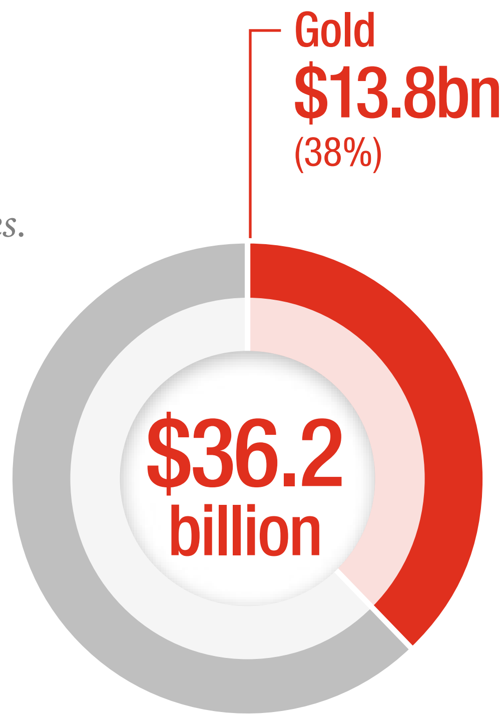
Aussie Mine 2015

Going for Gold

In challenging times, gold has proven to be a saving grace for the Australian Mid-Tier 50 miners in 2015. Looking ahead, the Mid-Tier 50 must stay focused on continued innovation, alternative sources of capital and improved project success to help revive its fortunes.



Market Capitalisation of
the 2015 MT50 Companies

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Foreword

Welcome to the 9th edition of Aussie Mine – Going for Gold. This report provides an industry and financial analysis of the largest 50 mining companies listed on the Australian Securities Exchange (ASX) with a market capitalisation of less than $5 billion at 30 June 2015 (the Mid-Tier 50).

Contents

Executive summary

Overall financial performance declines

FY15 was a tough year for the Mid-Tier 50, with financial performance falling across most metrics. Falling commodity prices coupled with poor investor confidence saw the combined market capitalisation again falling, negating the recovery seen in the previous financial year. Revenues, gross margin and cash flows declined for all commodity groups, with the exception of gold, and in some cases, copper. Many companies looked to strengthen their financial position using equity raisings to repay debt and operating cash flows to invest in existing production assets.

Key results across the industry for FY15:

- Market capitalisation of the Mid-Tier 50 fell from $36.7 billion to $36.2 billion, a 1.5% decline on the previous financial year
- Revenues declined by 1.8% to $28.1 billion
- Impairment losses totalled $5.5 billion and continued to impact financial performance
- Gross margins fell to 22.7%, down from 25.7% in FY14.

Gold shines; copper performs well

Amongst the gloom, companies holding quality gold assets were the shining lights for 2015. The gold sector increased its share of the Mid-Tier 50 revenue from 39% to 44%, on the back on an 11% jump in revenue. Copper also performed well, lifting both revenue and gross margin to make it the most profitable commodity for FY15.

Deals slow, but expect a pick up next year

The total value of the completed deals in the 12 months to August 2015 were two-thirds the value of the deals in the year prior, however activity is forecast to ramp up significantly throughout 2015-16. However our analysis indicates there is a strong pipeline of pending deals, spurred by a market appetite for low-cost gold and nickel projects and ongoing divestment programmes by large miners. As at 31 August 2015, the total value of pending transactions is estimated to be $3.1 billion, up from $396 million at the same time last year.

An industry focussed on positioning itself for the future

Leading miners are looking towards alternative sources of capital, the use of prescriptive analytics for commercial decision-making, standardised controls and processes to improve project success, and innovative digital technologies to improve safety. With a change of Federal Government leadership, now is also the time for the Mid-Tier 50 to make sure their voice is heard in Australia's important debate on tax reform.

Key industry trends and themes

Safety innovation

The use of mobile digital solutions to improve the performance and safety of mines is on the rise. But mid-tiers need to make sure they have the capacity and capability to implement these new technologies and leverage the data to its full potential.

Page 16

Prescriptive analytics

Although mid-tiers have embraced predictive analytics at the geology and mine planning level, it's yet to make its way fully into business and operations planning. Prescriptive analytics, implemented right across the value chain, offers companies the ability to create the competitive commercial advantage required to sustain them through periods of low commodity prices and capital constraints.

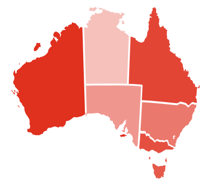
Page 20

Alternative capital

Despite falling market capitalisation, pockets of private funding currently exist and more continue to emerge. These sources of capital present a viable capital alternative for the Mid-Tier 50 in 2016 and beyond.

Page 24

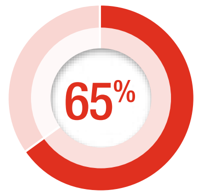
Indigenous investment



The Indigenous Economy is developing at an increasing rate, with at least $8 billion in assets. We are seeing an increasing number of organisations acquire the appropriate level of sophistication to explore a diverse range of investment opportunities. Indigenous investment could provide an important long-term source of capital for mid-tier Australian miners.

Page 26

Major projects



With almost 65% of projects failing, mid-tiers need to seriously rethink their approach to project implementation and governance. The application of standardised processes and controls can significantly boost project success and accelerate time to value.

Page 30

Tax reform

Tax reform will have significant implications for the performance of the Australian economy, including the mid-tier mining sector. It is important that the sector understands the Government's thinking and contributes to the tax reform debate, given its direct and indirect contribution to the economy, its global outlook and its standing in the community.

Page 32

Market capitalisation of the Mid-Tier 50 fell to

$36 billion

Page 6

Impairment losses total

$5.5 billion

Revenues declined by

1.8%

Gross margins fell to

22.7%

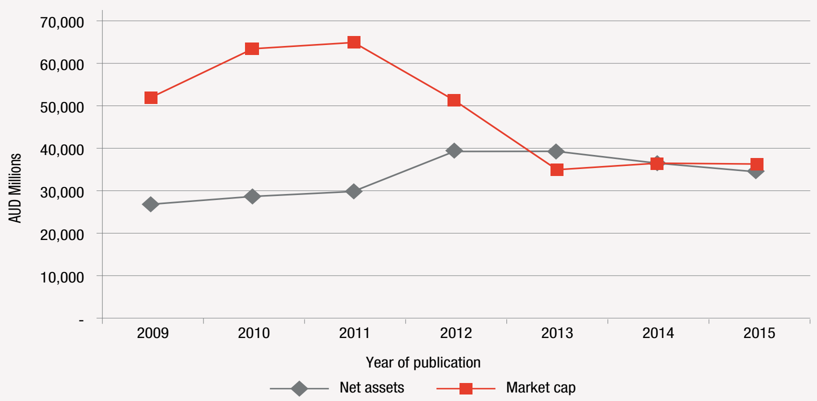
Page 36

Financial performance

It’s been a tough year for the Mid-Tier 50

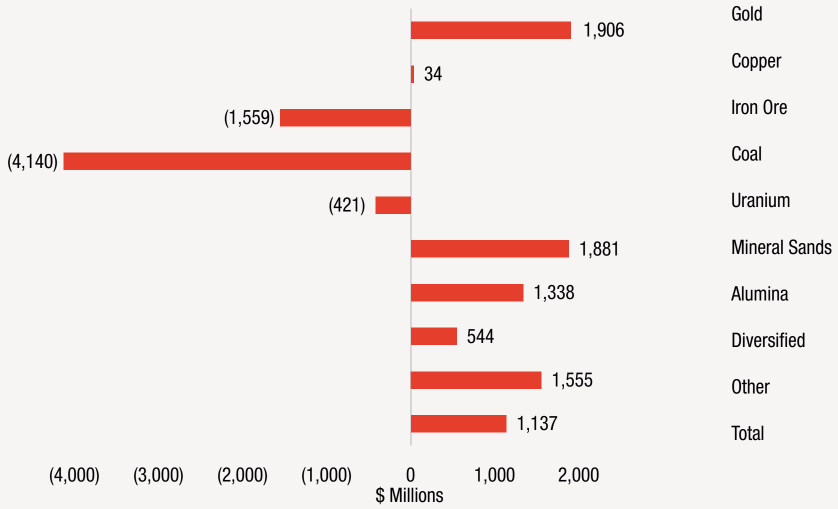
Falling commodity prices coupled with poor investor confidence saw declining market capitalisation in the 2015 financial year.

Net assets versus market capitalisation



The MT50 index fell to $36.2 billion this year, a fall of 1.5% compared to the bounce of FY14. The differential between net assets and market capitalisation has contracted to just $1.1 billion. Bulk commodities were particularly hard hit: market capitalisation is now less than the net assets of iron ore and coal companies by $1.5 billion and $4.1 billion respectively.

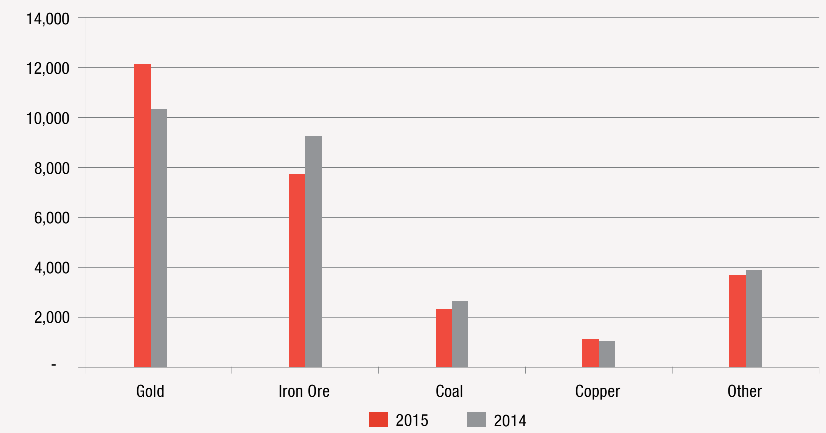
Market capitalisation less net assets ($m)



Impairment losses, which totalled $5.5 billion in FY15 ($5.5 billion FY14), continue to impact the financial performance of the Mid-Tier 50.

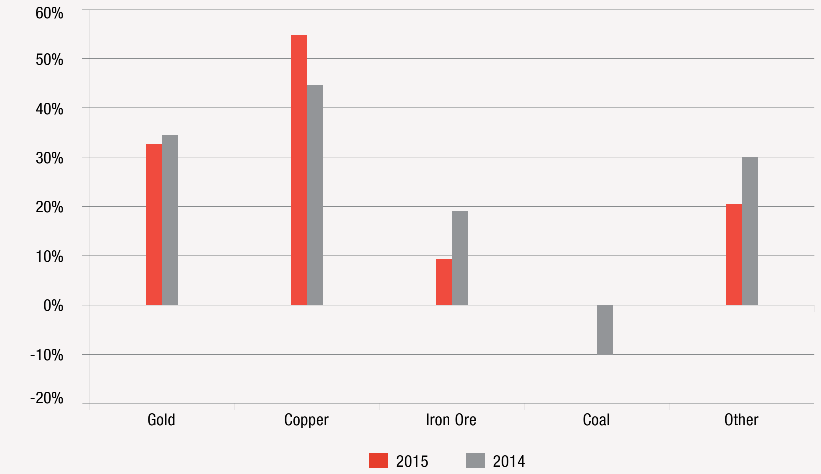
Revenues declined by 1.8% to $28.1 billion during the year, largely on the back of declining commodity prices. Iron ore led the decline in revenue (a 16% fall), while gold and copper company revenues increased by 11% and 16%, respectively, on the back of higher AUD realised prices and increased production.

Mid-tier revenue by commodity ($m)



Consistent with FY14, the anticipated productivity improvements and cost reductions have not kept pace with the reduction in commodity prices leading to a decline in gross margin from 25.7% to 22.7% for FY15.

Gross Margin by Commodity (%)



Preservation of cash, repayment of debt and the use of operating cashflows to fund capital expenditure highlight the difficulty the Mid-Tier 50 have experienced in attracting additional capital for investment throughout the last financial year.

> *“Going forward, weaker companies will drop off. The key for mid-tiers: don’t stress your balance sheet and don’t risk your good assets.”*
>
> Dan Lougher, Western Areas

Gold and copper shine

On the upside, companies holding quality gold and copper assets have proven to be the shining lights of FY15. Gold companies benefitted not only from increased AUD gold price, but also increased production. As a result, the gold sector increased its share of the Mid-Tier 50 revenue from 39% to 44%, offsetting the decline in iron ore from 33% to 28%.

Copper, while representing only 5% of the Mid-Tier 50 revenue, constitutes 12% of the gross margin across the group. In FY15 its own gross margin increased to 54%, making it the most profitable commodity in the Mid-Tier 50.

Value of pending transactions

7.7x more than 2014

Average deal value

$398 Million

in 2015, decrease by

36% from 2014

Deals analysis and outlook

Deal activity slow, but expect a jump in 2016

Compared to prior years, the transaction climate around mid-tier Australian miners was subdued in FY15, confirming the general uncertainty regarding short to medium-term performance of the industry. The total value of the 5 deals in the 12 months to 31 August 2015 represented only 64% of the value of completed transactions for the prior year.

But is this all about to change? Our analysis indicates there is a strong pipeline of pending deals, spurred by a market appetite for low-cost gold and nickel projects and ongoing divestment programmes by large mines. As at 31 August 2015, the total value of pending transactions is estimated to be $3.1 billion, up from $396 million at the same time last year.

M&A Transactions within ASX listed mining companies 31 August 2014 to 31 August 2015

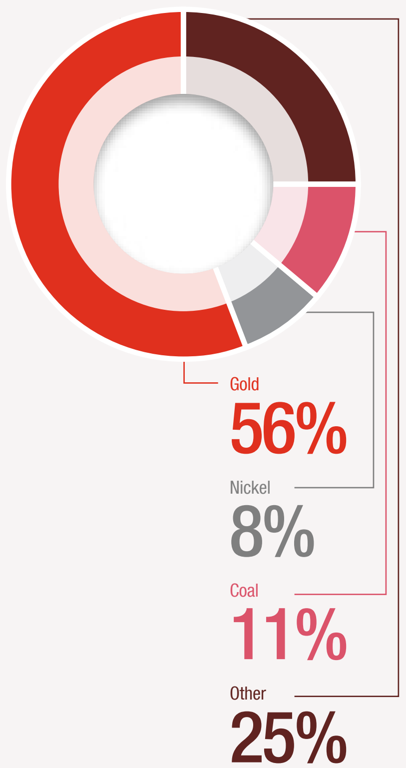
	Completed		*Pending*		*Cancelled*		*Total*	
	Deal Value $m	Deal Numbers	Deal Value $m	Deal Numbers	Deal Value $m	Deal Numbers	Deal Value $m	Deal Numbers
Iron Ore	90	1	-	-	-	-	90	1
Gold	1,792	3	1,449	6	16	1	3,256	10
Mineral Sands	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-
Nickel	-	-	1,521	2	-	-	1,521	2
Uranium	-	-	16	1	-	-	16	1
Platinum	-	-	-	-	-	-	-	-
Coal	107	1	-	-	25	1	133	2
Other (Manganese)	-	-	24	1	-	-	24	1
Precious Metals	-	-	49	1	-	-	49	1
Total	1,989	5	3,059	11	41	2	5,089	18
Total (2014)	3,089	12	396	2	4,002	4	7,487	18
Total (2013)	327	7	2,255	7	3,662	1	6,244	15

Source: Capital IQ, PwC Analysis. A full listing of transactions is provided in Deals transaction history

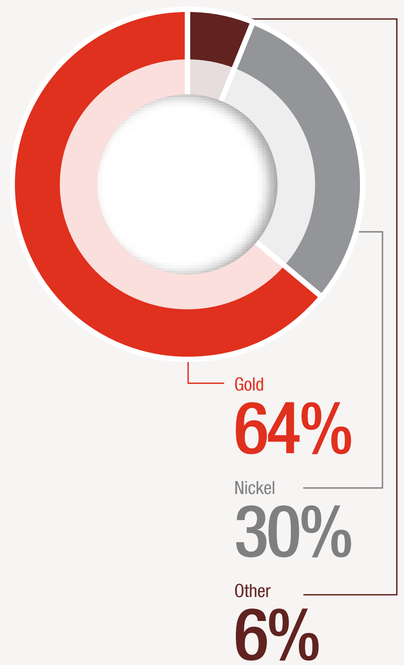
Gold is a standout

Of the total deals done in the year to 31 August 2015, including those pending but yet to be completed, gold was a clear standout based on the deal value and number of transactions. Gold deals represented 64% of total deal value and had an average deal value of $326 million. The remainder of the commodities were relatively quiet from a transaction perspective, with only a single deal in both iron ore and coal completed during the year.

No. of transactions (by share of total) in 2015 by commodity



Value of transactions (by share of total) in 2015 by commodity



> *The re-emergence of the independent mid-tier gold producer in Australia is something that will be seen in the coming years. These independents will be well placed to take on the large/global producers as mid-tier gold miners tend to yield better returns for investors (versus larger peers).”*
>
> Jake Klein, Evolution Mining

Mid-Tier 50 large deals for 2015

Independence Group *acquisition of Sirius Resources (c.$1.5bn) to create WA's largest diversified miner.*	*Rationale:* To create a strong portfolio of low operating cost, long-life assets. Sirius' Nova development is expected to be cash generative from 2016.
AngloGold Ashanti *divestment of its Cripple Creek & Victor mine to Newmont Corporation (c.$1.1bn).*	*Rationale:* To cut debt and strengthen AngloGold's balance sheet.
OceanaGold Corporation *acquisition of Romarco Minerals Inc. (c.$0.9bn).*	*Rationale:* Greater access to a low cost, enhanced growth profile and greater diversification.
Evolution Mining Ltd *acquisition of Barrick's Cowal mine (c.$0.7bn).*	*Rationale:* Growth-focussed transformational transaction to acquire a highly cash-generative project.

Trends to expect in 2016

A rise in opportunistic capital

Cashed up and well-positioned buyers are likely to pick off vulnerable or cash-generating assets. If large projects are divested by the majors, we expect to see bids launched by mid-tier players involving 2 or more partners.

Gold will continue to shine

International gold producers may look to divest non-core gold assets as they seek to de-leverage and lower their financing costs amid weak USD gold prices. This was evident in AngloGold Ashanti's motivations to divest its Cripple Creek & Victor mine, Newmont's sale of the Waihi mine to OceanaGold and Barrick's sale of the Cowal mine to Evolution Mining.

A preference for brownfield over greenfield

We expect a preference to acquire projects capable of generating desired production rather than those requiring development of existing tenements.

Cash will still be king

For debt-financed transactions, we expect the target assets to be cash-generators with limited requirements for ongoing sustaining capital, as seen in Evolution Mining's acquisition of Cowal.

Majors will continue to divest

Mid-tier miners will continue to target assets divested from global portfolios as majors divest higher risk/ low return assets, as seen in Western Areas Ltd's acquisition of Cosmos Nickel Complex from a Glencore subsidiary.

> *The current environment opens a whole host of opportunities through lower prices and the ability to command the deal you want. It is a buyers' market.”*
>
> Dan Lougher, Western Areas

CEO perspective

AussieMine sat down with four Mid-Tier 50 mining leaders to discuss their views on the current business environment. We focussed on mine safety, project delivery, innovation and technology, alternative capital, tax reform, transaction drivers and the 2016 outlook. Here are the some views from the top.

Mine safety

"Safety is a behavioural issue which technology can only aid, not cure." – *Bob Vassie*

"Technical risk assessments help, trend and data analysis helps, proactivity helps, but it comes down to the culture of the leadership team; there has to be a fundamental belief in a zero-harm culture from the top." – *Andrew Cole*

Transaction drivers

"There are opportunities for acquisitive growth as a result of sell downs by large gold producers, driven by high operating costs and high gearing levels." – *Jake Klein*

"Quality of future assets and available resources are barriers to inorganic growth. Quality assets are hard to find." – *Andrew Cole*

Tax reform

"Fall in the Australian dollar makes Australian assets more accessible, but to attract foreign capital, Australia needs to remain competitive. We don't need Government interference through further royalties, taxation or regulation." – *Dan Lougher*

"Predictability and stability are crucial for tax reform. Mining industry bodies have played an important role in the past and need to step up as the voice of the industry." – *Bob Vassie*

Innovation and technology

"Mining services have sharpened their pencils. Technology is far more evident in their performance management and safety management." – *Dan Lougher*

Alternative capital

"Alternative capital does exist and is available but the challenge is that investment committees are not familiar with mining and are hard to convince that medium to long term commodity price expectations are achievable." – *Jake Klein*

"Debt markets in Asia, with an appetite for unsecured debt, are largely untapped by Australian mid tiers at present." – *Bob Vassie*

"If management perceive the market to be wrong then it is up to them to explain why and fight to have the market correct its perception." – *Jake Klein*

"Good capital project delivery (on time and on/below budget) builds your brand in the market, allows easier access to capital and protects shareholder value." – *Dan Lougher*

"Private equity has become more active, especially in relation to distressed assets. Good assets can still get good money – traditional capital is not completely dead." – *Dan Lougher*

"Alternative capital providers are out there – they are innovative, they understand risk but are more expensive." – *Bob Vassie*

"Some investors just want quick returns in a short-term time frame – that's fine but it's not what the mining industry is about." – *Andrew Cole*

Project delivery

"As a result of the downturn in iron ore and coal commodity prices there has been a resurgence of skilled labour to other commodities as expansion projects wind down. The result: a lower cost base and better capital project outcomes." – *Jake Klein*

"Project delivery – on time and on budget – tends to be poorly done across the sector and particularly by mid tiers." – *Bob Vassie*

"Project management must take a 'no surprises, you can't hide' approach." – *Andrew Cole*

2016 outlook

"It's important for gold players to continue to invest in the mid-tier space with Australian projects being re-rated favourably against international projects, led by decreasing costs and weaker Australian dollar." – *Jake Klein*

"[There are] more opportunities than challenges right now. The long-term fundamentals are strong, especially for copper." – *Andrew Cole*

"The markets have cut too deep. Herd mentality and negative sentiment is very powerful. Investing prudently now to be ready for the upturn would be well timed." – *Dan Lougher*

Meet the CEOs

Bob Vassie
St Barbara
Managing Director and CEO

Bob is a mining engineer with 30 years of international mining industry experience. Prior to joining St Barbara, Bob was the Managing Director and CEO at Inova Resources Limited (formerly Ivanhoe Australia Limited) and has 18 years experience in a range of senior management roles with Rio Tinto.

Jake Klein
Evolution Mining
Executive Chairman

Jake has served as Executive Chairman since the 2011 merger with Conquest Mining Limited. Prior to this, Jake was President and CEO of Sino Gold Mining Limited and worked at Macquarie Bank. Jake is also a non-executive director of Lynas Corporation Limited and formerly a non-executive director of OceanaGold Corporation.

Dan Lougher
Western Areas
Managing Director and CEO

Dan is a qualified mining engineer with 30+ years of experience in all aspects of resource and mining project exploration, feasibility, development and operations. Dan is a member of AusIMM and is also a director of Mustang Minerals Corp and the Chairman of FinnAust Mining Plc.

Andrew Cole
OZ Minerals
Managing Director and CEO

Andrew has over 20 years of experience in mining exploration and operations. Before joining Oz Minerals, Andrew held key positions with Rio Tinto in Australia, China, Canada and the UK, including COO of Rio Tinto Iron Ore and Titanium and CEO of the Chinalco-Rio Tinto JV.

Industry trends and insights

Despite difficult conditions, many Mid-Tier 50 companies are focused on positioning themselves for the future. Leading miners are looking towards innovative digital technologies to improve safety, the use of prescriptive analytics for commercial decision-making, alternative sources of capital, and standardised controls and processes to improve project delivery. Now is also the time for the sector to make sure their voice is heard in Australia's important debate on tax reform.

In summary

The Internet of Things (IoT), digital mobility solutions and predictive analytics to be drivers of safety and productivity performance in future mines.

Digital innovation is accelerating mine safety

Mobile digital solutions can improve both the performance and safety of mines. But the challenge for miners is the extent to which they can successfully implement this technology and leverage the data to its full potential.

Digital technologies, particularly the Internet of Things (IoT), is driving connectivity and mobility faster than ever. Increasingly, equipment, systems, people and devices are being linked to the internet and to each other.

When combined with predictive analytics, this connectivity can help inform decision-making on precursors to safety incidents, deviations from safe operating limits and insights on the mental and physical health of a workforce.

We are already seeing an increase in the usage of products like sensor and beacon technology, smart clothing, wearable technology, mobile applications and geo-fencing. The challenge for mining companies will be the extent to which they manage the implementation and integration of this technology to deliver improved performance. Mine sites, although data rich, traditionally lack the data analytics and digital skills sets required to successfully implement this technology and leverage the data to its full potential.

How do you work today?

Do you still have a safety advisor go out into the field with a clipboard and a pen to do an audit? Do they type up the report, email it out for review or even print out a hardcopy to be circulated for comment and signatures prior to actions being assigned?

Do you have a safety observation program that still requires the person doing the observation to go back to their desk to enter it into the system?

Do you undertake audits and control testing but can't integrate and analyse this audit data with other data sources to provide lead indicators of safety performance and health of the control environment?

How could you work tomorrow?

A safety advisor and mining supervisor at an open cut mine are going out to do a pit inspection. They're wearing their fluoro smart clothing that contains geo-sensors; they grab their tablet with the pre-loaded audit app and mine designs and head to their light vehicle.

The vehicle automatically detects the driver and passenger and their audit route is pre-planned and will be tracked by Dispatch. While en-route, the vehicle communicates with other equipment, is speed limited based on its location and relays data to the maintenance and supply systems on the km travelled and fuel consumed.

As they progress with their inspection, a sensor in the tablet talks to a number of beacons located around the pit. They compare the 'as built' pit to the designs and mine standards and on the tablet record and assign any remedial work, take photos and make notes and annotations on the mine design. They make observations of spillage on certain corners and look at information on their tablet of haul truck loads and speeds to take action to reduce spillage and assign work to an operator to clean up; all equipment in the area is informed via a wireless alert sent from their tablet.

Once the inspection is completed, the data is automatically uploaded to the server, allowing instant, detailed analysis to be conducted. This data is analysed with other data sources on production rates, pit traffic intensity, fleet mix, equipment reliability & availability, maintenance schedules, tyre damage, geotechnical, weather and workforce data to provide insights and predictions on precursors to incidents and control health on the mine site.

Innovation trends for mine safety

We have identified a number of digital and analytic trends that we believe will improve mine site safety now, and in the future.

Mobile applications are assisting mine sites to work more effectively, manage risk and provide timely data for analysis through:

- Removing manual and time-consuming processes for safety observations, inspections and audits, hazard analysis and reporting of hazards and incident events
- Linking databases and enterprise-wide systems to provide real time insights on issues and resolutions
- Providing easily accessible resources to help workers improve their physical or mental well-being by targeting known risk factors within the workforce.

Sensor and beacon technology:

- Sensors are relatively low cost devices that capture a wide variety of information that is being used to provide visibility into operations and improve context-specific decision-making
- Beacons allow for device interaction based on proximity, such as communicating with a nearby smartphone application. Beacons can also house sensors to capture and transmit data, which can help track and manage safety-related interactions between workers and machinery.

Smart clothing and **wearable devices** including **biometric identity** technology:

- Smart clothing is where sensors are woven into the fabric of clothing such as shirts and are used to capture and transmit data such as a wearer's location
- Wearable device technology can currently measure heart rate, respiratory, oxygen and emotional states
- Biometric identity wristbands such as the Nymi device, use your heart's unique signature to confirm your identity. This could provide organisations with a seamless way to ensure security around restricted areas, such as providing access to equipment and vehicles.

Site Audit App

We helped an oil and gas company collect safety and logistics information for their worksites more efficiently though our Site Audit App.

Through the app, information is collected via checklists, descriptions, photos and sketches, and integrated with existing enterprise systems. This ensured all business units and employees have easy access to safety information in real time.

Mental health

We recently assisted a client in developing an app to help monitor the wellbeing of staff who work in high stress environments. The app evaluated the general wellbeing, depression, alcoholism, fatigue and other health domains. The app sends triggers to employees in a personalized manner, whilst maintaining privacy and security. The solution is optimised for employees, administrative staff and for professionals (e.g. psychologists).

Safety Risk Predictive Analytics

It's now possible to take data captured by sensors and beacons and combine it with other data sources such as maintenance, production, financial, HR, geospatial and weather data to understand the drivers of accidents that were previously unseen.

Our Safety Risk Predictive Analytics team uses powerful statistical analysis methods to combine multiple disparate data sources, helping organisations gain insights and predictions about where accidents are most likely to happen, under what circumstances, and to which segments of the workforce all before they actually occur.

Determine the best commercial course of action with prescriptive analytics

The benefits of a well-implemented, whole-of-business analytics strategy can be significant. Those miners that are first movers in the use of prescriptive analytics across their entire value chain are likely to create the competitive advantages required to sustain them through periods of low commodity prices and capital constraints.

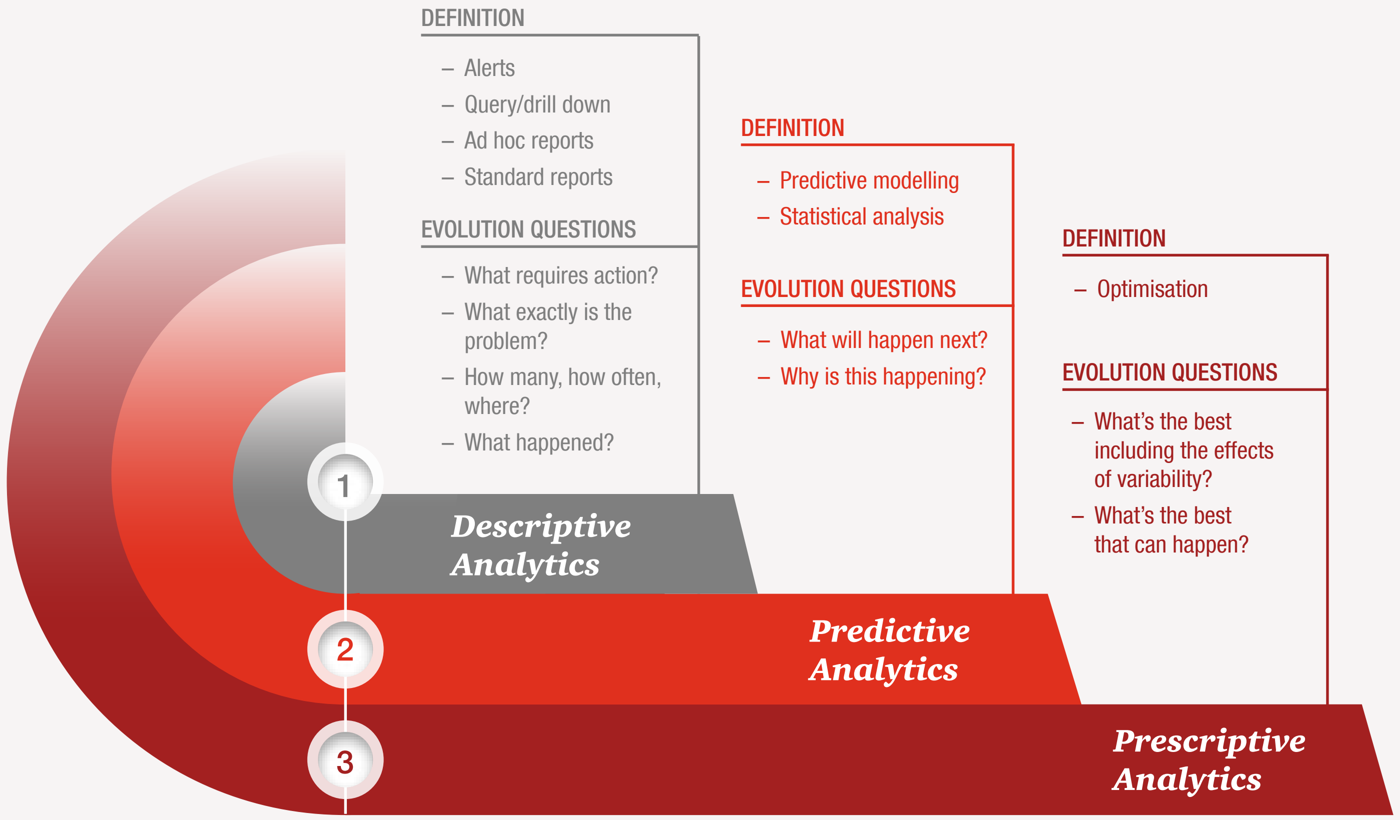
Given the history of early adoption of innovative software in the mining industry, it's interesting that the culture of optimisation has failed to make it out of the geology and mine planning departments and into the realm of commercial and business planning.

Mining operations can be extremely complex operations with large elements of uncertainty in the mining stage, including ore body characteristics and equipment reliability, product specification and marketing. This has contributed to the view that it is not possible to adequately account for such complexity when it comes to building integrated planning models in mining operations. However, prescriptive analytics can help companies to understand what the best commercial course of action is, now and in the future.

In summary

The way ore bodies are understood and how mines are designed and scheduled has been revolutionised through value optimisation software. Historically, miners have been successful at optimising parts of their operations to increase their value. Software products such as Whittle, Vulcan, Datamine, and Surpac, have received industry-wide recognition and acceptance for their use in resource estimation and mine planning optimisation.

Hierarchy of analytics



Source: Competing on Analytics: The New Science of Winning (Davenport/Harris)

Value comes when you move from descriptive to prescriptive analytics

The building of large scale remote operations centres is one area of analytics innovation that has gained wide acceptance with larger miners. In combining the many control functions of a mining operation in one place and adding a layer of monitoring and analytics, remote operations centres are designed to increase collaboration across operational functions to enable more effective and timely decision making.

But while there are advantages to developing such a centre, if they are not linked into the overall decision making process there is a risk they simply become more expensive forms of descriptive analytics (see hierarchy of analytics chart) without improving the quality of decision making.

When implementing monitoring and analytical technologies, companies need to consider if they're adding value to their decision making processes, or just adding more ways to watch what is happening at any given time. It is only when the data collected from descriptive monitoring systems is combined with more advanced analytics that the ability to make more effective and profitable decisions is significantly increased.

Innovative analytics helps capital investment decision making

Capital decision making is just one area where new technologies, combined with deep industry experience, can have a major impact. Such decisions include:

- how to best allocate sustaining capital to:
  - remove bottlenecks in an operation
  - optimise grade and product blending options
  - improve the configuration or expansion of logistics chains
- optimising production levels, marketing, and off-take selection
- long-term value versus up-front capital expenditure trade-offs in new projects, how to determine the likelihood of achieving projected results through risk quantification
- While all capital investment decisions should be focused on improving overall value, traditional methods struggle to adequately predict whether or not such decisions will achieve the desired results.

For example, in mining companies, most capital allocation decisions have been made through the building of discounted cash flow (DCF) analysis models to analyse projected returns. However, even in the hands of experienced analysts, on its own the DCF model does not take into account how feasible or likely modelled outcomes are. They are also often highly sensitive to variables outside the control of the project (e.g. commodity price, exchange rate), which in our experience leads to operational improvements in the project being given diminished priority.

Even though DCF models become more powerful when combined with more advanced scenario and sensitivity analysis tools, these analyses are often based on improbable market conditions and are unable to properly model operational interactions and value chain network effects. The result is that you assume you know what happens when you flex a variable, and this can be misleading.

How new prescriptive analytics work

Emerging technologies now make it possible to model larger, enterprise-wide problems, and quickly undertake what-if analyses.

Code-free software now allows the creation of integrated operations models that can be used to calculate the impact on the business of forecast scenarios, and to optimise mining operations, while taking into account operational constraints such as equipment capacity and efficiency, processing, headcount capacity, funding, and regulatory requirements.

The integration of operational constraints with financials creates optimisation models that are much more powerful than traditional business intelligence reporting tools. Prescriptive analytical tools ensure internal data consistency and can identify where outcomes are not physically achievable in real world operations.

Analytics that fully integrate the entire value chain of your organisation (from exploration to market and from operations to financials) allows a management team to make decisions that are not only timely but that are based on a comprehensive understanding of the inputs to and likely outcomes of those decisions.

"Innovations which would have the greatest impact are in the areas of data analysis, processing technology, and exploration technology."

Bob Vassie, St Barbara

Case Study: Value chain modelling to optimise capital investment

We worked with a smaller Australian mining company with a company making development project to assist them in optimising their capital infrastructure configuration to maximise project value.

The benefit for the client was the reduction in time required to model additional configurations from weeks to hours, enabling them to easily test new ideas and focus their attention on those that were likely to yield value. They expect that the overall value of the capital project will now be significantly greater than had they used traditional modelling techniques alone.

The optimisation, undertaken in Enterprise Optimiser (a mixed-integer, linear programming software), enabled the client to identify the optimal configuration of multiple interdependent mine and plant configurations. The model was completed in under a month. A traditional spreadsheet-based model with the same level of complexity would have taken over three months to build, if it could have been built at all.

The predictive analytical tool created differed from traditional investment modelling as it allowed the client to test a multitude of combinations of operational configurations and commercial decisions across a range of variables including market prices, exchange rates, and utilisation rates, rather than restricting the modelling to a selection of cases or scenarios with singular variable sensitivity analysis.

Additionally, the operations and financials were modelled simultaneously, allowing the user to identify potential bottlenecks and address these as part of the capital investment evaluation. As the value chain model demonstrated the operational flows and could be updated/varied very rapidly, the interactions between the mine and plant could be easily understood by all stakeholders and adjusted to ensure each operation was optimised to achieve benefit across the entire value chain.

Median market capitalisation for MT50 fell

31%

in 2015 to $340M

Market Capitalisation	2015 MT 50	2014 MT 50	YoY Movements $	%
Mean	723	735	(12)	-2%
Median	340	492	(152)	-31%
Low	139	185	(46)	-25%
High	4,747	3,788	959	25%

Private equity looks to fill the capital gap

In the last twelve months the market capitalisation of the Mid-Tier 50 has reduced significantly, corresponding with poor investor confidence and subdued Chinese growth. Despite this punishment, pockets of private funding currently exist and more continue to emerge. These sources of capital present a viable capital alternative for the Mid-Tier 50 in 2016 and beyond.

In the year ended 30 June 2015, the median market capitalisation of the Mid-Tier 50 Index fell from $492m to $340m, representing a 31% YoY decline. With external factors hammering mining valuations, the mainstream capital markets appear to be growing impatient and disillusioned. Risk-averse investors have shown little interest in companies with slowing and uncertain earnings and, on a broad level, are increasingly eager to reduce exposure to the industry's cyclical nature.

Notwithstanding the dynamics of demand and supply, the destruction of value partially reflects a disproportionate shareholder focus on short-term earnings. However, pressuring miners to minimise operating and capital expenditure for the sake of more palatable YoY accounting metrics and press releases is not a sustainable, long-term strategy. Insufficient consideration is being given to assets with long-term growth potential and cash flow pipelines.

On the back of these deteriorating valuations and low stakeholder appetite, the market's short-termism has reduced the availability of traditional capital sources.

Mining-specific private equity can fill the capital gap

Although mainstream private equity has historically avoided the resources industry, there has always been a number of mining specific private equity providers such as RCF, Sentient, and AMCI. However, the sudden decline in commodity prices has given birth to a number of new mining-focussed mandates.

Unlike mainstream private equity, which has a greater aversion to cash flow volatility and long-term horizons, the cashed-up new players in the mining sector are motivated by attractive valuations and a resilient demand story. Backed by sophisticated investors – some with industry connections – these firms are waiting patiently and quietly, and incentivised by a desire to uncover undervalued assets in Australia's largest export industry. These funds understand the sector and its risks and, in comparison to current sentiment, are willing to take a long-term view. To borrow a Wall Street proverb, they are looking to buy straw hats in the winter.

Private capital is flexible and commodity-agnostic

Unlike mainstream capital sources, these private funds will consider a range of flexible investment structures to match a project's unique risks and opportunities. We also expect some of these funds to be commodity agnostic, targeting undercapitalised or capital-starved growth assets. Projects likely to be in their sights include advanced developments, scalable operating mines, or distressed projects with high cash flow potential.

For Australian mid-tier miners, the increased participation by mining-specific private equity could provide management with the capital they need to develop quality projects.

Contrary to the mainstream equity market short-termism, sophisticated private equity war chests appear to be increasingly motivated to finance high-quality mining assets. Will 2016 be the year alternative capital deploys on a wider scale? The valuations are primed and the industry is ready; for private capital it's now or never.

Some recent examples of alternate financing entering the mining sector

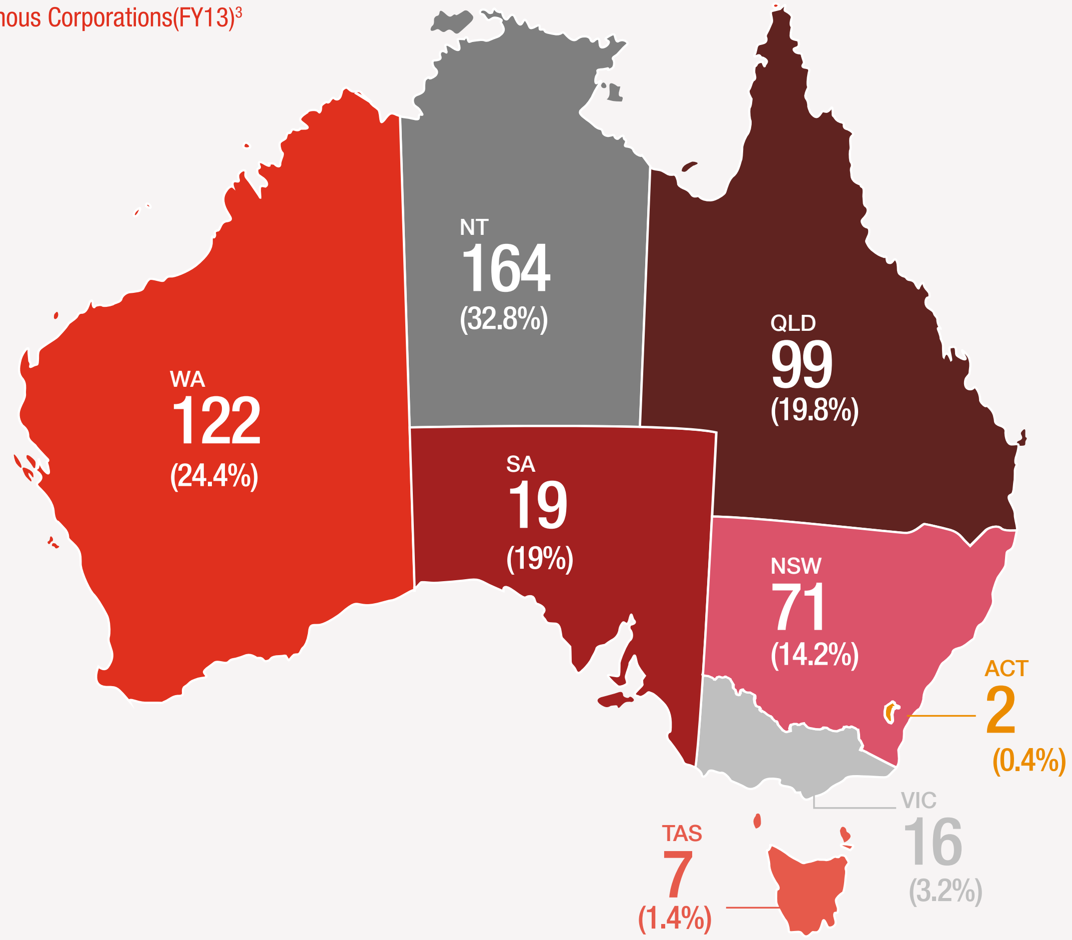
- *Resource Capital Funds (RCF) is an established PE firm specialising in the mining industry and has helped transform Wolf Minerals Ltd. In 2012, RCF provided Wolf Minerals with US$82 million in development funding. The package comprised of a secured bridge finance facility and a 2% revenue royalty, allowing the Wolf Minerals to immediately develop its Hemerdon Tungsten and Tin Project without waiting for the equity market to improve.*
- *Paladin Energy, ranked 22 of the Mid-Tier 50, sought to recapitalise and address its funding requirements in November last year. In addition to a public offering, Chinese private equity firm HOPU injected new capital by purchasing a 15% stake and demonstrated yet another major move by a PE firm into a listed Australian resources company.*
- *Evidence of PE's revised assessment of the opportunities the industry now represents is demonstrated by KKR securing a 10% stake in Oz Minerals.*
- *Outside the Mid-Tier 50, there are also endless examples of private equity chasing mining investments. AMCI, for instance, is an established commodities house with mining investments littered across the world, including the Chile's Mineras Las Cenizas and Queensland's South Galilee Coal Project. Other resourced-focussed PE firms rumoured to be on the chase in Australia include Denham Capital, Greenstone Resources, EMR Capital, Arete Capital Partners, Wateron Global Resources, Appian Natural Resources and Warburg Pincus.*

Indigenous investment offers new capital frontier for mining

Although in its infancy, the Indigenous Economy is developing at an increasing rate. We now see organisations with the appropriate level of sophistication exploring a diverse range of investment opportunities. If miners can position themselves appropriately, and develop authentic relationships with Traditional Owner groups, Indigenous investment could provide an important long-term source of capital.

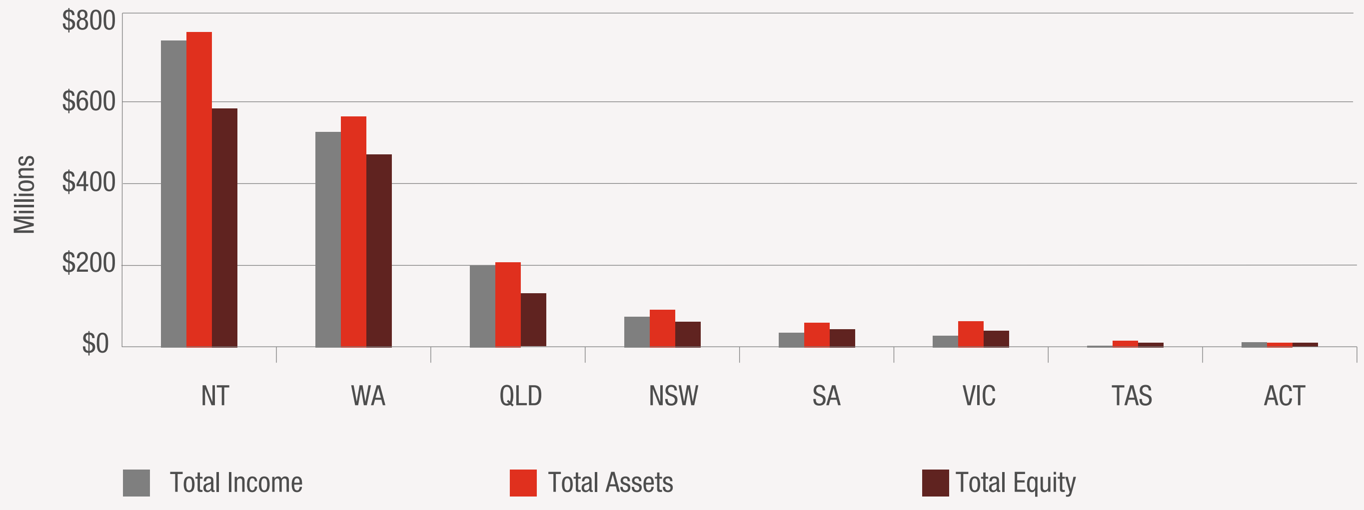
In the last 20 years, Australia has seen Indigenous organisations grow in both number and financial strength. In FY13 the top 500 Indigenous corporations had combined income of $1.7 billion (representing a 10.5% growth rate over the previous nine years) and combined assets of $1.98 billion. Having the economic means for significant investment is still a maturing concept for the majority of Indigenous organisations. Unfortunately, it is still common for Indigenous organisations with significant capital having not developed the appropriate level of capacity to deliver major investment decisions.

Location of 500 largest Indigenous Corporations(FY13)[3]



In April 2013, a report was commissioned by Indigenous Business Australia that identified that Indigenous Trusts are estimated to hold at least $8-37 billion in total assets[4].

Top 500 Indigenous Corporations Financial Performance & Position (FY13) [5]



1. ORIC 2013, The top 500 Aboriginal and Torres Strait Islander corporations 2012–13, Office of the Registrar of Indigenous Corporations, viewed 8 August 2015, <www.oric.gov.au>.
2. ORIC 2013, The top 500 Aboriginal and Torres Strait Islander corporations 2012–13, Office of the Registrar of Indigenous Corporations, viewed 8 August 2015, <www.oric.gov.au>.
3. ORIC 2013, The top 500 Aboriginal and Torres Strait Islander corporations 2012–13, Office of the Registrar of Indigenous Corporations, viewed 8 August 2015, <www.oric.gov.au>.
4. Indigenous Business Australia 2013, Understanding the need for investment advisory services for Indigenous organisations (April 2013), Indigenous Business Australia, viewed 10 August 2015, <www.iba.gov.au>.
5. ORIC 2013, The top 500 Aboriginal and Torres Strait Islander corporations 2012–13, Office of the Registrar of Indigenous Corporations, viewed 8 August 2015, <www.oric.gov.au>.

We are seeing Indigenous communities that have significant capital actively looking for economic development initiatives in order to generate returns to fund social objectives. Specific opportunities include:

- *NSW Aboriginal Land Council: Over $670 million in investible funds and $2 billion in assets. The Council is open to mining opportunities and are progressing with Petroleum Special Prospecting Authority Applications for Coal Seam Gas in NSW.*
- *Indigenous Business Australia (National): Over $1 billion in assets. The body is set up to assist Indigenous organisations start and expand businesses which could easily be further translated into the mining sector.*
- *Indigenous Land Corporation (National): Over $1 billion in assets. The Corporation is mandated to fund viable land-based initiatives for Indigenous Australians.*
- *Bauxite Mining in Aurukun (QLD) – Significant mining operations could be developed that would work alongside Cape Communities.*
- *Rio Tinto and BHP Billiton mining operations in the NT and North West WA – There are currently long term royalty streams in place and many groups have considerable funding available. Improved Traditional Owner governance and miner's improving this relationship with communities could drive greater opportunities.*
- *South West Aboriginal Land and Sea Council (SWALSC): It is expected that $1.3 billion in land assets and funds will be handed over to Traditional Owners over 12 years commencing in the short term.*

"

Community engagement is often seen as a risk area when it should be seen as an area of opportunity."

Andrew Cole, OZ Minerals

Indigenous investment in mining

While the Indigenous investment is growing in a range of sectors, there is currently limited precedent of direct investment in mining projects. This has been a result of limited capital, limited availability of opportunities, immature decision making frameworks and negative sentiment towards the industry by some Traditional Owners. Having the economic means for significant investment is still a maturing concept for many Indigenous organisations and some with substantial capital lack the capacity to deliver major investment decisions.

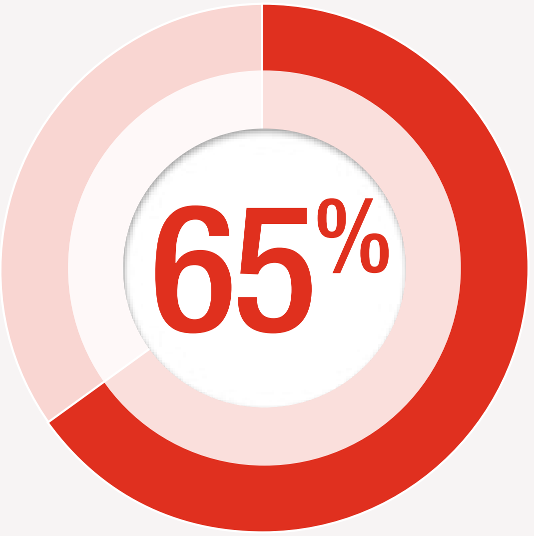
But the momentum is shifting. The first large-scale example of an Indigenous owned and operated mine is already underway in the Pilbara. The Perth-based company Australian Aboriginal Mining Corporation Limited is aiming to develop its Extension project and expects to have capacity to export two to four million tonnes of iron ore from the site per year. Environmental approval was received earlier this year and approval for infrastructure access has just been received.

In recent years, we have also seen significant levels of Indigenous Investment in mining services. There are several examples of Indigenous owned and operated mining services organisations including Carey Mining, Guma ICRG and Ngarda Mining and Civil, all of whom are regarded as prominent services providers to the coal and iron ore sectors.

Considerations for Indigenous capital in mining

For Australian miners looking for new sources of capital, Indigenous investment could provide a significant alternative to mainstream markets. Companies looking to enter this space should:

- Focus on ensuring long-term alignment of values with traditional owners
- Ensure incentives are right for each party, particularly in relation to potential financing options such as debt, equity, hybrid, etc.
- Ensure communications between all parties (and between the community governance body and the community itself) are culturally appropriate, robust and thorough
- Seek expert advice to ensure equitable terms are agreed and that agreements are legally enforceable.



Major projects fail

*Source: Independent Project Analysis, Inc.

Boost project success rate through standardised controls and processes

Tough times call for discipline and efficiency. With the boom over, the industry has an even lower tolerance for poor project delivery practices. Standardising capital program activities is becoming crucial to mitigating delivery risk and improving time to value, resulting in better project economics.

The mining industry has weathered the storm of large commodity price drops by paring back all discretionary and some non-discretionary spending to stay in the black. We are now well into the phase of driving efficiency and productivity improvement in mining operations.

The projects community has also eliminated some of the poor practices overlooked in the boom, but a cultural barrier remains. The community, by nature, is not process-centric and as a consequence continually looks to reinvent the wheel, often repeating the reinvention through the life cycle of a project. This is no more evident than when organisations deliver major projects intermittently, typically unsupported by project systems, standards and capabilities.

The "Hero" model is not reliable

While most organisations, particularly within the mining industry, have quite robust gating processes for funding approval, once these projects are approved there is limited process and control. This is exacerbated by the industry's adoption of the Engineering Procurement and Construction Management (EPCM) model, where the prime contractor is expected to bring methodology for developing activities they are responsible for, but owner controls are limited. The common solution for organisations with sporadic project activity is, quite reasonably, to find a project director who has done similar projects.

This is known as the "Hero Model" for project delivery. It works well when a good hero is secured. Unfortunately, heroes are not plentiful, and as a consequence two thirds of major projects fail, or at least disappoint, according to independent analysis*.

> *"A rising tide lifts all boats. This was particularly applicable in the boom years of coal and iron ore. At the time the commodity prices saved miners as growth strategies dominated. That is no longer the case. Financial frugality is fundamental to delivering projects successfully."*
>
> Jake Klein,
> Evolution Mining

Key questions mid-tier miners should ask themselves as they embark on transformative projects:

- *How much of our project is truly unique?*
- *Where can we use standard processes and technologies that have been successfully applied elsewhere?*
- *Have we sufficiently challenged our non-technical costs and our time to value?*

Ad hoc governance, processes and controls are the real problems; standardisation is the answer

A better approach is to focus on the root causes of project success and failure rather than the symptoms. Projects rarely fail for technical reasons. Rather, problems are normally rooted in poor governance or project administration management. Miners who recognise this are now applying best practice in governance and program management to mitigate the risk of failure and accelerate time to value. This is equally as relevant to ongoing sustaining capital projects as it is to major mine developments.

While all project owners are unique, project innovators are moving toward simplification and standardisation of core project processes. Put another way, miners adopting standard practices for the core and common activities in a project, accelerate program ramp up, time to value, and apply their limited attention to truly important project issues, not noise.

> *"Technology-based systems and successful operating processes enable better decision and project delivery."*
>
> Andrew Cole,
> OZ Minerals

Technology and people are key to delivering standardisation

Using technology to operate effective governance, management and control principles can largely eliminate variability in project outcomes, or at the very least, provide early warnings that remedial action is needed. Standard project applications including cost estimating, planning and scheduling, risk management, progress reporting and analytics, data management, knowledge/document management, and so on, should be operational and available to project leaders in a matter of weeks, not months.

Mine owners who are innovating their project processes avoid the temptation of system customisation and establish standard processes across the portfolio, supported by effective systems that enable data capture, data analysis and knowledge transfer across the portfolio.

To move the dial on project certainty from the historic success rate of 35%, projects need not only processes and systems to support effective governance and project management, but also effective people. With the mine capacity expansion phase behind us, access to effective and skilled project people is now better than ever. Smart miners know that the right people operating the right processes are the key ingredients that will reduce variability and increase project success.

Mid-Tier miners must engage in tax reform debate

Tax reform will have significant implications for the performance of the Australian economy, including the Mid-Tier mining sector. Given its direct and indirect contribution to the economy, its global outlook and its standing in the community. It is important that the sector understands the Government's thinking and contributes to the tax reform debate.

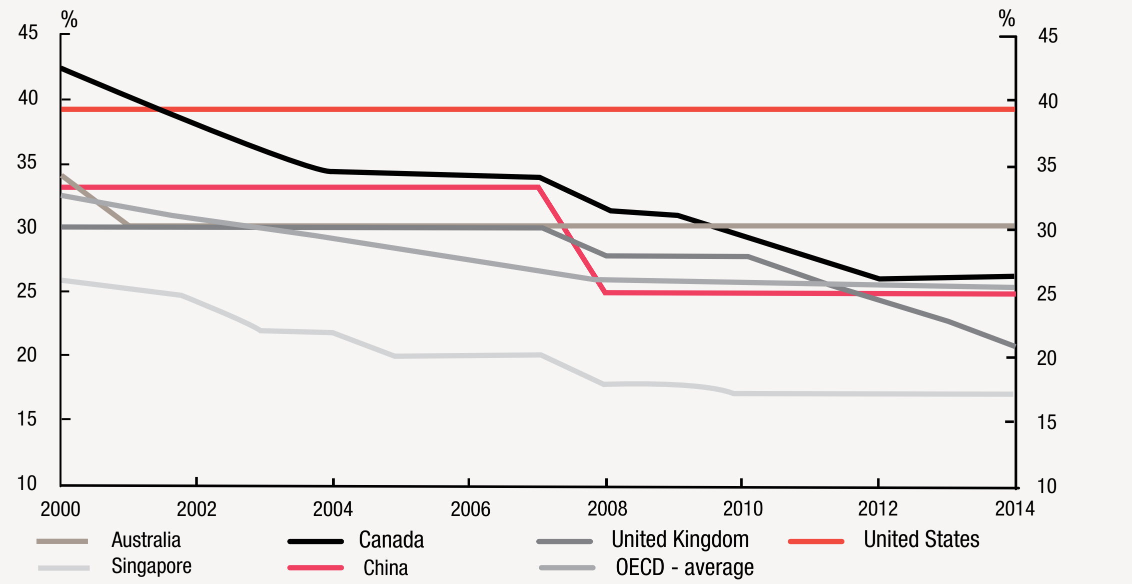
With the recent change in Federal leadership, new life has been breathed into the tax reform process. Prime Minister Turnbull and Treasurer Morrison agree that reform must strengthen incentives to work, save and invest. All options are on the table, including GST reform and superannuation tax concessions. Innovation is also emerging as a particular economic policy priority. A Green Paper, setting out reform options, is expected late this year or in early 2016, and the Government is expected to take a reform package to the next election.

With key reform decisions yet to be made, it is critical that the mining sector be heard during this crucial period. While we expect the Government's reform package to have a whole-of-economy rather than sector-specific focus, the sector's views on key questions, including competitiveness of our tax system, will influence the broader debate.

In summary

Tax reform will have implications for the performance of the Australian economy, including the mining sector. It is important that the sector understands the Government's thinking if it is to make a constructive contribution to the debate.

Trend in corporate tax rates in selected economies



Source: The Australian Government the Treasury 2015, Re:think – Tax discussion paper: http://bettertax.gov.au/publications/discussion-paper/

What are the current issues with the taxation system now?

- Australia relies more (as a proportion of all taxes collected) on corporate and personal income tax than other OECD countries.
- Unchecked bracket creep (nominal wages growth moving people into higher thresholds) automatically increases the tax burden faced by individuals, and hurts lower and middle-income earners most.
- While all taxation carries an economic cost, company tax is particularly harmful. By lowering our reliance on the most inefficient taxes, the economy as-a-whole benefits, including employees who earn higher wages.
- Australia's overall tax burden, as a share of the economy, is not high by OECD standards; but the tax take is dominated by the Federal Government, with states reliant on transfers from Canberra.
- States generally rely too heavily on inefficient taxes and charges such as 'ad valorem' royalties levied on natural resources, which penalise marginal production, and stamp duties, which can render uneconomic otherwise efficient natural resources transactions. These charges distort economic decision-making and impose a deadweight cost on the mining industry and the economy.

> *"There is much frustration with regard to some royalty legislation which has meant that producers are paying royalties even when mines are losing money."*
>
> Bob Vassie, St Barbara

Developments in mining taxation in competitor jurisdictions should not be ignored by policy-makers in Australia. In Canada, to take one example, mining companies have the ability to issue flow-through shares to investors which provides tax credits in return for funding exploration activities. Good or bad policy, this financing mechanism has been credited for a number of significant discoveries during this difficult time for the sector.

Canada also provides generous accelerated depreciation rates for capital mining assets. While cherry-picking particular features of other countries' tax systems is not always instructive, given differences in broader tax, economic and political settings, nonetheless these policy choices can shed light on their priorities. In Canada's case, the value its government attaches to the mining sector.

Our analysis suggests the following reform directions:

- Changing the overall tax mix, with less reliance on income tax, and more on consumption tax.
- Lowering the corporate rate, bringing us more into line with other countries.
- State governments taking more responsibility for their revenue needs, by making greater use of potentially economically efficient tax bases at their disposal (like payroll and land tax).

There is nothing surprising about these prescriptions, which are in line with OECD and IMF recommendations. While the Government is no doubt aware of this blueprint, political, fiscal and community considerations must also be taken into account.

What are the implications for mining?

A primary focus of the Government will be considering the uncompetitive corporate tax rate in Australia. Mining, and other sectors reliant on foreign capital, have a vital interest in this issue. While most economists would support a cut in the corporate rate, views are likely to differ regarding its magnitude, its ability to be funded and whether it should be phased in.

It will always be tempting for Governments to pay for a rate cut by 'base broadening', for example, removing or reducing generous depreciation allowances. But this approach can be self-defeating and even, in some scenarios, result in less investment overall.

Targeting particular activities, firms and industries, can also lower the cost of tax relief for the corporate sector. This approach, while superficially attractive, can distort the allocation of resources and add further complexity to the tax system. A move to deliver corporate relief through depreciation changes, instead of a corporate tax cut, carries these risks.

In the wake of renewed fears for global commodity prices and a reduction in new exploration, it is important that Australian policy settings, both tax and non-tax, do not penalise mining. Tax reforms that benefit the sector should be considered as part of a broader tax reform package, rather than in isolation, and should be the subject of consultation with the relevant stakeholders.

In practice, calls by industry for special treatment have generally benefitted Australia's less competitive, least outward-looking industries rather than our most globally-competitive and export-earning sectors, including mining. Similarly, it's important that the Government not identify innovation, an emerging reform priority, with specific sectors and activities.

It is critical that the mining industry participate in these tax reform debates to ensure that the industry is not penalised in any consideration of industry competitiveness due to its global competitiveness.

> *A recent IMMC study estimates that one dollar of economic activity in the mining sector can contribute three or more dollars elsewhere. For every direct mining employee, employment is generated for between three and five employees elsewhere in the economy.*

Source: International Mining and Mineral Council (2014) The Role of Mining in National Economies (2nd edition), 23-24, http://www.icmm.com/document/8264.

Reform prospects: what will the Government include in its White Paper?

From an economic perspective, it is clear that the broader and more ambitious the package, the larger the potential gains. The optimal blueprint, would be a change in the tax mix from income to consumption tax, accompanied by a corporate rate cut (perhaps phased in over a period of time) and reform at the state level. From a political perspective, such a package would represent a high-risk, high-reward approach.

While GST changes would be strongly opposed, this is arguably the only credible way to fund large personal income tax cuts. This approach should be welcomed by the mining industry as a more efficient tax mix, with a lower corporate tax rate, is likely to support Australia's competitiveness relative to its global peers.

A less ambitious, lower-risk and lower-reward, alternative would be for the GST to remain unchanged and for personal and corporate rate cuts to be funded by base broadening within these respective bases or by spending restraint. However, the scope for the former is relatively limited given the legacy of reforms in recent decades, which have extended the perimeter of these bases (e.g. capital gains tax, fringe benefits tax and depreciation changes following the Ralph review). And in economic terms, base broadening can be self-defeating.

Financial analysis

FY15 was a tough year for the Mid-Tier 50, with financial performance falling across most metrics. Revenues, gross margin and cash flows declined for all commodity groups, with the exception of gold, and in some cases, copper. Many companies responded by focusing on capital management and continued investment in development and exploration.

Impairment of

$5.5 billion

eroded a further 13% of the Mid-Tier 50 mining asset base in 2015.

Income statement

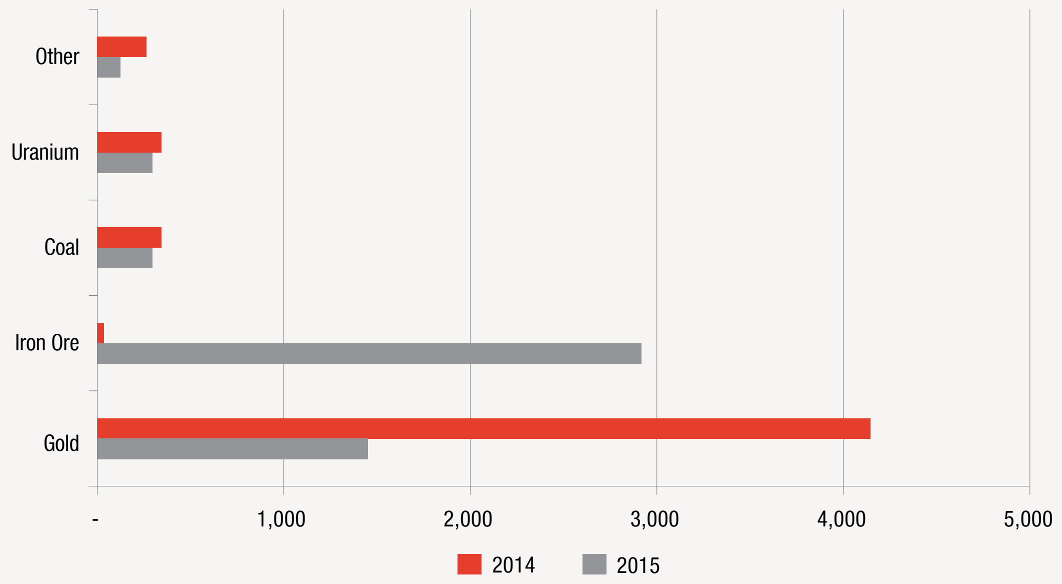
Impairment continued, with iron ore the worst hit

Impairment of assets totalling $5.5 billion were recognised in FY15, which was approximately the same amount as in FY14.

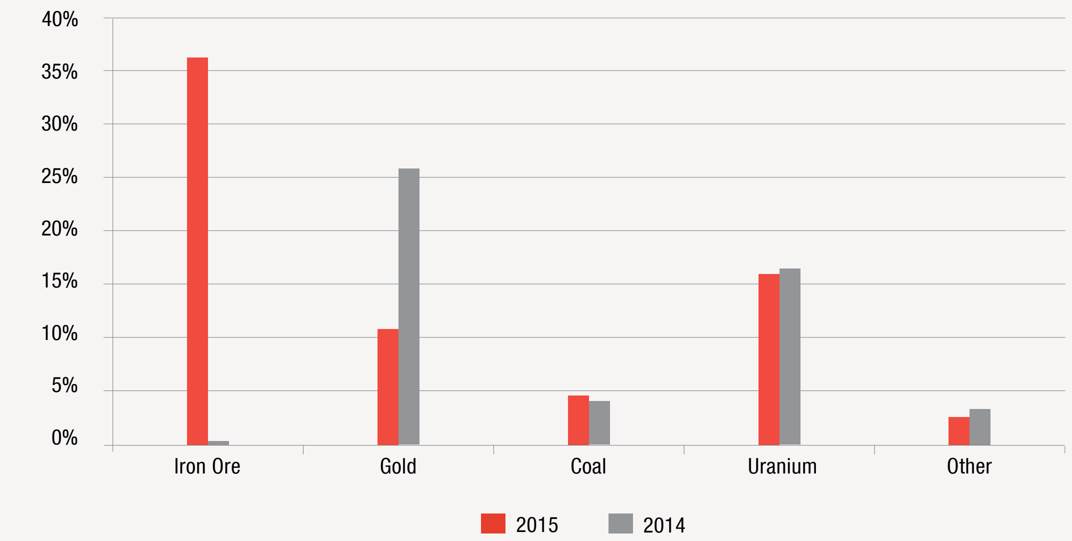
The iron ore sector accounted for 57% of the write-downs, eroding 37% of the sector's asset base. These impairments were triggered by adverse moves in the spot and forecast long-term iron ore prices as a result of increasing near term production growth from Brazil and slowing Chinese demand.

Surprisingly, the gold sector has not been immune to further impairments, with a further 10% written off the asset base during FY15. This largely related to overseas assets, which have not benefited from the increase in the AUD price per ounce of approximately 10% over FY15.

Impairment charge by commodity ($m)

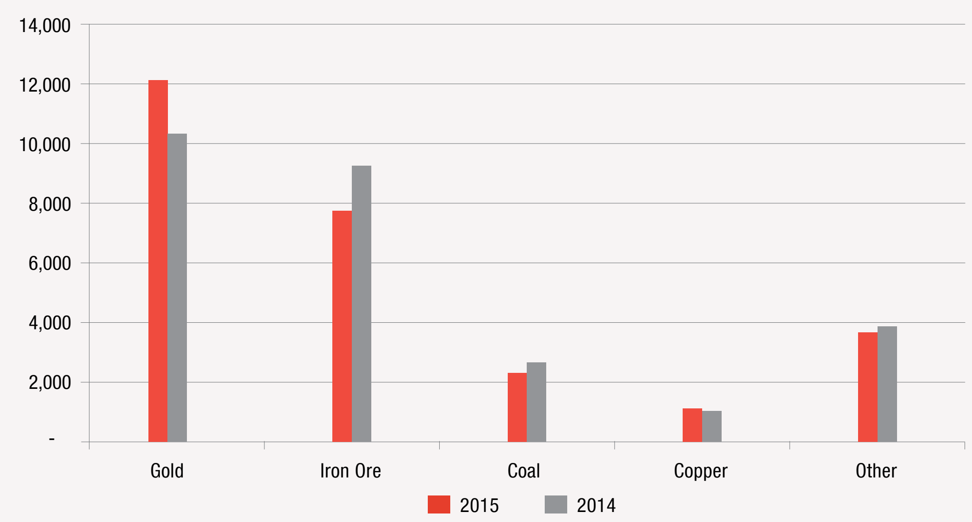


Impairment charge as a percentage of commodity asset base



Top 5 revenue		
Ticker	2015 $m	2014 $m
AGG	5,925	5,833
ARI	5,896	6,502
YAL	1,401	1,510
MIN	1,299	1,899
NST	846	297
Total	15,367	16,041
%	55%	56%

Mid-tier revenue by commodity ($m)

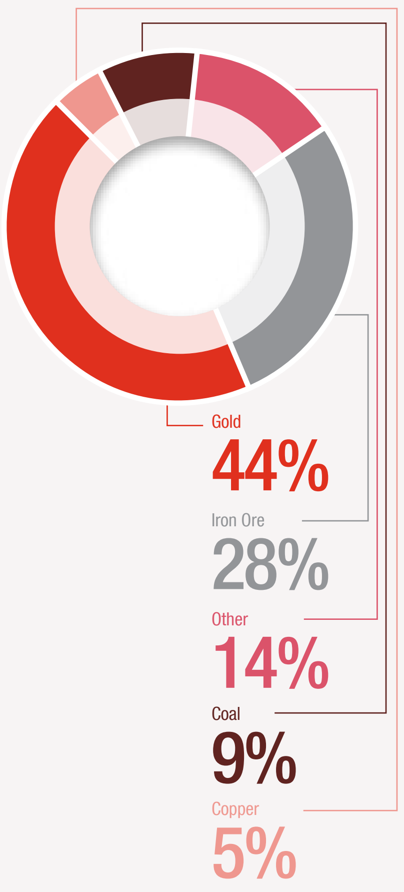


Total revenues declined, with the exception of gold and copper

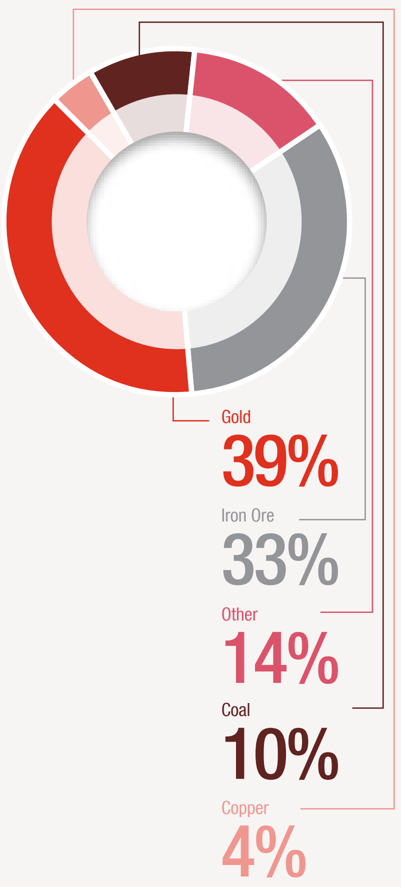
Revenues across the Mid-Tier 50 declined 1.8% to $28.1m in FY15. The main contributors to the decline were bulk commodities iron ore and coal, which were impacted not only by a fall in price but also lower volumes, as many mines were placed on care and maintenance during the year.

Gold companies were the shining stars in terms of revenue, largely on the back on the increased AUD gold price, but also as a result of increased production in FY15. The gold sector increased its share of the Mid-Tier 50 revenue from 39% to 44%, offsetting iron ore's decline from 33% to 28% of total revenue.

2015 Revenue by commodity



2014 Revenue by commodity



In a 'flat is the new growth' environment, gold is the saving grace.

Gross margins deteriorated for most

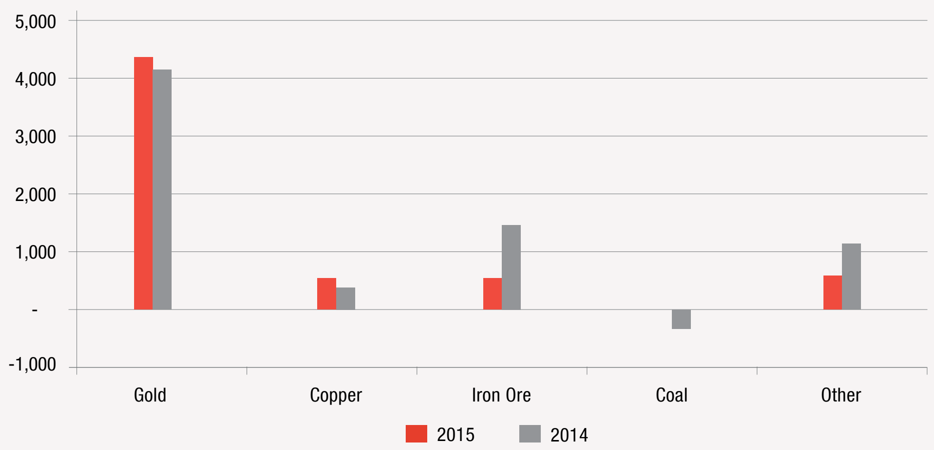
In FY15 gross margins declined to 22%, compared to 25% for the previous financial year. This was primarily on the back of lower revenues and the anticipated realisation of productivity and cost benefits not being achieved at the rate required to transform the cost base across the sector.

Gold, however, continues to punch above its weight, representing 63% of the gross margin earned by the Mid-Tier 50 in FY15 (with only 44% of the revenue and 38% of the market capitalisation).

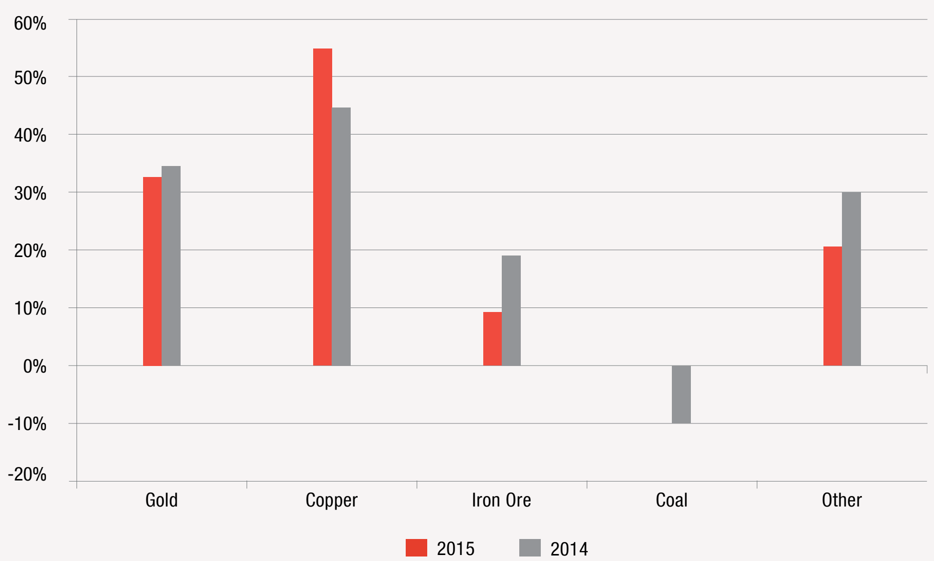
Copper, while representing only 5% of the Mid-Tier 50 revenue, constitutes 12% of the gross margin across the group. In FY15 its own gross margin increased to 54%, making it the most profitable commodity in the Mid-Tier 50.

The iron ore sector has seen the most significant decline (10%) in gross margin to 9%. Despite representing 28% of the Mid-Tier 50 revenue, iron ore only accounts for 12% of the Mid-Tier 50 gross margin.

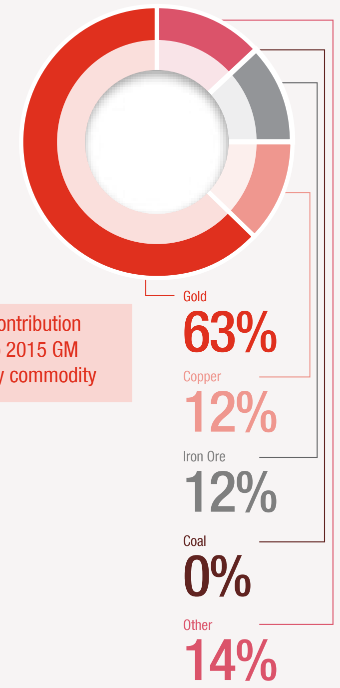
Gross Margin by commodity ($m)



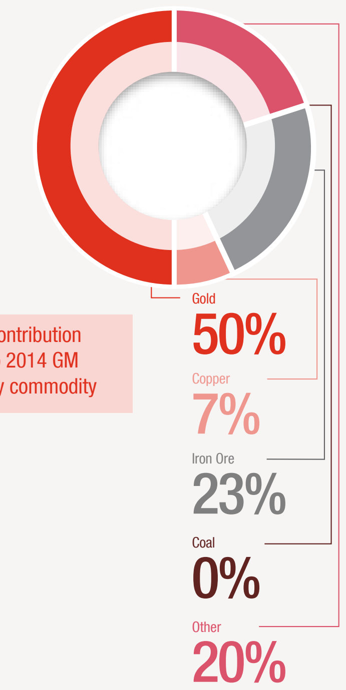
Gross Margin by Commodity (%)



Top 5 gross margin		
Ticker	2015 $m	2014 $m
AGG	1,439	1,792
OZL	477	247
MIN	363	628
NST	325	90
EVN	317	256
Total	2,922	3,013
%	47%	56%



Contribution to 2015 GM by commodity



Contribution to 2014 GM by commodity

Balance sheet

The net asset position of the Mid-Tier 50 declined by $2.0 billion in FY15, on the back of $5.5 billion in asset impairments, which were partially offset by new equity raisings of $3.1 billion.

Companies remained focused on capital management

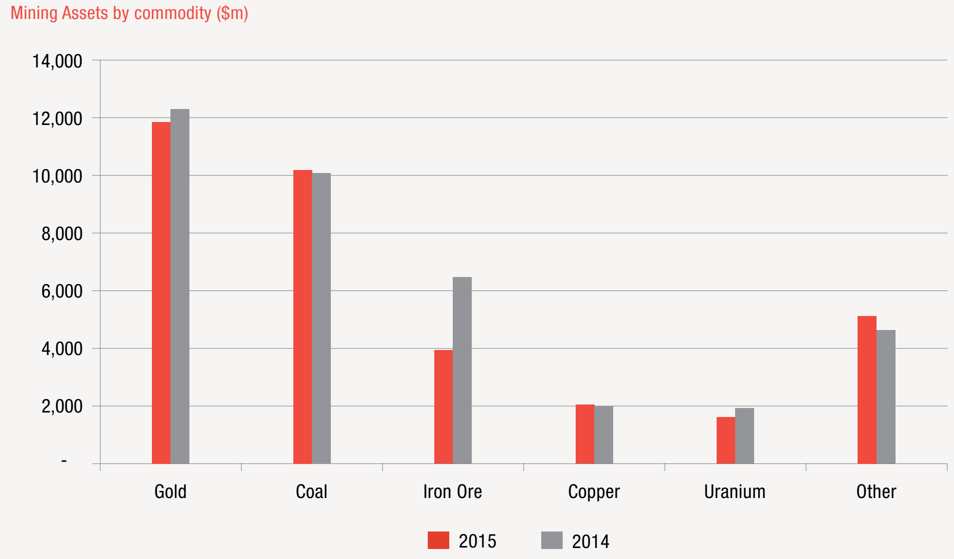
The Mid-Tier 50 moved to strengthen their financial position throughout the financial year. Debt was repaid out of proceeds from equity raisings primarily in coal and iron ore, while cash flows generated from operations were used largely to fund development and maintain existing assets.

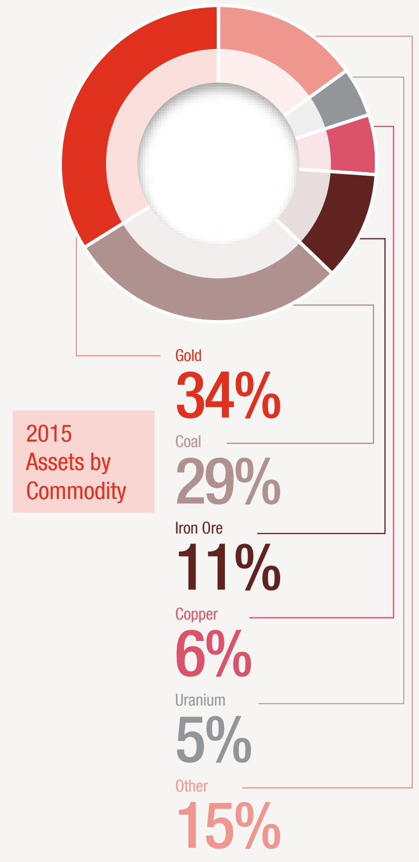
Investment in development assets continued

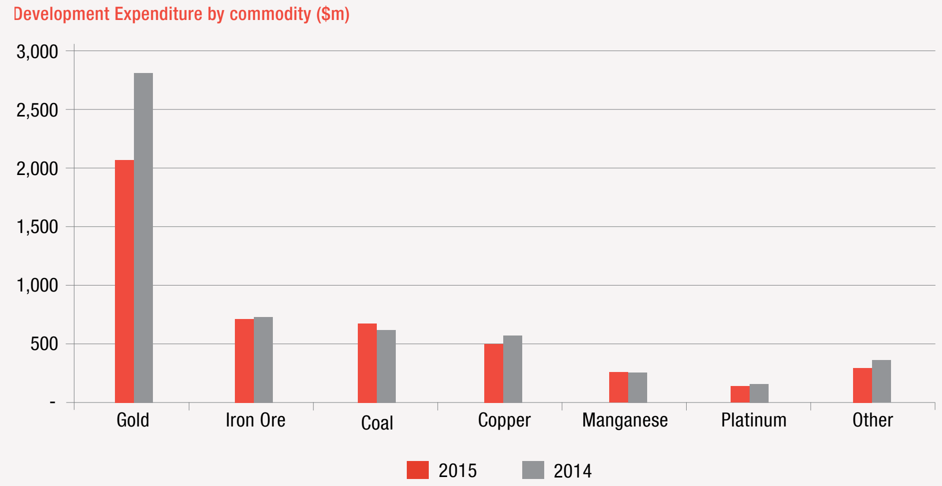
The Mid-Tier 50 continued to invest in maintaining their mining asset bases during FY15. Gold led the charge with slightly over $2 billion in development expenditure, and now represents 34% of the Mid-Tier 50 asset base. Iron ore saw significant impairments erode its position in the Mid-Tier 50 and now comprises only 11% of Mid-Tier 50 asset base. Coal continued to maintain a strong presence in the Mid-Tier 50 and reflects 29% of the asset base.

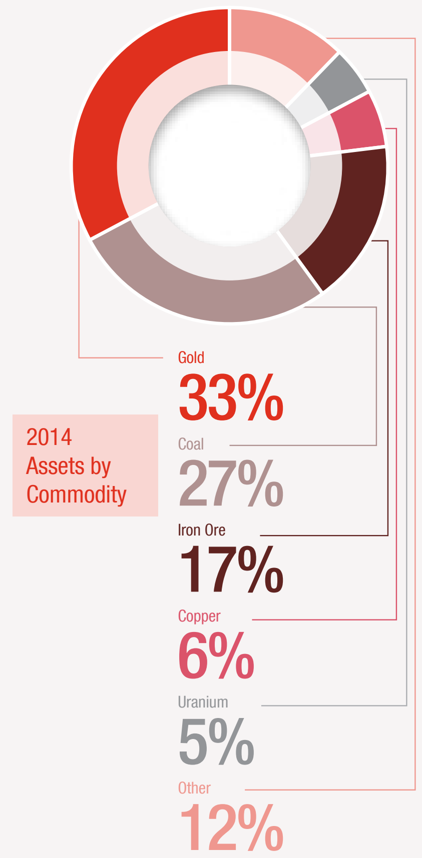
Top cash balances

Ticker	2015 $m	2014 $m
AGG	571	724
AQG	423	324
ERA	293	357
AQP	255	145
PDN	239	94
Total	1,781	1,645
%	35%	33%









Top 5 operating cashflows

Ticker	2015 $m	2014 $m
AGG	1,373	1,311
NST	359	80
ILU	290	53
EVN	285	202
OZL	280	254
Total	2,586	1,900
%	54%	35%

Cashflow

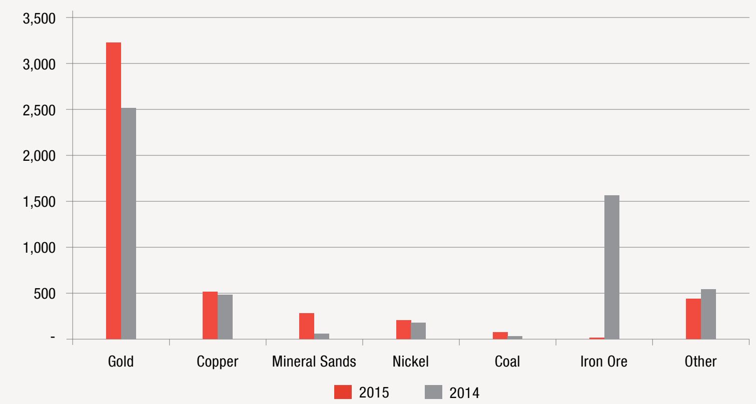
Operating cash flows fell, but not for gold and copper

Operating cash flows across the Mid-Tier 50 declined 12% to $4.8 billion in FY15, with the top 5 companies contributing more than half (54%) of total operating cash flows.

Most significantly, iron ore generated only $7 million in operating cash flows during FY15, despite the fact this commodity represents 28% of the revenue base of the entire Mid-Tier 50.

Gold continued to shine, increasing its operating cash flows to $3.2 billion. Copper, which represents only 12% of the sector's revenue base, contributed $500 million in cash flows.

Operating cash flows by commodity ($m)

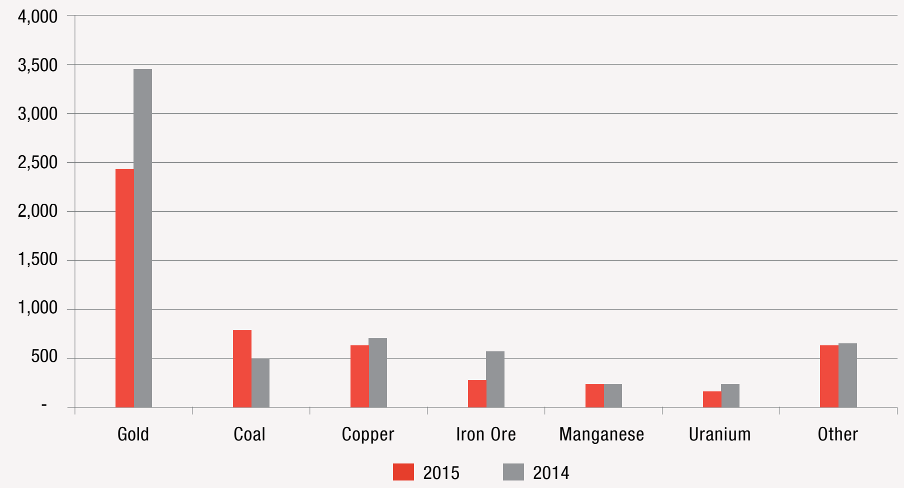


Investing cash flows fell

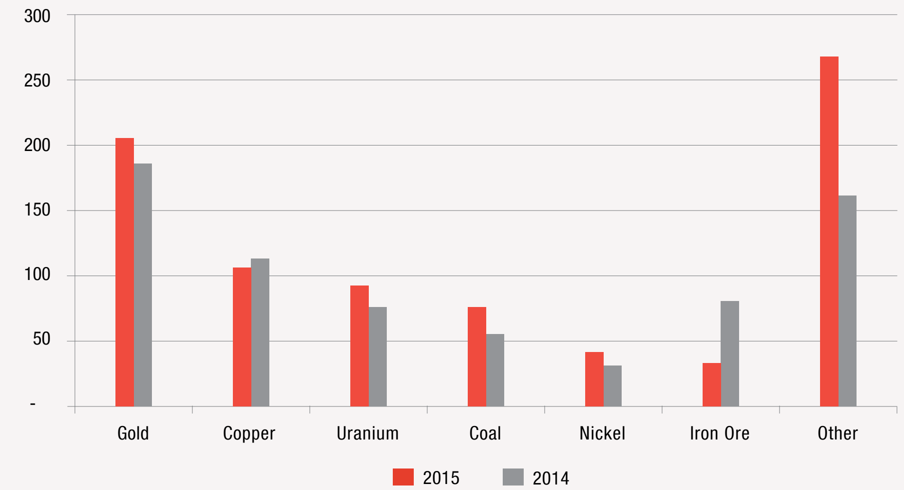
Investing cash flows declined 20% to $5.0 billion in FY15, largely a reflection of new mines and expansions coming on line in 2015. Despite the decline in cash flows, investment in both development and exploration still occurred, albeit mostly within the gold sector.

Exploration expenditure increased 17% to $821 million in FY15. The majority of commodities saw increased exploration, with the exception of iron ore. Diversified miners showed the greatest increase in exploration expenditure over the prior year.

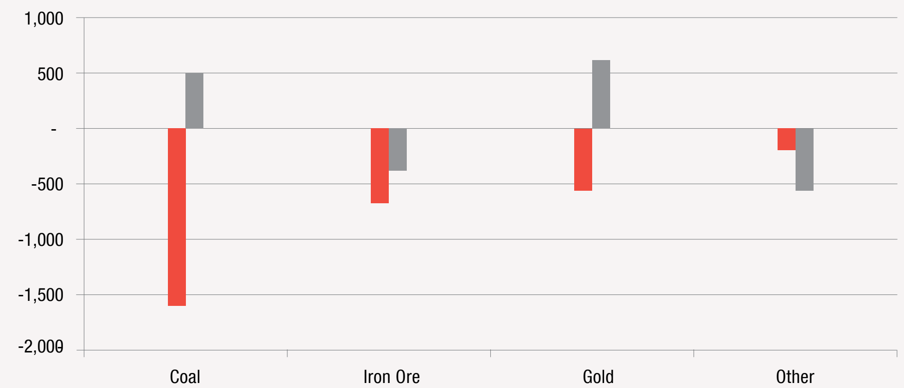
Investing cashflows by commodity ($m)



Exploration by commodity ($m)



Net cashflow (Borrowings) by commodity ($m)



Financing cash flows strategically decline

Financing cash flows declined by 86% to $105m in FY15 following significant debt repayments by the Mid-Tier 50 across all commodities, reflecting a market appetite for strong capital management. Debt repayments were predominately funded by existing cash reserves, disposals and equity raisings. Coal and iron ore companies had the greatest focus on debt and recorded over $2bn in negative net borrowings, which was largely financed by $3bn of new equity issues.

The strategy to reduce debt and only undertake essential maintenance to preserve cash is also reflected by FY15 shareholder distributions. The aggregate dividend payment of the Mid-Tier 50 fell during the year, dropping 34% to $564m.

Aggregated financial information

Balance Sheet

	2015	2014	Change
	$m	$m	%
CURRENT ASSETS			
Cash and cash equivalents	5,028	5,010	0%
Inventories	4,933	5,218	-5%
Receivables	2,710	3,665	-26%
Other current assets	1,642	2,157	-24%
TOTAL CURRENT ASSETS	14,314	16,050	-11%
NON-CURRENT ASSETS			
Investments in associates and joint ventures	5,315	5,188	2%
Property, plant and equipment	22,618	22,560	0%
Capitalised development & mine properties	8,175	4,993	64%
Capitalised exploration expenditure	3,949	9,885	-60%
Goodwill	1,946	2,014	-3%
Other non-current assets	4,280	4,182	2%
TOTAL NON-CURRENT ASSETS	46,283	48,821	-5%
TOTAL ASSETS	60,597	64,872	-7%
CURRENT LIABILITIES			
Accounts payable & accrued liabilities	4,198	4,582	-8%
Interest bearing liabilities (short term borrowings)	1,395	1,490	-6%
Provisions	761	726	5%
Other current liabilities	564	1,045	-46%
TOTAL CURRENT LIABILITIES	6,919	7,843	-12%
NON-CURRENT LIABILITIES			
Interest bearing liabilities (long term borrowings)	13,572	15,027	-10%
Provisions	3,947	3,580	10%
Other current liabilities	1,091	1,370	-20%
TOTAL NON-CURRENT LIABILITIES	18,610	19,978	-7%
TOTAL LIABILITIES	25,529	27,821	-8%
NET ASSETS	35,069	37,051	-5%

Profit and Loss

	2015	2014	Change
	$m	$m	%
REVENUE FROM ORDINARY ACTIVITIES			
- Operating revenue	28,036	28,419	-1%
- Non-operating revenue	203	331	-39%
TOTAL REVENUE	28,239	28,750	-2%
Less expenses from ordinary activities	(21,839)	(21,380)	2%
Gross profit	6,400	7,370	-13%
Exploration expenses	(452)	(593)	-24%
Other income/(expenses)	(1,349)	(2,048)	-34%
Adjusted EBITDA	4,600	4,729	-3%
Gain/(loss) on sale of investments	54	137	-61%
Impairment	(5,516)	(5,507)	0%
EBITDA	(862)	(642)	34%
Depreciation and amortisation	(4,092)	(4,031)	2%
EBIT	(4,954)	(4,672)	6%
Net interest income/(expense)	(126)	(120)	5%
Profit from ordinary activities before tax	(5,079)	(4,792)	6%
Income tax (expense)/benefit	(354)	595	-159%
Net profit/(loss) from continuing operations	(5,433)	(4,197)	29%
GROSS MARGIN	22.7%	25.6%	
Adjusted EBITDAI margin	16.3%	16.5%	
NET PROFIT MARGIN	-16.7%	-18.7%	

Cash Flows

	2015	2014	Change
	$m	$m	%
Cash flows generated from operations			
Cash generated from operations	5,606	6,241	-10%
Net borrowing costs	(501)	(542)	-8%
Other	158	255	-38%
Income taxes (paid)/refunded	(497)	(557)	-11%
NET OPERATING CASH FLOWS	4,766	5,397	-12%
Cash flows related to investing activities			
Purchases of property, plant and equipment	(4,591)	(5,483)	-16%
Exploration expenditure	(821)	(704)	17%
Purchases of investments and intangibles	(525)	(499)	5%
Other	132	(662)	-120%
Proceeds from sale of property, plant and equipment	247	488	-49%
Proceeds from sale of investments	592	658	-10%
NET INVESTING CASH FLOWS	(4,966)	(6,201)	-20%
Cash flows related to financing activities			
Proceeds from ordinary share issues	3,828	1,520	152%
Net borrowings	(3,293)	157	-2200%
Distribution to shareholders	(564)	(852)	-34%
Other	135	(91)	-248%
NET FINANCING CASH FLOWS	105	734	-86%

2015 Mid-Tier 50 Companies

ASX Ticker	Entity Name	Market capitalisation as at 30/06/2015	2015 Rank	2014 Rank
AGG	AngloGold Ashanti Ltd.	4,747	1	N/A
AWC	Alumina Ltd.	4,293	2	1
ILU	Iluka Resources Limited	3,209	3	2
NHC	New Hope Corporation Limited	1,571	4	3
SIR	Sirius Resources NL	1,360	5	9
WHC	Whitehaven Coal Limited	1,304	6	5
NST	Northern Star Resources Limited	1,310	7	18
MIN	Mineral Resources Limited	1,238	8	4
OZL	OZ Minerals Limited	1,208	9	7
EVN	Evolution Mining Limited	1,141	10	25
OGC	OceanaGold Corporation	976	11	12
IGO	Independence Group NL	954	12	11
SFR	Sandfire Resources NL	902	13	13
AQG	Alacer Gold Corp.	888	14	16
ZIM	Zimplats Holdings Ltd.	753	15	14
WSA	Western Areas Limited	753	16	10
SPH	Sphere Minerals Limited	676	17	20
SYR	Syrah Resources Limited	618	18	19
MLX	Metals X Limited	581	19	27
RRL	Regis Resources Limited	540	20	15
CDU	CuDeco Ltd.	482	21	28
PDN	Paladin Energy Ltd	408	22	37
ARI	Arrium Limited	396	23	8
BCK	Brockman Mining Limited	365	24	24
SAR	Saracen Mineral Holdings Limited	341	25	32

ASX Ticker	Entity Name	Market capitalisation as at 30/06/2015	2015 Rank	2014 Rank
WLF	Wolf Minerals Limited	340	26	42
ORE	Orocobre Limited	318	27	34
GOR	Gold Road Resources Limited	291	28	N/A
SBM	ST Barbara Ltd.	282	29	N/A
EVR	Endeavour Mining Corporation	267	30	N/A
TGZ	Teranga Gold Corporation	261	31	N/A
PRU	Perseus Mining Limited	226	32	43
MGX	Mount Gibson Iron Limited	218	33	17
AQP	Aquarius Platinum Limited	207	34	22
ATU	Atrum Coal NL	206	35	N/A
ERA	Energy Resources of Australia Ltd.	202	36	21
TBR	Tribune Resources Limited	200	37	N/A
OMH	OM Holdings Limited	198	38	35
RSG	Resolute Mining Limited	196	39	30
TZN	Terramin Australia Limited	183	40	N/A
MML	Medusa Mining Limited	174	41	31
AVB	Avanco Resources Limited	172	42	N/A
NWF	Newfield Resources Limited	164	43	N/A
KCN	Kingsgate Consolidated Limited	155	44	47
PEN	Peninsula Energy Limited	152	45	N/A
PAN	Panoramic Resources Limited	149	46	38
YAL	Yancoal Australia Ltd	149	47	41
CZA	Coal of Africa Limited	148	48	N/A
BDR	Beadell Resources Ltd	148	49	26
GRR	Grange Resources Limited	139	50	50

For dual-listed ASX companies with CHESS Depository Interests the company's primary exchange listing has been used to determine market capitalisation.

New Entrant | Returned Entrant

Explanatory notes

We have analysed the largest 50 mining companies listed on the ASX with a market capitalisation of less than $5 billion at 30 June 2015. 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.

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 2015 covers periods between and 1 January 2014 and 30 June 2015, 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 Australian dollars, except where specifically stated. The results of companies that report in currencies other than the Australian dollar have been translated at the average Australian dollar exchange rate for the financial year, with balance sheet items translated at the closing Australian dollar exchange rate.

Some diversified companies undertake part of their activities outside of the mining industry. Unless specifically stated, no adjustments have been made to exclude such non-mining activities from the aggregated financial information.

Detailed deals analysis

Completed M&A Transactions in the Mid-Tier 50: Deals greater than $15 million (September 2014 to August 2015)

Target	Acquirer	Sector	Target country	Ownership interest (%)	Approximate deal value ($m)	Announcement date	Status
Cripple Creek & Victor Gold Mining Company, Inc.	Newmont Mining Corporation	Gold	United States	100	1073	Jun-15	Closed
Arrium Limited, Wire Ropes Business	NV Bekaert SA	Iron Ore	Australia	100	90	Jun-15	Closed
Barrick (Cowal) Limited	Evolution Mining Limited	Gold	Australia	100	703	May-15	Closed
Saracen Mineral Holdings Limited	–	Gold	Australia	4	16	Jan-15	Closed
Whitehaven Coal Limited	AMCI Euro-Holdings BV	Coal	Australia	6	107	Aug-14	Closed
Total					1,989		

Pending M&A Transactions in the Mid-Tier 50: Deals greater than $15 million (September 2014 to August 2015)

Target	Acquirer	Sector	Target country	Ownership interest (%)	Approximate deal value ($m)	Announcement date	Status
Aquarius Platinum (South Africa) (Proprietary)	Northam Platinum Limited	Precious Metals	South Africa	100	49	Feb-15	Announced
Xstrata Nickel Australasia Operations Pty Ltd	Australian Nickel Investments Pty Ltd	Nickel	Australia	100	25	Jun-15	Announced
Phoenix Gold Limited	Norton Gold Fields Limited	Gold	Australia	82	39	Jun-15	Announced
Toledo Holding (Ausco) Pty Limited	Evolution Mining Limited	Gold	Australia	100	299	Apr-15	Announced
Romarco Minerals Inc.	OceanaGold Corporation	Gold	Canada	100	893	Jul-15	Announced
Newmont Waihi Gold Limited	OceanaGold Corporation	Gold	New Zealand	100	161	Apr-15	Announced
OM Materials (Sarawak) Sdn Bhd	Samalaju Industries Sdn Bhd	Other (Manganese)	Malaysia	5	24	Mar-15	Announced
Energia Minerals Limited, Carley Bore Uranium	Paladin Energy Ltd	Uranium	Australia	100	16	Jun-15	Announced
Sirius Resources NL	Independence Group NL	Nickel	Australia	100	1497	May-15	Announced
Central Tanami Project	Northern Star Resources Limited	Gold	Australia	25	20	Feb-15	Announced
Phoenix Gold Limited	Evolution Mining Limited	Gold	Australia	80	36	Aug-15	Announced
Total					3,059		

Pending as at 31 August 2015. Deals subsequently completed (by target) include: Xstrata Nickel, Toledo Holding, Romarco Minerals, Newmont Waihi Gold, and Sirius Resources.

Cancelled M&A Transactions in the Mid-Tier 50: Deals greater than $15 million (September 2014 to August 2015)

Target	Acquirer	Sector	Target country	Ownership interest (%)	Approximate deal value ($m)	Announcement date	Status
Coal Of Africa Limited, Mooiplaats Colliery	Blackspear Holdings Proprietary Ltd	Coal	South Africa	100	25	Sep-14	Cancelled
Central Tanami Project	Metals X Limited	Gold	Australia	25	16	Feb-15	Cancelled
Total					41		

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  - *London School of Mines* (United Kingdom)
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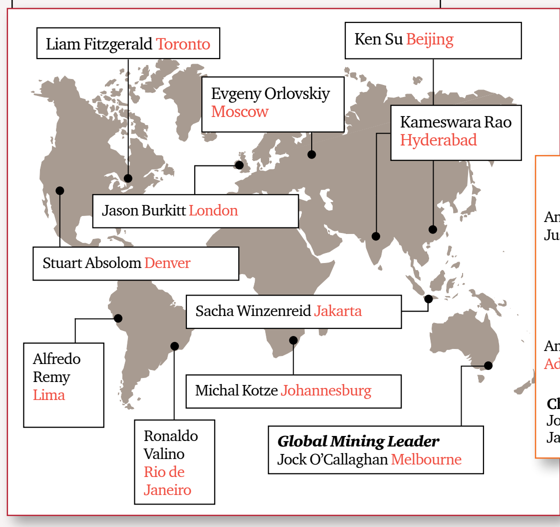

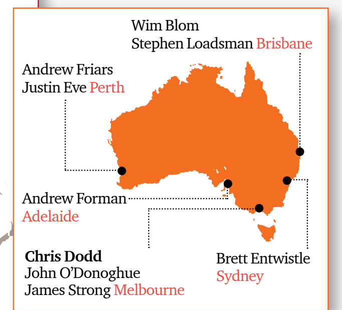

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