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On the road again?
Global Mining 2011 Deals Review & 2012 Outlook

March 2012

pwc

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Introduction

"This is not a world in which the major global diversified miners will necessarily find it easy to operate. They are, after all, very much products of the process of economic globalisation and the free flow of global capital. Their rise to prominence has largely occurred, whilst this was the prevailing paradigm…"

Dr. David Humphreys
former chief economist for Rio Tinto and Norilsk Nickel

The sound of voices predicting the end of the commodity super cycle that began at the start of this millennium reached a crescendo pitch during 2011. The end of China. The end of India. The end of the nuclear age. The end of the American dream. The end of the Euro. With each of these expected ends, markets assumed a necessary end to the demand for mining resources.

Our theme this year, *"On the road again?"* borrowed from American philosopher and musician Bob Dylan, is a reference to the brazen wisdom demonstrated by the mining community in 2011, so confident in the long term fundamentals that, for the most part, critical voices were drowned out. Global mining M&A activity increased 33% over the prior year and nearly hit a record high. Buyers were plentiful, bidding wars ensued and valuations were high. Not at all the kinds of behaviours expected in a cyclical downturn. Our annual M&A year in review revisits the 2011 trends: who was buying and selling, what resources were sought out, what drove deal premiums and, of increasing importance, what the differences were in buying behaviours between developed and growth market buyers.

A nod to historic precedent can shed light on important drivers for mining M&A. But, with a view to moving forward, we are also pleased to share our 2012 mining M&A outlook. We anticipate a record year of mining M&A ahead, primarily driven by cash-rich seniors and intermediates hungry for projects. 2012, however, is unlikely to be "more of the same". We expect a variety of financial and vertical buyers to be active, a state of affairs that should bode well for deal values. We also expect that Africa will increasingly become a more viable M&A geography with growth market buyers in particular, driving substantial acquisition volumes. The latter dynamic prompted us to editorialise Mr. Dylan's famous song title by punctuating it with a question mark. Why? In 2012, we expect that the West will increasingly find itself in an unfamiliar world. The roads ahead, those in frontier markets, are not those that have been mastered by many of the miners of our age. We believe that shifting centres of gravity, from the west to the east, will increasingly challenge the traditional economics behind mining M&A deals and force Western boards and shareholders to reconsider the manners in which the balances of risk and reward are weighed. It looks to be another year of game-changing M&A indeed.

Tim Goldsmith
PwC Global Mining Leader

2011 Deals review

We are pleased to share our key observations of M&A in the mining sector in 2011. In addition to traditional deal tallies and metrics, our report also includes a précis of geographic trends, M&A value drivers and a closer look at activity by resource.

Shelter from the storm...

Deal tally

Market volatility. Resource price erosion.

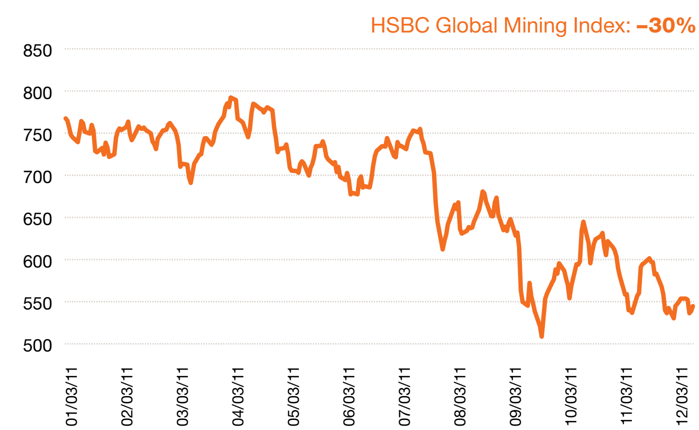
2011 was a tough year. It saw unprecedented social uprisings in the Middle East, a nuclear meltdown in Japan, crisis upon crisis in Europe, a downgrade of the US government's debt rating and economic deceleration in numerous growth market countries. The S&P travelled 3,240 points during the year, only to close unchanged. Even Harry Potter called it a day.

Resources markets were not spared. Most base metals dropped by 20% or more in value in 2011 and the annual performance[1] of precious metals, as a group, was also rather dismal (gold being the notable exception).

Annual performance of select mining commodities	
Zinc (price per pound)	–25%
Copper (price per pound)	–21%
Nickel (price per pound)	–24%
Silver (price per ounce)	–9%
Gold (price per ounce)	+10%

HSBC Global Base Metals Index

HSBC Global Mining Index



Source: Bloomberg, PwC Analysis

1 Annual performance refers to change in price between January 1, 2011 and December 31, 2011.

> In spite of dropping public equity valuations for most miners, average deal value rose to $105 million, up from $70 million in the prior year.

Miners optimistic and opportunistic. 2011 near global mining M&A record.

Disregarding market gyrations, miners aggressively pressed on with plans for M&A in 2011. **2,605** M&A deals were announced, making 2011 the second busiest year of mining M&A activity in history.

The value of announced M&A transactions with disclosed values was **$149 billion**, **33%** higher than the prior year and **nearly double** 2009's value tally. To put this into perspective, consider that aggregate deal value in 2011 fell just 2% short of the value tally at the 2006 peak.

Active at the high and low ends, quiet in the middle.

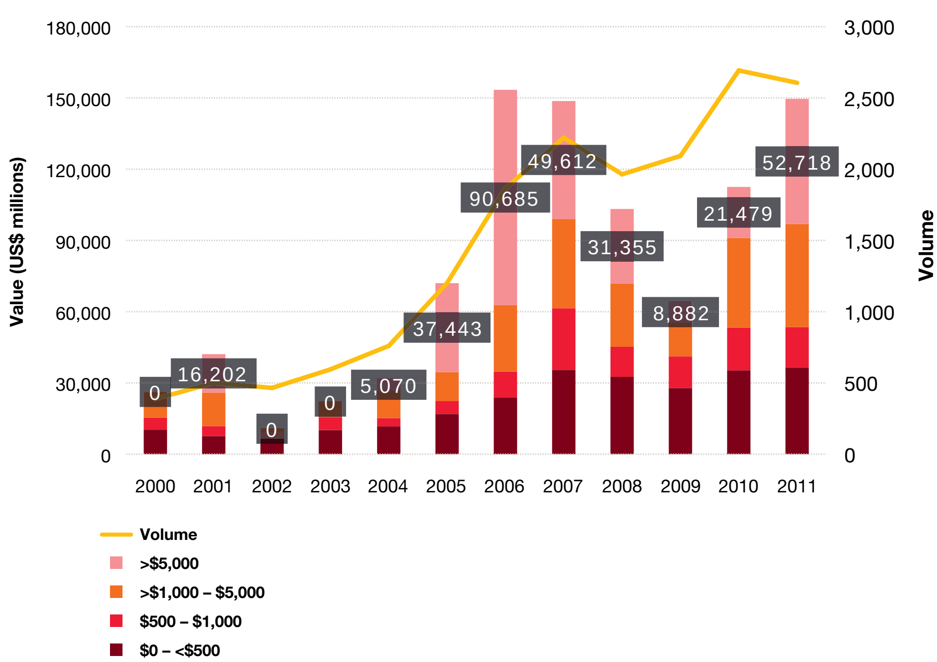
Although 2011 saw only one $10 billion+ deal, overall, **seven** deals worth more than the US dollar equivalent of **$5 billion** were announced. Total values in the $5 billion+ segment registered increases of **145%** and **490%** over 2010 and 2009 respectively. Deals in the $1 billion – $5 billion segment were also impressive with 23 transactions worth $43 billion being announced. Measured by value, this represented a **14%** increase over the prior year and was double the 2009 tally.

At the opposite end of the spectrum, the junior sphere also had a blockbuster year. In the <$100 million segment, **1,355** deals worth **$36 billion** were announced, both all-time records.

Conversely, the mid-size deal segment between $100 million and $1 billion experienced a moderate year over year contraction in aggregate value as 25 deals worth $17 billion were announced, a **decrease of 6%** over 2010.

In spite of dropping public equity valuations for most miners, average deal value rose to **$105 million**, up from **$70 million** in the prior year. This was largely due to a higher concentration of large transactions, rather than an expansion in multiples.

Global mining sector M&A volume and aggregate value



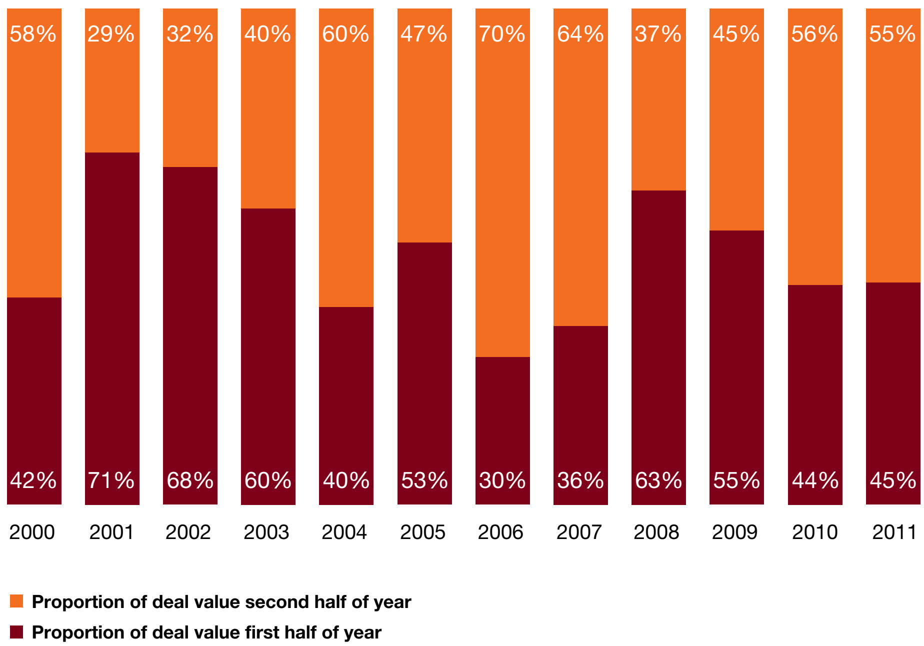
Source: S&P Capital IQ, PwC Analysis

M&A in the second half of 2011 defies gravity. Few deals are cancelled.

Despite the fact that 2011's market volatility was largely confined to the second half of the year, mining M&A activity in the first and second half of 2011 was not entirely asymmetrical. We observed a steep drop in M&A volume and value during the July – October period. However, because November and December were extremely busy, M&A in the second half of 2011 outpaced the first.

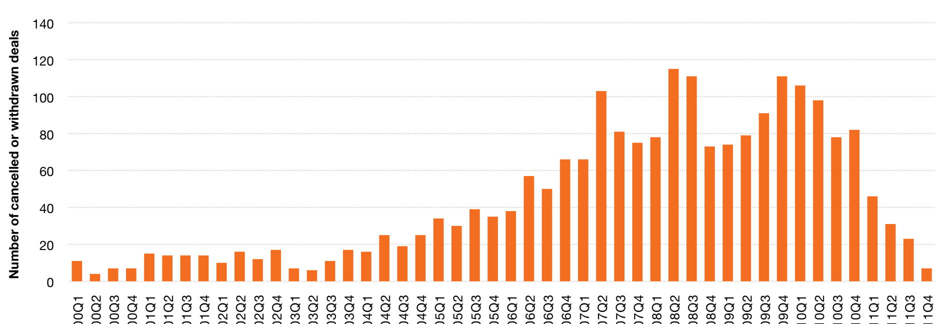
Atypical of mining M&A in a volatile resource market, we observed record low deal cancellations. As depicted in the accompanying graph, only **107** mining M&A deals were cancelled in 2011. This was the lowest annual cancellation volume since 2004 and, as a proportion of total deal volumes, a historical low. Interestingly, Q4 2011, the tail end of peak resource volatility, registered the lowest cancelled deal volume of the year. We attribute this drop-off to a perception that there was an opportunity to find value buys in the M&A market.

Global mining M&A half year comparison (deal value)



Source: S&P Capital IQ, PwC Analysis

Cancelled mining M&A transaction volumes (quarterly: 2000-2011)



Source: S&P Capital IQ, PwC Analysis

Let's keep it between us. Geographic trends

In a nutshell

Our annual geographic analysis begins with a brief snapshot of the top five geographies for global mining M&A (from a buyer and seller perspective). We observed continued dominance of buyers from Canada, Australia and the US, together with increasing activity levels from growth market buyers in Asia, Latin America and Russia. Although some intra-country variances over 2010 were interesting, most were rather unremarkable.

In order to move beyond traditional geographic data "slicing and dicing", we also took a deeper look at the differences in the buying behaviours between "the west", as a group, versus "the rest", the key growth markets[2] of the world. Our results show that, with the exception of a small number of outliers, the developed and growth worlds are biased towards transacting within their own regions. Very little "cross-pollination" was observed between the two worlds.

The bottom line? Many developed world miners operate within regulatory and financial constraints that prevent them from fully capitalizing on opportunities in growth markets. While a myriad of risks may make it more costly to transact in high risk/high growth regions, the fact that these same regions are home to the majority of the world's remaining mineral reserves means that, in the long term, it may be even more costly not to transact.

2 Key growth markets of the world include: Brazil, Russia, India, China, Mexico, Indonesia, Turkey, South Africa, South Korea, Vietnam, and the Philippines.

Snapshot of global mining M&A by geography

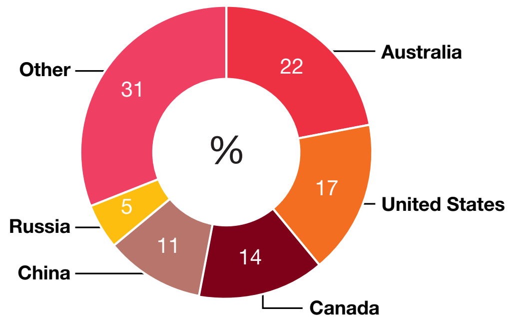
Buy side activity & value

Consistent with historic precedent, buyers based in the US, Australia and Canada drove the lion's share of M&A values in the global mining sector in 2011. These three regions together accounted for **53%** of annual acquisition values, up from **46%** last year. **Australia** remained in the top spot with **22%** market share, up from **19%** in the prior year. Americans supplanted the Chinese to become the second most acquisitive by value, representing **17%** of buy-side values, up from only **9%** in the prior year.

This same trend is evident when segmenting the market by volumes. Australia, Canada and the US represented **57%** of buy side activity, down slightly from **59%** in 2010. **Canadian based buyers** were the most acquisitive: 30% of all 2011 global mining acquisitions involved a Canadian buyer.

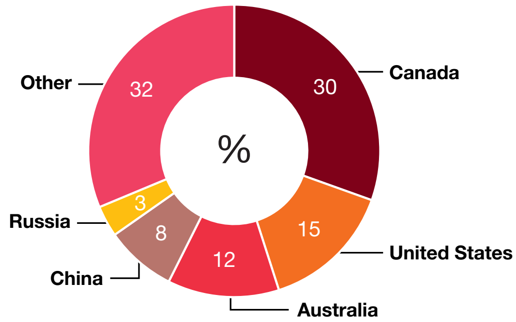
China and **Russia** continue to be the only non-western geographies to make it to our annual "top five." 2011 saw buyers based in China and Russia lead **16%** of deals by value and **11%** by volume.

Global M&A activity market share of mining deal buy-side **values** by geography (2011)



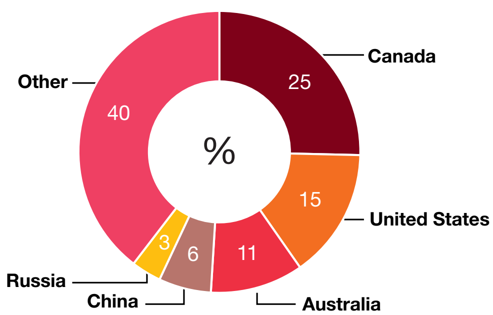
Source: S&P Capital IQ, PwC Analysis

Global M&A activity market share of mining deal buy-side **volumes** by geography (2011)



Source: S&P Capital IQ, PwC Analysis

Global M&A activity market share of mining deal sell-side **volumes** by project geography (2011)



Source: S&P Capital IQ, PwC Analysis

Sell side activity & value

In order to present a "true picture" of which countries attract mining sector investment, this portion of our geographic analysis focuses on the location of project(s) acquired, rather than the location of the headquarters of a target. (Most mining targets are headquartered in a capital markets centre that can be disassociated with project location. This can skew sell-side data in favour of capital markets centres.)

In over **51%** of global mining acquisitions in 2011, acquired projects were located in the **US**, **Australia** and **Canada**. **Canada** took top honours with a **25%** market share. **US projects** continued to be popular, taking second place with **15%** market share by volume. China and Russia, representing 6% and 3% respectively, round out the top five in terms of project locations acquired.

In over 51% of global mining acquisitions in 2011, acquired projects were located in the US, Australia and Canada. Canada took top honours with a 25% market share.

> *"...The relative lack of significant results throughout mainland Asia-considered some of the most prospective and underexplored terrain on the globe-demonstrates that regardless of geology, many publicly listed juniors are still hesitant to explore in countries that historically have not protected their long-term interests."*
>
> ***Metals Economics Group***
> World Exploration Trends, 2012

A closer look at M&A by buyer region: "the west versus the rest"

During the course of our geographic analysis, we identified a number of differences in the buying behaviours of developed market buyers versus growth market buyers:

Growth markets: *Although still a small share of global M&A, growth market buyers are gaining traction. These buyers have a strong preference to acquire projects in other growth markets.*

Despite the fact that growth markets are home to the majority of the world's population and that these same markets are the end users for the majority of the world's mining resources, growth world buyers led only **17%** of acquisitions (by volume) in the mining sector in 2011. Canadian-led M&A, alone, outpaced the entire growth world tally. By value, this same group led **24%** of acquisitions. This is a tremendous increase compared to the less than **1%** penetration observed at the start of the millennium and almost **50%** higher than the deal value tally at the 2006 market peak. Although not yet dominant, certainly, with each passing year, growth market miners increasingly become forces to be reckoned with.

China, not surprisingly, dominates buy side activity among its growth market counterparts. Buyers based in China represented close to half of growth market led deal activity in 2011. Overall, annual Chinese buying volumes increased **40%** over the 2006 market peak volumes and **300%** over 2006 peak market values. If Minmetal's C$6.3 billion cash offer for Equinox Minerals and Yanzhou Coal's $3.7 billion offer for Whitehaven Coal had been successful, China's buy side tally would have registered at $26 billion, ahead of Canada's 2011 total of $21 billion.

Global mining M&A transactions led by key growth market buyers (# of deals)

		Acquisition Volumes (2011)	Acquisition Volumes (2006 market peak)	Change (%)
BRIC nations	Brazil	20	8	150%
	Russia	90	74	22%
	India	26	12	117%
	China	205	146	40%
Total BRIC		341	240	42%
Other key growth markets	Mexico	10	10	0%
	Indonesia	17	13	31%
	Turkey	2	1	100%
	South Africa	33	22	50%
	South Korea	19	16	19%
	Vietnam	1	1	0%
	Philippines	13	3	333%
Sub-total		95	66	44%
Total		436	306	42%

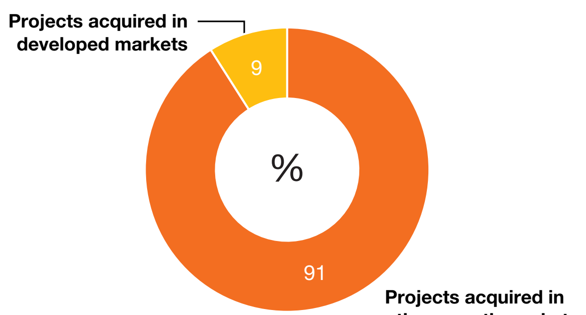
Source: S&P Capital IQ, PwC Analysis

Although still only representative of a very small portion of the global mining M&A market, buyers based in India, Indonesia, South Korea and the Philippines made some notables moves in 2011.

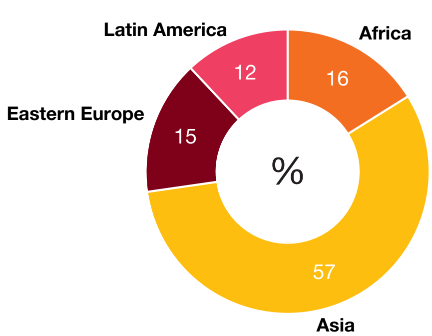
- India based buyers announced 26 acquisitions worth $1.6 billion, a **117%** increase in volumes and a more than **1,300%** increase in values compared to the 2006 market peak.
- Indonesia based buyers announced $1.3 billion worth of mining buys in 2011, up from negligible values at the 2006 market peak.
- South Korea based buyers announced $2.6 billion worth of buys, up from $424 million at the 2006 market peak, a **509%** increase.

> *"Africa has been Jinchuan's focus for overseas development...After this acquisition, Jinchuan would like to leverage Metorex to look at more opportunities in Africa as well... The mining industry has a very long value chain so it can become a very fundamental driver for local economic growth."*
>
> ***Zhang Sanlin***
> Vice President, Jinchuan Group

Project locations of growth market acquisitions



Growth markets targeted



Source: S&P Capital IQ, PwC Analysis

An interesting facet of mining M&A involving growth market buyers was that in deals where information about project location was identifiable[3], **91%** of acquisitions involved an early stage project in another growth market. Asia was the most common investment destination (**57%**), followed by Africa (**16%**). Geographic clustering was even more prevalent on a country by country basis with many buyers preferring projects located in their own markets. Notable examples, by volume, included:

- 64% of Chinese-led acquisitions involved projects in mainland China.
- 90% of Russian-led acquisitions involved projects in Russia.
- 100% of Mexican-led acquisitions involved projects in Mexico.
- 75% of Brazilian-led acquisitions involved projects in Brazil.

India was a notable exception to this trend. Although **50%** of acquisitions included an India-based project, Indian buyers extended geographic reach more broadly with acquisitions led by sourcing for raw material not locally available, and high valuations and lock-in regulations discouraging transactions. Other notable exceptions involved deals led by mature Chinese mining powerhouses with the wherewithal and know-how to extend geographic reach globally. In addition, we may see less corporate M&A emanating in South Korea, but we expect to see continuing activity in the form of off-take agreements or deals that provide capital expenditure financing.

Very few observed acquisitions of growth market mining projects were structured as "plain vanilla" M&A transactions. Often, acquisitions involved providing some long-term support to local firms or governments. In fact, it is rather difficult to quantify the "true value" of investment into growth market mining projects because there are a number of immeasurable economic variables associated with these complex agreements. As an example, consider the experience of Chinese investors in Sub-Saharan Africa. According to the International Monetary Fund (IMF), in exchange for African projects, Chinese buyers often offer packaged investment projects: *"Normally in packaged projects, the natural resource part is equity financed by*

3 For emerging market transactions, the location of an acquired project was identifiable in 70% of all deals.

Chinese entities as Foreign Direct Investment (FDI) and the infrastructure part is debt-financed usually by the Export-Import Bank of China (EXIM Bank) on concessional terms...In many cases, packaging can help Sub-Saharan African countries to export natural resources to China. Indeed, there is quantitative evidence that FDI and economic cooperation often go hand in hand, and higher FDI from China is associated with greater concentration of exports to China."[4] The latter point is a critical one upon which to reflect. In light of the fact that securing supply is a key deal driver for growth world buyers, it is only natural that a bias would be expressed for projects that permit buyers to exert some influence over supply destination.

- One of the most noteworthy examples of China's investment in Africa was the announcement of a $5 billion loan to the Democratic Republic of Congo (DRC) by a Chinese entity for infrastructure development in September 2007, followed up by the signing of another $3.8 billion mining investment project in 2008. According to the Executive Research Council: *"The Chinese EXIM Bank pledged the nearly $9 billion loan to build and upgrade the DRC's roads (4,000 km) and rails system (3,200 km) for transportation routes that connect its extractive industries and to develop and rehabilitate the country's strategic mining sector in return for copper and cobalt concessions. In return, China would gain rights to extract up to 10 million tons of copper and 420,000 tons of cobalt over a 15 year period with operations expected to begin in 2013."*
- Another notable example is Chinese conglomerate Hanlong Mining's A$1.44 billion bid this year for Australia's Sundance Resources. Sundance's projects span the Republics of Cameroon and the Congo. The cost to develop the projects, including the construction of a deepwater port and railway, is estimated to be $4.7 billion.

In addition to the infrastructure build outs necessary to bring some of these projects to fruition, acquirers can be faced with greater involvement from external stakeholders. The opinions of public stakeholders can certainly hold sway, requiring miners to make additional concessions in order to appease a broader base of stakeholders.

Indeed, there is quantitative evidence that FDI and economic cooperation often go hand in hand, and higher FDI from China is associated with greater concentration of exports to China.

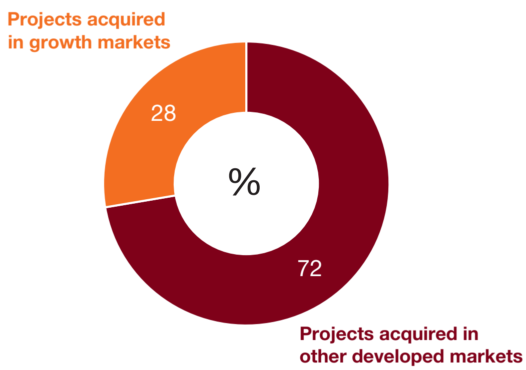
4 IMF Working Paper "FDI from BRICs to LICs: Emerging Growth Driver?" Mlachila Montford, Takebe, Misa, July 2011.

"The emerging market miners have become formidable competitors for the large miners based out of developed countries. They frequently benefit from preferential access to resources on their home territories, and they are well adapted to managing the risks of operating in other emerging market countries, while the participation of the state in some of these companies gives them a level of political support that the traditional miners cannot expect."

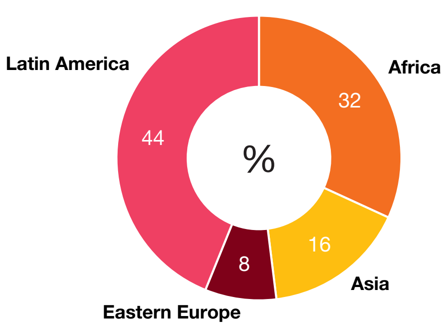
Dr. David Humphreys

former chief economist of Rio Tinto and Norilsk Nickel

Project locations of developed market acquisitions



Growth markets targeted



Source: S&P Capital IQ, PwC Analysis

Developed markets: *Many developed world buyers are "playing it safe", not aggressively extending geographic reach.*

Interestingly, this geographic clustering trend was not confined to the universe of growth market buyers. We observed a similar trend amongst developed world buyers. In the universe of western-led deals, 72% involved acquisitions of projects in another developed world region. Like their growth market counterparts, buyers also preferred to stay local. Notable examples included:

- 64% of Australian-led acquisitions involved projects in Australia.
- 61% of Canadian-led acquisitions involved projects in Canada.
- 60% of US-led acquisitions involved projects in US.

When extending geographic reach, many developed market buyers were most comfortable transacting in Latin America. **44%** of western-led deals outside of the west involved targets in Latin America. Although not technically considered a developed market, Latin America, especially Brazil, Chile and Peru, have a well developed mining sector and a long history of working with large western miners.

Africa was the next most popular growth world destination. Western buyers are on record as having acquired 122 projects in Africa in 2011, a small percentage of overall deals, but noteworthy considering this total was negligible only five years ago.

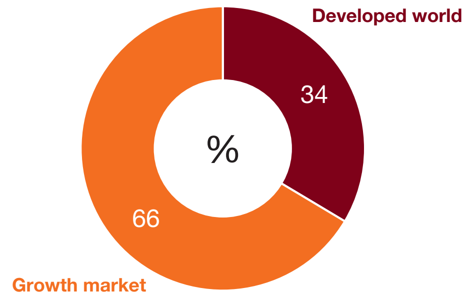
A long investment time frame fraught with sovereign risk and uncertainly around true economics of a project make getting a deal done in a growth market extremely challenging for many western miners. It remains difficult to "sell" these types of transactions to boards and markets. Interestingly, the World Bank recently documented that so-called "privileged access", for countries like China, has been another deterrent to western-led deals in high growth regions. In a recent report, author Dr. David Humphreys, the former chief economist for Rio Tinto and Norilsk Nickel commented on growth market buyers, stating: *"…they often had privileged access to local resources; resources which, as already noted, were often significant and underdeveloped. This was sometimes a function of the leases they had acquired at a time when they enjoyed a quasi-monopolistic position in the country, but it also reflected the practical reality that the management of these companies were generally well connected politically and bureaucratically within the countries in which they were domiciled, understood the regulatory regime and how to operate within it, and had good knowledge of local resource development opportunities."*[5]

It is worthwhile to note that not all miners transact within the safety of the west. Many miners have aggressively moved to extend their geographic reach. In fact, these examples are so well covered in the press that it is surprising to believe they are the exception and not the rule! Certainly the recent Barrick/Equinox and Kinross/Red Back deals are prime examples. Another notable example in 2011 was the commencement of a joint venture between uber-miner Rio Tinto and Chinese partner Chinalco. CRTX, the official name of the joint venture, will primarily be exploring for copper in China, with plans to expand into coal and potash.

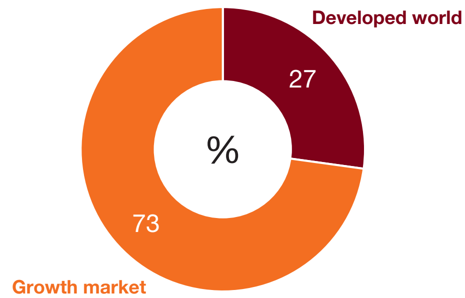
Our perspective is that this geographic clustering is not just an interesting data trend. It is a sign that some western miners are not being aggressive enough. Consider the following graphs from the US Geological Survey which set out the global distribution of mineral reserves for key resources. Clearly, key mineral reserves are highly concentrated in growth markets. This begs the question: what is the long-term cost of not doing business in these markets?

Locations of known reserves

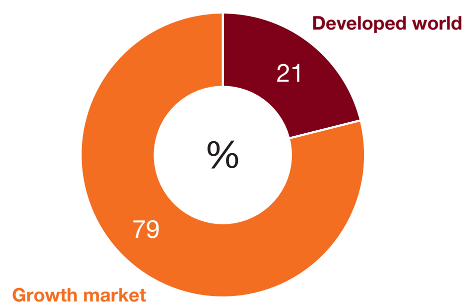
crude ore (iron ore)



gold



copper



Source: US Geological Survey, January 2012 (excludes countries not disclosed, approximately 10% of total reserves)

5 Emerging Players in Global Mining, The World Bank, Dr. David Humphreys, June 2009 (Extractive industries and development series #5)

Can't wait... Activity by resource

In a nutshell

Targets with an interest in gold, coal, copper, iron ore or niobium represented 81% of aggregate target values[6] in 2011.

- **Copper** saw some of the most controversial and dramatic M&A activity of 2011. Overall, deals had an average value of $193 million, a 155% increase over 2010 and carried an average premium of **46%**, the highest of all resources. Buyers were opportunistic and optimistic: **44%** of all 2011 deals took place during a four month period of precipitously declining copper prices. While the traditional copper geographies were still the busiest, some buyers made big bets in the copper geographies of tomorrow: Mongolia, China, DRC, Zambia, and Namibia. An astounding **41%** of copper transactions, by value, took place in one of these regions.
- **Coal** targets had the highest average deal value of all resources ($871 million) as mass consolidation between seniors continued across the Americas, Australia and Russia. Coal miners "stuck to what they know" and very little M&A driven by resource diversification strategies was observed.
- The average size of **gold** acquisitions, at $41 million, was the smallest amongst all resources. This was largely due to an absence of large takeover targets rather than a compression in deal valuation. In fact, buyers in the gold sector were willing to pay a rich average **46%** premium for targets, especially those in the stable jurisdictions of Canada, Australia and the US. The upper end of the market, although a small segment of overall gold deals, saw a number of business combinations, as well an aggressive move by China as Shandong Mining made an unsolicited $1 billion bid for Brazilian gold producer Jaguar Mining.
- Geographic diversification was most prevalent in deals involving **iron ore**. Afghanistan, Russia, the Republic of Cameroon and the Republic of the Congo were among the most talked about acquisition regions, although the majority of transactions still occurred in Australia, Canada and China. Growth market buyers made a number of "big bets" in iron ore, often committing to large-scale infrastructure build outs in key frontier regions in order to get deals done. Chinese steelmakers continued to strike non-traditional deals with early-stage iron ore companies, as portrayed in our case study on Century Iron Mine Corporation *"Striking while the iron is hot"* on page 42.

The bottom line? In 2011, across almost all resource categories, miners were bold, willing to bet on the long-term fundamentals behind five key resources, rather than focus on short-term market pricing gyrations. The race to achieve scale continued at a breakneck pace, leaving us with a question that we will revisit in the outlook. *What will be the drivers behind M&A activity in 2012?*

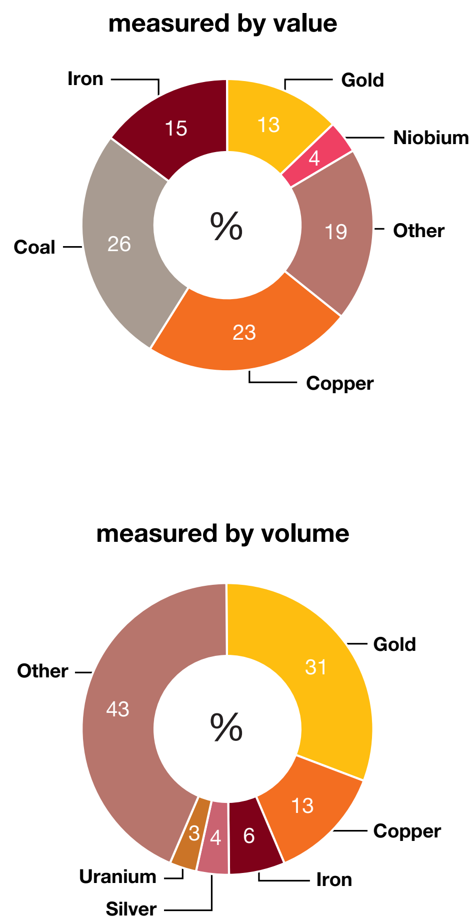
6 This analysis tracks the target resources. As such, transactions such as BHP's acquisition of Petrohawk Energy, outside of the traditional mining sector, have been excluded from this analysis.

Snapshot of global mining M&A by resource:

While many mining sub-sectors were busy from a deal perspective through 2011, five key resources dominated. Mine targets with a primary resource of gold, coal, copper, iron ore or niobium represented **81%** of aggregate target values in 2011[7], with coal and copper taking top honours, boasting market shares of **26%** and **23%** respectively. Gold M&A represented **13%** of all deals by value, down from **31%** in 2010. Similar to fertilizer last year, niobium made it to the top five resources by virtue of just two transactions, each a $1.95 billion acquisition of a 15% stake in Companhia Brasileira de Metalurgia e Mineração. Absent from our top five list was the targeted resource in the top transaction of the year, BHP Billiton's acquisition of Petrohawk Energy for $15.1 billion. For the purposes of this analysis, we have excluded the deal and will defer the discussion on shale natural gas to our energy colleagues!

Measured by volume, global mining M&A exhibited greater diversity. The top five resources represented **57%** of all activity compared with **79%** in 2010. The volume tally saw uranium and silver making the top five list, supplanting niobium and coal, the latter of which saw the highest value of M&A in 2011. Consistent with the prior year, gold deals dominated M&A volumes, representing **31%** of all activity.

2011 global mining M&A, by resource



Source: S&P Capital IQ, PwC Analysis

7 For purposes of this analysis, PwC reviewed a universe of mining targets in which the primary resource was easily identified. Approximately 80% of transactions in 2011 were included in this analysis.

A closer look by resource

Our view is that some "*measure the world in tonnes*" while others measure it in "*pounds* or *ounces*." This year, we also observed deal drivers and patterns of activity that were increasingly unique amongst resources. For these reasons, we are pleased to share a brief summary of metrics by resource in the accompanying tables.

Key Resource	Geographies (Headquarters)*	Average deal value**	Average premiums***	Key M&A themes	Top Five Headline-Grabbing Deals
Coal	Top Buyer: **Australia** (26%) **China** (12%) **US** (12%) Top Targets: **Australia** (24%) **Russia** (19%) **US** (17%)	**$871**	**33%**	Mass consolidation in the Americas and Australia. Very few transactions outside of the pure coal sector observed. Coal miners remain hesitant to diversify.	1. Alpha Natural Resources beats out fellow American Arch Coal to acquire Massey Energy for $8.5 billion—the highest valued mining target in 2011. 2. Subsequent to a failed divestiture attempt, Whitehaven announces the acquisition of fellow Australian miners Aston and Boardwalk for $3 billion. The deal creates Australia's largest independent coal explorer. 3. Against a backdrop of crashing equity prices, Rio Tinto and Mitsubishi team up to acquire a minority stake of Australia's Coal & Allied and take it private for approximately $1.5 billion. 4. Mongolia Mining signs a $464 million deal to buy fellow Mongolian coal miner QGX. The deal is the largest ever Mongolian M&A transaction. 5. The board of Bumi plc announces that its proposed acquisition of 75% of PT Bumi Resources Minerals from PT Bumi Resources will not proceed due to market uncertainties. Subsequent to the announcement, Nathaniel Rothschild asks PT Bumi Resources to shuffle its board and carry out a 'radical clean-up.'
Copper	Top Buyer: **Canada** (46%) **Australia** (19%) **China/US** (6%) Top Targets: **Canada** (42%) **Australia** (14%) **US** (7%)	**$193**	**46%**	Bidding wars for high grade projects. Deals to achieve vertical integration. Politically charged post-deal environment.	1. Australia's Equinox Minerals is acquired by Canada's Barrick Gold for C$7.3 billion. The offer trumped Minmetals' C$6.3 billion offer, resulted in Equinox retreating from its hostile bid for Lundin Mining (which resulted in the death of a friendly merger between Lundin and Inmet mining) and was the third largest mining transaction in the year. 2. KGHM Polska Miedz announces an acquisition of Canada's Quadra FNX Mining for C$3.5 billion—the largest ever overseas acquisition by a Polish company. 3. Japanese industrial conglomerate Mitsubishi Corporation acquires a 24.5% stake in Anglo American Sur for $5.4 billion in November. The deal blocked Chile's Codelco from acquiring 49% of Anglo's Chilean copper unit (via its option to do so) and ignites a cross-continent legal battle. 4. In another cross-continent battle, in this instance for African copper resources, emerging market giants, China's Jinchuan Group offers $1.3 billion to acquire South African copper miner Metorex, trumping a bid by Brazil's Vale. 5. Chinese Minmetals Resources extends three offers to Africa-focused Anvil Mining, the most recent of which valued the company at $1.3 billion. The Democratic Republic of Congo engages in some political jockeying with state-owned mining body, Gecamines, under pressure to raise cash, responding that it believes the deal could trigger a review of the lease for Kinsevere, Anvil's flagship investment, and Mutoshi, a copper-cobalt project.

Key Resource	Geographies (Headquarters)*	Average deal value**	Average premiums***	Key M&A themes	Top Five Headline-Grabbing Deals
Gold	Top Buyer: **Canada** (49%) **Australia** (15%) **US** (14%) Top Targets: **Canada** (36%) **US** (13%) **Australia** (12%)	**$41**	**46%**	Consolidation in the intermediate sector. Share exchanges and business combinations common. China demonstrates a strong appetite for gold deals, for the first time in recent history. Strong bias for politically stable jurisdictions.	1. Eldorado Gold acquires fellow Canadian European Goldfields for C$2.5 billion. The transaction, which was motivated by a desire to secure European Goldfields' assets in the politically stable regions of Greece and Turkey, was the largest gold deal of 2011. 2. US-based Newmont Mining Corp acquires Canada's Fronteer Gold for C$2.3 billion in order to gain three exploration and development projects in Nevada, which are expected to contain 4.2 million ounces of gold. Newmont spun off a remaining 11 projects into a new company, Pilot Gold. 3. In one of the largest ever transactions led by a Chinese gold producer, Shandong Gold Group announced a $1 billion unsolicited bid for Brazil's Jaguar Mining. The hostile offer has prompted Jaguar to initiate a strategic review process to explore alternatives. The bid represented the highest premium ever offered in cash (nearly 79%) for a gold miner (>$500 million). 4. Canada's White Tiger Gold and Century Mining enter into a business combination. The combined entity emerged as a diversified intermediate with multiple properties in various stages of production and development in Canada, Russia, and Peru. 5. Northgate Minerals and AuRico Gold enter into a share exchange worth approximately $1.5 billion. The deal resulted in the creation of a leading intermediate producer, with a strong foothold in Canada, and Australia.
Iron Ore	Top Buyer: **Australia** (26%) **China** (16%) **Canada** (15%) Top Targets: **Australia** (21%) **Canada** (18%) **China** (11%)	**$219**	**29%**	Broadening buyer universe, inclusive of industrial conglomerates, private equity and steelmakers. Commitments to build infrastructure in exchange for exploration opportunities/rights extremely prevalent. Emerging market players willing to make "bigger bets" in iron ore.	1. US-based Cliffs acquires Canada's Consolidated Thompson for $4.7 billion. Cliffs sought out Consolidated Thompson's coveted Asian customer in order to expand beyond its largely North American steel-making customer base. 2. In a sign that the buyer base for mining deals is expanding, Russia's VTB Capital, the investment business of VTB Group, acquires Russian-based iron ore producer OAO holding company for $2.5 billion, the second largest iron ore acquisition of the year. 3. Chinese conglomerate Hanlong Mining acquires Australia's Sundance Resources for A$1.44 billion. Sundance's projects span the Republics of Cameroon and Congo. The estimated cost to develop the projects, including the construction of a deepwater port and railway, are in the range of $4.7 billion. 4. The Steel Authority of India wins rights to develop an iron ore concession in Afghanistan (the latter was the latest in a series of deals aimed at opening up the country's mineral resources to regional powers). As part of the deal, the Indian consortium proposed setting up mines and a steel plant in the war-torn country. 5. The Techint Group, the second largest steelmaker in Latin America, agrees to pay $2.8 billion for a 27.7% voting stake in Brazil's Usinas Siderurgicas de Minas Gerais SA. Usiminas is the largest flat steel producer in Brazil with 9.5 million tons of crude steel capacity. It has facilities near the main consumers of steel in Brazil and iron ore mines in the Serra Azul region.

*expressed as % of total buy side volumes
**US$ millions
***expressed as % premium over share price one month prior to announcement

Spotlight on Copper M&A

Our spotlight resource for 2011 is copper. The red metal, increasingly dubbed "Dr. Copper" for its perceived economic predictive value, saw some of the most controversial and noteworthy M&A activity of 2011.

The macro backdrop for the copper market in 2011 was dismal…

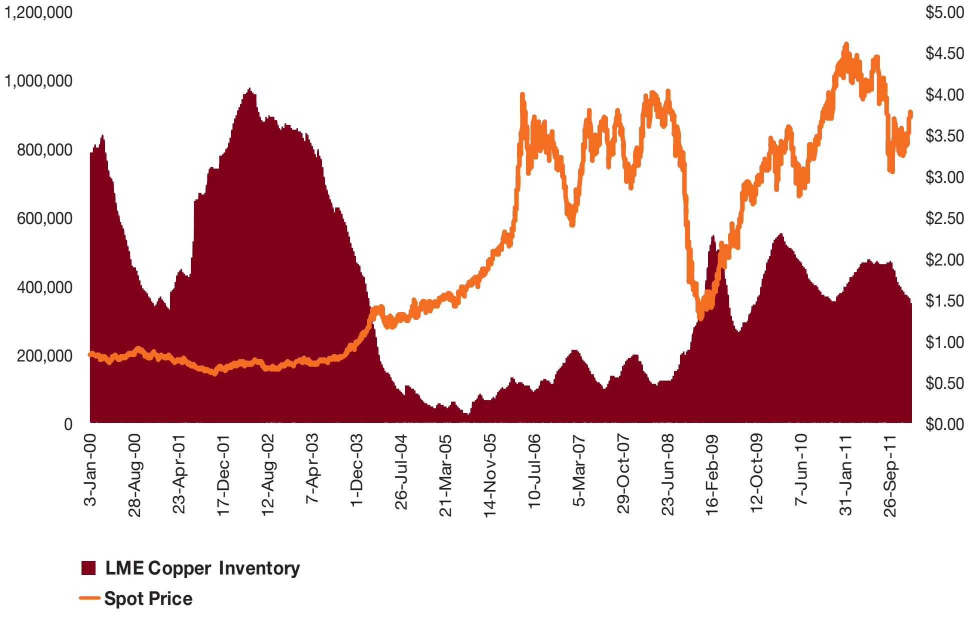
The case for copper 2000-2010

The first decade of this millennium saw massive Chinese construction and infrastructure spending, strong global real estate markets and noteworthy commitments by Western nations to revitalize aging infrastructure. As goes global construction activity, so goes the copper market—the red metal enjoyed a meteoric **300%** increase in price per pound between 2000 and 2010.

Copper in 2011

Public markets were firmly fixed on the copper demand story through 2011. Repeated announcements from Beijing that China would move to reorient away from its resource intensive investment focus towards a more consumption-based model, coupled with deceleration in industrial production metrics in India and China, raised fears that demand for copper would retreat precipitously. These concerns were further compounded by the possibility that austerity measures in Europe and the US would impede the West's ambitious infrastructure revitalization programs, another potential drag on demand. Overall, the market price of copper fell by **21%** during 2011, the majority of which occurred over the relatively short timeframe from September – December. At one point, the price of copper was **34%** off of its annual high.

Copper Price versus Inventory



Source: Bloomberg, PwC Analysis

> *"Given that just 6% of copper in the 62 discoveries has so far been converted to reserves, it is clear that we know the majors have added almost all of their exploration-derived reserves at existing mines and older projects, but very little of it through new discoveries."*
>
> ***Metals Economics Group***
> 2011

…but miners were optimistic and opportunistic.

M&A activity in the copper sector through 2011 was largely disassociated with the market price for copper. In fact, 44% of 2011 copper deals (by value) actually took place during the four month period September to December which exhibited the steepest drop in prices (**-17%**).

Intermediate and senior producers of high grade copper were highly coveted M&A targets in 2011. Overall, measured by value, **24%** of M&A targets had a primary resource of copper, up from only **13%** in 2010. A dearth of deals involving junior takeover targets, however, meant that, measured by volume, the red metal represented only **13%** of target volumes, down from **19%** last year. Typical of a mining segment characterized by a universe of seniors on the hunt for high quality producing projects, the upper end of the copper M&A market was extremely busy. Copper miners saw average deal values rise by **155%** over 2010 to **$193 million**. While this was largely attributable to the fact that there was simply a greater concentration of larger deals, we did observe buyers willing to pay an average **46%** premium over share prices one month prior to deal announcement, the highest premium of all the resources in our analysis.

Miners were clearly opportunistic and optimistic. Overall, acquisitive miners continued to point to the strong long-term fundamentals for copper, namely that:

- **Copper inventories are low:** London Metal Exchange (LME) copper inventories dropped by 2% during 2011 (atypical for declining price market). Viewed from a longer term perspective, inventories are extremely low: The 2011 year-end LME balance was approximately 53% lower than it was on January 1, 2000.
- **Copper prices are still strong:** Even though the price of copper dropped 21% in 2011, the average spot price throughout the year was $4.00 per pound. That is 17% higher than the 2010 average spot price, 24% higher than the spot price during 2007, and 386% higher than the average spot price in 2000.
- **Strikes at copper mines are disrupting supply:** 2011 saw major strikes at Indonesia's Grasberg mine, Peru's Cerro Verdeo Mine and Chile's Collahuasi mine. Strikes created severe supply bottlenecks.
- **Time to production is widening:** The time to production in geopolitically unstable regions may be longer than in politically stable jurisdictions. An increase in operating costs, foreign exchange instability as well as significant challenges obtaining permits, raising capital and accessing power may extend the average time between discovery and production.
- **Grades of new copper discoveries are low:** According to Metals Economics Group, a mere **6%** of newly discovered copper this decade has been upgraded to reserves.

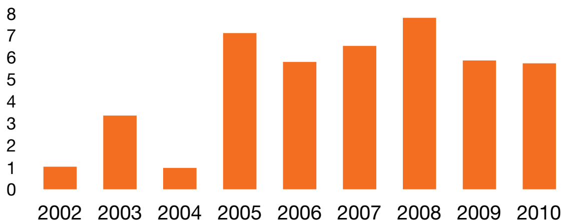
Trends in copper transactions (2007 – 2011)

% of total value by transaction ranges	2007	2008	2009	2010	2011
Greater than $1 billion	64%	81%	32%	48%	70%
$500 – $999.9 million	20%	4%	20%	15%	10%
$100 – $499.9 million	10%	11%	35%	29%	15%
Less than $100 million	6%	4%	13%	7%	5%

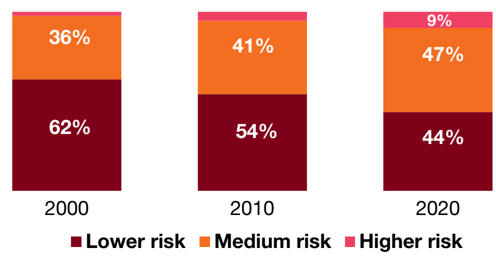
Source: S&P Capital IQ, PwC Analysis

Copper supply will continue to be constrained

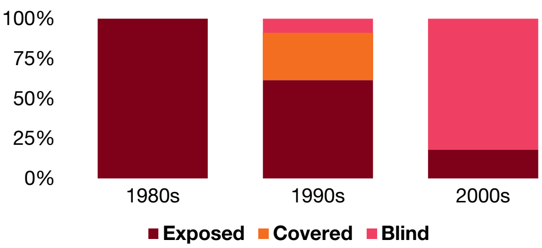
Disruption rates will continue
(% of planned production)



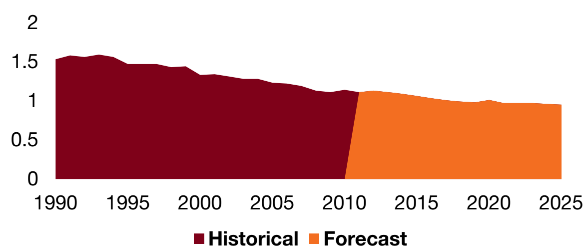
Sovereign risk
Copper supply location (%)



Increasing depths
Indicative depth of discoveries



Declining grades
Average head grade treated (% Copper)



Source: Rio Tinto Chartbook 2011, reproduced with permission

"I think the market is largely focused on demand with this ongoing disruption, and with more clarity in Europe regarding their debt crisis, I think that the market could switch attention back to supply shortages... The fact that we have steadily declining LME and Shanghai (Futures Exchange) inventories and a pickup in cancelled warrants indicates this trend is going to continue."

Catherine Virga
Director of Research, CPM Group

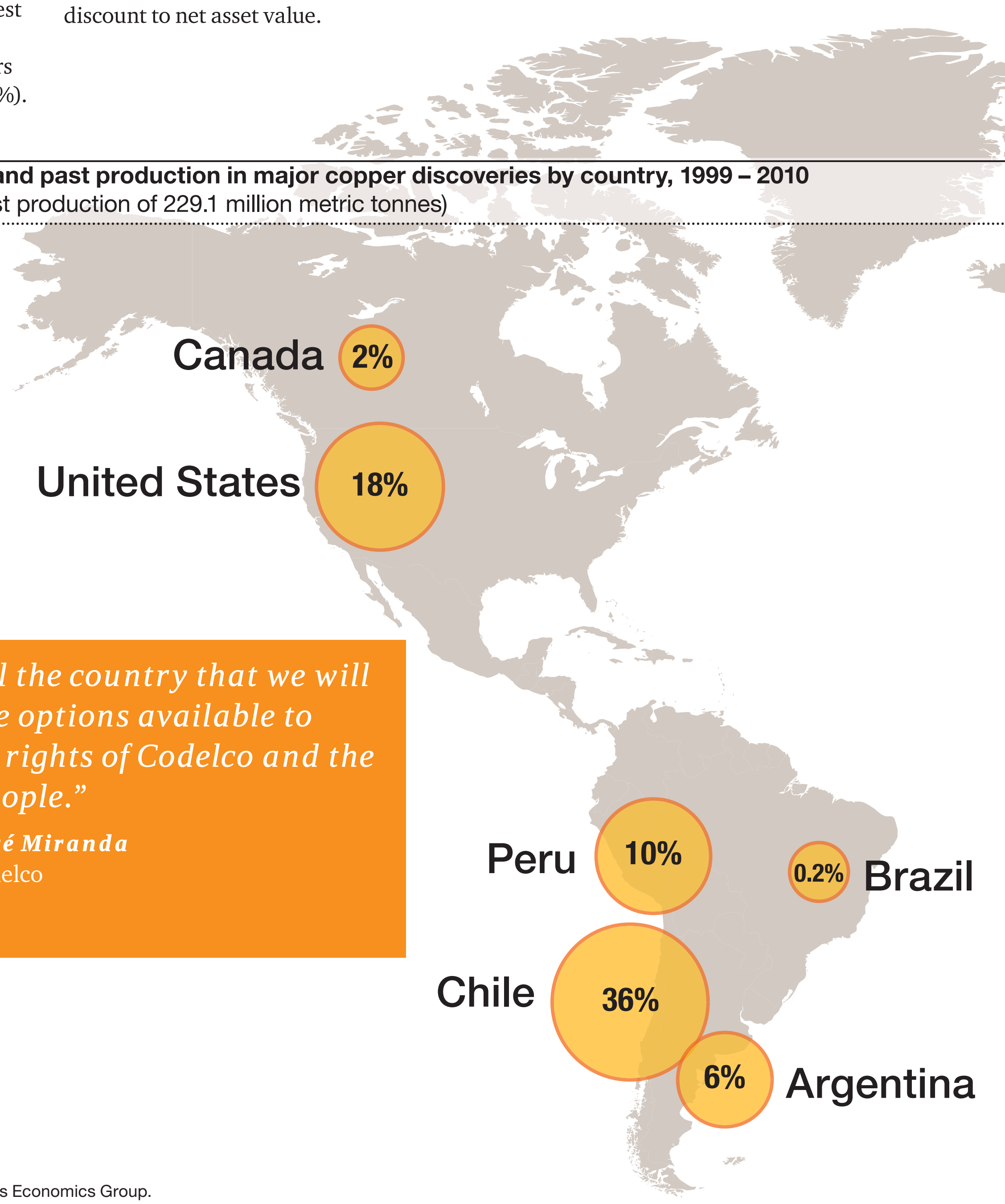
A closer look at buying activity in the copper sector

Canadian miners were the most active buyers of copper projects in 2011, representing **32%** of all acquirers by value. This was primarily due to the acquisition of Equinox Minerals by Barrick Gold for C$7.3 billion. The offer trumped Minmetals C$6.3 billion offer, resulted in Equinox retreating from its hostile bid for Lundin Mining (the latter of which resulted in the death of a friendly merger between Lundin and Inmet Mining) and was the third largest mining transaction of 2011. Other geographies home to acquisitive buyers included China (6%) and Australia (5%).

Poland was the surprise geography of copper M&A in 2011. Poland's KGHM Polska Miedź, the world's ninth largest producer of copper and third largest producer of silver, announced an acquisition of Canada's Quadra FNX Mining for approximately C$3.5 billion. The deal, struck at a **43%** premium to Quadra's 20-day average closing price, was the largest ever overseas acquisition by a Polish company. Although the premium was rich, the deal was viewed by the market as extremely opportunistic as the price tag was reportedly a 36% discount to net asset value.

Certainly the Barrick and KGHM deals received much attention. However, honours for the most interesting copper buy might belong to Mitsubishi Corporation. The Japanese conglomerate acquired a **24.5%** stake in Anglo American Sur SA (AAS) from Anglo American plc for $5.4 billion in November. The deal blocked Chile's Codelco from acquiring 49% of Anglo's Chilean copper unit (via a long held option) and has ignited a cross-continent

Copper in reserves, resources, and past production in major copper discoveries by country, 1999 – 2010
(Total reserves, resources, and past production of 229.1 million metric tonnes)



"We can tell the country that we will take all the options available to defend the rights of Codelco and the Chilean people."

Gerardo Jofré Miranda
Chairman, Codelco

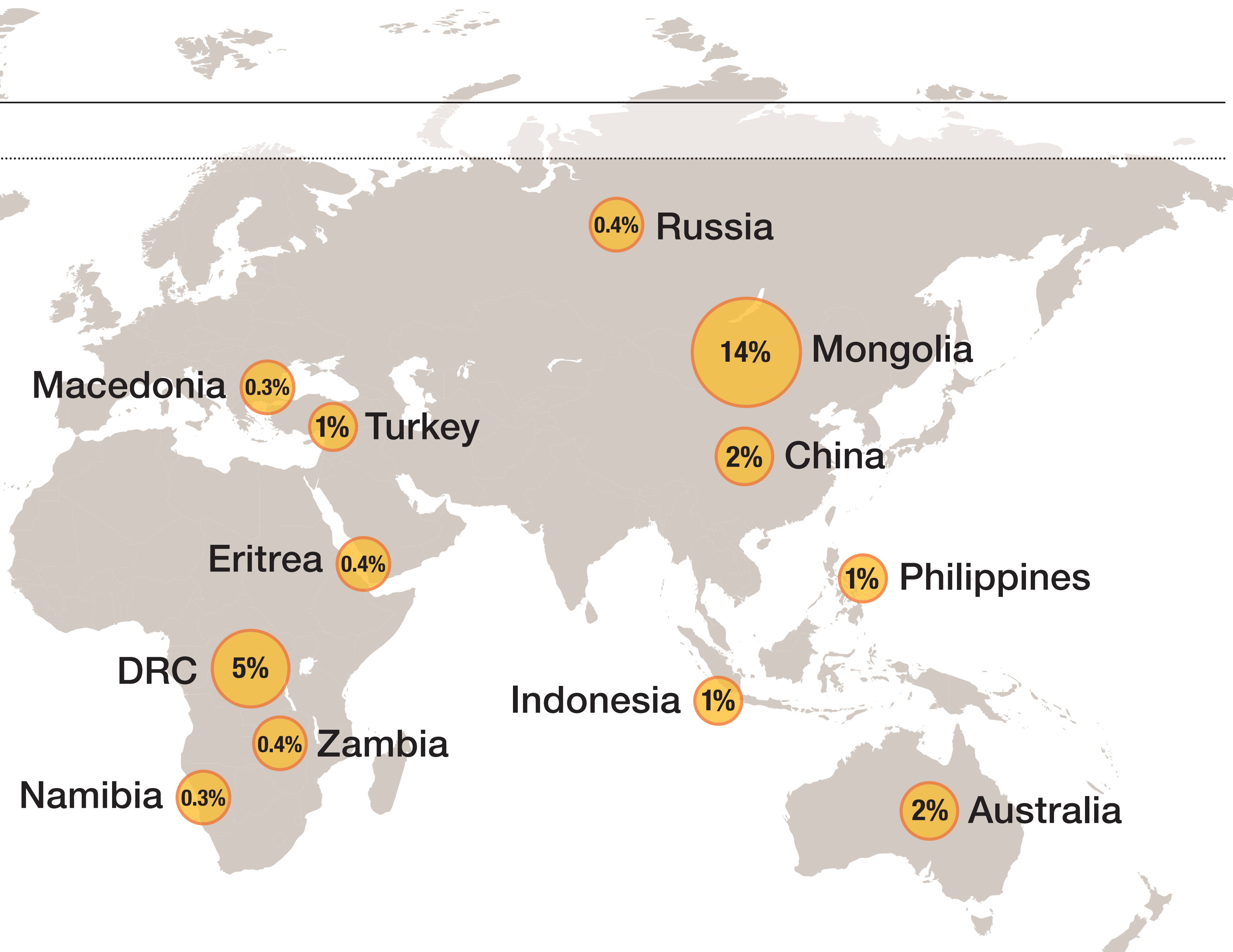
Source: Reproduced with permission from Metals Economics Group.

battle. Both Anglo American and Codelco are accusing each other of violating the terms of a contract which granted Codelco an option to buy a 49% stake in the coveted unit at a predetermined valuation during a one-month window in January 2012. Codelco has since asked Chilean courts to force Anglo to hand back a 49% stake in Anglo American Sur. At the time of print, this battle was still in progress.

A closer look at copper project geographies

Overall, we observed acquisitions of copper projects in 29 countries on six continents. However, 53% of acquired projects, measured by volume, were in the traditional copper belts of Canada, Chile and Australia. Of those, copper projects in Canada were most sought after, accounting for more than 33% of all targets.

Buyers continued to transact in Canada, Chile, the US and Australia where targets typically yield high grade copper, are at or near production and, are, of course, associated with lower political risk. Despite this bias, prevailing constrained supply meant that some buyers also sought out targets in other promising geographies. As depicted in the accompanying map supplied by Metals Economics Group, Mongolia, China, DRC, Zambia, and Namibia are frontier regions with promising copper reserves. Indeed, 2011 saw **9%** of acquisitions (by volume) involving a project in one of these regions and an astounding **41%** of transactions (by value).



2011 Top 20 Global Mining Deals

(by value, $US million, historical rate)

Announced Date	Target	Target Description	Target Headquarters	Transaction Value
14-Jul-2011	Petrohawk Energy Corporation	Petrohawk Energy, an independent oil and natural gas company, engages in the exploration, development, and production of natural gas properties located in the United States.	United States	$15,100
28-Jan-2011	Massey Energy Corporation	Massey Energy produces, processes, and sells bituminous coal primarily in the United States.	United States	$8,500
24-Apr-2011	Equinox Minerals Limited	Equinox Minerals engages in the mining and exploration of mineral properties.	Australia	C$7,300
09-Nov-2011	Anglo American Sur SA	Anglo American owns copper assets in Chile, including the large open pit Los Bronces mine, the open pit El Soldado mine and the Chagres smelter.	Chile	$5,390
11-July-2011	MacArthur Coal Limited	Macarthur Coal engages in the exploration, evaluation, development, and mining of metallurgical coal in Queensland's Bowen Basin in Australia.	Australia	A$4,800
04-Nov-2011	The De Beers Group	De Beers engages in the exploration, mining, and marketing of diamonds.	Luxembourg	$5,100
11-Jan-2011	Consolidated Thompson Iron Mines Limited	Consolidated Thompson engages in the exploration and development of mineral properties in Canada.	Canada	C$4,900
02-May-2011	International Coal Group, Incorporated	International Coal produces coal in northern and central Appalachian regions of the United States.	United States	$3,400
06-Dec-2011	Quadra FNX Mining Limited	Quadra FNX Mining engages in the development and production of mineral properties primarily in Canada, the United States, and Chile.	Canada	C$3,500
14-Apr-2011	KazzInc JSC	Kazzinc primarily produces zinc with copper, precious metals, and lead credits in Kazakhstan.	Kazakhstan	$3,200
27-Nov-2011	Usinas Siderúrgicas de Minas Gerais S.A.	Usinas operates in the steel industry primarily in Latin America.	Brazil	$2,800
23-Dec-2011	OAO Holding Company	OAO Holding engages in the production and sale of iron ore products and ferrous metals in the Russian Federation and internationally.	Russia	$2,500
11-Dec-2011	Aston Resources Limited	Aston Resources engages in the coal mining, exploration, and development in Australia.	Australia	A$2,500
18-Dec-2011	European Goldfields Limited	European Goldfields engages in the acquisition, exploration, and development of mineral properties in Greece, Romania, and southeast Europe.	Canada	C$2,500
03-Feb-2011	Fronteer Gold Incorporated	Fronteer Gold engages in the acquisition, exploration, and development of mineral resource properties in Canada, the United States, and Turkey.	Canada	C$2,300

Target Resource Type	Acquirer	Acquirer Description	Acquirer Headquarters	Transaction Status (as at January 24, 2012)	Price Premium over Prior Month (for publicy traded targets)
Oil and Natural Gas	BHP Billiton Limited	BHP Billiton, together with its subsidiaries, operates as a diversified natural resources company worldwide.	Australia	Closed	60.5%
Coal	Alpha Natural Resources, Incorporated	Alpha Natural engages in the production, processing, and sale of coal in the United States.	United States	Closed	29.2%
Copper	Barrick Gold Corporation	Barrick Gold engages in the production and sale of gold, as well as related activities, such as exploration and mine development.	Canada	Closed	48.5%
Copper	Mitsubishi Corporation	Mitsubishi engages in the general trading business worldwide.	Japan	Closed	N/A
Coal	PEAMCoal Pty Limited	PEAMCoal is a holding company for MacArthur Coal owned 60% by Peabody Energy and 40% by ArcelorMittal	Australia	Closed	44.8%
Precious Metals and Minerals	Anglo American plc	Anglo American engages in mining platinum, diamonds, coal, base metals, iron ore, metallurgical coal, and thermal coal in Africa, Europe, South and North America, Australia, and Asia.	United Kingdom	Pending	N/A
Steel	Cliffs Natural Resources Incorporated	Cliffs Natural produces iron ore pellets, lump and fines iron ore, and metallurgical coal products.	United States	Closed	41.5%
Coal	Arch Coal Incorporated	Arch Coal engages in the production and sale of steam and metallurgical coal from surface and underground mines located throughout the United States.	United States	Closed	28.2%
Copper	KGHM Polska Miedz SA	KGHM Polska Mied S.A. engages in the mining, extraction, processing, and production of copper, silver, and other metals in Poland and internationally.	Poland	Pending	31.6%
Zinc	Glencore International plc	Glencore engages in producing, sourcing, processing, refining, transporting, storing, financing, and supplying commodities to industries worldwide.	Switzerland	Pending	N/A
Iron Ore	Ternium Siderar	Ternium Siderar engages in the manufacture and sale of steel products.	Argentina	Closed	43.9%
	Nippon Steel Corporation	Nippon Steel engages in the steelmaking and steel fabrication businesses in Japan and internationally.	Japan		
	Confab Industrial S.A.	Confab Industrial, through its subsidiaries, manufactures and supplies welded steel pipes for oil, petrochemical, gas, sanitation, and power industries primarily in Brazil and Latin America.	Brazil		
	Ternium S.A.	Ternium S.A. engages in manufacturing and processing a range of flat and long steel products for construction, home appliances, capital goods, container, food, energy, and automotive industries.	Luxembourg		
Iron Ore	VTB Bank	VTB Bank and its subsidiaries provide corporate, retail, and investment banking services.	Russia	Closed	N/A
Coal	Whitehaven Coal Limited	Whitehaven engages in the development, production, and operation of coal properties in New South Wales.	Australia	Pending	0.0%
Gold	Eldorado Gold Corporation	Eldorado Gold engages in the discovery, exploration, development, production, and reclamation of gold properties in Brazil, the People's Republic of China, Greece, and Turkey.	Canada	Pending	43.1%
Gold	Newmont Mining Corporation	Newmont engages in the acquisition, exploration, and production of gold and copper properties.	United States	Closed	28.6%

Announced Date	Target	Target Description	Target Headquarters	Transaction Value
02-Mar-2011	Companhia Brasileira de Metalurgia e Mineracao	Companhia Brasileira de Metalurgia e Mineração engages in the extraction, processing, manufacture, and marketing of niobium-based products.	Brazil	$1,950
01-Sep-2011	Companhia Brasileira de Metalurgia e Mineracao	Companhia Brasileira de Metalurgia e Mineração engages in the extraction, processing, manufacture, and marketing of niobium-based products.	Brazil	$1,950
28-Aug-2011	Northgate Minerals Corporation	Northgate Minerals engages in exploring, developing, processing, and mining gold and copper deposits in Canada and Australia.	Canada	C$1,500
06-Aug-2011	Coal & Allied Industries Limited	Coal & Allied Industries engages in mining, preparing, and marketing coal products in Australia.	Australia	A$1,500
15-Jun-2011	Drummond Company, Inc., Colombian Mining Operations and Related Infrastructure	Drummond Colombian Mining Operations and Related Infrastructure comprises coal exploration properties with probable reserves of about 2 billion net tons.	Colombia	$1,500

Target Resource Type	Acquirer	Acquirer Description	Acquirer Headquarters	Transaction Status (as at January 24, 2012)	Price Premium over Prior Month (for publicy traded targets)
Diversified Metals and Mining, Niobium	JFE Holdings Incorporated	JFE Holdings, Inc., through its subsidiaries, engages in steel and engineering operations in Japan.	Japan	Closed	N/A
	National Pension Service	National Pension Service is a pension fund manager.	South Korea		
	Nippon Steel Corporation	Nippon Steel Corporation, through its subsidiaries, engages in the manufacture and sale of steel and related products in Japan and internationally.	Japan		
	POSCO	POSCO engages in the manufacture and sale of steel products in South Korea and internationally.	South Korea		
	Sojitz Corporation	Sojitz Corporation operates as a general trading company worldwide.	Japan		
	The Japan Oil, Gas and Metals National Corporation	Japan Oil, Gas and Metals provides financial assistance, technology development, technical support, stockpiling, gathering/providing information, mine pollution control, and overseas field survey services in Japan.	Japan		
Diversified Metals and Mining, Niobium	CITIC Group Company	CITIC operates as an industrial conglomerate that offers banking, financial, manufacturing, and communication services through its subsidiaries.	China (all)	Closed	N/A
	Shanghai Baosteel Group Corporation	Shanghai Baosteel engages in the production and sale of steel in China and internationally.			
	Anshan Iron & Steel Group Corporation	Anshan Iron & Steel produces iron and steel in New China and internationally.			
	Shougang Corporation	Shougang manufactures steel products in China.			
	Taiyuan Iron & Steel (Group) Co., Ltd.	Taiyuan Iron & Steel engages in the research, development, production, and processing of stainless, special, and high grade carbon steel.			
Gold	AuRico Gold Incorporated	AuRico engages in the exploration, development, and production of gold and silver mines and projects in Mexico.	Canada	Closed	59.1%
Coal	Australian Coal Holdings Pty Limited	Australian Coal Holdings, through its subsidiaries, engages in coal mining, exploration and distribution.	Australia (all)	Closed	21.9%
	Mitsubishi Development Pty., Ltd.	Mitsubishi owns coal mines in Australia and offers coal for manufacturing steel, and thermal coal for generating electrical power and general industrial use.			
Coal	ITOCHU Coal Americas Inc.	ITOCHU Coal Americas, a subsidiary of ITOCHU, was founded in 2011 and is based in Wilmington, Delaware.	United States	Closed	N/A

The times they are a changin'
2012 Outlook

In a nutshell

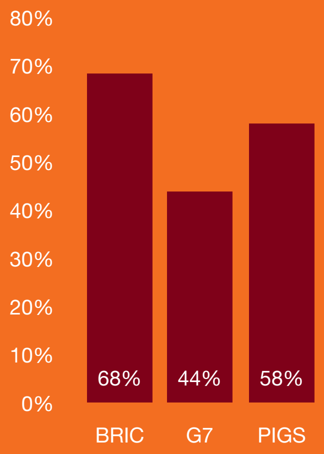
We expect that 2012 will see record M&A volumes and values in the global mining sector.

With over $105 billion[8] in cash, pent-up demand for new projects, rising production costs and declining developed world reserves, miners will seek out targets to build scale and achieve cost efficiencies. Activity will be underpinned by continued demand for base and precious metals by the world's rapidly industrialising nations.

Competition for deals will be fierce, as "non miners" step up acquisition activity:

- Financial buyers (Sovereign Wealth Funds (SWF), specialized private equity (PE), large pension funds) eager to deploy capital, are likely to continue re-evaluating their approach to the resource sector. These savvy investors will likely focus outside of the top resources, where acquisition opportunities at compelling valuations may be in greater abundance. SWFs are likely to have an advantage winning deals due to their lower cost of capital.
- Steelmakers and players from other industrial verticals will intensify their search for targets to secure resource supplies, especially in the iron ore sector where supplies of high grade ore that can be easily shipped are hard to come by. In PwC's recently released 15th Annual Global CEO Survey, 68% of BRIC-based metals CEOs noted that they expect to increase their investment in securing natural resources that are critical to business.
- A new class of growth world buyer, with deep pockets, deep expertise in frontier markets and the flexibility to operate under the principles of state capitalism are likely to be formidable competitors to the uber miners from the West in the M&A arena.

We asked 421 metals sector CEOs:
Will your company increase its investment over the next three years securing natural resources that are critical to your business?[9]



Source: 15th Annual Global CEO Survey, PwC

8 Mine 2011: The game has changed, PwC,2011.

- Competition for deals will be problematic for the mining moguls that have dominated the twentieth century. These players will struggle to make M&A in "the new world" fit into "western M&A" formulas: transacting at compelling valuations to realize gains in the short term. We expect this challenge will prompt a return of mergers of equals between western mining titans, eager to add scale in low-risk and familiar geographies. Others may take the route of re-evaluating their approaches to risk assessment, as high-risk unfamiliar geographies, like Sub Saharan Africa, become an increasingly important destination for investment.
- We did cheat a bit in our forecast in that we have had the benefit of observing M&A activity in early 2012. The year is already off to a strong start. If approved, Glencore and Xstrata's proposed $90 billion merger of equals will be the largest mining transaction in history, eclipsing the two most famous previously completed mega-deals in mining history: Rio Tinto/Alcan and Vale/Inco.

Total cash held by worlds top 40 miners (2010 year-end)	$$$$$$$$$$$$$$$$$$$$$
2010 fiscal deficit, Canada	$$$$$$$$$$$
2010 fiscal deficit, Italy	$$$$$$$$$$$$$$$$$$$$
Quoted market capitalization, TSX-V listed mining companies (at December 31, 2011)	$$$$$$
Total equity raised by AIM listed companies, since 1995	$$$$$

$ = US$5 billion

9 15th Annual Global CEO Survey, PwC, February 2012

"Mining companies are like sharks: if they don't keep moving forward, they'll eventually die."

David Fickling and ***David Winning***
Wall Street Journal, February 22, 2011

A more detailed summary of our expectations for 2012.

1. Growth world demand will continue to drive M&A.

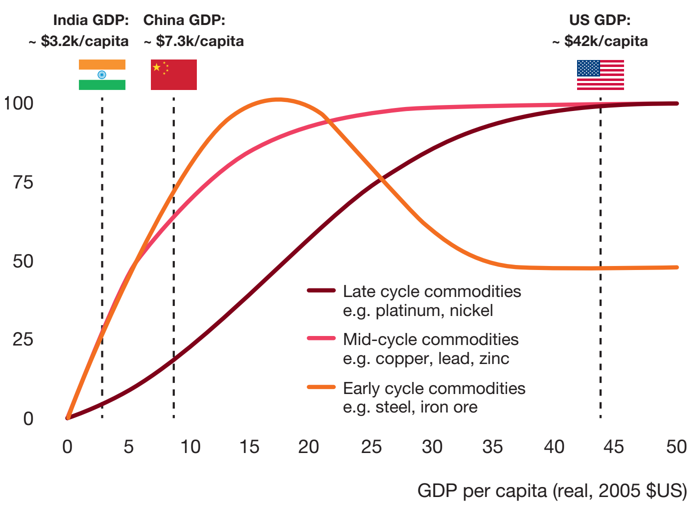
Emerging nations remain the key drivers of global economic growth. In a recent research study, the McKinsey Global Institute found that real per capita incomes in China and India have been doubling every 12 to 16 years. The volume of resources required to support this scale of industrialisation is vast.

Even if growth rates decelerate due to natural rebalancing and declines in western aggregate demand, most analysts agree that it is unlikely that demand for resources will retreat to pre-2005 levels in the near term. In fact, the wave of urbanisation to which we have become accustomed in recent years is only expected to intensify across a number of growth markets going forward. The OECD recently forecast that the world's middle class will increase to 4.88 billion in 2030 from 1.85 billion. India, China the ASEAN-6[10] and Nigeria are expected to add 1.3 billion urban residents by 2050. As depicted in the accompanying graph, urbanisation is highly resource intensive. It will support increasing demand for steel ingredients in the near term with demand for mid and late cycle commodities expected to spike over the longer term. This intensity graph does not even take into consideration agricultural minerals or thermal coal, which are also essential ingredients in urbanisation processes.

10 Members of the ASEAN-6 are Brunei Darussalam, Indonesia, Malaysia, the Philippines, Singapore and Thailand.

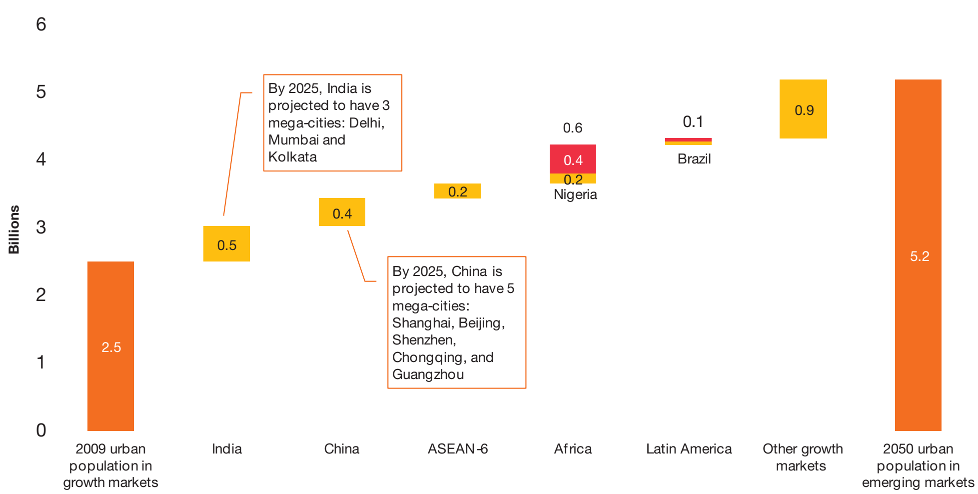
India, China, the ASEAN-6 and Nigeria will add 1.3 billion urban residents by 2050

Commodity Intensity



Source: Xstrata, reproduced with permission

Urban population in emerging markets, forecast to 2050
(Megacities = urban aggregation containing more than 10 million inhabitants)



Source: UN, World Urbanization Prospects The 2009 Revision

Continued demand from these markets is likely to spur further M&A across all resource sectors, with an especially intense focus on early cycle commodities. Traditional miners, as well as steelmakers and other industrial verticals will increasingly seek out acquisitions in light of continued challenges with supply. Examples of supply-side challenges include:

- New mining discoveries have been difficult to come by despite large investments in exploration.
- The cost of organic mine development has continued to increase as a result of rising energy, transportation and labour costs. Cost pressures have been exacerbated by foreign exchange volatility.

The cost of exploration is also rising, largely due to the above noted factors.

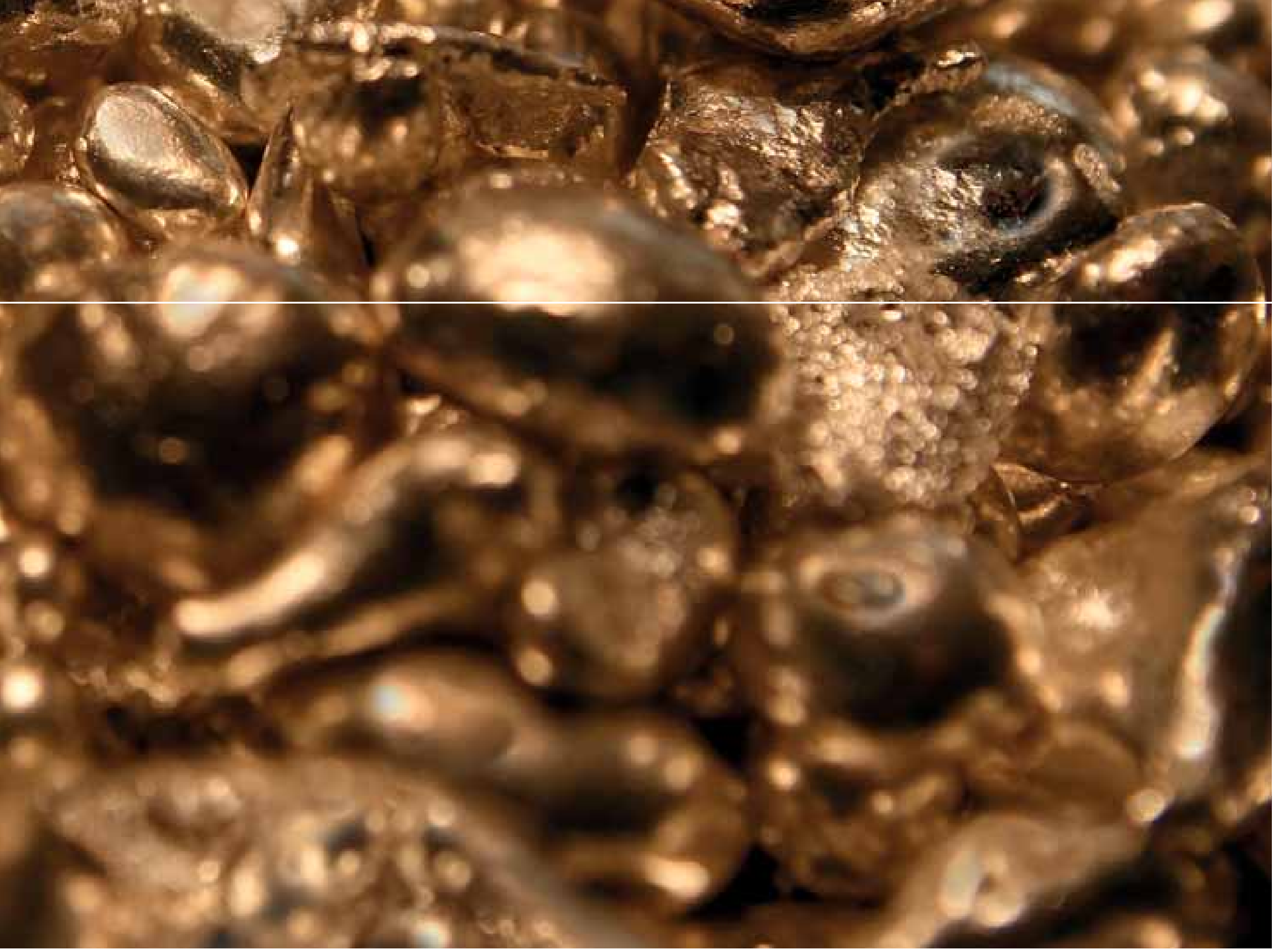
Spotlight on the outlook for gold M&A

The big story in the gold market in 2011 was the unusually high divergence between the price of gold and gold equities.

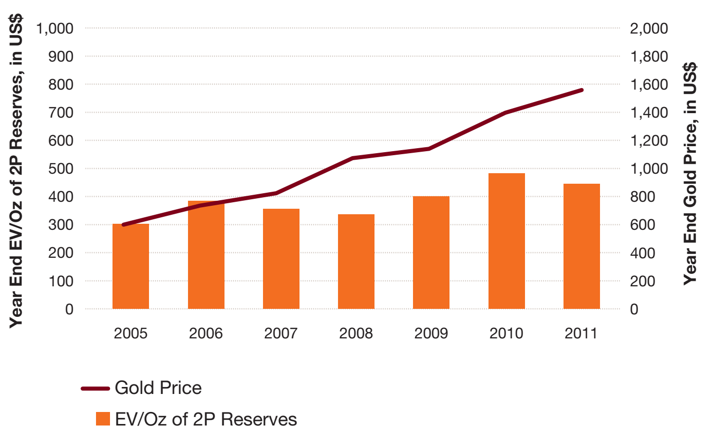
Gold versus gold equities revisited

The gold spot price-gold equity price disconnect is arguably best measured by examining the gap between the price of the "HUI" Index and the spot price of gold. Dubbed the "gold bugs" index, HUI is comprised of 14 gold miners and two silver miners that do not hedge production (theoretically, absent hedging, price movements on these equities should closely mimic those of the gold spot price). During 2011, HUI dropped 13% despite spot gold prices rising 10% over the course of the year.

This divergence in these metrics appears to be unrelated to reserve scarcity. We analysed the market value per ounce of the proven and probable ("2P") gold reserves of each HUI index company during the period 2005-2011. Our results show that despite an appreciation of 160% in the spot price of gold, enterprise value (EV) per ounce of 2P rose by only 47%. In other words, the gap between what markets were willing to pay for one ounce of physical gold versus one ounce of gold reserves is widening ($914 in 2011). As the collective wisdom of the finance industry dictates, it is unwise for us to dismiss these market valuations of gold equities as entirely irrational. There are some legitimate drivers behind this disconnect including: sovereign risk, labour disruptions, the emergence of alternative investment vehicles for gold investment and, most importantly, cost inflation.



Enterprise Value/Ounce of Proven and Probable Reserves versus price of gold



Source: Bloomberg, S&P Capital IQ, company financial statements, PwC Analysis

Post-crisis, we have observed some of the world's leading PEs and SWFs attempting to *"figure out how to make mining investment work."*

Consider that average six year compound annual growth rate (CAGR) of gross margins for HUI component companies' was only 7.1% per year despite the meteoric rise in the price of gold (theoretically, assuming all else being constant, price increases should result in relatively consistent gross margin increases). The most significant contributors to gross margin erosion were skilled labour shortages, increased fuel costs, foreign exchange strength in producer countries and the increased cost of mining of lower grades. TD Securities has predicted ongoing cost inflation for gold miners in the range of 10-15%.

We are not gold analysts, and, as such, will not opine on the future price of gold equities. However, we are observing some plausible arguments in support of the gold equity - gold spot disconnect. We do not firmly believe that this gap will close entirely and, as such, we don't expect a flurry of opportunistic buying in the gold sector in 2012. What we do expect is a continued healthy level of takeover activity, led by large intermediates. These miners are likely to target companies with:

- future production profiles showing declining cash costs per ounce (especially if acquisitions can lower consolidated cash costs per ounce)
- exploration and development projects in politically stable regions with lower operating costs
- projects that may be synergistic to a buyer's existing operations via labour, capital or equipment efficiencies

Other expectations for gold M&A include:

- for some growth market buyers and diversified majors with an appetite for risk, we may see continued opportunistic buying in frontier regions where target valuations may be more compelling
- joint ventures between majors on riskier projects with uncertain cash costs per ounce

2. Financial buyers will gradually begin transacting in the mining sector, although deals will be few.

Financial buyers have traditionally been less-than enamoured with investing in the mining sector, and with good reason. Mining investments are typically accompanied by:

- illiquidity and high capital expenditure requirements over long hold periods (10+ years between typical discovery to commercial operations)
- regulatory, environmental and sovereign risks
- concentration risk (via single asset, single commodity, single geography, etc.)
- price risk

None of these are congruent with the classic "buy-lever-hold-sell" model that many PE firms subscribed to during the first decade of this millennium. However, the post-crisis global macro backdrop, characterized by anaemic growth in the west, low interest rates, volatile public markets and bullish long term sentiment for resources, has prompted select PE funds and SWFs to pause and reconsider. Post-crisis, we have observed some of the world's leading PEs and SWFs attempting to *"figure out how to make mining investment work."*

With most financial buyers still in investigative phases, the mining sector has not yet seen significant capital inflows from SWFs or PEs. However, there are some anecdotal signs that the tide is slowly turning. Recent financial buyer deals have included China Investment Corporation's 2009 investments in South Gobi Resources, PT Bumi and Teck Resources, Blackrock and First Reserve's 2010 backing of Glencore's deal for Umcebo Mining and Temasek's 2010 investment in Inmet Mining. 2011 saw a continued interest in direct private investment including:

- Qatar Holding LLC's ("Qatar Holding") investment in and financing of European Goldfields. Qatar Holding, a global investment house founded by the Qatar Investment Authority, provided a $600 million, seven year loan (secured against European Goldfields Greek gold assets) plus a $150 million unsecured loan with equity participation. The equity participation includes the issuance of warrants to allow Qatar Holding to acquire equity at a predetermined price. In addition, Qatar Holding conducted two separate transactions and acquired 9.9% of the undiluted share capital of European Goldfields and entered into a call option agreement allowing for further acquisition of company shares.
- Taurus Minerals Limited, a company formed at the direction of CGNPC Uranium Resources Co. Ltd. and The China-Africa Development Fund, offered approximately £632 million to acquire Kalahari Minerals, which holds an indirect interest in the world's fourth-largest uranium mine, the Husab project in Namibia.
- Beijing-based private equity firm Origo Partners, one of the largest buyout investors in the Mongolian natural resource sector, partnered with Dutch commodity trading giant Trafigura in a joint coal and iron ore mining venture in Mongolia. The joint venture company, Trafigura-Origo MGL, will invest in a number of already identified coal and iron ore exploration projects in Mongolia with the objective of targeting further high-grade deposits with the potential for significant export volumes.

Going forward, we expect that financial buyers will continue to move into the mining sector, albeit in an extremely cautious and calculated manner.

> *"My New Year's resolution for 2011 was to try to find an appropriate mining investment—and it carries over as a resolution in 2012."*
>
> ***Jeff Donahue***
> Senior Principal, Private Investments at Canadian Pension Plan Investment Board

Specifically, we expect that:

- SWFs will seek out opportunities to invest non-controlling stakes in both pre-development and producing projects. The SWF value proposition, ceding cash without takeover, may be attractive for cash-hungry developers in growth markets with few financing options. SWF partners may also be of interest to small and mid size producers that are not interested in tapping public markets (a process which can be expensive and highly restrictive).
- Large Western funds (those with sufficient resources to allocate to the mining sector in a diversified portfolio) will continue to evaluate the mining sector in 2012. These potential buyers will need to find projects at or near production, in stable jurisdictions and with strong management teams. In this aim, financial buyers will compete with public equity markets, strategic buyers and state-backed entities - all of which frequently place a higher value on companies and projects. We recently spoke with Jeff Donahue, Senior Principal, Private Investments at Canadian Pension Plan Investment Board, one of the world's leading pension funds with C$152.8 billion under management as of December 31, 2011. He aptly noted: *"Relative to the oil and gas industry, large scale (greater than $100 million) private equity has been relatively inactive in the mining and metals industries for a number of valid reasons. My New Year's resolution for 2011 was to try to find an appropriate mining investment—and it carries over as a resolution in 2012."* Mr. Donahue also highlighted that *"with regard to SWFs, I think some view the commodity [market] as strategic and in combination with a greater confidence with respect to future commodity demand and potential low-cost debt, are willing and able to pay higher prices than traditional private equity."* The competitive environment for targets may prompt pension or hedge funds to:
  - Utilise debt-like instruments to protect against downside risk and earn preferred returns.
  - Target resources which do not require multi-billion dollar, follow on investments in infrastructure (as can be the case with iron ore).
  - Focus on resources with unique drivers and lower risk profiles. For example, thermal coal can be considered an energy play, fertilizer minerals can be considered an agriculture play.
  - Carefully monitor the market to identify projects that do not have a "logical strategic buyer"

3. Western buyers will be forced to find business models that make the growth market deals "work". Not all miners will be successful.

One of the key findings of our 2011 retrospective analysis was that western miners are lagging their growth market counterparts with regard to transacting in the higher risk emerging, developing and frontier regions. This will need to change if Western mining titans want to remain dominant through the next decade. Roughly three quarters of known reserves are believed to lie in countries outside the developed market economy countries.

Gaining market and board acceptance of transactions in growth markets will pose a significant challenge. Deals in these markets, in general, have a notorious history of being value-destructive. A recent PwC study showed that over 50% of all deals in growth markets that enter detailed diligence fail to complete. The study also showed that post-deal failures are expensive, with buyers losing an

> *"I still believe in the super cycle, but as we have seen we get hiccups as we go along ... If the markets think we have a hiccup, the shorts will jump on your stock and just destroy you. It happened to us, it happened to Teck [Resources Ltd.], it happened to Rio Tinto. The destruction of value is just immense."*
>
> **Lukas Lundin**
> Chairman, Lundin Mining

average 50% of their initial investment.[11] Smaller mining entities, in particular, may have difficulties effectively managing operations in these markets.

Strategies we recommend to help the west adapt to this new paradigm include:

- Pursue multi-faceted partnerships with governments and other miners. In addition to safeguarding against post-deal "surprises", these relationships can be an important source of future deal flow. While partnerships are important, 50/50 joint ventures should be avoided. They can be tricky when consensus or exit is required.
- Re-tool risk-evaluation strategies. There are no "perfect investments" in frontier markets. Risks need to be assessed in context in order to take appropriate "calculated risks." (Security risks are high across Sub-Saharan Africa, for example, but identification of a protected pocket may mitigate this risk).
- Consider spinning off of higher risk assets into a separate entity to insulate the slower growth, lower risk project portfolio (although this strategy introduces financing challenges).
- Identify specific political risks you will be up against and prepare your board and shareholders. The accompanying table sets out some specific political risks by region. If transacting in an environment where there is a high risk of instability with regards to taxation and royalty schemes, for example, run scenarios for what a detrimental outcome will look like in the short and long term. Engage local advisors on these matters and engage them early.
- As appropriate, revise your negotiating approach by appreciating that "first world standards" may be foreign in these markets. In our case study about Century Iron Mines for example, the concept of "limited liability" was a stumbling block for the Chinese investor. The company needed to take care to appropriately define and defend this concept.
- Contemplate what your exit options will be. Is a sale to another strategic buyer possible if partnering with a local firm/government? What kinds of deal activity is the region seeing?

Type of Political Risk	Growth market examples
Taxation and royalties	Peru, Zambia, Tanzania
Mining reform/contract revisions	Brazil, Zimbabwe, Mongolia, Guinea
Expropriation/nationalization	Venezuela, South Africa
National champions	Russia, Brazil, South Africa
Domestic market obligations/value-added production	Brazil, Kazakhstan
Local environment/social opposition	Panama, Guatemala, Colombia, Philippines
Security	Mexico, Cote d'Ivoire, Papua New Guinea, Niger
Government stability and transparency	Kazakhstan, Guinea, Zimbabwe, Indonesia, Cote d'Ivoire

Source: Eurasia Group

11 Getting on the ride side of the delta: A deal-makers guide to growth economies, PwC, January 2012

4. An African Renaissance.

Our perspective is that Africa will emerge as one of the most important mining M&A geographies of 2012. Unparalleled resource potential and an increasingly investor-friendly climate are two of the key drivers of this view. We welcome contributions from Raw Materials Group and Eurasia Group, both world renowned firms that are well known for their views on mining in Africa:

The Potential of Africa

Magnus Ericsson,
Raw Materials Group

The Second African Union conference of ministers responsible for mineral resources development was held in Ethiopia December 12-16, 2011. The ministers adopted the Plan of Action for the implementation of the Africa Mining Vision as a continental tool for guiding the prudent, transparent and efficient development and management of Africa's mineral resources. While many similar declarations have been made over the years it seems as if African leaders have finally understood the unique opportunities offered by high mineral commodity prices, created by the increased competition and demand for Africa's mineral resources from China and Europe. The Plan of Action includes setting up a Mineral Policy Centre in Addis Ababa to support the transformation of Africa's mineral regimes.

In South Africa the African National Congress (ANC) has reaffirmed its intention not to nationalise the mining industry as has been called for by its youth league. An ANC study was released in early February 2012 thoroughly discussing the situation and proposing a series of actions excluding nationalisation.

These are but two recent examples of the improving political climate in Africa. Transparent and efficient mining policies are being formulated and even if calls for participation by local capital and government have increased, the interest in investing even in countries as difficult as Zimbabwe is evident at the Mining Indaba conference held recently in Cape Town.

The revival of African mining is obvious from the number of new projects covering a range of commodities. Examples include:

Copper
A host of projects, both greenfield and brownfield, located mostly in Zambia and the two Congos but also in other parts of the continent is in the pipeline for completion within the next couple of years.

Uranium
The Namibian uranium boom continues and considerable new supply from mostly greenfield projects is projected before 2015. Niger will also expand its production. New countries are Botswana, Zambia and Tanzania.

Iron ore
West Africa is the emerging hot spot for iron ore mining. Greenfield projects in Sierra Leone, Guinea, Liberia, Congo and other countries are well on track to create a new global iron ore centre.

Coal
Three countries dominate the coal project pipeline, South Africa, Mozambique and Botswana. South Africa is the established and expanding leading producer. Mozambique will increase its production considerably in the next couple of years. Botswana's projects are further down the track as the necessary infrastructure is not yet fully in place.

Investment Considerations in Africa

Divya Reddy, Eurasia Group

As Africa sees a surge in investor interest, mining companies will have to navigate a new landscape for deal making as government policies toward the sector evolve. Relatively high commodity prices, heightened investor competition from China (and elsewhere), and less policy pressure from donors have helped to shift negotiating leverage to African governments. Many countries are also more stable and better governed than in the recent past, when the threat of war, unrest, or systemic regulatory uncertainty deterred all but the most risk-tolerant investors, who often received highly attractive terms.

Now, as the concept of state capitalism takes hold across the world, African governments are keen to increase their participation in mining projects, typically through parastatals. South Africa is busily establishing a new mining parastatal to partner with investors, as are the governments of Namibia and Tanzania. Mozambique established its parastatal in 2009 with the aim of promoting equity participation for the government in future projects. Elsewhere, as in Zambia and the DRC, long-established mining parastatals are seeking to broaden their roles, and their equity holdings, as minority partners in joint ventures. In most jurisdictions, though, changes will not be retroactive and foreign miners can still retain majority ownership under these models, but the days of 80+% ownership and near-total control over corporate governance for multinationals in Africa may be coming to an end.

Moreover, Chinese mining and infrastructure parastatals can sometimes establish stronger ties with their African counterparts than do Western firms whose partnerships are bogged down by bureaucratic inefficiencies and political interference. China's so-called financial diplomacy, most of it tied to coveted infrastructure development, helps to smooth over disputes and political headaches that may arise in joint ventures. Multinational corporations, by contrast, tend to fend for themselves rather than wait for their countries' embassies to resolve thorny problems.

Some governments are also looking to enshrine a 'right of first refusal' for their parastatals when mergers and acquisitions impact their joint venture partners. For governments that have a poor track record on corruption, this could enable officials to steer the same kinds of 'asset flipping' speculative deals that they routinely deplore when carried out by private companies. On balance, this concern predisposes African governments to place a premium on attracting world class companies, which are unlikely to sit on concessions with the main aim of selling them at a profit.

African leaders are also speaking out more and more against so-called mining speculators. In response, the DRC, Guinea, Zambia, Mozambique, and others are establishing or tightening use-it-or-lose-it rules that require miners to maintain an aggressive exploration timetable or forfeit their prospecting, exploration, or mining rights. Authorities are also seeking to reap benefits from M&A activity by conditioning regulatory approval on revenue transfers (or other rents). Even in cases in which the government lacks the finances to make a credible offer, the temptation to spin it off at a profit to an underwriting third company will be high.

Overall, though, the investment climate in Africa remains broadly positive—or at least manageable—in most countries, with the notable exceptions of the DRC and Zimbabwe. So while M&A in Africa will continue apace, companies would be well-served in understanding the new terms that they are likely to encounter when doing deals on the continent.

"Striking while the iron is hot" Century Iron Mines Corporation

PwC is pleased to share the highlights of a recent discussion with Sandy Chim, president and CEO of Century Iron Mines Corporation, about his recent deal with WISCO International—one of China's leading steel mills.

Background

A closer look at Century Iron Mines

Century Iron Mines Corporation ("Century Iron") is Canada's largest holder of iron ore land claims with interests in several properties in Quebec and Labrador. Subsequent to its recent graduation from the TSX Venture Exchange to the Toronto Stock Exchange in September 2011, Century Iron announced it had concluded a joint venture with China based Wuhan Iron and Steel ("WISCO"). Having already successfully raised funds from WISCO as well as MinMetals Exploration and Development on its major financing in early 2011, the deal was the company's second successful arrangement with WISCO.

The deal with WISCO

In addition to WISCO's initial investment, Century Iron received an additional $120 million from WISCO on executing the JV agreements. Following these investments, WISCO:

- held an approximate 25% equity stake in Century Iron (corporate level);
- will participate in a 40/60 joint venture in three projects (Duncan Lake, Attikamagen and Sunny Lake), which entitles them to 40% of production;
- has the rights to an additional 20% of production (at market prices) via an off-take agreement; and
- will support debt financing of development.

Highlights of our conversation

What are the benefits of working with a China-based steel mill?

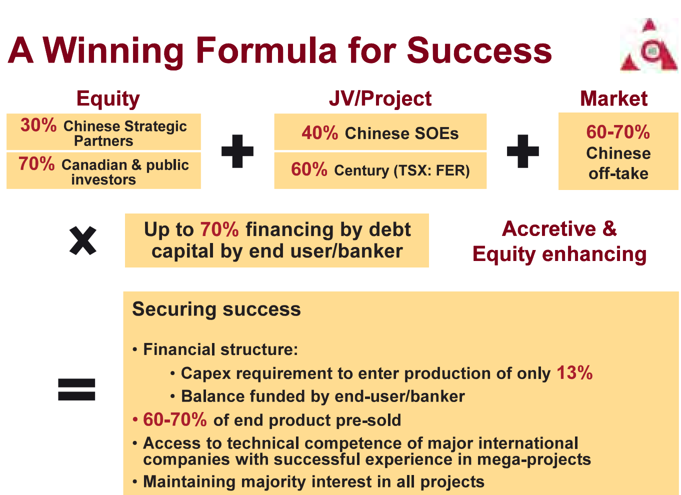
Scale: In seeking to build a world-class iron ore business, Mr. Chim wanted access to a quantum of capital that could finance aggressive project exploration and development goals. Suffice to say that Mr. Chim believes that scale is the most critical value driver for an iron ore producer: *"iron ore is all about scale and scale is all about capital."* He cited Cliff's recent acquisition of Consolidated Thompson for close to $5 billion during 2011 as a clear-cut example of the value of scale. Consolidated Thompson controlled close to 580 million tonnes of proven and probable iron ore reserves and produced close to $8 million tonnes a year of iron ore concentrate at the time of acquisition. While the $5 billion price tag is enviable in the industry, Mr. Chim aptly noted that *"it cost Consolidated Thompson probably $1.5 billion to get there."* With this in mind, while building Century Iron, Mr. Chim was mindful that he needed *“to have a capital structure in place to permit access to a substantial amount of capital.”* He turned to well capitalized strategic partners, like WISCO, as a result of his view that the capital required to achieve his desired scale would be outside the realm of comfort for most traditional capital providers.

Shareholder value: It was quite clear to Mr. Chim that in order to build a world class iron ore operation he would not only require access to significant capital immediately, but also additional capital injections throughout the life of several projects. A “plain vanilla” process, involving conventional equity and debt sources along each stage of mine life would be dilutive and restrictive. Indeed, he stated that: *“Traditional financing may make it difficult to maximize the value of the company you are building.”* This concept is partially illustrated in the accompanying figure “A Winning Formula for Success” that graphically represents Mr. Chim’s accretive and equity enhancing capital structure.

Protection against market volatility: As the old adage goes, it is impossible to “time the market.” Similarly, according to Mr. Chim, it is nearly impossible to find the “best time to finance” iron ore projects based on market conditions. In completing piecemeal financings, miners run the risk of having to raise capital during a temporary market downturn (which can result in having to accept a less than desirable equity valuation in order to complete a project). This was experienced by a number of miners during the 2009 downturn. According to Mr. Chim: *“Often you have to take “any price” to finish a project… we figured that the most important part of building a multi-billion dollar project from a junior stage was to put a capital structure in place at the beginning of our venture that would ensure we could gain access to capital along each stage of development. This is why we sought a strategic partner. We did not want to be left scrambling for financing.”*

The right end product: In what is a little appreciated fact, Mr. Chim pointed out that steel mills need to work with a consistent supply of iron ore (in terms of ore characteristics). *“Blast furnaces are calibrated to supplies from particular mines. As such, stability and consistency of supply is critical for a buyer of iron ore.”* Mr Chim highlighted that in the exploration and development stage, it can be easy to overlook the final customer’s needs. *“It is wrong to think that iron ore is just a shippable commodity.”* Having a strategic partner, who is also a customer, involved in mine development and production, can mean that a project will produce ore that is perfect for its blast furnace. This can help to foster a longer term sales relationship and create a competitive advantage.

Access to technical competence: Supplementing the latter point, Mr. Chim shed light on the fact that, in striking



deals with both MinMetals and WISCO, Century Iron was also gaining access to decades of experience with large scale iron ore mining. Each of Mr. Chim's China-based partners has owned and operated large scale iron ore operations. This accumulated experience has an intangible value in that Mr. Chim has access to constructive guidance. "*Because China uses one billion tonnes of iron ore a year, the accumulated experience of Century Iron's Chinese investors is very useful as a reference and for guidance*".

Pre-production sale guarantees: The off-take portion of a strategic partnership (over and above the production rights associated with a joint venture) can be one of the most attractive aspects of a strategic partnership in today's market. While these types of agreements were once struck at fixed prices or discounts to market, today the norm is to agree to sell production at future market prices, basically a "guaranteed future sale."

Access to Chinese markets: In working with WISCO and MinMetals, Century Iron was able to secure access to the Chinese market. These partners are two of China's largest end-users, importers and traders. Mr. Chim noted: "China represents 45% of the global steel market in terms of crude steel production, and they buy 60%-70% of total seaborne iron ore. Any new iron ore mine that comes into production cannot afford to ignore a final market in China."

How can a junior miner get a deal done with a Chinese partner?

The benefits of transacting with a China-based steel mill are clear. But how can a junior miner attract a Chinese partner? Mr. Chim shed light on some of the key factors that allowed him to strike a successful partnership:

Project diversification: Mr. Chim's strategy from day one was to create a *"one stop solution"* to attract China-based customers. He realized that many juniors focus on one project at a time, largely due to limited financial resources. However, if aiming to attract customers from China, one project is often not enough (largely for the aforementioned reasons, with regard to quality of supply). In building

"Contrary to common belief, China is very advanced with regard to internal controls. Many people outside China don't understand that Chinese entities have more internal controls than typical Western style companies."

Sandy Chim
President and CEO, Century Iron Mines Corporation

Century Iron, Mr. Chim amassed a project portfolio encompassing different types of ores, spread across different locations. By building with the Chinese customer in mind, Mr. Chim also became an attractive partnership target.

A "Chinese mindset": In aiming to build a business relationship with a Chinese partner, a critical step is to understand Chinese thinking and approach. This may seem like a rather simple concept, but according to Mr. Chim, *"you need to be mindful that what the Chinese see as benefits, may not be quite obvious or logical from a Western point of view."* For example, as Westerners, we are accustomed to investment in TSX Venture exploration stage companies and we focus on these projects in terms of capital markets valuations. A Chinese mill, on the other hand, is thinking about tangible products and process. *"They are a steel mill. They are very used to running cost efficient factories and are very practical. But, before you see production it is not real, so there are lots of unknowns that need to be addressed in order to attract investor interest."* Westerners would bode well to frame initial conversations with this Chinese value proposition in mind. Effectively, it's all about articulating how you plan to deliver the right production to the customer, at the right price.

Build the right transaction team: Suffice to say, it helps to have the right transaction team. Mr. Chim ensured that his team included competent translators from technical, commercial and legal perspectives. He noted "social conversation is one thing, *but when it comes to due diligence, competent translation is key.*" Mr. Chim also noted that literal translation is not the only challenge. Very often, Chinese investors and potential partners from other cultures can be challenged to understand concepts that may be fairly straightforward to one of the parties. For example, Chinese corporate law does not define what a limited partnership is. Defining the concept was a challenging experience, in that it had to be explained from a variety of angles in order to "make sense" from a Chinese perspective.

Have patience! Mr. Chim claims that patience is paramount in the due diligence process. *"Anyone who has completed a transaction with a Chinese company can understand this. Contrary to common belief, China is very advanced with regard to internal controls. Many people outside China don't understand that Chinese entities have more internal controls than typical Western style companies."* Mr. Chim advises that Western partners should be prepared to answer hundreds of questions at various stages of due diligence spanning financial, technical, geological and legal. An added complexity is government approvals. For example, in China, the National Development and Reform Committee, Ministry of Commerce, Foreign Exchange Control Department and other government bodies need to approve transactions. *"One needs to be prepared to go through all of these procedures"* Mr. Chim noted.

Century Iron is an excellent example of how a company with mining properties in the West can "get it right" with China. We thank Century Iron and Sandy Chim for contributing their insightful perspectives to our annual review.

A note on methodology

Our methodology for M&A analysis is set out below:

- M&A data includes announced mergers or acquisitions (including less than 100% acquisitions / divestitures). Cancelled, dismissed, expired or withdrawn deals are excluded from data (Often, however, deals can be cancelled post publication).
- The acquisition of rights, special warrants and convertible debt are not included in M&A statistics (unless utilized as equity sweeteners). Strategic partnerships which do not involve the acquisition/divestiture of an equity stake are also excluded from our analysis.
- The geography of a buyer is determined by its headquarters. The geography of a target is determined by the location of its major projects (when such information was available).
- Certain transactions involved buyers from more than one geography. As a result, for buyer by region analysis, we utilized appropriate weighting to arrive at aggregate figures.
- For M&A by resource, we classified targets by their primary disclosed resource where possible. In certain cases, a primary resource was not identified. These deals were excluded from our analysis.
- The main source of our data is S&P Capital IQ. S&P Capital IQ includes real estate and property deals in its data.
- Deal currency is US$, historical rate, unless otherwise noted.
- Transaction value refers to total consideration to shareholders, calculated as:

  Total Consideration to Shareholders
  \+ plus Total Other Consideration
  \+ Total Earn-outs
  \+ Total Rights/Warrants/Options
  \+ Net Assumed Liabilities
  \+ Adjustment Size
  \+ Total Cash
  \+ Short-term Investments

- Mega deals are defined as transactions valued at > $10 billion.
- Mining includes Anthracite Coal Mining, Bituminous Coal and Lignite Mining, Chemical and Fertilizer Mineral Mining, Diversified Metal Ores (Copper, Lead, Nickel, Radium, Tin, Titanium, Uranium, Vanadium and Zinc Ores), Gold, Precious Metals and Minerals, and Iron Ores

Sources

The Associated Press, AME, Bloomberg, Capital IQ, The Economist, Eurasia Group, FAO, The Financial Times, The Globe and Mail, International Monetary Fund, National Post, New York Times, RBC Capital Markets, Raw Materials Group, Scotiabank Global Banking and Markets, TD Newcrest, US Energy Information Administration, The Wall Street Journal, The Washington Post, World Gold Council, United Nations, The World Bank.

PwC also utilized various company press releases and public filings in regard to deal descriptions. Quotes were obtained from both company filings, as well as other matters of public record (newspapers, television interviews, etc.)

Contacting PwC

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Design and production by Frank Moniz