GLOBAL BUSINESS REPORTS

The Un-Played Game

How China's Resource Thirst is Reshaping the Rules of the Global Mining Industry.

Rapidly changing dynamics associated with China's economic growth continue to reshape the global mining landscape. The world's second largest economy is not only the largest producer and consumer of minerals, but has also become the world's leading investor in natural resources. In an effort to secure mineral and metal supplies, China's actions both domestically and overseas are producing large shifts in industry structures, national economies and the regulations that govern mining. As flows of capital and equity change, Chinese investors face a steep learning curve to manage their overseas acquisitions and foreign companies have had to adapt to be better positioned to receive that investment, while service companies have to be nimble enough to take advantage of the opportunities poised by the country's growth. China's advent has challenged the traditional rules of the mining game, and in the backdrop of global economic uncertainty, success in the industry is becoming more complex than before.

The real story behind China's entry onto the global mining scene in the last decade has been the simple reality that China's own impressive array of natural resources have failed to fulfill the requirements of the country's economic growth. When, on 14th March 2011, the National People's Congress approved China's 12th Five-Year plan, which sets goals for the country's economic development, the targets clearly demonstrated the effect that their implementation would cause on overseas markets. The 2011-2015 program is particularly impressive, entailing a plan that will see crude steel demand reach up to 750 million mt, high speed railways reaching lengths of 45,000 km, highway networks reaching 83,000 km and urbanization growing from 47.5% in 2010 to 51.5% by 2015.

Keen to avoid any economic stagnation caused by resource insecurity, China's resolve to balance its growth and have the resources in place to fuel it, is playing out on both its domestic and international arenas. This report examines how the international mining community is being affected and how economic growth forces China to go further than it has ever gone before.

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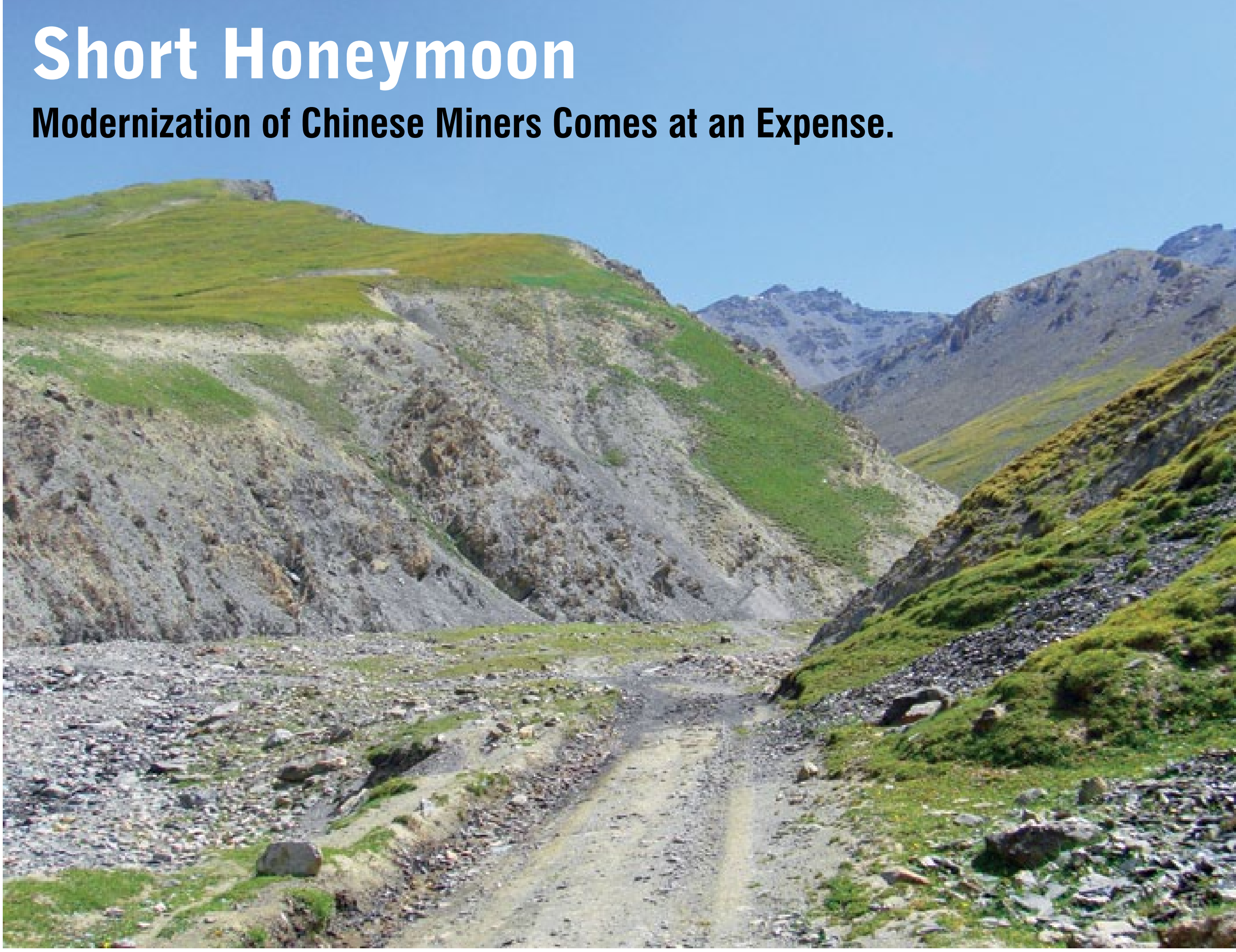
Short Honeymoon

Modernization of Chinese Miners Comes at an Expense.



GobiMin's Sawayaerdun gold property in western Xinjiang, China. Photo courtesy of GobiMin.

Swiftly developing regulatory policies aimed at spurring more efficient use of China's mineral assets have recently begun to improve the country's sprawling and inefficient mining industry. The government has invested into the consolidation of the sector, with the dual purpose of ensuring that mining companies clean up their acts in the safety and environmental spheres, while also modernizing them for international investment. Meanwhile, the drive to modernize has also been accompanied by a reversal in the level of government encouragement for foreign direct investment into the mining industry, largely negating the results of previous policies, which allowed numerous foreign companies to acquire exploration prospects back in the 2000s. As government reforms begin to pay off, they are producing a new breed of better-positioned domestic companies to compete on the global stage, while causing foreign mining companies to reassess their investments in the country.

A New Kind of Consolidation

Following in line with the 12th Five-Year plan, strong-handed government policies have effectively began to consolidate particular sectors of China's mining industry, including coal and rare earths. By 2015, the plan is to reduce roughly 11,000 coal companies to 4,000. "There is a consolidation wave occurring because of mining accidents and duplicate investments. Since so many of the mines are small, the owners cannot afford to invest properly. Less investment results in lower standards and worse equipment, which in effect causes accidents. With the government paying closer attention to mines' safety re cords, smaller players have no choice but to close down or be acquired," said Felipe Tan, CEO of GobiMin, a TSX listed explorer currently developing its Sawayaerdun gold project in Xinjiang province.

"Another issue is duplicating construction. Often miners choose to have their own smelters and this is sometimes unnecessary. There needs to be a focus on the centralization of smelters. The government has been getting very tight on the environment as well."

The policy is meant to ensure that companies not only master the efficient use of their resources domestically, but also so they be better prepared should they acquire them abroad. "The government wants them to become more efficient in order to gear them better for overseas investment," explains Jeremy South, partner and global mining leader at Deloitte.

The by-products of this consolidation drive are already beginning to make headlines abroad. Shandong Energy, for example, was heaped together by the government in March 2011 from a group of leading Shandong province based coal companies to become a single entity with an 83 million mt/y coal capacity. By March this year, the group was already bidding for Australian explorer Rocklands Richfield.

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Foreign Miners: A Dying Breed?

Conversations with China's mining industry veterans about the role that foreign companies play in the country often yield the words 'dinosaurs' or 'dying breed,' calling into question what role foreign miners and explorers can play in developing Chinese mineral wealth. One oft-cited challenge to foreign companies has been the country's Mineral Resources Law. The law classifies minerals into several brackets: encouraged, permitted, restricted and prohibited, with each offering different investment options to foreign companies. "A little more than 10 years ago, the exploration and extraction of the most basic minerals was encouraged for foreign investment. Over the years the encouraged list of minerals has shrunk to almost nil," said Robert Kwauk, managing partner at Blakes law firm in Beijing who has covered the mining space in China since the 1990s. "Meanwhile, the prohibited list has grown from uranium and rare earths some ten years ago, to adding a number of other minerals such as tin, nickel, antimony, manganese etc. And the restricted list is also growing, so things that have been encouraged previously have now moved to the restricted category," Kwauk added.

During the 1990's, the country's poorly explored mineral resources (only 36% of the country's resources were explored in 2011) provided the government impetus to bait in foreign explorers and miners, thus introducing a new stream of technology and higher standards to what had been a largely home-grown industry. Companies came, many from Australia and Canada, in pursuit of valuable assets. After years of exploration, companies who had already survived challenging operating conditions began to face tougher regulations and many sold off their assets and left.

Whether or not government regulations are really to blame for the stifling of foreign investment is not as clear as one might think. Many of the foreign explorers 'shot themselves in the foot as well,' reckons Kwauk. "Most of the companies who were operating in China were good entities, but it just takes a few bad apples to ruin the whole barrel. Some of them ran into management problems, others misused funds and fudged data. Foreign companies who had these issues left many projects at the altar and not enough money was put into the ground," he said.

Poor behavior by foreigners in a country like China goes far to explain why the regulations have become tougher, and indeed the Mineral Resources Law underwent several major reshuffles, with a complete rewriting in 2006 and the latest revision occurring in 2010. However, Gavin Yang, a partner at Chinese law firm, Dacheng, who worked with the government on the last revision, still questions why foreign mining companies are increasingly finding China unappealing. "Many foreign investors in China are now deciding whether to stay here or go to other countries, and many of them are choosing to leave. We have been studying the reasons why they have been leaving China, especially at a time when our laws seem to be encouraging of foreign investment and the licensing procedures are user friendly. What we found was a lack of implementation of central government policies at the provincial and local levels, which often discouraged foreign investors. Most often local governments would try to prevent foreign activity in order to protect their own local interests. Provincial and local opposition aside, China's regulatory framework has had an overall open position towards foreign investment," he said.

Stuart Bromley, CEO of CIC Mining Resources, a Beijing based advisory firm, said: "China is a bottom to top system; it's not a Chinese regulatory problem causing issues for foreigners, it's the problem of the board not understanding how the system works. You have to know the poli-

cies at every level, village, county, local district, provincial and state; and the state will never influence the province, and the province will never influence the district, the village will influence the county and so on. It's like the communist party; everything is founded by the village."

If numbers are a judge of whether tough regulations and operating conditions are having an effect on China's foreign mining companies, then the answer is clear. Today, the total amount of foreign owned producers in China number around three. One of them is Vancouver based gold miner Eldorado Gold. The company's story is extraordinary not only for being able to survive the downturn in foreign presence, but actually for thriving–56% of Eldorado's gold production came from their China operations in late 2011. "Around 2009, they made all gold restricted, which simply means we have to joint venture (JV) with Chinese companies and jump through a lot more hoops, although no more than we would anywhere else. There used to be a perception that China was really hard compared to the rest of the world, but I would argue that the hardness has caught up. There is nowhere that is easy anymore, and some places are much more difficult than China," said Greg Collins, China exploration manager and chief geologist for Eldorado in China.

"The good thing about mining in China is that the system is very supportive when you comply," said Felipe Tan. "If you want to talk to government officials, they are very helpful and help you push through your development plans. The policy of transferring mining licenses however is tightening and that is tough. As long as you are planning to build a mine and will fulfill the environmental compliance regulations, then the government is very helpful."

An area with great potential for pitfalls is when foreign companies attempt to acquire 100% of an asset. "Getting your own exploration license requires, first of all, setting up your own business vehicle and understanding Chinese laws. In China, there are two types of foreign vehicles: joint ventures and Wholly Owned Foreign Enterprises (WOFEs). In a lot of other industries, WOFEs are common, but they are an unproven entity for acquiring new assets in the country. On the other hand, if you acquire a new license via a JV, you are immediately diluting to three partners, which is ugly and hardly ever works. However, I don't think anyone should try to take 100% of a property in China, because you have to look at the positives of partnering up with a local county or brigade. If the county is on your side, water, roads and people are all sorted. That is not a corruption thing–it is just in their best interests to make these things happen. Regulations are growing tougher in China, but for everyone, not just foreigners," said Collins.

Despite the legal framework offering increasing hurdles, Eldorado's experience demonstrates that foreign ventures can still be successful in China, though it may be harder in the current environment to start from scratch than at any previous time. One of the largest stumbling blocks companies have faced is transitioning from exploration to production licenses, and in China's bottom to top system, depending on Central Government policies or contacts to get these will not help if you are facing local opposition to your mine development plans.

"It is often the case that the Central Government says, 'We welcome investment and your investment should be fine,' but when the time comes to get approvals and permits, then those need to be given by someone at a different level and who is not necessarily motivated by the same things," said Sarah Kutulakos, executive director of the Canada China Business Council. "The further you go away from Beijing, the more autonomously you can do things, so you can have some random official who is slowing you down."

Localization has been a winning strategy for successful companies operating in China. Indeed, often the only way to attain required permits and approvals is making friends with those who ultimately decide on your presence. "I have had four joint ventures here in four provinces, and all have worked… Honor the due diligence: if you are supposed to hire 10 people, hire 15; if they ask you to contribute a school, give a school and a half. Always go beyond what people ask you to do, and you will not have a problem enforcing legal agreements. Obviously, you are going to get some people trying to screw you, but that's just the nature of it," said Dev Randhawa, CEO of Fission Energy, a Canadian uranium explorer.

Have the majority of foreign enterprises implemented such localization measures in China? Most often the answer is no. The lack of desire to relocate or place senior management in China for lengthy periods of time often results in Chinese communities not taking foreign ventures too seriously. Miners interested in exploring in China have to spend long periods of time in the country to make their investments sound.

"Looking through the Australian, or Canadian, or whatever set of glasses you've got on, China looks to be one thing from out there, and you've made a whole bunch of business decisions based on that perception. But then you come here, spend time listening and learning and you discover that this isn't the reality," said Peter Arkell, managing director of Asia for Swann Global, a leading executive search and recruitment company specializing in the mining sector.

Peter Arkell, managing director of Asia for Swann Global and chairman of Global Mining Association (GMAC).

The changing nature of foreign investment in China is evident in the make up of members at the Global Mining Association of China (GMAC). The association, whose purpose is to lend a united voice to China's international mining community, used to be populated by explorers and miners. These days, most of the participants are mining related service providers such as lawyers and consultants. Recent news that Rio Tinto had formed a JV with Chinalco to explore for copper deposits in China was greeted warmly by the community who hope that such a venture may open the doors for other players. Whether or not that will happen remains a question.

"The Chinese mining industry is not the easiest one to work in for foreign mining companies. The major trend is that China is ever increasingly intent on keeping its own resources for itself, and this will, to a certain extent, always limit the role that foreign investors will be able to play here," said Jean-Michel Floc'h, senior corporate advisor at China Bridge Capital, a Beijing based fund manager.

However, Doug Jones, senior vice president of the China Region at Eldorado Gold, remains optimistic. "I am told it is just like every other country. You have the open- and closed-door guys, and the right and left wing factions within the party pushing and pulling to radicalize or localize business. This results in the cyclic nature of doors opening and closing. I think it is inevitable that doors will open again."

Bracing the Curve

Outbound Investment Forces Chinese Companies to Mature.

With coal and iron ore consumption in China steadily rising, the country has endured a period of heavy reliance on the world's largest miners for its imports. To avoid being at the mercy of the world's largest coal and base metal producers, miners and end consumers are acquiring resources themselves to secure supplies or, in the case of end consumers, to vertically integrate their operations.

Chinese demand is unlikely to wane any time soon according to Ralph Lutes, vice president of Asian affairs for Teck Resources: "The debate in the Western media about hard landings, soft landings, needs to be put to bed. These buzzwords seem particularly inept. I don't see any landing at all, hard or soft... The slowdown is of primary concern for financial institutions and those who are more focused on day-to-day trading activities. From a mining perspective we need to take a much longer-term view. In that respect, we are very confident and optimistic about China's medium and long-term prospects. The Chinese government has an impressive array of tools to manage its economy. The slowdown that people are very concerned about in some quarters is largely a policy-driven slow down of its own economy. So the concern about China experiencing a hard landing, I think, is overdone. I see China continuing to be a driver of global commodity consumption. No landing at all, just a slightly lower altitude directed by air-traffic control."

China's movement abroad, though beginning in the late 1990's, accelerated as prices for commodities ballooned in the 2000s. Chinese investors, awash with cash and with the government's blessing, rapidly began investing into overseas mining acquisitions. Last year, this investment reached a record high and raw materials accounted for nearly 30% of all M&A transactions. Meanwhile, as the trend of equity fleeing the West continues, an increasing amount of mine owners fiercely seek avenues to raise capital to develop their projects. In the resulting free-for-all, the past several years have seen the confrontation of largely cash rich inexperienced Chinese entities with cash poor junior miners. Many good and bad investments later, the Chinese are beginning to learn and their investing strategies continue to evolve with a variety of consequences.

Ralph Lutes, vice president of Asian affairs for Teck Resources.

Flawed Model

Upticks in outbound investment flow have particularly occurred in the last few years. In 2008, when the commodities boom began to increase prices for iron ore and coal, it forced many end receivers in China to reluctantly agree to hefty price increases from major suppliers. The same year saw China become, for the first time, a net importer of coking coal, having already become a net iron ore importer several years earlier. With this in mind, the concept that one could buy a mine, develop it, and send the ground back home was too appealing.

The first miscalculation occurred when Chinese investors thought that they could bring the resources back home quickly. Jumping through regulatory hoops and having the capital to survive unexpected delays have become commonplace concerns in the western mindset. Within the Chinese context however, as long as you have government support, such problems are largely non-existent. State owned enterprises (SOEs) and private entities with official or semi official backing from the government can get mining operations underway quickly; state owned banks readily provide loans and regulatory issues tend to be avoided.

As investors acquired assets overseas and began to develop them, the perception that replicating favorable domestic environments abroad was possible soon caused massive disappointments. Tetra Tech, an engineering and consulting company that works on Chinese mining ventures abroad has firsthand experience of this. "In the European context, labor costs are high and labor is not easily available. So the framework is that things need to be automated and mechanized, return on investment needs to be as high as possible, and capital costs should be as low as possible. That is an international perspective of mine development. China operates differently. Labor is available and relatively cheap. The desire for mechanization is not there, nor is the experience available. Available capital is not a problem generally, and the return on investment, for a company that is more interested in vertical integration, is a fundamentally different calculation. So if that is your framework of understanding then when you go abroad everything you think of as to how mining should be done is fundamentally different from what is actually being done," said Brent Thompson, senior vice president of Tetra Tech's mining division.

Initial failure to appreciate long-term investment horizons has been one such fundamental difference. "The Chinese want to lock up the resource and bring it back home," said Syd Chesson, chairman of Yellow Rock Resources, an Australian vanadium explorer currently courting Chinese investment. "They don't care if they make money in Australia, they don't care if they make profit; what they want is to bring the resource here to China."

This approach largely characterizes the prime motivators of Chinese outbound investments, but it also underscores their greatest pitfall. There is a vast difference between buying a mine, developing it, and using the resources to sell to a client as opposed to buying a mine, developing it, and being in effect your own client by importing the minerals back to yourself. Multiple accounts of Chinese investments abroad demonstrate that the vertically integrated approach has been flawed, not in its theoretical basis, but rather in its existing implementation. Too often, the desire to get to quick production and delivery of materials back home resulted in decision making processes that made overseas operations much more costly and challenging than they could have been.

"One thousand days at home is always good, but even one day abroad is very hard"

So goes a Chinese traditional saying, recounted by a Chinese lawyer referring to

the challenges that his country's investors face overseas. The top trouble spots have stemmed from three areas: inexperience, failure to seek professional help, and communication issues.

"There is still a long way for us to go. Japan started making natural resource investments for their smelters back in the 60s. China had enough of those resources and we had a planned economy at the time, not a market economy. We failed to take that first step in the beginning; now that we are going overseas, it is not really easy for us," said Zhang Xin, chairman of Metal Challenge Group, a leading Chinese metals trader.

"Unlike many Western companies which have much cross-border experience, many Chinese companies are undertaking offshore investments for the first time," said David Olsson, partner at King, Wood & Mallesons. "A lot of Chinese companies, when they make a strategic decision to invest in resources, do not put enough effort into the legal and regulatory preparation. We spend a lot of time helping clients understand what the foreign investment rules are, and doing non-legal work–explaining how to manage investments, and who the stakeholders are that they need to engage: governments, local communities and those with environmental concerns... because there is not a culture in China at the moment of engaging external advisers early or at the right sort of level. Chinese companies often think they can do all the work alone."

Lack of engagement is attributed in part to the other facet of Chinese appreciation for vertical integration: the fact that most enterprises, especially state owned, tend to have in-house capabilities for services that most western firms would outsource to others. "Outsourcing is about packaging services in a different way and taking advantage of expertise. They are still on the journey to figure whether they need that. I regularly bump into clients who have 20 people in their M&A department and they haven't done a deal. It's difficult for these companies to then come to Deloitte, Goldman, or JP Morgan and say, 'Look we have people who do this, but can you please do this for us?' That's a pretty tough sell," said Jeremy South.

Failure to invest in due diligence is not the only feature that has characterized investing firms' inexperience. Another equally important one has become the popularity of mine acquisitions for industry groups located either segmentally or in some cases right outside traditional mining expertise. "Many of the investors have surprising backgrounds. For example, there are many property developers who made a lot of money over the last five to six years, and who are now investing in mines abroad given the current state of the housing market," said Jamon Rahn, vice president of Emerging Asia Capital, a mining investment advisory.

The Backlash: Government Takes Action

"It's been a mess and it hasn't just happened to one or two companies, but with many… many projects have come to a stop and investments have been lost," says Simon Dai, development manager for global engineering firm, Hatch. "A major recent event is that the Chinese Central Government has started cracking down on poorly executed projects…The government's message is a wakeup call to many overseas investors."

In the majority of cases, improper consideration of local regulations, infrastructure, and labor laws led to the perfect storm: cost overruns and delays. Notable and oft talked about examples have included CITIC Pacific's disastrous Sino Iron project in Western Australia, where cost overruns grew from an initial US$2.5 billion dollar estimate to most recently standing at a reported US$8 billion in August. But there have been others.

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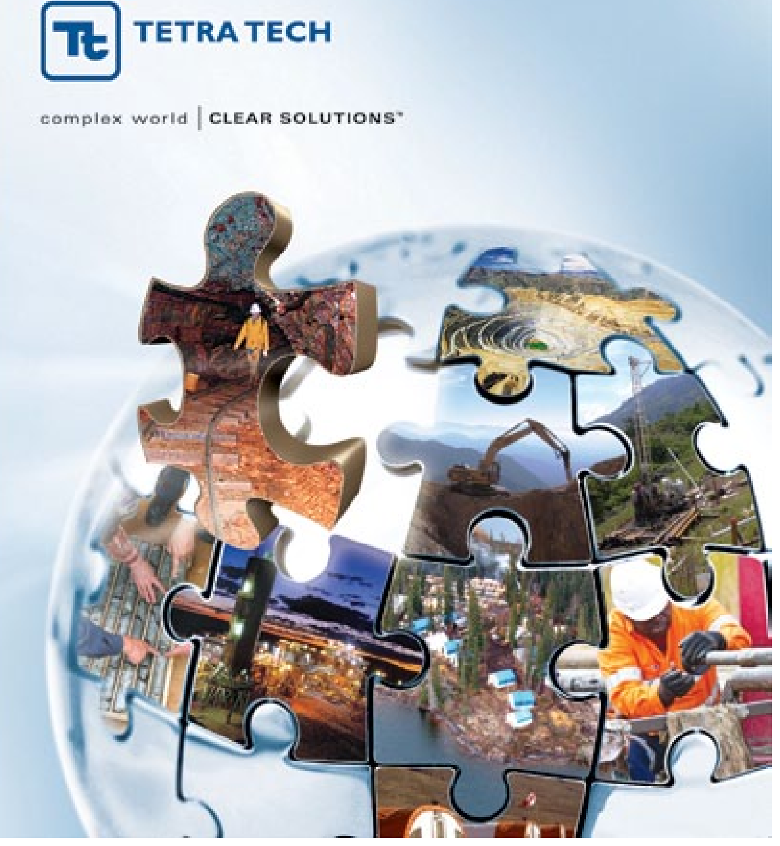

The Hon. Cheryl Edwardes, former attorney general of Western Australia and now a partner at Holman, Fenwick, Willan relayed a story involving a Chinese investor. "In one case, a client that did not carry out due diligence at the beginning of a transaction was left with an environmental debt of US$20 million. I am very happy to assist them in overcoming these problems, but they could have been avoided at a much earlier stage. This is the message we are giving the key decision-makers in Beijing for them to pass on when they talk to companies."

Recent government moves suggest that Beijing is getting the message. In early April, the government finally stepped in when the State Assets Supervision and Administration Commission declared new rules and penalties for companies not investing into their core areas. The main message as put by Jeremy South was that "coal companies should be buying coal and not shopping malls."

Learning Fast

Foregoing the government's April announcement, there have already been signs that Chinese companies are beginning to adapt. "A number of Chinese companies have gone through these growing pains. They have tried a number of approaches that have not worked and they have had to learn new methods, so now there are Chinese companies emerging with much more experience and a strong ability to operate globally," says Thompson of Tetra Tech.

As the more inexperienced companies and smaller provincial SOEs become discouraged from investment, the bulk of Chinese investors are getting smarter and more sophisticated. This is being reflected in a variety of ways, but the overall sense is that companies are learning through adaptation rather than a rejection of their whole investment model. "You don't need to throw out your Chinese business model to be successful abroad, what you need to do is adapt your business to make it work," said Peter Arkell. "This can be achieved by putting into key positions personnel who appreciate the business styles and culture of the head office as well as the new market."

"If a Chinese entity comes across good executives in Australia, to think how to best use those people and leverage their skills is a smart strategy," said James Philips, partner at Minter Ellison, who has been involved in Chinese investments into Australia. "To run a mining operation in a regulated environment like Australia is not just a matter of digging stuff out of the ground; there is a lot of regulation around the operations and also the question of how to deal with employees, contractors, etc. Local knowledge is extremely important. To lose local knowledge is quite likely to mean you have lost the ability to operate effectively in this environment."

The Minmetals acquisition of Australian Oz Minerals in 2009 has been a good example of how such an approach has been gradually taken on board by Chinese enterprises. Minmetals kept Oz Minerals CEO, Andrew Michelmore on as the head of the newly formed acquisition and, in 2010, placed him at the head of their Hong Kong listed Minmetals Resources, which focuses on overseas acquisitions. Since then, the US$1.3 billion acquisition of Anvil Mining by the company, which was finalized in February, has cemented Minmetals Corp. as one of China's more successful overseas investors.

An increasing appetite for off take agreements has also become a feature of the more passive and maturing Chinese investor. "In all fairness, the strategic desire is to secure supply," said Wayne Basford, partner at accounting firm BDO. "Three or four years ago this involved getting 100%, but now they can understand that the off take agreement is what they really want and they won't have to deal with the hassle of changing the management. Going forward, you will very likely see a lot more sophistication in the way that Chinese companies take ownership. There will be many 75% Chinese owned Australian listed companies being the vehicle of getting around the perceived Chinese negativity, and they won't be called Sino this or Dragon that - it will be an Australian company extracting and working as it usually does but it will be owned by Chinese."

As this experience trickles down to the rest of the system, asset owners worldwide can expect to see more qualified and mature Chinese investors. Moreover, those who have been recipients of such investment in the past often mention that loyalty is a defining characteristic of a high quality Chinese investor. Paul McGroary, currently a director at Bullabulling Gold, an exploration company in Australia, says that Chinese partners have stuck by his side from an earlier time when he was involved in exploring for mainland gold and copper assets. "Chinese investors, as long as you keep them informed and you appear to be doing the right thing, will continue to back you even when things get more difficult. If you can develop the relationships and find quality investors in China, they will be some of the best you will ever see anywhere."

Getting the Message Right

The gradual outsourcing of exploration by major mining producers to junior miners over the last decade has firmly placed smaller and mid cap exploration companies at the receiving end of Chinese investment. However, attracting that investment is not easy and requires companies to get the message right. Several factors have made this difficult. Since the beginning of China's 'going out' policy, inexperienced Chinese investors often overvalued assets and lacked the ability to properly assess mining properties. Sellers and agents involved in these transactions have often taken advantage of this. However, the unrealistic stereotype that Chinese overspend (caused by such deals in the past) has only hurt sellers' interests as they increasingly encounter investors burnt by bad deals and whose collective experience has made them more conservative and aware of their interests than before.

What led Chinese companies to overspend in the first place was once again their desire to get to production as quickly as possible. Edmond Cibamba Diata, senior partner at African law firm Cabemery and Partners, related a story about how Chinese companies came to overspend. "When one discovers an asset, one must transform its title from a research title to an exploration title. Chinese companies do not want to go through this preliminary research stage. They want to directly obtain the asset and start mining. This is a real challenge for Chinese companies because they trust the estimates given to them by mine owners and, as a result, they can easily get fooled. The assets can be overvalued and sold to them at a price which does not reflect the real value of the mining asset. Oftentimes Chinese investors realize one or two years later that they have been fooled."

While this particular example referred to African investments, anecdotal evidence suggests that these incidents have been widespread across a variety of countries. Unfortunately, the ultimate outcome of such deals has arguably hurt companies' abilities to raise capital.

Tim Wang, a partner at Clifford Chance, says that one such reason has been a new-found conservative streak in expenditures: "Chinese companies may try to take a conservative view when acquiring a mine, and I have seen many deals fail as a result of a disagreement between the buyer and seller. I have seen foreign investors try to sell at steep prices, but Chinese do not want to pay high prices anymore and they have become more experienced in mining acquisitions. This is different than before, when

during a rush to secure resources Chinese investors overpaid for mines. This is a key issue. Sellers have a tendency to think that the Chinese will pay high prices but this is not reflective of reality. The expectation from sellers is too high."

Failure to recognize this has been a second reason hurting juniors' abilities to raise money. "When you sit down with an investor, it's important that you really understand why they are sitting across the table and why they are interested in your resource. Western companies often tend to be some of the worst offenders in this," said Jeremy South. "They don't spend enough time to get their message right. They think that China is just full of a bunch of people with lots of money who don't really know what they are doing. While this may be partly the case, what's driving most companies right now is the desire to secure the commodities that they actually need."

So what are Chinese companies looking for in their investments? The answer to the question has been evolving for some time, but in light of the government's recent crackdown on poorly executed deals, one can expect a growing focus by investors on their core commodities.

"They want production but they do not want to pay so much," says Rahn of Emerging Asia Capital. "I think it depends on what type of asset you are talking about. If it is coal, then they are looking for a turnaround on investment within one to two years, copper and gold are two to three years. But five to seven year investment horizons are not that appealing unless it is a major discovery and the infrastructure is good."

Demonstrating a quick window to production is a winner with Chinese investors. How companies go about this depends on the asset, but in the past year, Bandanna Energy, a Queensland coal explorer seeking to raise several hundred million dollars to fund their Springsure Creek project, has put more than a quarter of the company's capital worth into developing port capacity. Marketing that investment has already placed them in negotiations with a handful of Chinese SOEs.

"Securing that port capacity is a transformational event for the company, allowing us to move from being an explorer with a lot of coal on the ground to now actually having a pathway to production. Because we now have a pathway to production we are a unique opportunity for investment for near term coal production and supply," said Michael Gray, Bandanna's managing director.

Does this mean game over for smaller greenfield explorers who are still unsure of what is in the ground? Adam Myers, part-

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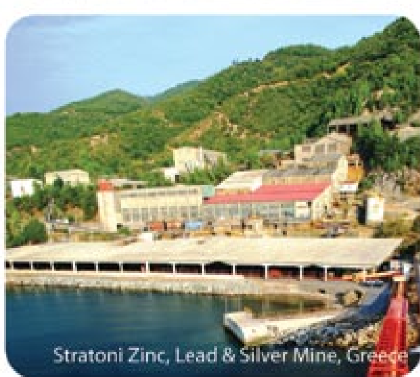
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Eldorado Gold is a leading, international, low-cost gold producer. The Company has seven operating mines, six development projects and various exploration programmes in Turkey, China, Brazil, Greece and Romania. By 2015, Eldorado aims to double its current annual gold production to 1.5 million ounces.

In China, Eldorado operates the Jinfeng, Tanjianshan and White Mountain gold mines. These produced over 314,000 ounces of gold in 2011 and make Eldorado the largest foreign gold producer in the country. Eldorado was the first North American company to build and operate a gold mine in China.

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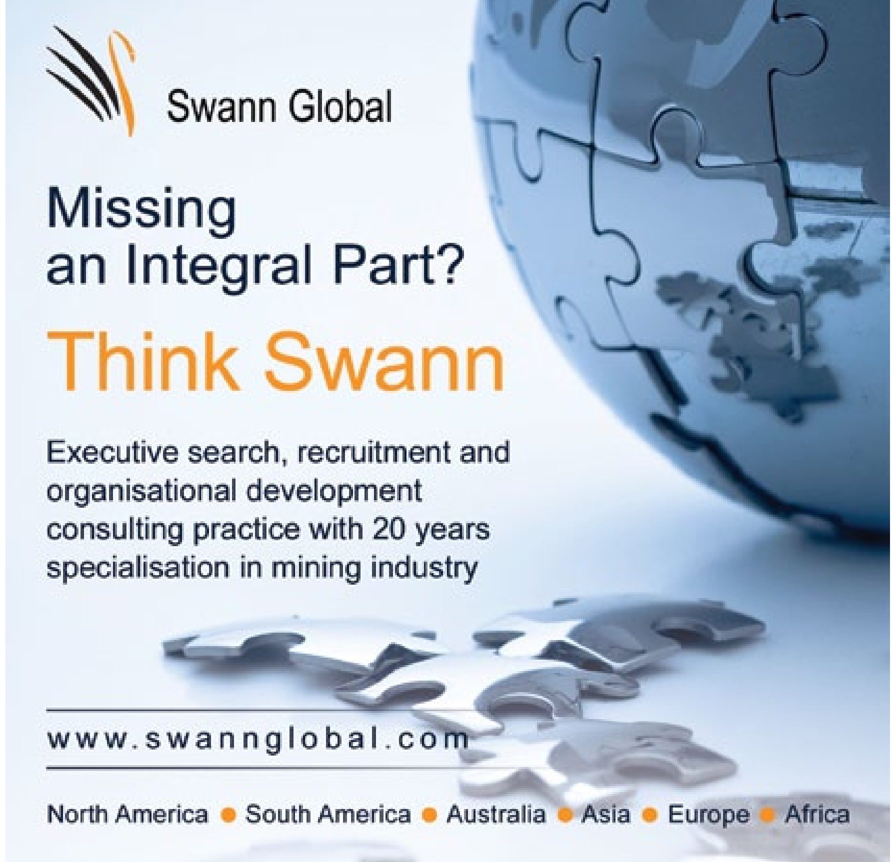
ner at accounting firm BDO, suggests that while greenfield interest by Chinese is possible, minimizing some risk prior to a deal is important: "While there might be a desire for a Chinese company to sign an off take with a greenfield exploration project, you will need to eliminate some of the geological risk to generate investment. It might be a good way to first raise some funds in Australia or Canada, start up the drilling, eliminate the risk and then start negotiating with the Chinese."

Patience is Key

Once you do get started in negotiations, awareness of the Chinese concept of time is crucial to getting through them. Communication issues and the Chinese need to create trust prior to a deal often delay negotiations significantly, so patience is the key to getting a contract signed.

Not all entities investing are slow, but generally speaking, most advisers involved in such negotiations place them in two groups: SOEs and private companies. Private investors can be more nimble, while SOEs tend to be slower, as being government owned involves having a more onerous approvals process, though many countries have also made it difficult by placing extra conditions on foreign government owned companies. "We get frustrated at times as advisers, because we sell our services for a fixed price–as they often want–and a six month project can suddenly become nine, 12 or 18 months, leaving us stuck with an inappropriate fee. In the meantime, they continue to ask questions throughout the process and re-visit the same things many times. Some are getting quicker, and some aren't. It really depends on the bureaucracy within particular organizations, and also on the messages they receive from up high, as the state plays a major role in deciding who goes into certain investments and when. Within a lot of the very big SOEs, there are many layers of bureaucracy in multiple departments, with so many stakeholders whose views have to be taken into account; but when it is decided from somebody at the top that a deal needs to be done, things often happen at the speed of light–we can be called in at 10 p.m. to complete a deal that has been running for six months by the next morning," said one lawyer involved in numerous outbound Chinese M&A deals.

Adam Myers attributes part of the blame to language issues. "I have been dealing with a potential Chinese mining investor for about 10 months now. The contact that I'm having is with a junior staffer who is an English major and he is doing project evaluation right now. The questions he has been asking along the way have been to really build his knowledge about projects and mining, yet in the same organization sitting above him he has experienced geologists. So it's quite difficult to bring this all together. There is a perception that the Chinese don't move fast enough; well I think a major cause is that there is an internal breakdown in communication in getting the message across to the right people. The English speaking front line negotiating team don't understand the questions that they are asked from a technical point of view, so when they translate the answers they get back, they might translate it correctly from English to Mandarin but they are not actually getting the geological or engineering meaning across to their superiors. This necessitates another round of questions to clarify these issues and this slows things down."



Building trust is another key element in scoring a successful deal and companies undergoing negotiations are advised to come to China as often as possible, with the more serious ones opening offices in the country to show their dedication. "Once you have built the relationships and have partners, they will not easily walk away from you. To have relationships, we have to be here," said Dev Randhawa, who is currently seeking to sell his Athabasca Basin uranium assets to Chinese end users. "We don't want to be bringing suitcases and then leave, which I find quite offensive. That is why we are opening a full time office in China. The questions you get asked in Asia are never the ones you hear in North America. The first question everyone asks is, 'Do you have an office in Beijing?' - how serious are you about doing business here? In Europe, they always want to know how much money you have; in North America, they don't care. Here, you have to be willing to spend time…"

Wayne Basford agrees: "The Chinese way of business is just completely different from the West; the Chinese will only do business with people they like. 'You came to Perth, we went out to dinner, we all got drunk, and you haven't signed the contract. A month later you come back to Perth, we all went out to dinner, got drunk and we still haven't signed the contract.' The West has no understanding or tolerance of why we have to go to dinner again and why it's taking several months for a contract to get signed. But that is how Chinese do business; just accept it. Patience is key. Just when you start thinking, 'I just can't do any more dinners, I just can't get drunk so much ever again' that's when you get the contract and the deal is on."

A New Way

Is the HKEx the Latest Fad in Mining IPOs?

As more miners begin to regard China as one of their main clients, the more they search for a better platform to gain the attention of Asian investors. As a result, the last few years have seen the Hong Kong Stock Exchange (HKEx) emerge as a strong contender for mining IPOs, more than tripling listed mining stocks in just four years. However, poor average performance of resource stocks has raised concerns about its ability to raise money as effectively as the more traditional exchanges like the TSX, ASX or the AIM market in London. Changes in the listing rules, introduced by the exchange in 2010, have made it easier for companies in pre-production to launch an IPO, but the city's capacity to properly evaluate natural resource listings has been questioned.

The first mining IPOs to occur were by large-scale Chinese SOEs who were seeking outward expansion and better financial and corporate integration with the world's top finance and service providers. "Hong Kong has a presence of 70 of the world's top 100 banks, so if a company needs access to other types of finance, then Hong Kong has a very competitive environment for such products. There are also many service providers in Hong Kong (legal, consulting, accounting, branding agencies) that have wide experience dealing with mainland companies, who also speak their language and understand their economic environment," said Simon Galpin, director-general of Invest HK, a government agency promoting the city as an investment destination for Chinese and international companies.

Seeing these benefits convinced many SOEs that listing in Hong Kong was the smart way to go. First came the large companies such as Chalco, which listed in 2001, Shenhua Energy in 2005 and China Coal in 2006. This encouraged international mining players to list as well; by 2008 there were seven mining listed entities, today there are ninety-eight.

However, industry experts have questioned whether the HKEx could really displace the well-established reputation of the AIM, TSX or ASX markets. The two major questions have been who the listing rules are best suited for, and, if you fit the bill, then is the investor understanding sufficient to make your listing successful?

To battle the perception that the exchange was too difficult for miners to list on and recognizing the reputation that it was gaining within the mining community, the HKEx undertook a rewriting of its Chapter 18 listing rules in 2010.

"Until two years ago, it was not totally user friendly and it was revamped to bring it more in line with international practice," said Julia Charlton, partner of Charltons, a law firm that assists companies to list on the HKEx. "It is much more objective, and it is easier for companies seeking to list to objectively identify the standards that they are seeking to comply with, whereas before it was more vague." As a result, the new Chapter 18 rules were changed to allow junior exploration companies to list, as long as they demonstrate sufficient indicated resources, using one of three major reporting standards (JORC, NI 43-101, and SAMREC) and have a competent person's report to substantiate it. There also has to be enough working capital for at least 12 months.

"This is obviously an important strategic move for the Hong Kong stock exchange. This will allow Hong Kong to present itself as an IPO venue for listings, not just in China, but also Central Asia," said James Phillips of Minter Ellison, who was involved in the amendment efforts. "On the other hand, Hong Kong perhaps does not yet have the depth of analytical capability in the broking houses covering the resources sector that you have in markets such as Australia and Canada."

Gaining that capability has been an uphill struggle reckons Chris Justice, who heads Quam IR, a service designed to help companies gain traction and attract awareness from Chinese investors: "Quam IR's first resource client, who was not an SOE, was a gold mining mid cap junior company that was listed on the ASX and had put together the largest collection of foreign owned gold mines in China. They did their secondary listing here in Hong Kong five years ago. We took them on as a client to

help fine-tune their message and their very good ASX investor relations materials for the Hong Kong market. We would take this company to visit investors and fund managers and they would say, 'Where is the cashflow? What do you mean this company does not have any cashflow… why are you showing it to me? What kind of company is this?' At that stage it was, of course, in pre production but investors simply did not understand the mining lifecycle. We had to fight a long battle to educate investors."

Nicholas Bias, head of investor relations for IRC Ltd., thinks that investor awareness is improving. IRC listed on the HKEx in 2010 and is an industrial commodities explorer and producer with operations in Russia's Far East close to the border with China. "You see in our shareholder base that we have the major mining investors in London: BlackRock, JP Morgan etc., but you don't see many large shareholders from Hong Kong. The situation is changing though. More mining companies are coming and more well established sell side analysts are coming. You also have more investors, and some of the really big global hedge funds setting up mining desks in Hong Kong," Bias said.

The successful bid to acquire the London Metal Exchange (LME) by the HKEx in July has arguably further cemented its edge in commodity markets and is drawing more mining and metals expertise into the city.

However, investor inexperience does not fully explain why HKEx listed mining stocks have been trading below their IPO prices. "In a weak market you already have valuations that are cheap. There is definitely a reluctance to take on an IPO risk of a new offering with assets and a new management team that are not necessarily known. This is more to do with the state of global equity markets at this point in time as opposed to some of these companies per se," explains Matthew Whittall, former Head of Global Metals and Mining Research for Renaissance Capital. "I think that within the China mining space there is definitely a requirement by investors to do considerable due diligence to make sure that they are comfortable with the assets, but when you already have world class companies trading at low single digits, then it is difficult for new IPOs to get away."

Sell Your Story

The path to listing in Hong Kong is not the easiest or the cheapest, but what it has demonstrated is a growing ability to provide a platform for mining companies to raise money close to their customer base. To be successful, however, one needs to have a China connection. "We have a variety of clients that are involved in a range of resources and stages of development; oil and gas in Central Asia, gold in China, coal bed methane in Australia and unconventional gas in China," said Justice. "We also have been in discussions with South American based coal companies and have clients in copper, uranium and iron ore, but the resource companies who have a tie back to China and Hong Kong are the most successful in raising capital."

Nicholas Bias agrees: "One of the first questions I usually get is why we are listed here. The answer is very simple. All of our assets are located very close to the China border in eastern Russia. We connect directly to railways in China and we supply 100% of our iron ore into China. Our projects, such as K&S, are being funded with Chinese finance and being built by Chinese contractors. So what we have in IRC is really a genuine Sino-Russian story. Much of what you see in terms of companies looking to list in Hong Kong has nothing to do with China but they just think that the equity is here and they go for it. So it can be an African gold miner or a Brazilian iron ore miner but really you have to ask the question, is it a Chinese story?"

"Getting closer to the demand side of the equation."

Interview with Eric Landheer, Head of Issuer Marketing Department, Hong Kong Stock Exchange

Please introduce us to the Hong Kong Stock Exchange and the role it is playing in the mining sector?

The Hong Kong Exchanges and Clearing Ltd. is a vertically integrated exchange. It is one of the largest exchanges in the world in terms of market capitalization as a public company. Our recent market capitalization is US$15 billion. At the end of last year, it was around US$17 billion and we were the largest exchange in the world. One of the reasons we are one of the largest exchanges is because we have a completely vertically integrated business model.

International companies are increasingly saying that demand and growth are coming from Asia, and China more specifically. If you go back 15 to 20 years, Asia and China were primarily a destination for investment. Today, they are increasingly becoming an exporter of capital. This is the fundamental shift that we have seen and it is one of the reasons why I have joined the Exchange.

Now, moving specifically to mining, we have done a lot of work in terms of making our standards more aligned with other exchanges and listing centers. In June 2010, we instituted our revised Chapter 18 rules. Chapter 18 says a mining and mineral or natural resource company with proven reserves, scoping studies, a competent persons report, and with sufficient capital for 12 months foreseeable needs around financing can list here. You do not have to be in production or be a profitable company. This is completely separate from our general listing rules, and is completely tailored to the mining and mineral and natural resource industries. Since we have made these changes, we have seen significant growth and interest. This is a key focus area for us. Today we have 82 energy companies and 94 pure mining and metal companies listed with us. The story behind this and why companies are listing here is first of all that we are a great platform on which to raise capital, but it is also about getting closer to the demand side of the equation, to customers, and to where the growth drivers are located.

What are some of the challenges that Chinese mainland companies have to go through to list on the Hong Kong Stock Exchange?

Well, I think this goes for all companies no matter where they are from. They need to have a good corporate governance structure and a good management team. In particular, in a challenging environment for capital raising like the one we have today, if you do not have a great story, strong controls in place, no strong management team, and of course some significant assets, then it is going to be very difficult to get listed. Obviously there are bad apples in every exchange. We do what we can to ensure that the companies that list here are of high quality, with high standards and controls. While we are making some of our rules more flexible, like Chapter 18, to facilitate these listings, we are also not opening up the door to junior explorers as of yet. We feel that the investor public here does not have a strong enough understanding of the risks associated with junior explorers.

Many stocks of HKEx listed mining companies are now trading at prices below their original listing price. What are the main causes for this?

The markets overall are extremely challenging. I have been in the financial industry for over 20 years and this is one of the most challenging environments I have ever seen for fundraising. I do not necessarily think this is an issue with the companies themselves who are applying and trying to list, it is rather the overall environment we are currently facing. In the mining and minerals and natural resources sector, there is a lot of concern about slowdown and demand from Asia, and China more specifically. This is hurting everyone, no matter where they want to list.

How do you see the development of the Hong Kong Stock Exchange in the near future given the current market environment?

We see Hong Kong as an important centre for mining and minerals and natural resource companies. It is an area we are very focused on and place much emphasis. Despite a very challenging environment, we believe that when things improve, Hong Kong has the ability to become one of the largest financial centers for the mining and minerals and natural resources sector in the world.

Raising the Bar

Efforts to Improve Chinese Mining Standards Provide New Opportunities for Services.

Hanking's Mengjia iron ore processing plant located in Benxi, Liaoning province. Photo Courtesy of SRK Consulting.

Long plagued with negative stereotypes concerning safety and quality, the Chinese government has funneled much effort towards raising the mining industry to global standards. The effects of these policies can be particularly observed within the services sector.

"China now has a very clear plan to develop it services sector as part of the restructuring of its economic growth model," said David Olsson of King, Wood & Mallesons. "While there remain barriers to entry, the market for professional services is opening up. As long as you are aligned with China's strategic goals, you will get a much clearer path to entry and expansion; if you are in areas that are already competitive and well-serviced by the Chinese market, it will be much harder."

In effect, this restructuring has manifested itself in the emergence of two specific areas. Where levels of expertise are already high, Chinese companies have filled the void, and their inherent capabilities doubled by ambition to expand outside China's borders, are increasingly placing them as reliable global service providers.

Where levels of standards are lower, foreign investment has been welcomed in order to contribute expertise and knowledge transfer to domestic players. "The focus of the international mining companies in the industry has shifted over the years from exploration to being more about the supply of commodities, while on the operational end it is largely about supporting the Chinese mining industry," said Peter Arkell of Swann Global. "The Chinese government has been very anxious to improve productivity, safety, and so on. So there's been an important place for international companies in changing that model."

Trends and Growth Areas

Whereas before, many international service companies came to China to cater to China's foreign players who could afford them, their diminishing number has forced many service providers to switch attention to Chinese companies. Traditionally, selling services to mainland clients has not been easy, but China's overseas involvement has served as a catalyst in changing this trend, and more foreign services companies are finding work with Chinese companies.

"For Tetra Tech, the market has changed from foreign mining companies looking into projects in China, to Chinese companies looking to do projects internationally. So, it has flipped 180º," said Brent Thompson. "For us, it has meant we have had to be nimble to adapt to this change. Now, roughly 70% of our work is for Chinese companies doing work internationally. It remains even more critical for us to remain in China given this trend because this is where the decision making is done. The headquarters of all these Chinese mining companies make the decisions on how to execute these international projects and who to work with. Moreover, Chinese companies like having such foreign counterparts here with whom they can interact."

Degrees at which profits come from international work varies company to company, but most service providers recognize the benefits of diversifying and focusing efforts on foreign bound Chinese players. Yonglian Sun, managing director of SRK Consulting in China argues that a key strength of having a China based office is not only to engage in domestic projects, but also to become the main contact for Chinese firms who desire to engage foreign consultancies in their overseas projects: "About 60% of our clients have projects inside China, and the rest are overseas: in Mongolia, Indonesia, Southeast Asia, Central Asia, Africa, or even Central or South America. Even though SRK Consulting has local offices around the world, Chinese clients often ask SRK China to take the lead in overseas projects because it is easier to communicate with us in Chinese, and even if they can speak English, it may be more convenient to use us as well. We would like to engage our local offices, but Chinese companies usually insist on having Chinese involvement."

While the opportunities posed by Chinese projects abroad have proven lucrative for many service providers with offices in China, there are signs that they are increasingly being engaged domestically as well. Within the engineering sector, for example, large multinational companies have long faced restrictions in the scope of their work. Simon Dai from Hatch says that challenges faced by Chinese companies abroad are making them more comfortable to seeking "more qualified

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After a presence in China of over two decades, in May, Hatch finally received their first Class A engineering license allowing them to practice a much larger scope of engineering work in the Chinese market. "We are seeing this not only abroad but also domestically. Before, Chinese mining companies only worked with domestic engineering firms, but now they are speaking with foreign professionals. We are getting more enquiries about our technologies and project services. The market is maturing and things are changing. China is starting to look more for technical solutions to improve their productivity."

Software and Resource Estimation

Foreign companies have been particularly successful in establishing a niche presence in areas where there is little domestic Chinese competition. Efforts to improve exploration, resource estimation and production methods have given a number of opportunities to automation and software companies.

"Within the software space for example, competition is mostly based on the price differential between foreign software and home grown software aimed at narrow market segments," explained Sandeep Ray, Director of Global Sales for CAE Mining. "Several local software houses are emerging in China, often catering to a particular commodity or mining method. To date, most of our sales and services have been centered around our flagship resource modeling and mine planning solutions. We can see increasing demand for our exploration solutions that are well suited to both large and small companies. We also expect our new CAE Terra equipment simulators to be popular in China as the adoption of mechanization in Chinese mines continues to increase in line with production rates."

One factor that has delayed the growth of these capacities domestically, and which still challenges the growth of such services, has been China's labor policies, which favor manual labor as opposed to automation.

"Although on the surface there is a lot of talk about improving efficiency, production, and minimizing maintenance, downtime and all of those sorts of things, the flip side of that is the loss of jobs. So outwardly they do want to be improving technology, but they are also being pulled in the other direction," said Cameron Dorr, general manager of Asia for Sedgman.

As a result of this challenge, engraining such technologies within the Chinese market has been a long process, but has ultimately paid off for those willing to put in the time and effort. Dean O'Keefe, group general manager for Micromine, who has worked on developing the Chinese market since 2000, said that it took coming up with various innovative approaches in order to succeed in transferring that knowledge to the market. Today, the company has around 400 clients in China. "Everyone is always very interested in good technology, but it is much harder to convince potential clients to make good use of that technology. The fact that we succeeded in doing this is why we were able to take off," O'Keefe said.

CAE Terra CAT 793F mining truck simulator. Photo Courtesy of CAE Mining.

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Resource estimation has also become a key growth area for international mining consultancies as they take advantage of the increasing spate of Chinese companies who either list or venture abroad and who thus are forced to transfer their Chinese estimation models to those accepted globally. The difference between globally accepted resource estimation codes and the Chinese version has been the key to this growing business. "Our bread and butter consulting is resource and reserve estimation. We take people's data and we tell them the size of their deposit. Now, the methodology to do that in the West are guidelines such as JORC. Thus we use our software to make step-by-step mathematical processes to quantify those resources under the framework of international guidelines. Now, in China, most of the resource estimation process is based on a more manual process called the polygonal method," said O'Keefe.

"There are definitely differences," said Yonglian Sun of SRK. "The Chinese system uses a three digit numbering code–111, 222, or 333–whereas JORC Code uses 'Measured', 'Indicated' and 'Inferred' terminologies, in order of decreasing confidence in categorizing the resources. With JORC Code, all data is available for audit, but China has long had a system similar to Russia's, in which lots of things are not digitized and it is very hard to get original sources of information. As a result, we often have to do a lot of confirmatory drilling to ensure that the data is reliable. We are sometimes unsure of how the initial data was collected, unlike under JORC Code, which requires companies to keep all original drilling and sampling records. This actually generates a lot of opportunities for us."

Consultancies

Challenges experienced by Chinese companies abroad have also resulted in the emergence of a new class of service providers, dedicated to making Chinese investments successful. As noted in the outbound investment chapter, numerous companies have faced difficulties in overseas acquisitions. Service companies have addressed these issues by helping companies from market research and geological help to negotiation assistance and community outreach. While Chinese companies began to employ such services earlier on in more mature markets, there are signs that such services are starting to be utilized in less developed economies as well.

Bantry Corp., a company that owns nickel ore deposits in Indonesia, has recently started to offer consultancy services to Chinese companies investing in Indonesian assets. "They are most interested in due diligence, and seek information on certain companies and assets as they encounter much difficulty in locating up to date and reliable information," said Vasily Tsarev, president of Bantry, speaking on some of the services that his company has been providing. "They seek recommendations on negotiation techniques and tactics, so that they can better define the financial aspects of a deal. The difficulties that they face is not that they are being cheated by local companies, but rather because they are not as experienced as the other party. There was one very large Chinese company that began investing in the Indonesian mining sector around three years ago, and they quickly suffered two or three failures with their Indonesian counterparts. Since last year, they have sought our services. Another area we help Chinese companies with is in community outreach. We have seen so many companies buy assets and bring their own workers from China, instead of hiring locals and this has often caused anger within the local communities. We are seeing more interest by Chinese companies to tackle these issues in the last year or two," Tsarev said.

The realization that community relations are critical to operational successes on the

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ground has come rather late to the mining industry but even in this space, opportunities are sprouting and Chinese companies are more willing to learn about how sustainability can help their operations. BSR, a non-profit membership organization that helps companies better integrate corporate social responsibility (CSR) into their operations, does not have many members in China so far, however, Terry Nelidov, manager for advisory services, said that interest is rising in this critical sector: "We believe it will happen in China as the country opens up more to the rest of the world, and as Chinese mining companies go overseas… China does not have the same tradition of mining activist groups that you have in other countries, so how can you expect its companies to be able to engage effectively with them in new countries outside of China when they do not have that experience at home?… Chinese companies have to decide that this is a priority, like transnationals did years ago with safety."

Chinese Domestic Players

Despite some of the improvement areas that the Chinese government has sought to plug through foreign investment and expertise, China's rich mining history has also produced a wealth of technologies and highly capable service providers, who are keen on offering their services abroad. Those with strong knowledge of Chinese mineral assets, often point to the fact that, by and large, many mines tend to be lower grade and geologically complex, and have thus brought about high levels of technical abilities in China that are not found in other countries.

"There are very many mines in China with very complex geology, and as a trend we are seeing that mines here are becoming increasingly deeper as companies try to reach ore deposits. China has a large amount of complex mines located under water bodies, or those defined by low-grade ore bodies, and these are very challenging for our design teams. Several years ago, most mines were less than 1,100 meters, but now mines that are over 1,100 meters are becoming more widespread and large scale. These are high temperature and high in-situ stresses mines with large scale operations," said Wu Shaohui, president of China ENFI Engineering Corp., a leader in project integration and resource development in the Chinese mining sector.

ENFI, which stands for China Nonferrous Engineering and Research Institute, is rooted in the country's former system of government managed research institutes, a setup adopted from the Soviet Union. These institutes supported the growth of China's mining industry through R&D, manufacturing and services. In 1999, around 80 institutes with mining related activities were converted into enterprises, with the goal of becoming self-sustaining and profit oriented companies.

Wu Shaohui, president of China ENFI Engineering Corporation.

"Chinese enterprises have a large focus on process development and related technology R&D because we do not have many high quality mineral deposits here. Most of the deposits are quite small and complex, which raises higher requirements on technology in order to economically recover minerals from the ores. Generally speaking,

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Jiang Kaixi, president of Beijing Institute of Metal and Metallurgy (BGRIMM).

Reduction roasting and ammonia leaching plant. Photo courtesy of BGRIMM.

the current technologies and equipment in China have already acquired all-round competitiveness and can satisfy the demands of the mining industry, particularly in respect to the comprehensive utilization of mineral resources. In dealing with low-grade and complex ores, our technologies have manifested good suitability, high efficiency and cost effectiveness. These features will be even more welcome at the time of resources depletion and degradation," said Jiang Kaixi, president of Beijing Institute of Metal and Metallurgy (BGRIMM).

BGRIMM, which was established in 1956, is largely focused on mineral processing and metallurgy for non-ferrous metals. Together, enterprises like ENFI and BGRIMM command tremendous resources and size. As an example, 70% of total non-ferrous mining operations in China use BGRIMM's technology.

Chinese service providers are also increasingly working on Chinese projects overseas, however, a growing number desire to work with international companies as well, and view diversification of their technical abilities as key to that growth.

"ENFI wants to develop its technologies involved in deep mining, oversize scale of mining, challenging mining technologies and also for processing mining. We will also be looking at comprehensive recycling solutions, construction of green fields, digital mining technologies and automation. In terms of strategy, we will be strengthening our training processes and will be sending our experts abroad to learn foreign technologies. This will guarantee our ability to expand our business inside and outside of China," said Wu Shaohui.

Although many Chinese companies seek to develop advanced technical abilities, Jiang Kaixi considers that the technical collaboration between China and the international mining industry has so far not reached its full potential: "I think today it is time to strengthen cooperation with foreign companies, but it is important to rethink the dimension and terms of these partnerships. For example, BGRIMM is very experienced in processing complex ores and developing complicated processes. In the meantime, foreign companies usually are very strong in equipment, automation and instruments, and have top international standards in engineering language. The cooperation that we need to build is to take advantage of both Chinese expertise and international strengths, and make a full utilization of our knowledge and skills to pursue investment into mining."

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What Next?

Majors Remain Optimistic.

Abdumalik Mirakhmedov, vice president of marketing for ENRC.

Data that China's economy has slowed to its lowest growth level in three years, doubled by persistent fears stemming from the European debt crisis continue to leave many companies with an uncertain outlook on minerals and metals demand. Moreover, news of rising stockpiles of coal, iron ore and other metals throughout China's ports are undeniably stoking fears amongst mining companies who are questioning what happens next.

Nevertheless, confidence that the poor economic data is but a bump in the road continues to be expressed by major producers, both foreign and Chinese.

China's commitment in fulfilling the lofty goals of their 12th Five-Year plan, doubled by rising production costs domestically also give reason for hope to Abdumalik Mirakhmedov, vice president of marketing for ENRC. The company, which is one of the world's largest producers of ferrochrome, has been operating in China since 2000 and is a large supplier of high carbon ferrochrome and iron ore into the country.

"There are massive plans by the Chinese Central Government to invest into the Gansu and Xinjiang provinces. That means that they will build more airports, roads, highways, and housing complexes, all of which are directly linked to steel production. For example, Baosteel, China's largest steel maker, is currently producing nine million mt of steel in Xinjiang province, but in the next 3-4 years they will be producing 15 millions mt. So our outlook on commodities is still very positive," said Mirakhmedov. "We believe that steel growth will remain, maybe not as high as before, and China's steel industry will continue to rely on foreign imports. Even though China has huge domestic iron ore production, they still cannot cover their own needs. The cost of production in China remains very high, their labor costs are rising, their raw materials grades are poor and the RMB is becoming stronger, which are all having a further impact on the domestic cost of production. With all these elements in place, ENRC will continue playing an important role in the import of raw materials to China."

However, an even more important sign is that China's largest companies remain strongly committed to leaving their mark on the global mining industry.

"Despite the global economic recession, we still have a firm base in our domestic GDP growth, and we will stick to our long-term development strategy," said Li Yihuang, Chairman of China's largest copper producer, Jiangxi Copper. "In the next five years, our target is to rank in the top three of the world's copper industry, to become one of the world's top 500 companies. We will step out of Jiangxi and face the whole world."