capabilities

Volatile commodity prices, depleted mineral reserves, stringent environmental regulations and restrictions, rising operating costs and ever-intensifying competition have seen the mining industry reassess its strategies and become more global than ever in its focus. Our industry-leading specialists at PricewaterhouseCoopers (PwC) help our mining clients effectively identify and achieve synergies across a range of business issues.

PwC is the world's leading adviser to the mining industry, working with exploration, production and service companies to provide business solutions tailored to the mining sector. This publication discusses the key challenges mining companies face today and how PwC is helping them identify and implement solutions.

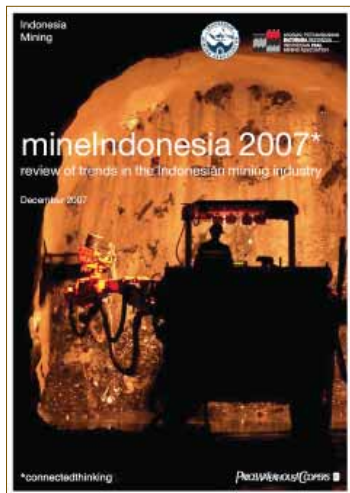
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## Other PwC mining publications



### mineIndonesia 2007—review of trends in the Indonesian mining industry

2006 was another spectacular year for the mining industry, both in Indonesia and globally—and with commodity prices at their current highs, 2007 and 2008 will see even better financial results. In Indonesia, profits in the sector have continued to increase in line with the rise in commodity prices. Total investment in the mining sector has also increased in 2006, however spending on exploration, and in particular greenfields exploration, continues to be only a fraction of the global spend.

PwC's survey, representing more than 85% of the Indonesian mining industry, shows that aggregate profits achieved by the industry reached record levels, resulting in the highest level of government revenues from royalties and taxes in the last 10 years.

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### Need to know—The future of IFRS for the extractive industries

The growing use of IFRS around the world means that all companies in the industry—whether in the oil & gas sector or the mining sector—should take notice of these developments. The information in this leaflet may also be of interest to those gas and power utilities that have oil and gas wells or coal and uranium mines among their assets.

In summary:

- Accounting for reserves and resources
- All models are being considered—including fair value of reserves on balance sheet
- The primary direction of the project is expected to be clear in the next 24 months
- First indications—IASB is keen on some use of fair values
- A new standard could be published as early as 2011, effective 2013
- Participation now is the best opportunity to influence the outcome

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