



Willis

MINING MARKET REVIEW

SPRING 2013

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INTRODUCTION

For the past few years global economic uncertainty combined with political upheaval has provided the mining sector with a volatile environment in which demand for metals, natural resources and commodities has ebbed and flowed considerably.

2012 has seen this trend continue, but has been marked by a slowdown in the growth of the Chinese economy, leading to demand for many commodities dropping dramatically and causing those prices to tumble.

Costs have been rising in the mining sector and these pressures persist, particularly with regard to employment. With cost containment and control being key levers in the face of falling commodity prices, workforces are being cut, mines are being closed down, projects are being delayed, scaled down significantly or cancelled, and orders for new plant and equipment are being deferred or reduced. Furthermore, government pressure to increase taxes and royalties is not helping an industry struggling within this difficult trading environment.

Infrastructure and the supply chain are becoming increasingly important factors in the success or failure of projects. More often than not, deposits are located in remote areas and efficient transport networks of roads and railways together with port facilities are crucial. In many of the countries in which mining is a core industry, the infrastructure is constrained which increases risk, limits growth and places a burden on development.

Against this backdrop, pressure from indigenous populations to gain greater benefit from the natural resources located on their lands has continued to grow, leading to social unrest.

As the imperative of investment returns remains unchanged, the mining industry faces an unprecedented number of challenges.

We have therefore focused this edition of our Mining Market Review on seven of the leading, closely interwoven issues to face the mining market today:

- Resource nationalism
- Social licence to operate
- New markets
- Costs
- Infrastructure
- Supply chains
- Skills shortages

We have explored the risk and insurance considerations, together with an overview of the key insurance classes that are affected by these issues.

“Globalisation’s taut interconnectivity demands that leaders constantly adapt to survive. In an era where management of crisis and the unexpected is the norm, leaders are required to operate in a zone of continual uncertainty. More than ever they need to be in touch, sure of their facts and supremely agile. Strategy will often take second place to subtlety”

Control Risks



10 TRENDS WITH AN IMPACT ON THE MINING INDUSTRY

1. The world holds its breath over China
2. Time-lag between prices and public expectations
3. Margins in the mispricing of political risk
4. Game-changing technologies are not science fiction
5. Considering the resource blessing
6. Bearing the costs of the build-your-own model
7. Demands for transparency becoming clearer
8. The rising tide of middle classes
9. Answering to many carbon regimes
10. Arctic ice melt: the opening of a new mining frontier

Source: Oxford Analytica

Our over-arching conclusion is that mining companies need to review their risk and insurance requirements more frequently and more dynamically. The trading and financing environment is changing so quickly, that decisions made in the recent past may no longer be effective, in relation to:

- Uninsured versus insured risks
- The optimum risk retention point for mining companies, where they transfer risk
- The type of coverage that is being purchased in the insurance market.

These trade-offs require careful consideration, given that mining companies and insurers often have differing views on the level of risk and its pricing. This is particularly the case for political risk insurance, as well as natural catastrophe and business interruption coverage for property insurance.

The insurance market has been relatively stable financially throughout the credit crunch and its impact on global growth. Insurers in the mining sector, however, have been tightening their pricing, capacity and coverage following a period of poor underwriting results at the height of the mining cycle.

Our secondary conclusion is that insurers need to be more adaptable and innovative to enable them to make adequate profits, while continuing to provide solutions that take into account the very different circumstances that mining companies find themselves in.

We hope this Review will prove a useful and interesting insight into the key challenges facing the global mining industry in the year ahead.



Andrew Wheeler
Mining Practice Leader





RESOURCE NATIONALISM

THE RISE OF RESOURCE NATIONALISM

THE WORLD'S POPULATION HAS ALMOST DOUBLED IN THE PAST 40 YEARS TO NEARLY 7BN. EVERY YEAR WE ADD A FURTHER 77M PEOPLE TO THE PLANET, SO BY 2050 THE WORLD'S POPULATION COULD HIT 9BN. AS A RESULT, POPULATION GROWTH NOW REPRESENTS ONE OF THE BIGGEST CHALLENGES FACING THE WORLD TODAY. THIS IS PLACING INCREASING DEMANDS ON THE WORLD'S NATURAL RESOURCES AND THE STRUGGLE FOR THESE RESOURCES WILL CONTINUE TO SHAPE THE GEO-POLITICAL LANDSCAPE FOR DECADES TO COME.

Increasingly, resource-rich countries in emerging markets are flexing their muscles as they seek to take a greater share in the proceeds from strategic projects. Ernst & Young's annual Business Risks Facing Mining & Metals Report 2012-2013 names resource nationalism as the number one risk for mining and metals companies around the world.

"Resource nationalism is not a new phenomenon but has risen to prominence during the latest so called commodity 'super cycle'. We have witnessed a domino effect as country after country has sought to extract a fairer share of the rewards from depletion of its mineral endowment. Resource nationalism is regarded as the top risk of doing business in metals and mining whether that is in developed or developing economies," says Ernst & Young.

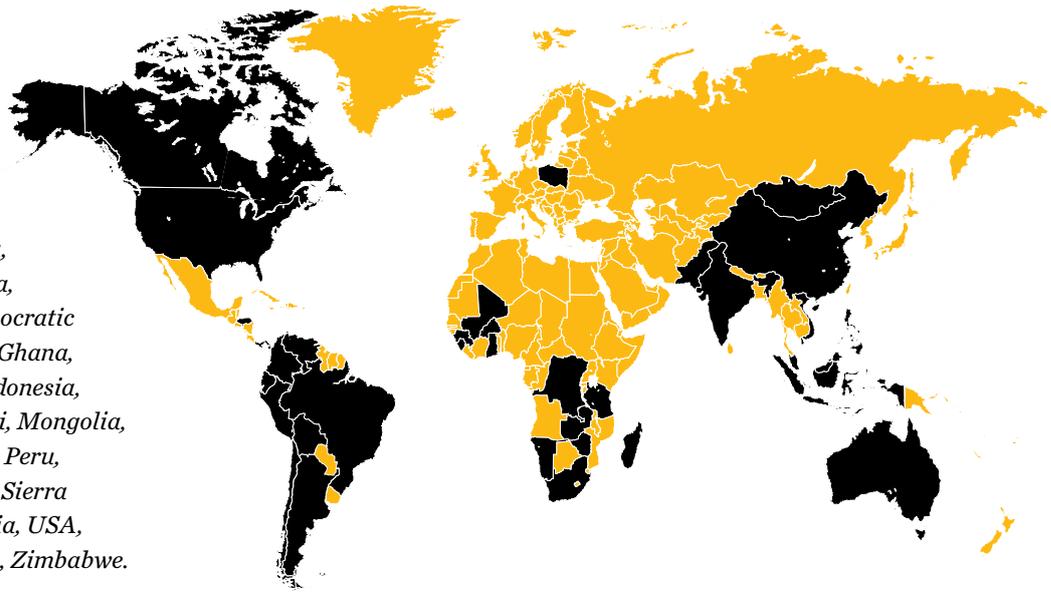
Deloitte adds *"Nationalisation or nationalism can take on many forms such as ownership, royalties, resource rents and even control exercised by government investment boards or exchange control departments."*

The decision of the Kirchner regime to confiscate Repsol's 51% stake in YPF, Argentina's biggest oil group, is an example of a new form of expropriation. Increasingly, what we are seeing is a more indirect or insidious form of government intervention referred to as 'creeping expropriation'. This substantially deprives a foreign investor of the use or benefit of their investment even though formal title may continue to vest with the foreign investor.

A GLOBAL SPREAD

Government expropriations, however, are no longer restricted to populist Latin American governments under the inspiration of Venezuela's Hugo Chavez. In the past two years alone, more than 20 countries have announced or implemented plans to increase the government's percentage of the profits from mining projects by increasing taxes or royalties. Nor is resource nationalism the preserve of emerging market economies. For example: in March 2012, the Australian government passed the Minerals Resource Rent Tax which imposes a 30% tax on iron ore and coal profits in excess of a certain amount.

Argentina, Australia, Bolivia,
Brazil, Burkina Faso, Canada,
Chile, China, Colombia, Democratic
Republic of Congo, Ecuador, Ghana,
Guinea, Honduras, India, Indonesia,
Madagascar, Malaysia, Mali, Mongolia,
Namibia, Panama, Pakistan, Peru,
Philippines, Poland, Quebec, Sierra
Leone, South Africa, Tanzania, USA,
Venezuela, Vietnam, Zambia, Zimbabwe.



TAX CONTAGION 2010-2012

This map highlights jurisdictions that have sought to increase the host Government's share of mining revenues over the period 2010-2012, primarily through the introduction of, or increases in, royalties and a range of taxes (including corporate and customs taxes)

Source: Ernst & Young 2012

Whilst resource nationalism has often been correlated with the rise and fall of commodity prices – when prices fall governments tend to loosen their fiscal regimes in an effort to encourage foreign domestic investment, but in boom times governments then demand a bigger slice of the pie.

However, it is a mistake to think this phenomenon is cyclical. Resource nationalism is now on the rise even though commodity prices have begun to slip. Where once expropriatory acts may have been driven by purely nationalistic policies that appeased the electorate, the resurgent resource nationalism of the 21st century now has wider political and social drivers in addition to the traditional economic ones.

The danger for mining companies, as Ernst & Young outlines, is that *“although the wealth generated from resource endowments is increasingly shared with the countries, the risk remains with the mining companies. Authentic engagement between host governments and mining companies is required to ensure the mining company risk / return balance is understood.*

“Mining companies can select where they wish to operate once the geological parameters of a deposit are understood. The decision to invest further and commit fully to developing a project is only undertaken on high quality assets with long life potential in stable political jurisdictions.

“If the parameters are not met, or if the goal posts are shifted (or are perceived as likely to shift), the companies have the choice of whether to invest or not. Similarly, investors also have choices and they may choose not to invest in resource companies if risk adjusted returns from those companies lag other sectors.”

“The outlook for global resources is one of supply disruptions, volatile prices, environmental degradation and political tensions over resource access”
Chatham House

SOME RECENT MINING POLITICAL RISK INCIDENTS

1 ARGENTINA: In October 2011, the government ordered the proceeds of export contracts of mining and energy companies be repatriated locally.

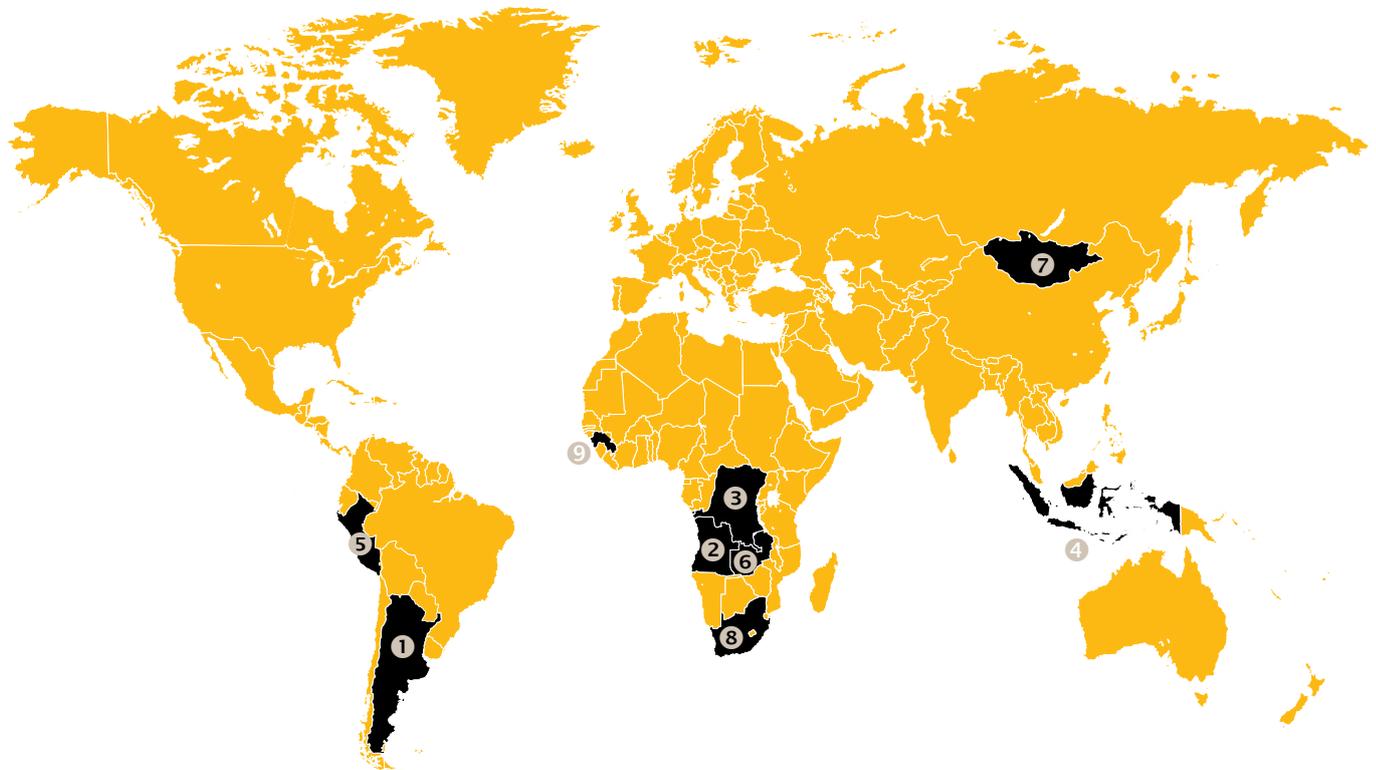
2 ANGOLA: In September 2011, Angola adopted a new mining code which provides that, in return for granting mining rights to an operator, Angola is entitled to at least 10% ownership in the operator or the minerals being extracted.

3 DRC: Termination by the government of the Democratic Republic of Congo of its copper and cobalt mining contracts with First Quantum Minerals Ltd for the IFC-backed Kingamyambo Musonoi Tailings (KMT) project, following a review of 61 mining contracts. The review was launched in 2007 by the Congolese government in efforts to boost the country's revenues from the mining sector and bring contracts in-line with international minimum standards.

4 INDONESIA: In March 2012, Indonesia announced foreign ownership of certain mines would be capped at 49%. Those foreign investors holding interests above this threshold have 10 years from the start of production to reduce their interest to the permitted levels. Also, in May 2012, the Indonesian government announced a 20% tax on exports of unprocessed ore.

5 PERU: As of October 2011, mining companies must pay more in taxes for their mining activities. The new law distinguishes between those companies that have negotiated stabilisation clauses with the government and those that have not.

6 ZAMBIA: In October 2011, the Zambian government announced plans to increase the country's interest in mining projects from 20% to 35%.



7 MONGOLIA: In September 2011, the Mongolian government sought to renegotiate its 2009 investment agreement with a joint venture mining project at the USD 6.2bn Oyu Tolgoi mine which would mean that it could increase its 34% share in the project to 50%. The government has since reaffirmed the original agreement that this increase can only take place in 2040 once the investors have recouped their initial investment. This change only came about following the election of the Mongolian People's Revolutionary Party which placed a higher priority on developing Mongolia's mineral resources and reopening negotiations with the mine operators.

8 SOUTH AFRICA: Following the passing of the South African Mineral and Petroleum Resources Development Act 2002, together with the Broad-Based Socio-Economic Charter, 15% of mining companies' equity must be owned by historically disadvantaged South Africans (HDSAs) and 26% of mining companies equity must be owned by HDSAs by 2014.

9 REPUBLIC OF GUINEA: In 2008 the exploration and mining rights to Simandou blocks 1 and 2 were expropriated by the mines minister during the rule of former president Lansana Conte and subsequently awarded to BSG Resources and Vale. In September 2011 a new mining code was adopted granting Guinea the right to own up to 35% of the share of capital of mining companies in Guinea.

However, as Ernst & Young warns, once committed it may be hard for the mining operator to change track, while its investors are much more able to simply liquidate their positions and reinvest elsewhere. Ernst & Young has provided some tips on what mining companies are doing to manage their exposure:

1. Undertaking authentic, multi-level engagement with national and local government and affected communities
2. Seeking to understand the needs of stakeholders and customising their engagement accordingly
3. Developing a genuine empathy for the host country, its people and related issues
4. Understanding and engaging respectfully with stakeholders, regardless of whether they agree with all the expectations, demands and requests
5. Framing negotiations with the long term in mind and seeking 'win/win' outcomes in that period, which has the benefit of mitigating the risk of future challenge and renegotiation.

FURTHER MITIGATION STRATEGIES FOR INVESTORS INCLUDE

- Foreign investors can seek to include in their agreements either stabilisation clauses or adaptation clauses. A contract stabilisation (or 'freezing') clause seeks to preserve the sanctity of the contract against the sovereign right to change the law. However, the reality is that foreign investors are often powerless to prevent changes to these freezing provisions.
- Investors may also be able to protect their investment through existing Bilateral Investment Treaties (BITs) by ensuring they structure investments through a company in a jurisdiction that has a BIT with the state where the investment is being made. BITs allow an investor to bring a claim in international arbitration. However, the mixture of an award, the possibility of enforcing against commercial assets, moral pressure from the World Bank and diplomatic pressure may no longer be sufficient to ensure arbitration awards under BITs are met. For example, in the case of Repsol, although a BIT between Spain and Argentina has been in place since 1991, Argentina has yet to honour awards going back to the debt crisis of 2000/2001 and looks like it has no intention of doing so.
- Foreign investors may also mitigate the risk of resource nationalism by currying favour with the host state by adopting a sound corporate social responsibility strategy, such as healthcare initiatives, building schools and other community projects. However, any assumption mining companies will avoid increased taxation simply because they have established good relations with local communities is unrealistic.
- Alternatively, investors may wish to protect themselves with political risk insurance. While the protection may be narrower than that provided by a BIT, it provides a degree of flexibility as the investor can tailor the precise terms of cover as required.

"Governments around the world are exercising several forms of resource nationalism, from mining industry privatisation and expropriation to windfall taxes, resource taxes and export controls, making it harder for mining companies to accurately forecast production schedules, understand long-term risk profiles or develop models to guide decision making over time. Miners need to work to strengthen their relationships with national governments, diversify their commodity mix and geographic area of focus, and demonstrate the industry's value to local governments and citizens"

Tracking the Trends 2013, Deloitte

INSURANCE CONSIDERATIONS

The main insurance consideration in the face of resource nationalism is political risk insurance as outlined below.

Political risk

Typically, mining investors and operators are planning for the long haul – they are looking to the next administration or even the one after that. Insurance can provide long-term security both for the operators and for those financing the project.

Resource nationalism and business interruption as a consequence of strikes probably represented the two biggest risks facing mining companies in 2012 and this trend is set to continue for 2013. The other challenge facing mining companies, particularly for capex programmes, will be access to medium-term financing – the cost of which is likely to increase due to the capital constraints imposed upon banks as a consequence of Basel III.

One of the primary concerns is expropriation risk and the associated physical loss and damage. The recent Arab Spring and continuing Middle East unrest is indication of the violence that can follow, or be the cause of, political upheaval. A key question for insurance buyers is which type of cover to purchase. Political risk insurance and terrorism cover are sometimes confused, with companies wrongly believing that their terrorism insurance will provide a payout after some form of political violence. Following on from the uprising in Thailand, a number of people found out too late that terrorism coverage would not respond and they should have had political violence cover.

“Post the introduction of MRRT in Australia many African governments are starting to consider resource rent taxes or windfall taxes. Ghana and South Africa both considered this, though this seemed to disappear when commodity prices started dropping. On the other hand, in September the Ivory Coast government proposed a new windfall tax for mining companies”

Deloitte

Political risk insurance includes forced abandonment - if you are required to exit the country or abandon projects as a consequence of the insured's own government actions. For example, the UK government advised companies to withdraw from Libya, which they did, mostly leaving all their assets and equipment behind.

Companies can assess commercial risk relatively easily but political risk is harder to measure. Insurance can be an effective risk transfer option for risks linked to resource nationalism, however, so far not all mining companies have recognised the threat.

Market capacity for 2013 is likely to increase due to increased reinsurance whilst pricing will likely remain static for the foreseeable future.



CASE STUDY

In July 2012, the Bolivian government announced the nationalisation of a silver and indium mine, Mallku Khota operated by a Canadian firm, the third major nationalisation project within four months.

The mine, valued at USD2bn, produces indium and has been operated by a subsidiary of the Canadian company South American Silver (SAS) since 2007. In May 2012, protests erupted and one person died. Two months later, some of the mine engineers were kidnapped along with a local policeman.

At the time the government stepped in and negotiated the release of the hostages. The mining company believed the government had negotiated without having to give in to demands to relieve the Canadians of control of the mine.

However, just one day later the government announced plans to cancel the SAS concession. By October SAS had notified the government of a formal dispute, triggering a six-month cooling off period but potentially leading to international arbitration.

This is just one example of where a mine operator had felt the contract was secure only to have the landscape changed overnight.

"In Australia, new carbon tax regulations that came into effect on July 1, 2012 charge companies deemed to be high carbon emitters A\$23 per tonne of carbon dioxide released. This rate will run until 2013, after which it will rise in line with inflation until 2015 and then be fixed by the market"
Oxford Analytica

TYPES OF POLITICAL RISK INSURANCE FOR MINING PROJECTS:

Confiscation, expropriation and nationalisation (including licence cancellation)

Confiscation, expropriation and nationalisation (CEN) insurance forms the central pillar of cover, offering protection against acts of a foreign government that could deprive the project sponsor of its ownership or equity in the project company, its right to extract the resources, remove the extracted materials, or use its equipment to operate the project facilities. This can include cancellation or termination of any concession or operating agreement provided to the project company, forced abandonment of the project, selective discrimination by the host government as well as forced divestiture of the project assets. Cover for 'creeping expropriation', which is a series of acts across a period of time that ultimately have an expropriatory effect, can also be provided.

Embargo

Cover can be provided to protect the project company against the introduction of any law, order or decree including the cancellation or non-renewal of any valid import, export, or transit licence which prevents or delays the import or export of goods and services into or out of the host country. This is particularly relevant to recovered commodities that are to be exported for overseas refining or sale.

Political violence

Political violence protects against losses resulting from damage or destruction of project assets due to events such as war, civil war, riots, strikes, civil commotion, sabotage, terrorism, insurrection, rebellion, revolution, coup d'état or malicious damage. It is also possible to cover the resultant business interruption following a physical damage event.

Currency inconvertibility / exchange transfer

Cover can be provided against the inability of the project company to convert local currency into freely convertible currency such as US dollars or the inability to transfer hard currency funds out of the host country for the purposes of remitting revenues or profits back to the project's sponsors and/or to service its debt obligations. Situations where the project company is unable to make a deposit due to a government action can also be covered where currency cannot be remitted following the cancellation of a permit allowing the project company to hold off-shore accounts.

Breach of contract

This covers the breach of specific contracts by host governments such as a joint venture / production sharing agreements or off-take contracts where government or state-owned entities are off-takers of the resources being produced. This may take the form of arbitration award default which can sometimes be extended to include arbitration frustration or denial of justice type covers. Where sovereign guarantees are issued to cover the performance obligations of the off-taker, non-honouring of the guarantee can also be provided.

THE RISK OF UNDER-VALUING POLITICAL RISK INSURANCE

There can be significant differences between the nominal price of investing in post-conflict countries and in those perceived to be more stable. Within this difference lies a huge margin where companies have misjudged political risk.

It takes the world a long time to shake off violent television images of high-profile conflicts, often leaving a significant lag for investor perceptions to catch up with realities. In fact, there are often more forces that accelerate a post-conflict nation's stabilisation than for other countries. As these weak states seek to encourage investment and generate revenue through natural resource exploitation, they are often assisted by international organisations like the International Monetary Fund and World Bank, as well as other donor groups. The presence of such external parties can have a positive effect on a resource governance regime, adding an unusual and often unseen degree of stability to these countries. Further, as these states compete for capital investment, they have an incentive for clearer mining investment frameworks.

The carbon tax debate has no doubt been quieted as the imperative for growth itself has spoken louder than the desire for greener growth. Nonetheless, the carbon regime agenda is likely to experience a new drive in 2013, with a proliferation of frameworks and compliance requirements that would impact mining companies' ability to push forward with their own growth strategies.

From the host government perspective, research on the "resource curse" shows that countries which are highly dependent on revenues from oil and minerals tend to score lower on the UN Human Development Index, exhibit greater corruption, have a greater probability of conflict, have a larger share of their population in poverty, devote a greater share of government spending to the military, and are more authoritarian than those with more diverse sources of wealth.

However, there are encouraging signs that the curse can be broken – even giving rise to a relative "resource blessing" as compared to neighbours without similar resource endowments - given the right conditions. Notable governance initiatives have been launched by civil society, industry associations and international organisations, based on successful collaboration with the industry.

The International Study Group for the Review of African Mining Regimes was established under the auspices of the UN Economic Commission for Africa and the African Union to promote improved tools and actions to enhance the contribution of mining to sustainable development. The Rio + 20 Summit in June 2012 built on the 2002 Johannesburg's Action Plan that acknowledged the role of minerals in development and the need to enhance its contribution to sustainable development.

Perhaps the most tangible results can be found at the local level, where mining companies are acting ahead of, and often beyond, regulatory requirements with regards to measurement, mitigation and monitoring of social impacts. Formalised teams and methodologies dedicated to conducting socioeconomic impact assessments (SIAs) are increasingly common and some leading companies have developed their own in-house 'toolkits'. Community agreements are becoming usual practice either as a matter of a legislative requirement, or good practice, or both.

The industry's learning curve to date has continued to yield greater agility and understanding in anticipating and reacting to localised problems and building a social licence to operate both in particular locations and as an industry more generally.

Compiled by Oxford Analytica



SOCIAL LICENCE TO OPERATE

THE RIGHT TO MINE

OPERATORS ARE FACING INCREASING CHALLENGES IN WINNING A 'SOCIAL LICENCE TO OPERATE'. MANY JURISDICTIONS ARE CHANGING THEIR ATTITUDES TOWARDS MINING PROJECTS, MAKING IT MORE COMPLICATED, LENGTHY AND EXPENSIVE. THIS TREND IS EXPECTED TO ESCALATE THROUGH 2013 AND BEYOND.

Generally speaking, the social licence to operate is governed by a number of issues which can be divided into three categories: environment and pollution; sustainability; and land rights. In 2013, it is increasingly easy for local people to oppose mining projects and to force the cancellation of rights already granted.

ENVIRONMENT

Pollution is one of the highest liability risks facing a mining operation. In recent times, there have been a number of incidents involving pollution from tailings dams, for example. When these dams burst the volume of water can destroy nearby villages and businesses. Not only is this extremely dangerous and potentially life-threatening for the local population, it can cause massive disruption for the mine operation and also threaten the continuing licence to operate thanks to more vehement opposition from the local population and government.

A second major pollution risk comes from toxic substances stored at the mine. These substances, for example, are commonly used in the extraction processes used for gold and silver. Improperly stored substances pose a real risk to the safe operation of the mine and, ultimately, increase the risk of a serious pollution incident and possible loss of licence.

SUSTAINABILITY

As commodity prices fall, the time required to generate profit at a mine has been increasing – one mine in Mongolia is expected to take 25 years to generate its first profit. Mine operators are duty bound to investors and other stakeholders to return a profit as soon as possible and also to ensure that the choice of mine location will result in a profit at all. Mine operators need to be confident they will be able to maintain their licence for as long as it takes to see profitability.

Recent experiences in Australia, for example, have shown this can be easier said than done. Following a serious injury or death at a mine, the Australian authorities are now revoking the licence to operate until the incident is thoroughly investigated and the authorities are confident that the mine is operating safely and properly. This in itself is no surprise; however, five years ago the process of acquiring a licence took about six months to complete. In 2013, this same process is more likely to take two or three years.

"Environmental change and degradation are challenging business-as-usual approaches to resource extraction, production, processing and consumption. Most ominously, climate change is expected to increase the frequency and severity of extreme events such as heat waves and floods, with the potential to disrupt resource production and further destabilise tight international markets"
Chatham House

LAND RIGHTS

Local populations have been increasingly vocal and organised in opposition to mining projects. Although such projects are welcomed in terms of job creation and wealth stimulation in the immediate vicinity, local populations are becoming more demanding in terms of reward for the indigenous peoples.

Opposition to mining development may delay the granting of any licence to operate while the various interested parties negotiate employment rights, compensation, remediation works and infrastructure.

“Mining companies are already adopting global transparency standards to counter the risks posed by corruption, but they will need even more responsible practices in the face of heightened regulatory scrutiny, both of themselves and their partners, suppliers, service providers, vendors, agents and intermediaries. Combating corruption will require the adoption of strong corporate practices and procedures, including third-party relationship management, internal compliance programmes, and investigation readiness”
Tracking the Trends 2013, Deloitte

Construction projects need to be handled sensitively – particularly if they involve large tracts of land or structures, such as dams and reservoirs, which affect the local community adversely. Mine operators need to be aware of the legislative environment throughout the build process – changing regulations may give local opposition a stronger voice.

Any damage that occurs during construction, that was subsequently found to be in breach of any licence to build, can also fuel opposition to projects and could result in non-payment of claims. The construction insurance markets could possibly see this as a material fact or a change of such, particularly if adjusting claims proves difficult due to restrictions imposed by local authorities.

Indonesia: Indonesia’s concerted drive to become a top 10 global economy by 2025 is partly grounded in the fact that the country holds the fifth largest gold reserves in the world. However, myriad issues have badly affected the development and continued running of the sector, potentially cutting off much-needed foreign investment.

Anti-mine sentiment is at an all-time high with local communities coming into conflict with foreign-owned mining companies and local government officials playing off both sides. Uneven regulation and local unrest have posed major problems for foreign investors with major sites, such as Freeport-McMoRan’s gold and copper mine, experiencing a month long strike last year over pay disputes. The mine’s location, in the remote Papua province, has rendered the situation even more problematic with allegations from activists that the company has bribed authorities and been complicit in human right abuses perpetuated by the Indonesian government and armed forces on indigenous Papuans.

Peru: Peru is the second largest global producer of copper, silver and zinc and the country has experienced hundreds of conflicts concerning the exploitation of these natural resources. The government has struggled to successfully mediate between concerned townspeople and foreign-owned mining companies. President Ollanta Humala’s approval rating sunk to a 45% record low this summer, reflecting the growing resentment of Peruvians around increased social conflict and economic mismanagement.

One example of this is the US-based Newmont Mining’s USD 4.8bn Conga gold and copper project. Work was suspended in a dispute concerning water supplies. Canadian firm Barrick Gold were also forced to suspend production in their Ancash-based mine as protests about water quality resulted in one dead and four injured.

LEGISLATION BECOMING CLEARER

Legislation around transparency – both in the realm of payments and in material supply chains – is pushing ahead, according to Oxford Analytica. In the near-term, the following rules will cover many of the major resource companies of the developed world:

- Controversial sections of the 2010 Dodd Frank Wall Street Reform and Consumer Protection Act are set to impose onerous compliance burdens on the industry. The Securities & Exchange Commission estimates the initial compliance cost of all three relevant sections combined at USD 6bn-USD 7bn, with ongoing costs of an additional USD 500m-USD 700m dollars per annum.
- Meanwhile, a draft law requiring European Union-based mining, oil, gas and logging companies to declare payments made to non-EU governments, starting from EUR 80,000 would put the EU in line with (and possibly ahead of) other developed country initiatives. A plenary vote in the European Parliament is scheduled for early 2013.

In parallel, Oxford Analytica warns, more focused initiatives have emerged, with the OECD's 'Due Diligence Guidance For Responsible Supply Chains Of Minerals From Conflict-Affected And High-Risk Areas' guidelines acting as the overarching framework for engagement. Still, the lack of genuine co-ordination and agreement between certification and traceability initiatives - particularly between competing donors and their civil society partners - has further complicated an already nebulous mineral policy landscape.

As a result, international pressure will probably increase for further clarification of mineral trade chains. The range of regional mineral tracking and certification measures will increase by the end of 2012. The World Gold Council's Conflict-Free Gold standards and measures related to tin-family metals in the Great Lakes region show the expanding reach of such expectations.

Some in the industry worry the proliferating rules will impose a heavy compliance burden and will be counterproductive, since they could antagonise producer governments and provide commercially sensitive information to rival companies with fewer qualms (and public pressures). Thus, they allege, resource companies from developed countries would be at a disadvantage to emerging market players.



"On December 5 the Colombian Government and the country's largest rebel group - the Revolutionary Armed Forces of Colombia (FARC) - reconvened for the second stage of peace talks. As a show of faith, the FARC pledged to cease kidnapping and declared a unilateral ceasefire until January 20, 2013. The FARC's actions in these initial stages of peace negotiation are a strong indication that there could be a reduced risk of kidnaps for ransom in Colombia."
Willis

INSURANCE CONSIDERATIONS

Liability and Directors' and Officers' insurance are two of the key considerations in issues surrounding a social licence to operate.

Liability

The mining sector continues to have a high profile in the liability insurance market, having generated more than USD400m of losses. The key drivers to this loss activity include Chilean Employers Liability claims, Australian pollution claims and a notable increase in subsidence claims that were once a grey area of coverage between property and liability insurances.

Employers Liability in Australia has become an area of focus, as the business model has evolved to the outsourcing of labour, resulting in a shift from when miners were employees and injuries were covered by the Workers Compensation Act (WCA) scheme. Whilst many claims continue to be settled under the WCA, the government is now bringing recovery actions against mining companies for negligence, resulting in a public liability claim. In the past, a civil action could not be filed by an individual who made a claim under the WCA, but the constitutional court has overturned this ruling, opening the way to litigation.

In South Africa, the insurance industry has seen a wave of litigation (class actions) from miners suffering from Silicosis. As in Australia, these claims have been covered under the COIDA (Compensation for Occupational Injury and Disease Act) scheme. A number of mines, however, are owned by companies domiciled outside the Republic of South Africa and actions have subsequently been brought against the parent company, giving rise to public liability claims.

"Corporate social responsibility extends beyond impact assessments and now requires meeting the expectations and demands from Non-Government Organizations (NGOs) and other relevant stakeholders, and operating with higher levels of transparency and sustainability. Mining companies will need to commit to a higher level of responsible behaviour by embedding sustainability into their internal metrics, their capital project methodologies and their negotiations with local communities, governments, NGOs and regulators"
Tracking the Trends 2013, Deloitte

Other examples of incidents that highlight the risk associated with employers and contractors liability include the Xiaojiawan coal mine in China's Sichuan province (19 fatalities, 120 trapped); the Coahuila coal mine in Mexico (6 fatalities, 200 evacuated); and the Orientale Province coal mine shaft collapse in the Democratic Republic of Congo (60 fatalities). In all of these cases, actions could be brought against the owners and operators of those mines, alleging negligence in relation to the protecting of employees and contractors.

The spotlight has also turned to tailing dams. One such example that has recently come back into the public eye is the 1998 Boliden dam failure near Donana National Park in Spain that caused large scale pollution to a National Heritage site. After 14 years in litigation, insurers have just settled this claim for around USD90m.

The trend in the liability markets cannot be generalised, but it has overall seen a modest softening of rates. The small increase in the overall market underwriting capacity should continue to generate more competition between (re)insurers, providing a favourable general environment. In that context, for the mining sector and the high risk profile associated with underground mining and employers liability, rate increases have often prevailed. But whilst capacity for underground mining remains tight and commands more onerous terms, rate decreases are possible for those who can demonstrate strong risk management.

DIRECTORS AND OFFICERS

Four years into the financial crisis, directors and officers of corporations both large and small, are increasingly having to face the threat of regulatory scrutiny and litigation arising from a concerted global push by authorities keen to make those who run corporations more accountable for their actions.

The end result has been a much keener interest by those managers and directors running corporations, in the protection available to them in the form of corporate indemnification and/or directors' and officers' liability insurance. Mining operators are not exempt from this.

In the autumn of 2011, Willis Ltd and Allen & Overy LLP ran a joint survey of senior individuals at public and private companies and the key themes from the statistics gleaned from that survey are just as relevant in 2013.

It is the corporate environment of today that is dictating the need for, and increased interest in, Directors' and Officers' (D&O) liability protection. The latest claims data continues to reflect the concerns of directors in the areas highlighted in the survey.

AREAS OF CONCERN ARISING FROM THE WILLIS/ALLEN & OVERY SURVEY

Of the top five risks polled in the survey that respondents considered to pose the greatest significant risk to their directors and officers:

- **48.3%** were concerned about the risk of being sued abroad
- **55.2%** were concerned about employment practices claims
- **63.2%** were concerned about the broad reach of anti-corruption legislation
- **64.4%** were worried about criminal and regulatory fines and penalties
- **84%** were concerned about regulatory and other investigations and enquiries

Some of the directors' and officers' (D&O) insurance coverage concerns considered to be of greatest importance included:

- **49%** were worried whether the D&O policy will co-ordinate with the company's indemnification obligations
- **67%** worried whether the D&O policy will be able to respond in all jurisdictions
- **71%** worried whether the D&O policy will always respond if there is an investigation involving directors

For more details, see Annex 1

The current commercial, as opposed to financial institutions, D&O market remains competitive. Rates have generally been in decline for the past five years but towards the last quarter of 2012 there has been a levelling off of rates and in some instances attempts have been made to increase rates especially on the primary layers in certain industry sectors. The D&O market has, during this soft market cycle, broadened the scope of cover.

Policyholders renewing their D&O programmes during 2013 will want to seriously consider the financial security of the carriers on the programme. Other considerations will include the ability of the primary carrier to issue local policies, and the flexibility of the carriers to move away from the dual insuring clause approach and embrace a single insuring clause with nil retention/deductible. Policyholders will also want to ensure a full review of the policy language has been carried out, particularly around how the policy responds to regulatory investigations and enquiries, as well as checking how defence costs are afforded.



SOCIAL UNREST - A GENERAL MARKET OVERVIEW

Mine operations often become a focus for social unrest and dissatisfaction among communities, ultimately affecting the social licence to operate. 2011 witnessed high levels of political unrest across the globe, with notable uprisings taking place across the Middle East North Africa region. 'The Arab Spring' provided a stark reminder of how quickly the terrorism/political violence market can change following a significant event(s). The repercussions of those political uprisings are still echoing across neighbouring Arab countries - notably in Egypt, Bahrain, Syria and Libya.

In 2012, reflecting the same pattern as in 2011, other terrorism and political violence events occurred in Pakistan, Philippines, Syria, Afghanistan, Indonesia, South Africa and Northern Ireland, some of which were insured into the London political violence market. Violence in Nigeria, Colombia, India and Lebanon contributed to the picture of a global risk.

Correspondingly, there has been a spread of incidents internationally within the mining sector and the root causes generally stem from:

- Conflicts between opposing rebel groups.
- Labour strikes against low pay and benefits.
- Local opposition to general mining operations (environmental or otherwise).

Some of the countries affected include:

Bolivia: General striking in Colquiri this year; the industrial action is being staged in protest at the occupation of the Colquiri mine by a group of co-operative miners.

Indonesia: In early February 2012, locals and environmental activists staged protests in Morowali, which demonstrates how quickly protests can turn violent. These protests have the propensity to degenerate into stone throwing and arson. In Walandaro in June, circa 100 residents staged violent protests against a gold mining company. The residents allege the land on which the mining company is operating belongs to them and that exploration activities are being carried out without their consent. Tensions continue to be high in the area and potential for further unrest remains until the issue is resolved.

Peru: The anti-mining protests in May 2012 highlight the continued operational threat posed by anti-mining activism to companies operating in Peru. Protests from residents intensified in the Espinar province against local mining operations in the region. The intensification of the Espinar protest reflects the serious operational threat that community activism and social unrest pose to extractives-sector operations in Peru. Disputes with local communities have taken place since 1985 but the current protests represent the first major recent outbreak of anti-mining unrest.

Philippines: In June 2012 attacks on mining compounds in Mindanao underscored the risks posed by rebel activity. Suspected communist rebels raided certain mining compounds in Compostela Valley province, setting fire to vehicles and damaging equipment. A landmine in June exploded near a military patrol vehicle in the Nueva Visayas area of the same province. Rebel assaults, as well as shoot outs between them and the security forces, pose significant risks to foreign personnel.

South Africa: Sector wide protests took place this year between striking mine workers and the police, many of which turned violent. The challenges have been well publicised and particular reference is drawn to the fatalities which occurred in Marikana. Further unrest took place this year across other mine sites in the North West province.

More details on p58.

"Political and sovereign risk is an issue in many African countries. This is evidenced by the ongoing political turmoil in Egypt, the attempted coup in the Ivory Coast and the uprising in Mali. Bribery and corruption seem to remain as a matter of concern for foreign companies investing into Africa"

Deloitte

INSURANCE CONSIDERATIONS

From an insurance point of view, terrorism is one of the key risks facing mining operations, arising from social unrest.

Terrorism

Available terrorism capacity has remained static in 2012, although capacity is anticipated to increase 10% in 2013. Commercial terrorism capacity in the standalone market is currently estimated at USD1.75bn. However, political violence capacity is once again more restricted than the previous year, particularly in the areas which have experienced the highest levels of political unrest.

As expected, insurers re-evaluated the way in which they allocate finite capacity to pay multiple claims arising out of one event (known as war aggregate), which has had a dramatic impact on the available war capacity today. Underwriters have consistently achieved higher premiums in 2012 in exchange for more 'limited' aggregate available. War aggregate in Thailand and Lebanon has the most limited capacity available and markets are looking at ways to increase their country limit for 2013 but this is costly to purchase.

The terrorism and political violence market remains focussed on property damage and business interruption coverage. Cover for terrorism third party liability and employers liability products, in excess of that offered by the general liability insurers, remains readily available.

A CASE IN POINT

Mine operations often have to balance the need for a certain mineral and the wishes of the local population, as this example shows:

World antimony reserves are forecast to be exhausted within eight years, according to Adroit Resources Inc, which has recently completed an environmental impact study on a new drilling site in the picturesque Tuscan countryside.

The company has applied for permission to start drilling in 2013; however, Italians are up in arms about the potential impact on the region which, they claim, is one of the few untouched parts of Tuscany and home to the famed 'butteri' cowboys. They also fear the mining could release poison into nearby water supplies.

Adroit Resources president Graeme Rowland told the UK's Daily Telegraph *"A lot of the people objecting to the mine don't realise how much they are already benefiting from it. The groundwater is always a factor in any mining but we believe there will be no problems in this case."*

Strict regulations would mean that it would return the site of the mine to a better state than it was in before, he said. *"It would be wonderful for the local area because of the infrastructure that will need building and all the restaurants and hotels that we'll use. We'd bring the area to life."*



A woman wearing a white hard hat, safety glasses, and a high-visibility yellow and black vest is holding a walkie-talkie. She is standing in a quarry or construction site, with a large yellow piece of heavy machinery and a pile of grey gravel in the background. The image is split horizontally, with the top half showing a close-up of the gravel and the bottom half showing the woman and the machinery.

NEW OPPORTUNITIES.
NEW FRONTIERS.

MOVING INTO NEW FRONTIERS

FRONTIER MARKETS IS AN ECONOMIC TERM, COINED IN 1992 BY THE INTERNATIONAL FINANCE CORPORATION TO DESCRIBE A SUBSET OF 'EMERGING MARKETS'. THESE MARKETS ARE OFTEN HOME TO SOME OF THE WORLD'S LARGEST METALS AND MINERAL DEPOSITS.

Frontier markets are investable but have lower market capitalisation and liquidity than the more developed emerging markets. As such, frontier equity markets are typically pursued by investors seeking high, long term returns and low correlations with other markets whilst benefitting from diversification within a portfolio of investment.

Some of the risks encountered by investors may include: political instability, poor liquidity, inadequate regulation, substandard financial reporting and large currency fluctuations. In addition, many markets are overly dependent on volatile commodities.

Beyond the risks of the trading floors, at the points of interaction between human beings and their economies, the threat landscape becomes more complex. Many frontier economies can be a natural haven for crime, corruption, extortion and the fomentation of terrorism. The locations of many of these economies, combined with their lack of infrastructural and service resilience, make them particularly vulnerable to quick onset natural disasters such as earthquakes and hurricanes and forest fires, as well as the more pernicious effects of disease, drought and flood.

How then do such risks affect the people of organisations working in frontier economies? How to identify and elicit the potential exposures from within complex environments and how can the chances of these threats affecting an organisation be reduced and plans prepared in case the contingency occurs? Finally, what are the complexities that need to be unravelled and dealt with prior to and during the onset of a complex emergency?

To gain an insight into risk exposures, knowledge of the context and the threats it presents is crucial. It seems obvious that an understanding of a potential or current business environment is fundamental to success. Yet many companies only truly understand or focus upon the quantitative or traditional economic aspects of their investments.

Companies in frontier economies have differing levels and types of risk management capacity and awareness.

Whatever the size, capacity or circumstances of companies in frontier economies, it is important to avoid becoming reactive in terms of risk and business opportunity.

A recent study from the Centre for Emerging Market Enterprises at Tufts University, argues frontier markets are fundamentally dependent upon the ebb and flow of human relations and actions, with particular emphasis on the interaction between business and the host country government.

The Tufts study has also shown companies that invest in building processes and staffing structures that incorporate substantive expertise on country-specific political, economic, socio-cultural and related issues will be better positioned to reduce business risk and identify and then capture, new business opportunities.

Businesses need advice on the local context with a view to identifying current and future threats to the business and its people. It requires access to country level and geo-strategic intelligence, and advice to stay ahead of the event and manage any exposure before it turns life threatening. This proactive approach to risk management also helps minimise the risk of a business becoming embroiled in a reputation-wrecking crisis. Furthermore, studies by academics Knight and Pretty show that if a company responds and deals with a crisis well, its shareholder value can actually increase.

Having expended considerable effort in the critical task of understanding the context and identifying its risks, it would be pointless to file it away and then wait for an insurance policy to kick in when it all goes wrong. This could invite crippling loss of market presence, position and credibility and run riot through the idea of duty of care.

Typical areas of activity that flow from continuous situational analysis may include:

- planning for medical emergencies
- planning for political and natural disasters including evacuation
- physical security at installations
- terrorist threat assessment and counter measures
- crisis management planning and training, including that of family support
- reputational communications management.

It is in such contingency planning and advice that lessons learned by observation of the response to clients' needs during the Arab Spring add robustness and credibility to the process. In a world where governments are no longer able to intervene, protect and evacuate their citizens abroad at times of global shock, it is critical that plans are agile, workable and, just as importantly, triggered at the right time in the right places.

Analysis of recent crises indicates that in many corporate security plans the following factors were either absent or not considered in sufficient depth:

- Firstly, in some cases there was no plan at all. Some companies had either not insured or had felt that the purchase of insurance alone was sufficient to demonstrate duty of care. It goes without saying that no company acting in a frontier market without insurance for its people can expect to survive unscathed from such an event and would be looked dimly upon by the courts should corporate security plans be absent or out of date.
- Secondly, where there were plans, many relied too heavily on assumptions of assistance from embassies and consulates, which was either late or never appeared. Impracticality was evident in the estimated numbers of evacuees and the nuances thrown up by their diverse nationalities. Furthermore, many of the potential evacuees were not aware of any plans if they indeed existed. The old military adage that 'no plan survives first contact with the enemy' had not been factored into much of the planning. The plans had rarely been rehearsed or even table-top exercised, presumably because 'non-productive days' preparing for or mitigating risk have a detrimental impact on quarterly results.

What was strikingly absent from much planning both during the Arab Spring and in other evacuation situations, is indivisible from understanding the context – a set of sensible triggers based on solid scenario planning. These are derived from a set of questions usually tailored to the context:

- Is the country generally stable?
- Are the government/police/military in control?
- Does control extend across the country or are we in a bubble of control?
- What are the attitudes of government/armed non-state actors towards us?
- Can/will the government guarantee the safety of expatriates?

"Despite the cooling of China's feverish growth, the expansion of the middle classes there and across the emerging markets will irreversibly reshape trends and levels of global demand. The number of households in emerging markets enjoying an income above USD30,000 will more than double to 149m by 2020, overtaking both the US (120m) and the EU (116m). As it grows, demand for commodities that go into consumer products will rise in tow. These trends are already undeniable: by the end of 2012, the number of mobile-connected devices were estimated to have exceeded the number of people on earth"

Oxford Analytica

The art is to judge the right moment to move the right people to the right place whilst maintaining business continuity or effective hibernation without threat to life – this is no mean task and even the best can incur costs by evacuating ‘unnecessarily’, or death or injury by leaving it too late.

Risk mitigation obviously differs depending on whether it is more foreseeable threats, such as hurricanes or inundation, or the unpredictable impact of earthquakes that are planned for. Here the planning focuses on pre-preparation and strengthening in situ with contingency planning for protection, survival and evacuation once the threat has struck.

In a frontier economy, those perceived to be comparatively wealthy, whether local or foreign, may come under increasing threat from extortion, through express kidnaps to drawn out kidnap for ransom. The risks are obvious, but less well known is that expert pre-incident preparation and avoidance advice has been shown to both prevent kidnap and to assist survival during the time of detention.

Companies should continually analyse the situation, divining possible paths ahead while defining possible threats. This knowledge should then lead to scenario planning and further threat assessment to prepare as best as possible for the occurrence of a contingency. Such planning should allow as diverse a number of options as feasibly possible thereby fostering agility in response whilst remaining practical.

The plans themselves should be made known to staff on the ground, discussed with corporate headquarters and rehearsed. The risks to business in these nations are varied and diverse. Consolidated insurance lines, combined with a proactive approach to risk that informs an integrated response, represent a strong but agile architecture on which to prepare and respond to risks to people working in frontier economies.

AFRICA IN PERSPECTIVE – A CONTINENT OF CONTRADICTIONS

Africa has often been referred to by many unfortunate names – a lost continent, third world and hopeless continent. However, in recent years in contrast, Africa is being called the hopeful continent, amazing and the next mining frontier, according to Deloitte.

The prevalence of significant untapped natural resources in Africa has made it an attractive destination for investment by numerous companies around the world seeking to add to their resource base and secure their future growth.

Africa has significant deposits of many of the world’s commodities, such as:

- platinum (South Africa is the world’s leading producer)
- palladium (South Africa is the world’s second-largest producer)
- chrome (Zimbabwe and South Africa have 80% of the global reserves)
- uranium (Africa accounts for 20% of global production)
- diamonds (Africa is the world’s largest producer at 50%)
- gold (Mali, Ghana, Burkina Faso and South Africa have significant gold deposits) amongst others.

Much of the unexploited natural resources in Africa are of a higher grade compared to elsewhere in the world in addition to being nearer to the surface, thus supporting lower-cost, open-pit mining. Recent oil and gas discoveries in East Africa have indicated the existence of vast resources that could materially affect the economic development of the region.

However, Africa is faced with significant political, socio-economic, infrastructural, financial, cultural, logistical, tax and legal challenges for those companies seeking to invest on the continent.

Political and sovereign risk is an issue in many African countries. This is evidenced, at the time of writing, by the ongoing political turmoil in Egypt, the attempted coup in the Ivory Coast and the uprising in Mali. Bribery and corruption seem to remain as a matter of concern for foreign companies investing into Africa.

Although many governments, such as the UK and the US, have introduced legislation to combat bribery and corruption, in reality whether such legislation achieves its intended purpose is questionable. It becomes extremely difficult for multinationals to abide by laws imposed by their own governments when (African) politicians may create legislation to enrich themselves at the expense of the people to justify personal pay increases, lavish business trips and acquiring shares in mining companies.

In South Africa, the mining industry has experienced the most severe industrial action seen in many years, which prevented its many gold mines from benefiting from higher gold prices. Industrial action also severely affected the platinum industry, which has not only affected company profits, but has placed many expansion plans on hold adding to unemployment.



Adequate infrastructure such as roads, railway lines, port facilities and electricity is lacking in many African countries. Although the development of infrastructure is continuing, it is often hampered by the lack of regulatory clarity, red tape and governments attempting to own the infrastructure at the expense of the resource company building the rail line or port facility.

Also, historically, African resource projects have been hampered by the temptation of governments to change the rules mid-game. That being said, competitiveness in the region is improving. In the past few years, several African nations have made significant improvements to their competitiveness and appeal as an investment destination. These include sustainable fiscal policies, improved management of inflation, reduced public debt levels and the removal of various structural rigidities, which improves market efficiency in the economy. There is still a long way to go but progress is being made in some countries.

African governments' penchant for requiring investors to give up portions of their business to government (ie through free-carry, non-contributory interests) and/or locals (ie through contributory local participation) is well known.

"Zimbabwe Prime Minister Morgan Tsvangirai said the country's laws that force foreign firms to cede majority stakes to local blacks is driving away desperately needed foreign investment. Tsvangirai said the country needs to respect investors' property rights if it is to revive moribund industries"

AFP

Africa is a large continent which brings with it the dual challenges of logistics and cultural diversity, and its tax rules are as diverse as its people. Firstly, the tax laws in Francophone African countries are based on the French legal system, while tax laws in others are based on the English legal system. Zambia, Ghana, South Africa, Namibia and Ivory Coast, to mention a few, have recently introduced or proposed various tax and fiscal amendments to increase revenue collection from mining companies.

As explored further in Chapter 4, African tax authorities often do not have the resources to effectively collect taxes and manage tax collection, so levy withholding taxes. These charges more often than not lead to losses for the head company. Withholding taxes are also increasing the costs of capital projects.

In stark contrast to the potential negative outlook, Africa is still the good news continent. Following the example of the mining sector, there is growing evidence that more and more international oil and gas companies are taking a serious look at Africa as a place to do business.

Where once Africa was only the preserve of the brave, it is now being seriously targeted for resource investment. Much thought, planning, flexibility and resolve need to be exercised by resource companies seeking to invest successfully in Africa. Judging by the number of resource companies which have succeeded in Africa, this is not an impossible task. What is evident is that notwithstanding the many challenges, the opportunities may just make it all worthwhile.

CHINA - THE END OF THE BEGINNING?

Although China is not a new frontier, or even a new market, it still offers new opportunities. And what happens in China often reflects directly onto the fortunes of mine operators worldwide and the likely price for commodities, so the state of the Chinese economy is crucial.

Rapid growth has catapulted China up the global economic rankings in the last decade, overtaking the UK, France, Germany and Japan to claim second place, behind only the US.

However, China now finds itself in the midst of a number of delicate transitions: it is undergoing an unstoppable structural shift from a low income to a middle income economy; there is a sombre move from rapid to a moderate growth rate; and, a complex shift is underway from being a low/medium-tech producer to a medium/high-tech producer.

The data shows a weakening economy from a peak of 14% GDP growth in 2007, 10.4% in 2010 and 9.2% in 2011, to most likely around 7.8% for 2012. This means growth has effectively halved against the 2007 peak and has dropped by around a quarter from the average of 10% in the past 30 years. China's economy is expected to rebound after experiencing seven consecutive quarters of slower GDP growth as illustrated in figure 1.

While China is certainly slowing, especially in certain sectors and regions, it is also true that a growth rate of close to 8% for the full year will still outpace that of any large economy. This year, China's economy will grow by some USD700bn, thereby adding another Switzerland or Turkey to global output. While gross capital formation still remains the largest contributor to China's GDP, it is expected to take a lesser role as a new economic structure forms, similar to the fall in net exports contribution in recent years as illustrated in figure 2.

Figure 1: China's Quarterly y-o-y GDP Growth Rate (% , 2008-2012F)

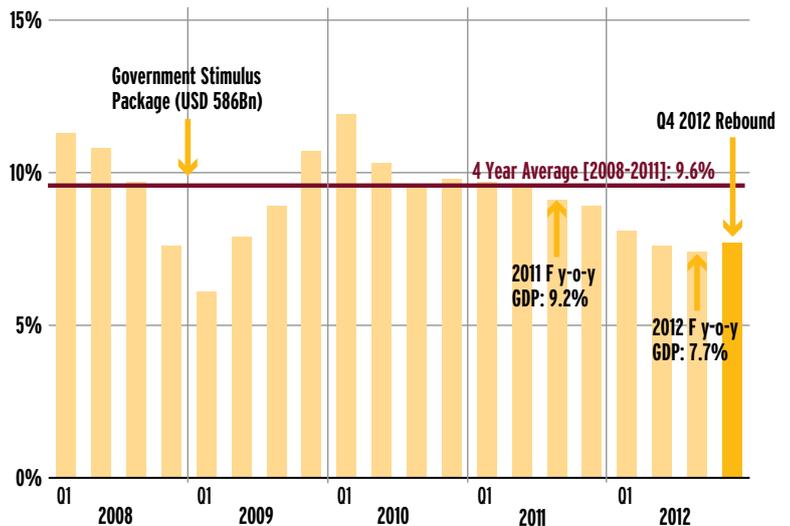


Figure 2: Contribution to China's GDP (% , 1998-2012F)

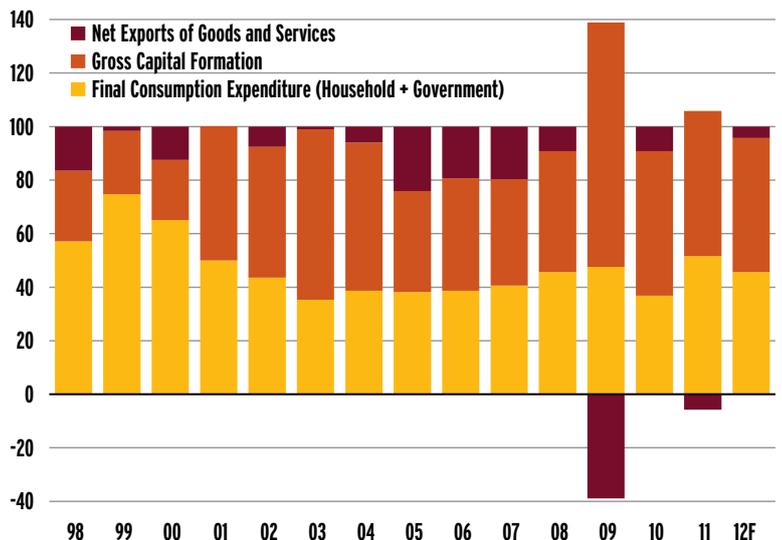
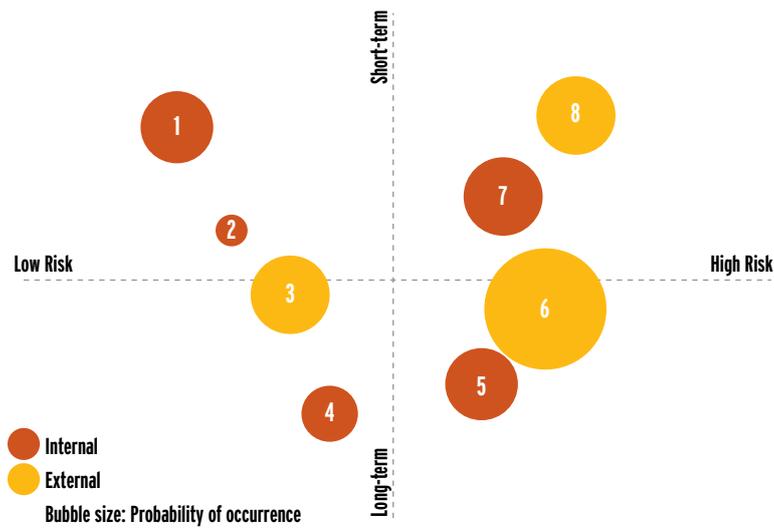
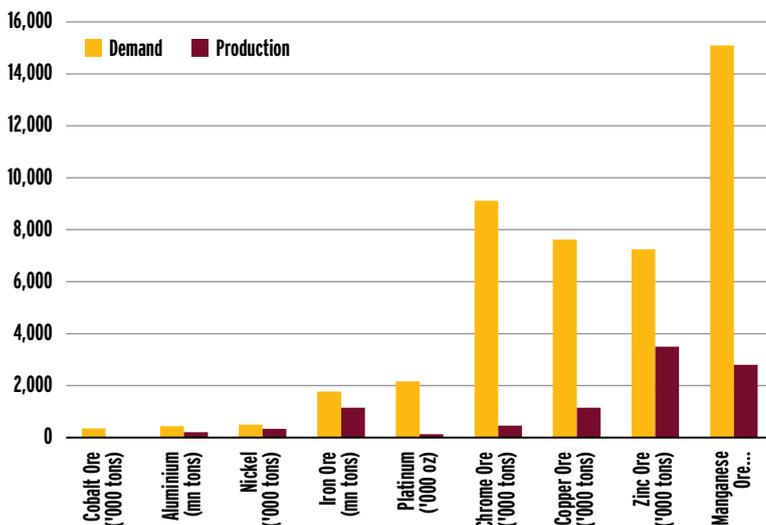


Figure 3: Largest Risks Facing China's Economy



- Politics and power transition:** Handover to the fifth generation of leaders in late 2012 is crucial as it sets the tone for policy and political reform during the years ahead.
- Domestic government finances (debt):** Unclear whether banks or local governments can bear burden of NPLs if economy were to slow sharply.
- FX Risk:** RMB must be closely watched as a more volatile period could lie ahead.
- Social cohesion:** Social unrest - wealth gap continues to widen, potentially undermining social stability.
- Ageing population and social safety net:** Shrinking labour pool unable to shoulder social costs of rapidly ageing population.
- EU debt crisis:** Worsening of euro zone debt crisis threatening to further dampen overseas demand for Chinese goods.
- Property bubble:** Local governments are pushing for a rollback of property market curbs to prop up their economies.
- Degrees of China dependency:** Commodity producers are the most exposed to a slowdown in China.

Figure 4: China's Implied Demand and Domestic Production of Selected Commodities (2010)



Today's China is already socially transformed to the point where it can remain stable and continue its long term trajectory even if the growth rate dips to around 6%. Of course, a protracted slowdown would be problematic, but the 'bicycle view' – that China will fall over if it grows too slowly – does not hold in the same manner that it did in the past.

While China has grown to be the world's largest exporter, claiming more than 10% of the global market, the room for further expansion is limited. Rising wages and a stronger yuan have also taken a toll on export competitiveness. China still has a large untapped pool of migrant workers, but fewer will be working in low-end, labour-intensive industries; instead, more will be employed in high-end, value-added industries.

As a result of this new phase, China watchers, used to lofty growth rates for the past 20-30 years, will need to sit through the inevitable volatility of the next 6-12 months. The key is to remember that China's long-term fundamentals remain strong. China will remain a key market for metals and minerals, hydrocarbons, high-end manufacturing, services and technologies.

While China is still on track to become the world's largest economy sometime during the new leadership's 10-year tenure, several deep-rooted problems formed during China's 30 years of socio-economic development must be tackled. A growing (and increasingly visible) disconnect between top wage earners and the working class and a rapidly-aging population are just some of the key issues facing modern China, in figure 3.

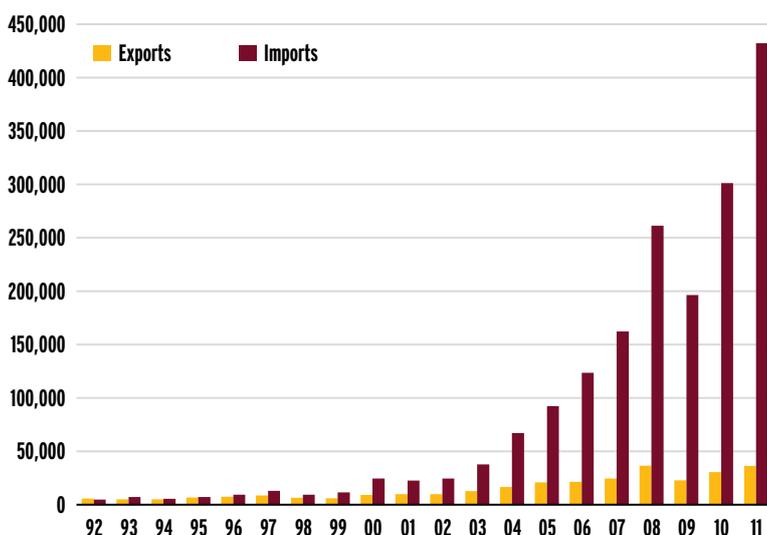
The landscape in China is changing and CEOs will have to think and anticipate differently.

For example:

- China will become a more ‘normal’ economy after decades of rapid growth. Changes are occurring in cost structures and differentials, technology, household and national debt, company leverage, etc. A very different landscape is unfolding.
- China is partially transformed. It must be viewed for what it has become – a USD 8trn economy still on a path of change.
- Entering China for the same reasons as 10 years ago is a mistake. Ignoring China is also a mistake.
- China is becoming a very competitive terrain; companies will need to work hard to identify and claim less contested markets.
- Mature (developed) and nascent (less developed) industries and segments will co-exist in the economy with very different patterns between regions and industries.
- Exemplary strategic intelligence is imperative in scoping the opportunities.
- It is now more important to have a solid China team than ever before – there are many ‘China hands’, but not many good ones.
- Strategy implementation will require more careful management to calibrate and fine-tune market positions.
- It will be necessary to operate in China with very different cost structures.

As seen in figure 4, China’s demand outstrips domestic supply across a number of commodities. As a result, imports are needed to compensate for the deficit as illustrated in figure 5. The drivers of this trend remain intact. Companies positioned in resource rich countries and regions such as Australia and Africa will continue to benefit from supplying key raw materials to China. However, complexity and change means that the resources industry is becoming increasingly ‘competitive’.

Figure 5: China’s Mineral Product Imports and Exports (USD mn, 1992-2011)



Key implications for the mining and resources sector:

- Despite lower demand growth, China remains the most important driver of commodities demand.
- Lower demand growth, lower prices, higher volatility and variability (some commodities will perform better/worse) must be understood and managed.
- Marketing is now a far more important function in the industry than before.
- There must be an emphasis on strategic marketing.
- Direct management of end-user relationships is key.
- Branding, after-sales service and support will become hallmarks in resource marketing.
- Resources is now a ‘competitive’ industry – mining marketing managers will increasingly compete in the same manner that, say, Procter & Gamble and Unilever compete.
- Companies that get this right will attract a premium.

China’s overall transformation remains intact. Beijing needs to rebalance its economy away from excessive reliance on investment towards a more domestic consumption driven growth model. In the meantime, China will continue to transform, urbanise, modernise and reinvent itself. The main story of how its population, burgeoning middle-class, production capacity, rising income and wealth, aspirations and global participation and influence will impact the world has yet to be written. In many ways, this is just the end of the beginning.

Compiled by the Beijing Axis

INSURANCE CONSIDERATIONS

One of the key considerations of developing operations in a new market is the risk of moving highly skilled employees into remote parts of the world and the consequent duty of care for employers. Among those risks are kidnap and ransom alongside repatriation, and these are the two areas on which the Review has focussed.

KIDNAP AND RANSOM

Community dissatisfaction with mining operations can sometimes result in direct attacks on mine workers. Expatriates are often the prime target, particularly if there is a local terrorist group willing to kidnap workers to further their cause. Kidnap and ransom incidents are not a rarity in the mining sector and often kidnapers will demand the withdrawal of a right to operate as part of a ransom payment.

The often remote locations of mining and refining facilities compounds the problem as kidnapers will have local knowledge of the area's topography as well as the routine operations of the target company.

The risk to employees is deepened by the perception of wealth that surrounds the industry and the assumption that ransoms will be paid without lengthy negotiations.

The threat of local security firms and police forces being complicit in kidnaps also remains a problem, particularly in areas with high levels of institutional corruption such as Nigeria, Mexico and Pakistan.

Out of the top 10 ranked countries for kidnapping, nine hold substantial mineral reserves or already have established mining operations, see Annexe 2. The 10 worst countries for kidnap risk are: Nigeria, Pakistan, Mexico, Afghanistan, Venezuela, India, Philippines, Iraq, Honduras and Colombia.

SUPPORT SERVICES

Timely information, prior planning and an integrated response are the core principles required in response to a complex emergency. Alongside that, responders - the agencies actually serving the needs of the client on the ground - must have a deep understanding of the arena, networks within and access to local service providers such as hospitals, airlines, warehouses and transport companies. Such capacity should also be reflected in their relationships and permissions with local authorities or, if possible, groups that are gaining legitimacy and control.

Where other nations or the UN are involved, there may be a requirement for greater liaison and co-ordination. However, in the past much of this required co-ordination has been absent - as has been seen in the humanitarian sector's combined and often unsatisfactory responses to events from Rwanda to Haiti. There are factors which make this difficult - consular capacity and action is subject to domestic policy and therefore public opinion and purse strings. It can sometimes be tardy and of necessity partial to its own citizens.

So the ability of a responder to act with agility and flexibility to cope with these issues is an important consideration; as is the ability and willingness to co-ordinate or be co-ordinated with other agencies. For example, a medical evacuation service working in concert with another provider of ground security to ensure the gaps between an incident in which casualties have occurred - a road trip, a short local air hop and a medical evacuation from an international airhead - are seamlessly filled through co-ordination, ensuring the client comes first.

The key is deploying the most suitable and available responders to the right place at the right time. These may include the tiniest of groups with low logistic capacity but an in-depth and empowering knowledge of local circumstances - an anthropologist who has spent years in a particular zone of conflict or a global full spectrum risk-management company. The approach to dealing with risk in the often complex landscape of frontier economies is predicated on understanding not only the economy but the internal politics and the security situation.

While having the correct insurance in place is essential, there is more that can be done, including the use of experienced and qualified responders. There are ways to reduce the risks and provide solutions in the event of an emergency. A comprehensive all risks evacuation product closely integrates intelligence, prevention and response functions under three mutually supporting pillars - a service developed by Willis and collectively known as Alert:24.

This innovative and proactive approach to risk management gives underwriters more confidence in the quality of a client's risk - since they are less likely to experience losses and claims. For clients this means they can access better prices and terms from the market.



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COST INFLATION

GOING UP?

MINE OPERATORS ARE FACING INCREASES IN UNDERLYING COSTS ACROSS THE WORLD BUT IT IS NOT A CONSTANT PICTURE. SOME OPERATIONS HAVE SEEN COSTS FALL, THANKS TO LOWER WAGE BILLS AS MINES CUT BACK PRODUCTION IN REACTION TO LOWER COMMODITY VALUES.

For example, coking coal prices have plunged dramatically. The implications have been quite significant and mines have been closed. However, thermal coal was never selling at a premium so the impact of falling prices has not been so significant. Iron ore prices have dropped but are now rising slightly once again.

Just as most commodity prices have tumbled, project costs have increased significantly. Manufacturers and suppliers no longer feel financially pressurised or can take the burden of storing large quantities of spare parts, subsequently lead or replacement times, particularly for key items, are longer than previously experienced.

Operators are also facing issues with ore grades and, as a result, miners are having mine at deeper levels. Rather than pay the higher costs of this, some operators are choosing to cut production until market prices start to improve.

However, while some companies may have found ways to reduce operational costs, extra taxes and higher royalties are increasing so the overall costs are hardly changing. The end result has been that many mines have retrenched staff in large numbers, laying thousands off work. There is also a time lag to consider between the fall in commodity prices and the ability of mine operators to react. Oxford Analytica warns in the time of record metal prices, *“resource-rich governments were eager to push for more concessions in mining contracts and extractive companies were likely to agree to secure future supply and beat out rivals.*

“Amidst today’s softening price environment, governments will continue to seek ever-greater gains from their mining industries but foreign companies may be less willing to accommodate. With shrinking margins and the ‘flight to transparency’ – where companies seek less risky and more predictable investment markets – mining firms may be increasingly out of step with resource-endowed host governments.”

It identifies the following reasons firms might experience significant distortion or disruption:

- The typical time-lag between a softening outlook and state responses means most governments will be ‘behind the curve’ and continue to push on fiscal issues, social development contributions and beneficiation investment for months after firms’ real margins make these claims unworkable.
- Governments may respond differently in any coming super-cycle downturn to the way in which they tended to respond in 2008-2009. Governments might consider they have nothing to lose by being assertive at the tail end of a not-soon-to-be-repeated super-cycle, with potentially dangerous consequences.
- Furthermore, as narrowing margins lead to labour layoffs, project freezing or postponed or revised production targets, this can open space for fiercer and more populist political rhetoric than during ‘the good times’.

“Australia has enjoyed strong income growth as a result of rising global commodity prices, and that price growth sparked an unprecedented surge in mining investment. But with global commodity prices now well down from their peaks, the first phase of the mining boom has passed”

Deloitte Investment Monitor

Public expectations do not always keep pace with markets, warns Oxford Analytica, and mining companies could find themselves increasingly squeezed between the two. There may be a distinction between new projects – where we might see a shift in bargaining power between investor and state – and sunk projects, where the state will retain leverage despite the cyclical downturn.

A new report from Deloitte, *Tracking the Trends 2013*, claims *“For the second year in a row, mounting costs tops the list of the key issues affecting the mining industry. This is expected to worsen in the short term as commodity prices continue to dip, workers demand higher wages and regulatory costs rise.”*

Deloitte argues, however, that *“Rather than halting production in the face of shareholder demands for more immediate returns, miners should be making investments today to meet the expected long-term demand for commodities.”*

“This continues to be a challenging environment for mining companies around the world,” adds Deloitte. *“By focusing on some key areas, such as combating corruption, enhancing corporate social responsibility practices and making increasing use of information technology and data analytics, companies can improve their prospects when global demand inevitably rebounds.”*

Currency volatility, high operating costs and lower grades are affecting decisions around continued production, expansions and the delinking of corporate equity from commodity prices, according to the report. To get costs under control, mining companies must pinpoint their cost drivers, automate, improve asset efficiency with analytics, improve their operating model and streamline the supply chain initiatives.

An unintended cost comes from many African tax authorities. According to Deloitte, these often do not have the resources to effectively collect taxes and manage tax collection, so most African countries levy withholding taxes on the repatriation of profits paid to foreign investors. In most cases, these African countries do not have double tax agreements with their major trading countries to reduce these withholding taxes. Some examples are withholding taxes on interest, management fees and technical service fees and VAT or GST.

Withholding taxes are levied on the gross amount of the payment made irrespective of the profit element contained therein. In many instances, mining companies based in Australia, the UK and Canada are required to charge their African subsidiaries for services rendered and money lent to comply with the head company’s home country transfer pricing legislation. Because of the imposition of withholding taxes, these charges more often than not lead to losses for the head company.

Withholding taxes are also increasing the costs of capital projects. Because of the imposition of withholding taxes on technical services, such as engineering and design of processing plants, most engineering companies are quoting for their work on a net-of-tax basis. Because these specialist services are not always readily available in a country, junior mining companies often have no other choice but to accept these conditions, which ultimately increases the cost of constructing a processing plant.

This challenge is a good example of the contradictions found in Africa, because many countries have realised the negative impact of these practices and therefore offer extensive tax concessions and incentives to assist mining companies during the construction phase.

MANAGING COST INFLATION

As the recent resources boom eased, there was a long pipeline of resource projects stretching out to 2015 and beyond. As demand slowed and shareholders became increasingly vocal with concerns about capex budgets and investment returns, companies have cut back on previously announced capital budgets and sought to defer those projects in the pipeline to which they were not already committed.

The charts (figures 1 and 2) reflect the impact that volatile prices and budget constraints are having, from an Australian perspective, on capital expenditure plans and the extent to which these plans have declined between 2011-2012 and 2012-2013.

Figure 3 is based on select over-run announcements made by companies between March 2011 and April 2012. The chart clearly shows the impact of the runaway inflation and its impact on capital costs in a range of projects, in different geographies and for different commodities. The average over budget variance for capital expenditure on selected resource projects was 56%.

Since the analysis summarised in figure 3 was undertaken, further announcements have been made regarding capex over-runs relative to initial budgets. One of the notable announcements concerned the Minas Rio iron ore project in Brazil. Originally budgeted at USD 3.5bn with production expected to commence in 2011, the project is now expected to cost at least USD 8bn with production expected to start in the second half of 2014, some three years after the original estimate. This example highlights not just the issue of cost inflation, but also the value leakage in time value of money terms due to project delays.

If the argument that a portion of mining company cost base is increasingly uncontrollable is accepted, executives should switch their focus to effective action to manage those controllable costs. There are two steps for executives to consider:

1. Understanding when and in what ways cost inflation is impacting on operations and financial performance (i.e. identifying and monitoring the 'signals'); and
2. Having a clearly articulated plan to manage cost inflation and ensure this has been communicated to all key personnel with appropriate accountabilities assigned.

Figure 1: Australian miners planning to invest in major capex projects in current year

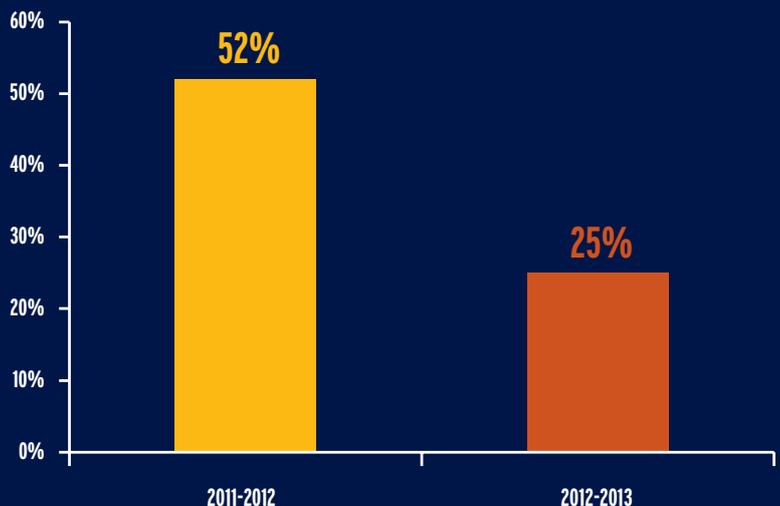


Figure 2: Reasons for not increasing investment spend

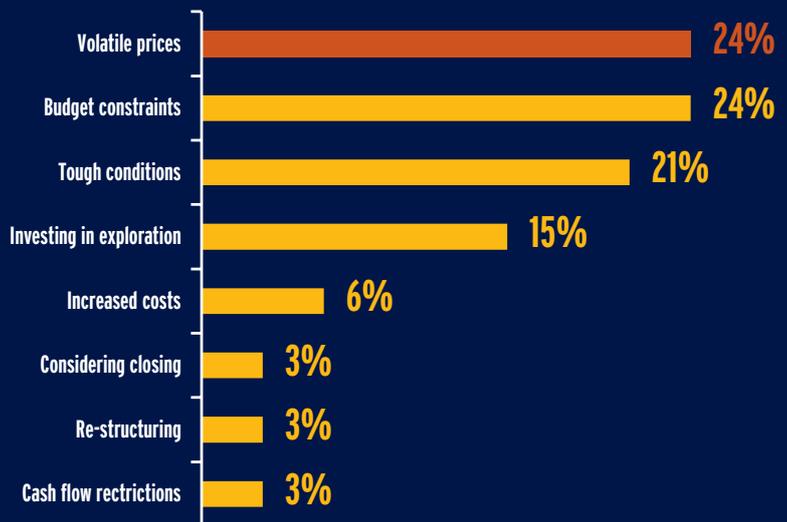
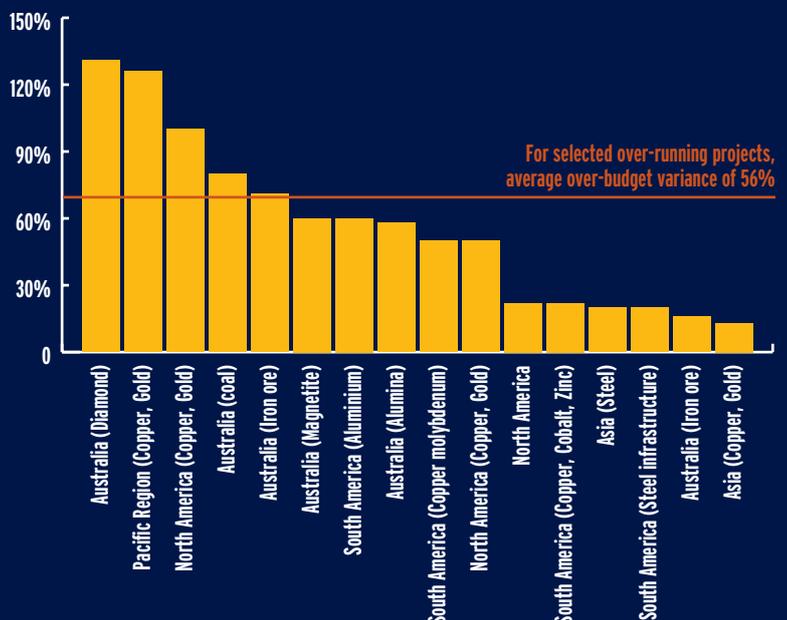


Figure 3: Ernst & Young analysis of projected cost variances for selected over-running capital infrastructure projects



COST INFLATION SIGNALS

Management should identify key signals with respect to their particular operations that can be monitored and reported easily. Whilst signals can vary by company and operation, a handful of key measures that can be monitored and acted upon include:

1. Profit growth not matching revenue growth
2. Costs increasing faster than inflation
3. Declining production volumes
4. Actual financial and operational performance falling short of budgeted performance
5. Impairment charges arising from cost overruns
6. Variations due to FX, commodity or index changes
7. Steadily increasing working capital commitments that cannot be explained by seasonal or other factors.

MANAGING COST INFLATION

Three key approaches to managing cost inflation include: seeking productivity improvements; optimising capital; and preserving cash.

Efforts to improve productivity include:

1. Increasing throughput with existing plant and equipment to defer capex associated with facility expansions
2. Identifying constraints and initiating debottlenecking projects; given these cost money, a careful cost/benefit analysis should be undertaken to understand the estimated risk adjusted return
3. Reducing support staff levels and reviewing supply contracts; in our experience there are often legitimate savings, rebates or bonuses available that have not been claimed in the past
4. Forming friendly joint ventures or other alliances.

In a capital constrained sector, there is a significant focus on optimising the capital already deployed. This is being done by various means, including:

1. Restating what the core business is, and then rationalising the portfolio of assets and projects that no longer fit the 'core' description. There is currently significant activity in this area with non-core assets being divested
2. Shutting down high cost, low margin plant, which has been particularly noticeable in the steel sector. The aluminium sector is also phasing out older smelters that sit high on the cost curve
3. Consolidating business units/commodity groups to build scale and extract synergies
4. Re-sequencing committed capital projects to better align capital deployment with cash flows, and deferring projects to which no formal commitment has been made
5. Reviewing capital tied up in high levels of pre-stripping, advance development and stockpiles
6. Reconsidering the costs and benefits of contract mining and sale and leaseback transactions.

Companies should also be very focused on the management and preservation of cash reserves. Areas of focus include a tighter focus on working capital and cash retention, renegotiation of supply and procurement contracts, review of workforce for headcount reductions and adjustments to discretionary spend.

With respect to the investment decision making surrounding major project approvals, the 'best in class' management teams are making a number of key changes to reflect the severity of the impact costs can have on project economics in the current environment, including:

1. Testing the integrity of data around estimated project costs and benefits to aid management's level of confidence in the decision making process;
2. Critically appraising the investment pipeline to ensure it aligns with the changing appetite for cost and cash exposure, and other commitments management has made to the market, including maintenance of credit ratings and dividend payments for example;
3. Developing customised criteria to sequence project pipelines;
4. Prioritising considerations beyond ROI to strategic alignment, cash flow exposure and complexity of delivery;
5. Implementing enhanced project controls in a standardised and consistent manner in an effort to drive better delivery against plan; and
6. Reconsidering the merits of metal price and currency hedging strategies, and hedging the costs of production inputs, to combat volatility.

In the current environment management need to be keeping a sharp eye on costs, notably signals that cost inflation is impacting on operational and financial performance, and act early. This is a time to challenge the status quo and not be satisfied with the "that is the way we have always done things around here" response.

It is unlikely to be the way things need to be done now.

Compiled by Ernst & Young

INSURANCE CONSIDERATIONS

One of the consequence of cost inflation is that the costs associated with construction are impacted and this has a consequent effect on construction insurance, as outlined below.

CONSTRUCTION

During the last 12 months, supply and demand dynamics within the construction market place have changed, easing significantly in key areas. Both the cost and time to replace has become considerably quicker and cheaper. So are the mandatory price caps on many business interruption policies still relevant? And in the same area, are deductible levels that were pitched to the considerably greater production and pricing levels of the past still appropriate to clients and their production estimates?

Contractor and manufacturer's order books have started to improve dramatically, driven by the numerous "world-scale" projects in the mining and energy sector. Raw material prices have risen significantly and despite the huge manufacturing capability of the Far Eastern economies there is now a much reduced supply of key skilled workers available for new projects. With demand growing for these new large multi-billion dollar investments, contractors have the upper hand and we increasingly see the cost/rebuild values for these projects soaring well beyond the original anticipated investment.

Indeed, many contracts which were originally engaged on a lump sum turnkey basis up to two years ago have had to be renegotiated on a cost reimbursable basis, due to the ever fluctuating raw material price rises. From an insurance perspective this can cause several key issues. The basis of cover provided under a construction all risk policy is indemnity in the event of damage – there has to be an indemnified damage event to trigger a claims payment under the policy.

When these policies are agreed the contract value/price of the project is estimated, however there is a mechanism to allow for small fluctuations in the price (the escalation clause). However, in the last 12 months we have seen several examples of contract values/prices on projects increasing by up to 300% more than originally declared. As a result, it has been necessary to amend the policy accordingly while maintaining the cover and the security. This is very challenging and often means re-assessing the original probable maximum loss (PML) scenarios. In turn, this results in underwriters having to reduce their part in the programme and thus having to bring new underwriters at a late stage. This drives premiums higher.

To mitigate these issues it is important to have independent engineering consultants conducting annual surveys to establish a true value for the rebuild of the project and thus ensure that, in the event of a loss, adequate protection is available under the policy.



HANDLING AN INSURANCE CLAIM

If there has been cost inflation, it can have a significant impact on settling claims which is why the Review has looked at the process of settling a claim and discussed the issue with Lavan Disaster Management.

Q: How can a claim be turned to an advantage?

A: There can be an upside to any claim, benefiting the company and the insurer. A policy is fundamentally about quantifying material damage and business interruption losses, applying relevant policy deductibles and paying the claim.

The policy does not dictate how the claim payment is spent. When an insurance loss occurs, most claimants focus on reinstating plant 'as was'. Few, however, ask whether reinstatement is actually the best option. Time is of the essence as the business interruption clock will be ticking.

Q: What options should firms consider?

A: There are two or three straightforward options. These include something newer. This is a fairly simple option, for older equipment is often not available any longer and finding a 'nearest equivalent replacement' can inevitably offer the chance to update – there is no option. But even if the older version of the equipment is still available, the option may still be open to replace it with the newer version, paying any difference in values.

Sometimes equipment is available, but something different may work better. If it costs no more and takes no longer to source, then the insurance claim should cover the cost. There are times where the 'something a little different' will cost a bit more or take a bit longer to obtain. Again, paying the difference in costs can be an attractive option.

In certain circumstances, replacement of a stand-alone piece of equipment, such as an hydraulic shovel, with a larger piece of equipment might offer the potential for increased production. Again, if it is the only thing available in a hurry and there would be a considerable delay in obtaining a machine as the same size as the damaged machine, then it makes perfect sense to purchase the larger machine. But even if the smaller machine is available, the larger machine might provide greater productivity during the business interruption indemnity period, allowing some or all of the business interruption loss already accrued prior to be offset.

Q: Do you have any other suggestions?

A: Thinking of alternative options altogether can provide solutions. For example, it may be hard to recover the lost production on site, but a neighbouring site may be up for sale and may make up the shortfall. Another example, a derailment of a train on a mining company's rail system in Australia resulted in a speed restriction on the 5.2 kilometre section where the sleepers had been damaged. It was going to have to be fixed progressively during an eight month period with a series of eight-hour line shutdowns and a A\$45m loss of production. The answer lay in building a duplicate line alongside, which not only stopped repair work hindering operations but which provided an alternative for the future, if needed.

For many, there will be opportunities that offer no attraction whatsoever and for whom like-for-like reinstatement is what is needed. For others, an insurance claim might just present an unexpected opportunity.

Q: Willis

A: Lavan Disaster Management

"In the US, states are planning emissions reductions programmes: 10 North-eastern states have a cap-and-trade scheme in place for utilities, several in the West and Midwest may follow suit, and California is looking to reduce its emissions to 80% below 1990 levels by 2050. This patchwork approach to emission regulation in the US will likely mean higher costs for energy-intensive firms"

Oxford Analytica

"A plan to fully liberalise China's thermal coal pricing mechanism was recently submitted to the State Council by the National Development and Reform Commission (NDRC). The new policy would mark the first time in nearly two decades that the country's coal supply has been completely exposed to market forces."
Chinamining.org



INFRASTRUCTURE



WHO'S IN CHARGE?

BY ITS VERY NATURE, ANY MINING INFRASTRUCTURE PROJECT TENDS TO BE EXTREMELY LARGE AND COSTLY, OFTEN TAKING MANY YEARS TO COMPLETE. SO IT IS NO WONDER THAT INVESTORS ARE KEEN TO KEEP AN EYE ON DEVELOPMENTS AND POTENTIALLY TO HAVE A HAND ON THE TILLER AS THE PROJECT DEVELOPS. HATCH INFRASTRUCTURE EXPLORES THE ISSUES FACING OPERATORS IN 2013.

These days ownership can be extremely complicated. Often host government and mining interests are intertwined, making it extremely complicated and costly to sort out infrastructure issues. Question marks can be raised about who owns what, who is responsible for what, who should be maintaining what.

While mining interests may control the local ports, they may not have the same control of the rail network which links the mine and the port, for example.

The rail track may cross land owned by others and may have many different users, all competing for capacity issues.

In turn, this raises issues around third party control. Mine operations may be under the control of the operators but the infrastructure issues around accommodation, access and utilities may all be in the hands of outside parties with divergent priorities.

However, despite the fall in many commodity prices, mining infrastructure construction in many areas is still booming. In Australia, for example, Deloitte Investment Monitor reports *“As for the construction leg of the mining boom, the summit is now approaching. Based on projects which are underway and committed, we are likely to see investment levels continue to rise in the short term.”* It predicts a peak in activity by early to mid-2014.

There is not quite such good news in terms of future projects, however, according to Deloitte which warns that, with a lack of new resources projects and some project cancellations, the value of projects in planning has fallen back in the past three months.

Economic infrastructure (covering transport, ports, energy, water and telecommunications projects) has a notable investment agenda underway, including major energy, transport and port projects, Deloitte says. The latter will support an expected lift in export volumes in the medium term following the expansion of mine capacity, though some of these projects are at risk in the current environment.

INFRASTRUCTURE INCLUDES:

- **Transport to a port:** trucking, rail, river barging, slurry pipeline, conveyors
- **Pipelines for supply:** water (sometimes desalinated), gas
- **Export:** ports, marine terminals, barging out from shallow water to loading platforms
- **Materials handling:** stockyards at mine/port, shiploading, conveyor systems
- **Power supply:** grid transmission, on-site fossil generation, hydro dam, wind/solar
- **Water supply:** dams, wellfields, desalination (brackish or seawater), tailings dams
- **Mine site village:** accommodation, catering, recreation, airstrip
- **Land access/acquisition:** mine site; routes for: power lines/pipelines/rail/road

SO WHAT ARE THE TYPICAL ISSUES FOR A REMOTE PROJECT?

- Scale: km/tonnes/dollars
- Complexity
- Skill and experience requirements
- Partner participation
- Contractor participation
- Extended project preparation time
- Staging of development where possible
- Valuation
- Financing
- Decision making

Source: Hatch

“Mozambique announced major rail and port infrastructure developments to facilitate commodity exports and announced the development of a major power station. At the Forum on China-Africa Co-operation in Beijing, China pledged EUR 16bn in new loans to Africa to assist in developing infrastructure and agriculture on the continent.”

Deloitte

Basic infrastructure, such as roads, railway lines, port facilities and electricity, is lacking in many African countries, according to Deloitte. Although the development of infrastructure is continuing, it is often hampered by the lack of regulatory clarity, red tape and governments attempting to own the infrastructure.

Deloitte warns Africa continues to score poor report cards in terms of ease of doing business and international competitiveness. Only two countries (South Africa and Mauritius) are in the top half of the World Economic Forum’s 2012-2013 Global Competitiveness Rankings. Of the bottom 20 economies, 13 come from Africa.

There is still a long way to go but progress is being made. In 2012, six African infrastructure projects made the Infrastructure 100: World Cities Edition list of the 100 “most innovative and inspiring” urban infrastructure projects in the world.

JUST A BIG VOLUME MINING PROBLEM?

A mining company, believes Hatch, may feel more at home in the gravitas of geology, reserves and mine planning. But when the infrastructure components can represent 75%-85% of the capital and operating costs, it may face risks which are not quite as familiar, as readily recognised, as well experienced, as controllable and/or readily mitigated.

The immediate assumption would rightly be that iron ore and coal, as the two largest volume minerals mined and shipped, would be at the centre of this new infrastructure content driven mining syndrome. And that assumption would be correct, according to Hatch.

However, it says, infrastructure resource is just as key for low volume mined products. For example, the Tasiast gold project of Kinross in Mauritania, which does not ship out gold by cape size vessels is nevertheless around 75% infrastructure content. Why? Because it is in a remote desert location. Things that would be easy and low cost in say Val D’Or in Canada are entirely import dependent in Mauritania and/or require extraordinary provision such as a prospective desalinated water supply piped in more than 100km.

Permission and access complications and multiple jurisdictions usually go hand in hand. Apart from the typical separation of exploration and mining permits from environment and social impact approval, long rights of way or ownership with multiple landowners can be unwelcome and tortuous. The Minas Rio slurry pipeline crosses 1200+ landowners.

Hatch stresses, even in an advanced country in a mining area like Quebec, a mine developer is not without headaches beyond proving the mine reserves. The railways are private, the land is provincial, the ports are federal and so risk of policy/political/permits/schedule approval conflicts and delays is rife. The existing two railways are ‘at capacity’ and any new line would need to be 800+kms long and consequently multi-user. Good for spreading costs but bad for increasing complexity.

In some geographies, such as South Africa, the infrastructure is still provided largely by the state. Greenfield or brownfield expansion is not only dependent on commensurate state infrastructure development (beyond the control of the mining company) but may also be dependent on other mining companies expanding at the same time to provide sufficient aggregate demand to make the new infrastructure viable. The risk in this case perhaps sits with the state and the mining companies simply suffer constrained opportunity.

In others, the existing infrastructure is owned by private interests. In this case there may be an inescapable technical logic that the existing infrastructure can absorb the new mine. But the owner may have zero interest to support the new mine. Western Australia's iron ore sector greenfield properties and the rail and port assets of BHP Billiton and Rio Tinto are in this situation.

HOW DOES REMOTENESS INCREASE RISK?

How remote is remote? Arcelor Mittal's Mary River iron ore mine north of the Arctic Circle with nine months of sea-iced port would receive everyone's vote. But simply being 500km-900km from the coast with no existing means/capacity of transport would also qualify (e.g. Kumba's Sishen mine in South Africa; Anglo American's Minas Rio mine in Brazil; Rio Tinto's Simandou mine in Guinea). Almost every risk that can be listed is greater at a remote site.

Capital costs and operating costs are both open to far more uncertainty and the biggest difference here from the past is that these are highly skewed to infrastructure components. Construction materials (steel, cement, pipes, cable, etc) may be shipped in from thousands of kilometres away and have reorder delivery times of months not days. Missing special tools can break the schedule when there is no corner shop nearby to replace them. Even small things like fasteners can grind work to a halt.

Staffing is always a challenge. Turnover can be very high impacting continuity in construction or operations, especially at fly-in camps where specific skill shortages are common. New country risk of un-experienced politics, permitting and business practice and getting things done, is high and may be compounded by a language barrier. All supplies have costs inflated by remote delivery. Some extremes require a year's stockholding because of inbound access seasonality. One example of risks coming to pass is illustrated to the right.

As Wardell Armstrong International points out, prime drivers for cost inflation include energy prices, and these can be even more costly in remote areas where the logistics of delivering energy are so complex. It explains *"The required infrastructure and energy initiatives, whether extensions or upgrades to existing networks involving long connection distances, project specific systems, or innovative renewable solutions, are costly; modern technology can usually overcome most technical issues, but usually with considerable capex at the outset and throughout the life of the project."*

A REMOTE MINE PROJECT: WHAT WAS THE SITUATION?

- New owner buys in at high price and inherits greenfield project and local team.
- Big up front purchase creates urgency to get built and into revenue production.
- Capital cost estimate balloons by 100% up from \$4 billion.
- Project completion progressing well behind schedule slowed by permits.

HOW DID IT GO WRONG?

- Owner adopts 'Fast Track' project delivery with poor project decision stage gating.
- Over-rides own corporate project delivery system and principles.
- Has no experience in the country and its politics/permitting/business ways.
- Becomes over-reliant on his local team and exposed to local contracting practices.
- Is experienced with mine and concentrator but not with transportation system assets.
- Large execution workforce gets deployed before land acquisition allows full access.
- Insufficient and inconsistent engineering completed before construction began.
- Some permits were not received prior to beginning execution causing work stoppages.
- Some painful difficulties accessing land due to community/social issues.
- Some project components in third party hands outside the control of the owner.

Source: Hatch



SHOULD THE TAIL WAG THE DOG?

Hatch says these projects require a total integrative dynamic simulation to model the capacities, bottlenecks and logical steps to figure out the most capital efficient development and expansion. For example, it is often not possible to see which components of the mine-to-customer total system are the actual bottlenecks allowing incremental expansion for the least cost. It is likely that for optimum capital efficiency and returns on the most costly components that the infrastructure development plan should determine the mine plan and not the other way around.

Game-changing advancements, such as the development of advanced extraction technologies or the new application of existing methods, are possible in the mining sector, says Oxford Analytica. They could allow mine operators to recover more resources from existing sites and boost production more generally by increasing economically recoverable reserves and expanding accessible reserves.

Other projects to mine polymetallic sulphides on the continental shelves of New Zealand and Fiji are in the pipeline. Not without technical challenges, seabed mining could compete with land-based deposits of copper, lead, zinc and gold, supplementing land-based resources.

"Until such time as the banks and investment houses start lending to fund the higher risk earlier stage companies and the large projects, a dangerous scenario is prevalent whereby due to underinvestment now, at some point in the not too distant future, there may be a significant impact"

Wardell Armstrong International

However, infrastructure shortages are acute, posing both short-term and long-term constraints. For example:

- Latin America will need to commit an estimated 9% of GDP annually to infrastructure through to 2020 to close the gap with South-East Asia - in 2007-2009 it invested only 2% of GDP. Latin America lags behind some other emerging regions on roads, ports, energy and telecommunications. Power generation is particularly concerning. Official data in Chile suggests a further 8,000MW is needed to support industry expansion: independent estimates foresee that only 2,300MW is likely to come on line in the next eight years.
- Shortages in sub-Saharan Africa relate both to transport and power infrastructure. In Zimbabwe, for instance, foreign financing for new power generation assets is unlikely to be readily available in the near term. In West Africa, the region's enormous potential will go unrealised without multi-billion dollar investments in dilapidated transport and energy networks.

“Ore for infrastructure” deals are gaining popularity with host governments, reports Oxford Analytica. China, Brazil and India have all succeeded in winning mineral title rights after offering significant new road, rail, port or power capacity - a trend likely to accelerate in the future.

However, this ‘build-your-own’ approach makes investment in risky or underdeveloped markets all the more costly. The dilemma remains: large-scale extraction depends on a massive infusion of infrastructure but such investment will require revenues from large-scale extraction.

INSURANCE CONSIDERATIONS

Among the key insurance considerations for infrastructure projects are property and business interruption cover, as outlined below. Business interruption is heavily dependent on infrastructure within property damage business interruption policies.

PROPERTY AND BUSINESS INTERRUPTION

The issue of time-lag and its influences has already been referred to elsewhere in this report. But nowhere has this been more marked than in the property and business interruption insurance market.

Here, the effect and repercussions of the commodity boom years have had dramatic influences on the perception, the response and the integrity of “risk transfer” products. Insurers and clients very quickly realised there was a disconnect when expectations were not met. This manifested itself in many areas, but most notably in terms of policy coverage and the balance between risk retained and transferred. The essence of the problem was that the operational mining insurance market had not kept abreast with the surge of demand nor with the effect it might have on operational insurance policies.

Today, we are experiencing a similar degree of change, though this time in the opposite direction. As this report has previously highlighted, the landscape is very different and the future mostly unclear. As a consequence, so too are the underlying risk exposures. Insurers need to be mindful that what was considered appropriate and justifiable pricing, risk retention and policy coverage back then may now be inappropriate for many clients and underlying businesses.

Take for example contingent business interruption exposures; these are no longer the same.

In an ever-expanding global environment change is inevitable. Multi-billion dollar projects designed specifically to extract raw material for an end user are now common and this in itself has not changed. With exploration and demand for raw materials expanding exponentially then it is inevitable that most of the sources of raw material become harder to reach, further from its intended end user and often far away from any of the typical infrastructure required. We need to adapt to this and we need to take a different approach to the way that we viewed and placed projects 10 years ago. Mining projects today are much more than just building a mine and the facility; they can include major power, civil and infrastructure works packages (eg power plants, ports, railways, roads, shipping, accommodation villages).

Elsewhere, positive and proactive steps have been made by the general market (clients, insurers, brokers and service providers) towards establishing a market standard policy form. This includes an agreed Market Claims Protocol. No one could have foreseen this happening prior to 2007/2008 when the dramatic Queensland flood claims occurred. However, again there is evidence of a time lag in which the activities of today are out of kilter with the current business environment.

Few would disagree, however, that the inadequate policy language and the resulting claims management needed change and review. The work continues in various structured groups and a positive conclusion and outcome is expected sometime in the Q2 2013.

SUPPLY CHAIN



WEAK LINKS IN THE CHAIN

THE 2011 DISASTERS IN JAPAN AND THAILAND, AND RESULTING FALL-OUT FROM A BUSINESS INTERRUPTION PERSPECTIVE, HAVE HIGHLIGHTED THE NEED TO IMPROVE THE QUALITY OF THE EXTERNAL SUPPLY CHAIN RISK ASSESSMENT PROCESS. COMPANIES IN THE MINING SECTOR NOW REQUIRE AN EARLY UNDERSTANDING OF CRITICAL SUPPLIERS COUPLED WITH IMPROVED VISIBILITY OF SIZE, LOCATION AND TYPES OF EXPOSURES THAT CAN LEAD TO BOTH PROPERTY AND NON-PROPERTY DAMAGE-RELATED BUSINESS INTERRUPTION.

Once the risk is better understood, a balanced risk management solution in terms of retention and transfer can be formulated and implemented. The focus is not just on property damage related perils but those related to non-damage business interruption.

In terms of physical damage related risk, the need to understand supplier locations in countries such as China, is paramount. A number of suppliers of mechanical equipment for mining operations have set up in Asia Pacific in the last few years. The country is known for its high levels of natural catastrophe risks. Understanding the natural catastrophe exposures threatening these supplier sites will support better decisions by miners on dual sourcing and buffer stock strategies.

The threat of physical damage to mining infrastructure cannot be ignored particularly in relation to logistical pinch points. For example, at one point mine operators realised manufacturers were failing to keep pace with demand for the essential large earthmover tyres.

Rio Tinto set up its own retreading facility in Perth, Australia in response and has since retreaded hundreds of tyres, adding thousands of additional operating hours to tyres which would have otherwise been retired – keeping the supply chain moving.

Other solutions to the same issue have varied from giving drivers “tyre awareness sessions” on extending the life of tread to so-called “mummy shifts” – women statistically have been found to drive in a way that extends the life of tyres.

Disruption to logistical routes that will create ingress and egress issues and closure to ports as a result of bad weather need to be analysed. Appropriate business continuity measures should then be implemented to minimise business disruption. The construction phase of a mine, for example, will require units to be delivered in a particular sequence. Disruption of that sequence, due to the late delivery of a particular construction module, will create huge challenges in terms of storage and planning and will exacerbate the impact on schedule and cost.



PROJECT SCOPING

Agree focus area, level of detailed assessment, boundary factors and pricing.

PHASE 1: GEO-LOCATE SUPPLIERS & IDENTIFY RISKS

Real-time, cost efficient, visual representations of global exposures on both direct and indirect validated supply chain nodes.

PHASE 2: DETAILED ANALYSIS

Forensic analysis of operations, throughput and interdependencies for key products/business units.

PHASE 3: EVALUATION AND RISK MANAGEMENT SOLUTIONS

Recommended solutions to minimise supply chain risk based on dual sourcing, buffer stock strategies, supplier buy-out and risk transfer.

KEY PRODUCTS

BUSINESS UNIT

REGION

NON-DAMAGE RISKS

Non-damage related perils have also become key in relation to business interruption to mining operations, particularly if issues have materialised at supplier sites. For example, coal mines in Indonesia are often located deep in the jungle with only one road or rail track out. The area is at risk of flood events as well as other natural catastrophes, while fire in the jungle presents an extra hazard. If there is a problem, access in and out of the site can be disrupted for weeks. This is all outside the mine's jurisdiction but the result is the same - a breakdown in the supply chain halts business.

Another example: a small company produces a unique electronic part used in a number of product lines. A hiccup in production has an exponential effect down the line as much larger production lines are brought to a halt by the lack of a widget.

Mines tend to operate in challenging areas within emerging economies. Political risk and social unrest in the workforce, coupled by events such as resource nationalism and food rights disturbances, lead to the cessation of the supply chain which will have a knock-on effect on the mining operations.

Strikes at the mine itself can have a knock on effect on the supply chain. While the miners have stopped work, suppliers of products to the mines lose trade and have been known to go out of business completely. If this happens, even when the miners resume work, the supply chain can be interrupted and stop production. It is a vicious circle.

The mining sector therefore requires cost effective solutions that can provide an up to date understanding of suppliers under threat against a number of different perils. This will allow companies to better plan for these threats and ensure that overall business interruption is minimised following the loss of a key supplier.

In response to this market need, a logical phased approach is therefore required, designed to provide a cost effective top down assessment of an organisation's supply chain, coupled with advice and support on the implementation of the most appropriate risk management solutions.

This can be done with the use of the latest technology, whereby environments can be created that allow suppliers and their dependencies to be mapped. Once suppliers have been geo-located, the latest risk information is mapped against these sites, thereby providing a quick and effective understanding of suppliers at risk.

This approach will provide a sound basis for further focused detailed business interruption and forensic accounting analysis against threatened suppliers and support decision making on the design and implementation of the most appropriate risk management strategies. These strategies should be a considered and balanced approach between risk retention, physical management/improvement and transfer to the insurance market. Supply chains are a critical part of any construction project. Contractors have to balance rising costs caused by economic conditions with a squeeze on contractor margins and also the desire to provide consistent quality. Reputational damage can be severe if contractors fail to get (and give) assurance from suppliers on the quality and speed of delivery of key items. Supply chain management is now a vital ingredient of successful project delivery both from contractors and employers perspectives.

"In terms of physical damage related risk, the need to understand supplier locations in countries such as China, is paramount"

"With specific regard to supply chain due diligence for responsible mineral sourcing, risk-based due diligence refers to the steps companies should take to identify, prevent and mitigate actual and potential adverse impacts and ensure that they respect human rights and do not contribute to conflict through their activities in the supply chain"

OECD

INSURANCE CONSIDERATIONS

Disruption to supply chain can impact many different types of insurance. This year in the Review, we have focussed on construction, marine and specie.

CONSTRUCTION

As mentioned in the infrastructure chapter, multi-billion dollar projects are becoming the norm. The critical issues associated with new "mega" projects centre around supply chain management and logistics. In the past, mega projects were located in areas with an abundance of skilled labour, raw materials, accommodation etc, but projects today are in very remote areas and often need to have infrastructure completed before work on the mine can be started.

Modularisation of the main process units, conveyors, loading arms etc can often be done in fabrication yards or manufacturers premises and shipped in on purpose built skids on purpose built cargo vessels. Any delay in the scheduling of these key units will have a detrimental impact on the ability to complete the project on time and on budget.

Indeed, some of the most significant cost over-runs and delays of the past 12 months can be attributed to poor supply chain management and logistics. A construction all risks policy can cover delay to the project only if the delay is caused by an indemnified damage event under the property damage section. However, delays due to scheduling and logistics alone will not be covered under the policy and, along with the cost and delay, can lead to further issues in terms of preservation of critical items of equipment, extended warranties on critical units, storage and preservation of items and indeed, transport of items requiring unique transport methods.

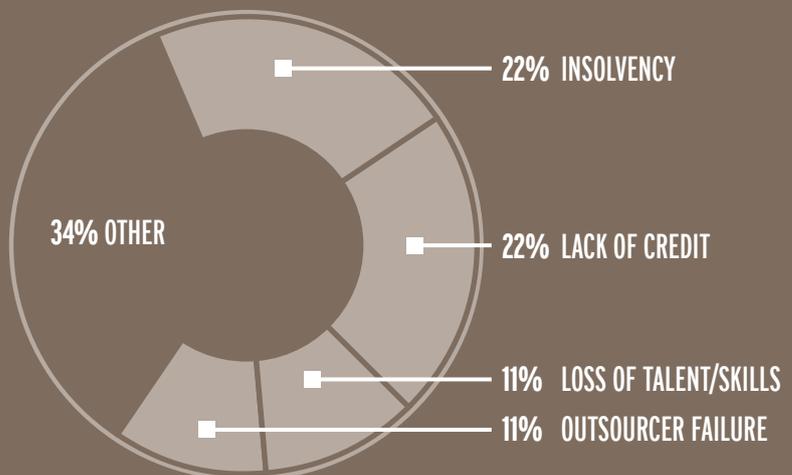


SUPPLY CHAIN RESILIENCE

Key findings in the 4th annual survey of Supply Chain Resilience, by the Business Continuity Institute included:

- 73% of survey respondents experienced at least one disruption with an average of five. This high level is consistent with the trend-line for the past four years
- 39% of analysed disruptions originated below the immediate tier one supplier, underscoring for the second consecutive year the deep-rooted nature of disruption
- Unplanned IT or telecom outages jumped to the top of sources of disruption with 52% affected to some or a high degree. The level was 41% in 2011
- Adverse weather maintained its prominent position with 48% citing it as a cause of disruption, but relatively unchanged from 51% in 2011
- Failure of service provision by outsourcing suppliers has doubled from 17% to 35% of disruption and joins the top three causes
- 21% suffered more than €1M in costs for a single incident; higher than 2011 and in spite of lower overall levels of disruption
- 59% cited loss of productivity as the primary impact of the disruption experienced, up from 49% in 2011. Across all indicators there was a deepening on impact experienced with an average of three distinctive consequences per incident
- 25% of respondents have still to consider supply chain disruption in their business continuity programmes and 44% of respondents have weak supply chains, while major sector differences persist especially in manufacturing and retail and between countries such as the UK and US
- While 47% now look for evidence of a business continuity programme over a simple plan and 23% run joint exercises – all improvements on 2011 – 15% still do not collect any information from key suppliers, and 41% do not validate that key supplier plans might work in practice
- 42% stated the biggest ongoing challenge is to secure buy-in to implement supply chain continuity practices in their firm

THE TOP CAUSES OF SUPPLY CHAIN DISRUPTION FOR THE ENGINEERING AND CONSTRUCTION RESPONDENTS



Source: Zurich

MARINE

MISAPPROPRIATION

Off the back of economic uncertainty, a new and worrying trend is emerging – misappropriation. With end buyers reluctant to buy up stock before they need it, more mining companies are stockpiling ore in warehouses, waiting for orders. The problem is that, months down the line, when they come to deliver the goods they discover the ore has vanished. The insurance markets are currently dealing with more than one loss involving lost goods in excess of USD100m in value. The issue has become global.

FLOODING

Losses from Super Storm Sandy reaching the cargo and specie markets are expected to top USD1bn – the largest ever to hit those markets – from the three to four million cars flooded in Newark as well as damage to bonds and fine wines stored in Wall Street vaults.

However, the 2011 devastation in Thailand and Australia had already alerted mining operations to the potential disruption of major floods. Flooding can disrupt the delivery of goods as well as damage stock in warehouses and equipment on site.

PIRACY

Although pirate attacks off the coast of Somalia are not new, it seems the marine market and especially cargo underwriters are starting to feel the full effects of general average ransom payments. Many companies involved in shipping commodities will charter an entire vessel, with cargo values often exceeding USD250m. For the past 18 months, pirates have started contacting cargo interests directly for ransom payments. However, ransom payments are not the only issue.

With fast fluctuating commodity prices, owners are faced with a cargo that may have lost enormous value while being held to ransom. Owners are unable to claim on their policy because the cargo still exists and will be returned, albeit at a lower value than if it had successfully arrived at its destination without delay.

The piracy problem will affect the coal trade only insofar as there will be minor cost implications for those trading in and out of Nigeria (Nigeria is a fairly large producer) and also through the Indian Ocean (there is some coal trade into India). The Nigeria problem does differ from the Indian Ocean as it is more of an in-port risk, with lesser time and cost implications. Pirates tend to board at night, ransack the vessels and loot the cargo. Only rarely are crew detained or the vessel kept for long periods of time. There is usually no ransom exchanged.

However, piracy activity is at an all-time low, with the first vessel taken since May 2012 captured just before Christmas 2012. Whilst insurance costs are therefore minimal, other costs can be high such as those resulting from crews demanding double wages for specific voyages or the employment of armed guards. By and large, the risk of capture is very low and the vast majority of traffic in these areas is unaffected.



ARCTIC ICE MELT: THE OPENING OF A NEW MINING FRONTIER

According to the US National Snow and Ice Data Center, Arctic Ocean ice coverage has fallen to its lowest level since satellites started measuring it in 1979 (3.41m square kilometres). The contraction of Arctic ice sheets increases the attractiveness of minerals investment in Alaska, northern Canada, Greenland and Russia. Mines in northern latitudes could become more competitive with those elsewhere.

The ice melt will greatly reduce shipping times between Europe and Asia and change the relative competitiveness of mines producing bulk minerals in the different regions. It will also enable manufacturers in Asia to compete even more in European markets, with knock-on effects on the geographical distribution of demand for mineral raw materials. However, while more ships will start crossing the northern sea, it will be years before this becomes a busy and established commercial route.

Natural resource extraction in the Arctic, in particular oil, gold and uranium, is poised to be the next commercial frontier. This new frontier of resource extraction could well become a frontline of geopolitics, climate change and environmental protest.

Compiled by Oxford Analytica

SANCTIONS

Sanctions continue to require the upmost vigilance on the part of clients and insurers. The ongoing challenges in the Gulf region and the knock-on effect for insurance contracts will continue to be felt in the months ahead.

While the mining company, or indeed the mine, may not be in the US or Europe, the reality is that investors or financial institutions, as well as insurers and brokers, are likely to be subject to regulation. These entities are increasingly worried about falling foul of regulators. Take, for example, Liberia, which is a sanctioned country but is also one of the largest flag states in the world. How many mining companies double-check their goods are not being transported on a Liberian-flagged vessel?

The other major issue for the insurance market is that cargo cover can be assigned. Goods can be sold on at various stages in their journey, ultimately arriving in the hands of a sanctioned individual or state, without the insurers' knowledge. Because the cargo insurance remains in place throughout the process, the insured has inadvertently broken the rules.

"There are supply chain issues, which have had a significant impact; global demand for goods and services and the time it takes to import items and/or acquire the appropriate visa/permits for staff, coupled with the increasing requirement to procure a certain percentage of goods and services locally or from business partners of significant investors where quality or quantity may be limited, are prompting operators to change the way in which they are working"

Wardell Armstrong International

MARINE CARGO

Cargo clients continue to enjoy the benefits of a soft market, with reductions in both premium and deductibles, and increases in limits at little or no additional cost.

From an insurer's perspective, several years of reductions in both premium and deductible levels are now being reflected in their results, with attritional losses narrowing the gap between profit and loss.

The recent natural catastrophes in Australia, Chile, Japan and Thailand affected profits but a relatively mild hurricane season in the US in 2012 was providing some relief, until the advent of Hurricane Sandy. In normal circumstances, this should mean the market is at the bottom of its cycle and should be moving upwards – but these have been anything but normal circumstances. Despite dwindling returns, competition remains fierce amongst insurers, thanks to a flurry of new entrants.

At the same time, clients have begun to show signs of emerging from the worst effects of the credit crunch with an increase in both shipped values and volumes. In particular, the increase in oil prices, resumption of construction projects and continued economic growth in the BRIC countries are directly contributing to an increase in premium volumes for the cargo market. In view of this, we see no end to the soft market condition in the foreseeable future.

A harsh economic environment can only lead to one direction for the cargo market – increased losses. The frequency of hijacking claims has significantly increased since the onset of the economic slowdown. As a typical shipment may be valued at between USD500,000 – USD1m, the impact of a single claim on insurers' results is material and immediate.

Corporate pressure for underwriters to grow their cargo book has continued, especially in the second half of the year. This might signal yet further premium reductions; however, recent renewals suggest this is not the case. Underwriters are also showing signs of being willing to reject business, rather than offer unprofitable terms.

While there is little sign of change as yet, adverse losses and reduced margins may force a new direction in underwriter focus.

SPECIE

The specie market continues to see increased growth in the value of precious commodities, such as gold, diamonds and platinum. Gold reached a high of USD1,724 per ounce in 2012, slightly down from the peak of USD1,900 in 2011. Increasing demand for diamonds continues to come from China and India in the main (Brazil and Russia as well), with the high end luxury sector still obtaining impressive results despite the continued adverse world economy.

The outlook for 2013 should be similar to 2012, as the western world economy continues to claw its way out of recession.

The specie insurance market has remained flat in terms of premiums charged. This has been brought about by positive underwriting results and over capacity due to new Lloyd's syndicates writing business in addition to European markets. Many insurers continue to be unable to give significant reductions on existing renewals but can often be more competitive when quoting for new business.

The main amendment to the standard market wording in 2011, applicable to all specie insurance contracts, was the addition of the Sanctions Clause (US and EU directive).

This can limit the cover in certain territories depending on the nature of the sanctions involved. Sanctions remain stringently enforced criteria. During 2012 underwriters have focused more closely on political risks, namely SRCC (strikes, riots and civil commotions) exposures in certain regions and territories.

COVERAGE

Coverage for the product will normally be arranged from the time that the product is entered into the Mine Register and in certain cases even before. One of the most important parts of the insurance coverage is the "basis of valuation". It is critical that this is correct and thereby avoiding any disputes with insurers in the event of a claim. It is possible to have different "basis of valuations" at various stages of production, reflecting the extra cost associated with recovering the product at any particular time.

Whilst mines are often in remote parts of the world, precious commodities such as gold and diamonds are often flown from the mine to a place of consolidation before onward shipment to either a refinery in the case of gold, or to a processing factory in respect of diamonds. Therefore, the impact of remote mining areas on this part of the insurance would normally be minimal - unless there are several transshipping points.

WHAT CAN GO WRONG

A typical supply chain failure, witnessed by the London P&I Club:

Under the International Maritime Solid Bulk Cargoes (IMSBC) Code, shippers need to establish that the moisture content of iron ore cargos are safe to load and transport. However, the London Club has warned ships are being offered iron ore cargos for loading in Sierra Leone which are unsafe and that limited local expertise and technology, together with poor communications, are exacerbating the problems.

Consultant Brookes Bell has confirmed ships have been offered unsafe cargo because its actual moisture content exceeds the transportable moisture limit (TML). Brookes Bell has learned there is no facility in Sierra Leone with the equipment necessary to establish the TML of a sample.

According to Brookes Bell, one surveyor resorted to drying out samples in an oven in the ship's galley. *"The resultant uncertainty about the cargo's safety led to very extensive delays during loading. At a simple level, there are significant logistical problems in accessing stockpiles either at the mines or at river terminals. The long and difficult journeys can involve both road and river transport and, because of the lack of on-site accommodation, these journeys may need to be repeated frequently."*

"The often long lead times required for ordering key items of equipment, commonly measured in years, and high capex costs of new equipment are causing operators to consider refurbishing equipment already on site and, increasingly, use contract miners, at least in the early years of development, who provide and maintain their own plant and equipment. However, it is becoming evident cheaper is not better and stoppages in production owing to mechanical breakdown/failure and the limited presence of skilled labour on site impacts the bottom line"

Wardell Armstrong International

NEW OECD GUIDANCE

In July 2012, the OECD published a supplement to its guidance on supply chain resilience in the mining sector to cover gold specifically. This new supplement will be added to the wider guidance when republished in 2013.

This Guidance recognises "Due diligence in conflict-affected and high-risk areas presents practical challenges. Flexibility is needed in the application of due diligence. The nature and extent of due diligence that is appropriate will depend on individual circumstances and be affected by factors such as the size of the enterprise, the location of the activities, the situation in a particular country, the sector and nature of the products or services involved. These challenges may be met in a variety of ways, including but not limited to:

- Industry-wide co-operation in building capacity to conduct due diligence;
- Cost-sharing within industry for specific due diligence tasks;
- Participation in initiatives on responsible supply chain management;
- Co-ordination between industry members who share suppliers;
- Co-operation between upstream and downstream companies;
- Building partnerships with international and civil society organisations;
- Integrating the model supply chain policy (Annex II) and specific due diligence recommendations outlined in this Guidance into existing policies and management systems, due diligence practices of the company, such as procurement practices, integrity and know your customer due diligence measures and sustainability, corporate social responsibility or other annual reporting."

Source: OECD



SKILLS SHORTAGE



LABOURING THE POINT

MINE OPERATIONS ARE DEPENDENT ON HAVING THE RIGHT PEOPLE IN THE RIGHT PLACE AT THE RIGHT TIME. FOR THE PAST FEW YEARS WHILE COMMODITY PRICES WERE BOOMING, MINE OPERATORS WERE LURING EMPLOYEES FROM ACROSS THE GLOBE TO MAKE THE MOST OF THE OPPORTUNITY.

Staff were standing outside London headquarters handing out flyers attracting much-needed drives. For example, while as recession hit hard in the Eurozone, Irish workers in their thousands migrated to the minefields of Australia where there was a surfeit of well-paid work.

How times have changed. Roll on to 2012, and likely into 2013, and commodity prices have fallen back dramatically. These same in-demand employees are no longer quite so needed and suddenly are being laid off in their thousands – in December 2012, R2Mining reported that Australian operations had reduced overheads by A\$2bn through cutting 10,000 jobs in the previous two months alone.

This volatility in demand is nothing new but is something that has to be appropriately managed. One of the more recent trends is for host countries to demand a higher proportion of their workforce is employed locally – in some countries this might be up to 90% of the total workforce. When it comes to cutting back, the mine operators may face local hostility which could even spill over into violence. In the worst case scenario, mine operators could face losing their licence to operate.

The mine operators often use a high proportion of expatriate labour simply because the mines are located in remote regions where there are not enough people to man the site. For example, at one recent Australian project the construction phase ‘soaked up’ all the welders nationwide. To help out, the mine operators set up welding ‘schools’ elsewhere across the country to replenish the missing workforce to satisfy local demand.

SKILLS SHORTAGE

While the number of employees needed on site may wax and wane with commodity prices, the demand for skilled workers never appears to diminish. Highly skilled people remain in demand whether or not there is a downturn in production. When profit margins are being squeezed, having the right staff on site can make all the difference between success and failure. Not only should these professionals be able to spot opportunities to reduce overheads, they are essential in maintaining health and safety standards as well as mechanical operations.

Mine operators may look for ways to automate the process and so reduce the head count; however, the need for skilled workers remains. Mine managers and engineers are among the most sought-after professionals and mine operators provide high wages and a range of additional benefits to attract them.

In some regions, such as Western Australia, there is a fly in-fly out culture. Workers can spend three or four months on site and then fly back to Perth with sufficient income to last the rest of the year. Workers will often arrive through one airport hub, then accessing a range of mining locations. It is hard for operators to ensure staff loyalty when demand is high and workers can choose between sites so easily. As budgets get squeezed, this can become harder for mine operators, while the skilled labour will also be looking for the best deal – aware the next job may not be so easy to find and this income may have to last longer than usual.

As budgets get squeezed, mine operators are being faced with some tough calls about the number of people on site and the numbers going underground. As commodity prices fall and as it gets harder to access the ore, the temptation is to have fewer miners potentially working longer hours to match the income produced more easily in the past. The largest operations will have a risk management team, continually assessing the true cost of any such changes. Risk managers will be making some of the hard decisions about the health and safety implications of any cutbacks, making sure training standards are maintained.

However, some mines are cutting back on training because of pressure from head office or from investors demanding a better return. These operators are exposing themselves to long term damage, risking losing their licence or harming the reputation of their brand.

“The South African mining environment has become simply a sea of troubles. One prominent South African miner has said privately that it is now easier to run a mine in Afghanistan than it is to run one in South Africa”

Business Day

STRIKES

Throughout 2012, the mining industry has been beset by a wave of wildcat strikes from Peru to Indonesia and, more recently, in South Africa. Whilst these disputes ordinarily revolve around grievances about pay or working conditions, the events in South Africa have taken on a more violent and political dimension the longer the strikes have continued.

South Africa: The South African gold and platinum sectors have been thoroughly shaken by a series of strikes and protests, sparked by the 46 deaths during protests at platinum producer Lonmin PLC. The strikes have centred around worker dissatisfaction with union leadership and demands for higher wages. The subsequent destabilisation of the sector has resulted in substantial output interruption, with Lonmin PLC losing up to 60,000 troy ounces of platinum. Until Cosatu, the country’s union federation, and the National Union of Mineworkers can hash out a workable deal between producers and employees, the South African mining sector will continue to face enormous challenges and potentially crippling losses, in an industry where rising inflation has already put pressure on labour and energy costs. Cosatu’s close relationship with the ruling African National Congress has also been called into question, with workers accusing the federation of incompetence and complacency. Recent moves to reinstate sacked workers and negotiate wage demands will be followed closely by the sector; South Africa’s mining sector has developed a reputation of unpredictability that is certain to affect foreign investment.

Colombia: Like Peru, Colombia’s rich mineral resources have brought in substantial revenues, with accompanying labour issues and development problems. The Glencore-owned La Jagua mine, which produces Colombia’s highest quality coal, has seen a three-month-long strike over working conditions and wages. However, unlike Peru, union representatives and company executives have managed to successfully negotiate an end to the strike through a government-sponsored arbitration tribunal. Despite setbacks from industrial action and the continued threat of FARC, Colombia has successfully increased overall coal output from 2011’s 85.8m to 93m tonnes, demonstrating that robust security measures and fiscal reforms are key to ensuring healthy growth in the sector.

INSURANCE CONSIDERATIONS

Among the key considerations for keeping skilled employees is the provision of adequate employee benefits.

INTERNATIONAL EMPLOYEE BENEFITS

In an industry with immediate and projected skills and labour shortages, identifying, attracting and retaining skilled labour is critical. The challenges currently facing the mining industry are largely impacted by the nature of the labour market; skilled labour has become globally mobile, creating a new set of considerations for benefit provision by the employer. The competition for skilled labour has increased labour costs and forced employers to look carefully at new ways of holding onto talented people – a failure to sufficiently address this important issue will likely impact production output and contribute towards project delays or cancellations.

COMPENSATION AND BENEFITS

For a long time mining employers have known that they must offer competitive remuneration packages. To keep up with growing trends, packages to retain the best talent must now include the right combination of cash and benefits (both financial and non-financial). From an employer's perspective it is also important to ensure the non-cash elements of the value offering are appropriately targeted to be appreciated by the workforce, and regarded as a true differentiator to their competitors in the labour market. The clear communication of the total benefits package to the employees, and education on how best to utilise the benefits, contribute towards a wider awareness of the whole investment the employer is making on behalf of the employees.

Benefits in a remuneration context

In determining the appropriate balance between cash compensation and benefits, multinational employers set their global strategy on the level of benefits to provide, ie which target range to provide benefits (at, above or below the median level, based on market knowledge and benchmark data). Corporate and social responsibility plays a key factor, not only on how the company is perceived by the labour force, but also on the benefit design and structure selected on a global level.



CASE STUDIES

CHILE

After the devastating earthquake hit Concepcion, Chile, the emergency crisis management service provider called upon its evacuation response team to support its corporate and NGO clients that were operating in-country. The support included providing intelligence assessments of the ground situation, advancing life sustaining medical and food supplies to clients in hard-hit remote areas and finally, to evacuate those who could no longer remain via air and ground assets.

GUINEA, WEST AFRICA

When political instability in Guinea resulted in violence, the emergency crisis management service provider was contacted by its clients to support its personnel living and operating in-country. The provider was able to move personnel to safe haven locations via ground and aviation resources, getting them out of harm's way.

Mobility

A competitive benefit solution must reflect the global and mobile nature of the mining workforce. This can also mean they may be more prepared to change jobs or location if a better offer is on the table. Therefore, there are insurance considerations to take into account to ensure that cover and savings are portable so continuity applies when changing work site or employer. Additional support typically provided by the employer includes relocation assistance and free or subsidised childcare facilities.

Flexible benefits

Very important aspects for the mining industry to consider are the broad variations in job positions, geographical cultural backgrounds and individual priorities of the employees. To best accommodate the multitude of different employee aspirations, an area with increasing focus for employers is the improvement of flexibility in benefits selection. Flexibility in benefit provision makes benefits more visible, as employees are allowed to choose more or less cover for themselves or their families, to suit their circumstances. This enables the employee to take ownership of their remuneration package and tailor it to their own specification.

Phased retirement

When skilled workers retire, not only do they reduce the headcount of the skilled labour market, there is also the loss of knowledge and experience that goes with them. Many employers have now introduced phased retirement programmes which allow employees nearing retirement to reduce their work commitment, while retaining their services on a part-time or new contract basis. This can be beneficial to all parties, not least by providing further opportunities for the retiring generation to transfer key skills and knowledge to less experienced employees perhaps just starting out on their careers.

Non-financial benefits

Taking this further, mining companies are now looking towards what more they can do to become the industry 'employer of choice' – this has now moved into the following areas:

"The production for the three months to September 30 2012 was 1.03Moz, which compares with guidance for the period of 1.07Moz to 1.10Moz at a unit total cash cost of USD835/oz and USD865/oz. The lower-than-expected production level was primarily due to continued labour unrest in South Africa and lower-than-anticipated production at Obuasi and will have a commensurate impact on unit total cash costs"
AngloGold Ashanti

Flexibility of FIFO/DIDO* Rosters

By developing new rosters which have reduced the amount of working time without a break to the current eight days on six days off, this offers the employees a greater work-life balance. More rigid roster structures may be viewed as less flexible and more old-fashioned by a workforce comparing the best working conditions for them on the market.

Tailored career development

There is a growing expectation that modern mining employers will offer some kind of training and career development plan to provide opportunities for the employees to move forward on their career path. Investing in the development of the employees themselves not only shows that the employer is committed to them, but also nurtures an environment where employees will feel valued and want to stay on for the longer term.

PURCHASE OF BENEFITS

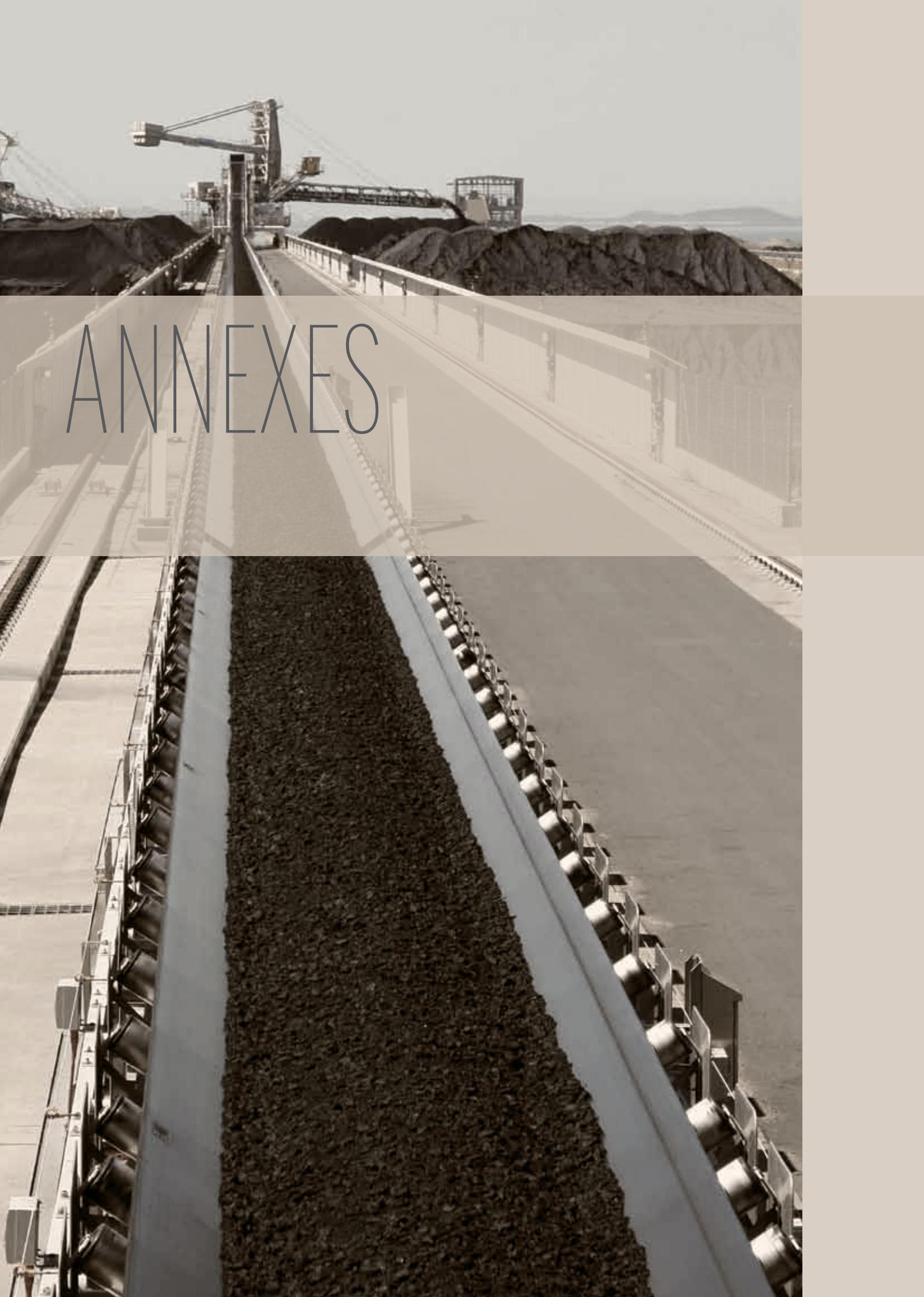
In the current challenging labour market conditions, every international employer will be looking at ways to mitigate rising costs and to optimise efficiencies wherever possible. The mining industry is no different. An international company must explore how it can use its purchasing power to ensure local benefits are correctly priced.

Multinational pooling is a well-known vehicle using global purchasing power to reduce costs or improve benefits. Economies of scale are achieved by combining the purchase of local insured employee benefits with a network of insurers - this gives access to a share of the insurers' margins.

The nature of the mining industry, with large groups of employees in a limited number of territories, makes the solution of insuring employee benefits with the Mining company's own captive insurance company a viable one for consideration. Insurers become local administrators, and the multinational employer gains access to risk and expense margins, enabling benefits to be often provided at a lower rate than the local pricing. While captive solutions may be able to reduce costs, a key spin-off is that transparent access to claims data allows companies a better insight into their own business risk and can result in claims reductions over the longer term.

**fly in, fly out/drive in, drive out*





ANNEXES

ANNEXE 1: DIRECTORS' AND OFFICERS' INSURANCE MARKET RISKS

AREAS OF CONCERN ARISING FROM THE WILLIS/ALLEN & OVERY SURVEY

84% believe regulatory and other investigations and enquiries pose the greatest significant risk of director/officer (D&O) liability

The worldwide financial crisis and its global effects underscored the complex and interconnected nature of international business. Governments and other entities have recognised the need to collaborate in correct procedure. Both existing and new measures have and will be implemented through strengthened and increased law and regulatory procedure. Most of the liability impact of these measures comes from the US, UK, EU and Australia as they are the most regulated economies, but other economies have been catching up as they integrate into the global business infrastructure.

Usually, in economic downturns there is an increase in the reporting of wrongdoings, as companies and countries seek to recover more aggressively to improve their financial situation. This in turn leads to an increase in company and regulatory investigative actions. What follows are some examples of regulatory expansion and the investigatory and compliance issues faced by directors in the current business environment.

In the UK, the Regulatory Enforcement and Sanctions Act 2008 was enacted to increase the effectiveness of risk-based regulation, as applicable to a broad range of regulators. It enables the imposition of regulatory sanctions directly without judicial intervention; such sanctions include fines, compliance and restoration requirements and enforcements of various kinds.

In dealing with fraud, bribery and corruption, the UK Serious Fraud Office (SFO) has imposed civil sanctions and used these powers in conjunction with other legislation such as the Proceeds of Crime Act 2002, to achieve civil recovery.

The SFO co-operates closely with the US and other countries to carry out its responsibilities and the Financial Services Authority (FSA) receives hundreds of requests per year for assistance from foreign regulators. The numbers have risen considerably during the last two years. See on P64/65 the Securities Exchange Commission (SEC) enforcement figures and cases, as an example of the broad reach of the regulators. Typically, the regulators favour the companies that co-operate and this does create situations where companies perform aggressive investigations in an attempt to avoid or mitigate severe sanctions. It has to be remembered that companies are not obliged, unless indemnification contracts are in place, to indemnify directors. Directors and officers need to be very careful and seek outside legal help to avoid being caught up in a potential legal minefield, where seemingly benign interviews become incriminating evidence leading to the corporate indemnity being unavailable and the real possibility of a divergence of interests between the director and the company itself.

It is essential to ensure the policy contains the appropriate level of cover for these types of claims. Does the policy differentiate between cover for investigations of directors personally or situations where a director is asked to attend an investigation into the affairs of the company? What is the policy trigger for cover under the policy? For example, will the policy only respond once a director has been subpoenaed or will cover be available following a request to attend an investigation including a request to interview or supply information. These questions can play an important role in securing cover and making sure that a director has the appropriate representation at an early stage of the investigation, which may help mitigate their ultimate exposure to a claim.

63% of those polled were worried about the broad reach of anti-corruption legislation

Directors and officers are right to be worried because this is one area where there is significant co-operation between the international regulators. All D&O policies have conduct exclusions and attention needs to be given to the breadth of the exclusion, defence costs language and final adjudication language. Attention will also need to be given to the cover afforded for investigations and when the policy is triggered.

The Department of Justice (DOJ) and SEC have just released their Resource Guide relating to the agencies' Foreign Corrupt Practices Act (FCPA) enforcement. The 120 page guide addresses, amongst other things:

- (1) the definition of a foreign official
- (2) gifts and entertainment and
- (3) the "hallmarks" of an effective corporate compliance programme.

Whilst the Guide does not represent a departure from the agencies' prior position it does, however, offer a useful one-stop summary of the agencies' enforcement positions that are worthy of careful review. The Guide, however, is just that - a guide - and is explicitly NOT BINDING on courts or even the agencies themselves.

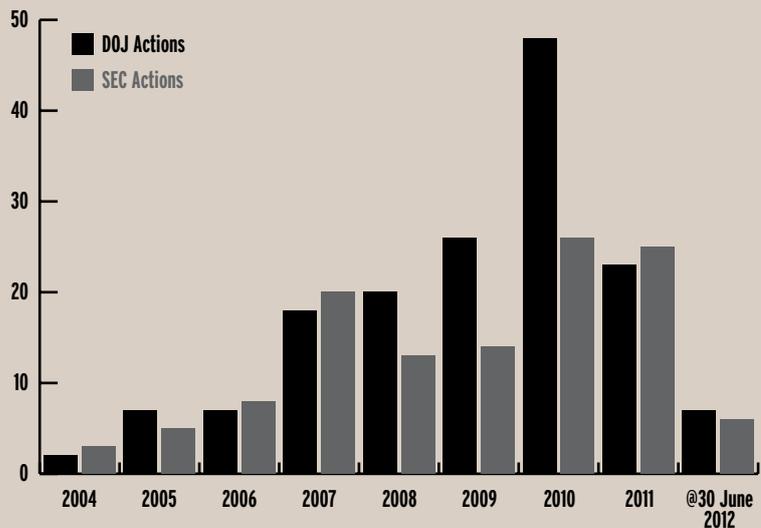
FOREIGN CORRUPT PRACTICES ACT (FCPA)

The FCPA's anti-bribery provisions make it illegal to corruptly offer or provide money or anything of value to officials of foreign governments or foreign political parties with the intent to obtain or retain business. The anti-bribery provisions apply to 'issuers', 'domestic concerns', and 'agents' acting on behalf of issuers and domestic concerns, as well as to 'any person' that violates the FCPA while in the territory of the US. The term issuer covers any business entity that is registered under 15 U.S.C. § 78l or that is required to file reports under 15 U.S.C. § 78o(d). In this context, the approximately 1,500 foreign issuers whose American Depository Receipts (ADRs) are listed on US exchanges are issuers for purposes of this statute. The term 'domestic concern' is even broader and includes any US citizen, national, or resident, as well as any business entity that is organised under the laws of a US state or that has its principal place of business in the US.

SEC ENFORCEMENT ACTIONS IN FCPA CASES

Enforcement of the FCPA continues to be a high priority area for the SEC. In 2010, the SEC's Enforcement Division created a specialised unit to further enhance its enforcement of the FCPA, which prohibits US companies from bribing foreign officials for government contracts and other business.

Number of FCPA enforcement actions initiated by the DOJ and SEC



Source: Gibson Dunn - 2012 Mid-Year FCPA Update

A brief selection of the SEC's FCPA enforcement actions follow, demonstrating the broad reach of the regulatory authorities:

2012

- **Tyco International** - SEC charged the Swiss-based global manufacturer with violating the FCPA when subsidiaries arranged illicit payments to foreign officials in more than a dozen countries. Tyco agreed to pay USD 26m to settle the SEC's charges and resolve a criminal matter with the Justice Department.
- **Oracle** - SEC charged the California-based computer technology company with violating FCPA by failing to prevent a subsidiary from secretly setting aside money off the company's books to make unauthorised payments to phony vendors in India.
- **Pfizer** - SEC charged the pharmaceutical company for illegal payments made by its subsidiaries to foreign officials in Bulgaria, China, Croatia, Czech Republic, Italy, Kazakhstan, Russia, and Serbia to obtain regulatory approvals, sales, and increased prescriptions for its products. Pfizer and recently acquired Wyeth LLC - charged with its own FCPA violations - agreed to pay a combined USD 45m in their settlements.
- **Orthofix International** - SEC charged the Texas-based medical device company with violating the FCPA when a subsidiary paid routine bribes referred to as "chocolates" to Mexican officials in order to obtain lucrative sales contracts with government hospitals.
- **Biomet** - SEC charged the medical device company with violating the FCPA when its subsidiaries and agents bribed public doctors in Argentina, Brazil, and China for nearly a decade to win business.
- **Noble Corporation executives** - SEC charged three oil services executives with bribing customs officials in Nigeria to obtain illicit permits for oil rigs in order to retain business under lucrative drilling contracts.
- **Smith & Nephew** - SEC charged the London-based medical device company with violating the FCPA when its US and German subsidiaries bribed public doctors in Greece for more than a decade to win business. The company and its US subsidiary agreed to pay more than USD 22m to settle civil and criminal cases.

2011

- **Magyar Telekom** - SEC charged the largest telecommunications provider in Hungary and three of its former top executives with bribing government and political party officials in Macedonia and Montenegro. The firm and its parent company agreed to pay USD 95m to settle civil and criminal charges.
- **Siemens executives** - SEC charged seven former Siemens executives for their involvement in the company's decade-long bribery scheme to retain a USD 1bn government contract to produce national identity cards for Argentine citizens.
- **Diageo** - SEC charged one of the world's largest producers of premium alcoholic beverages for making USD 2.7m in improper payments to government officials in India, Thailand, and South Korea to obtain lucrative sales and tax benefits. Diageo agreed to pay more than USD 16m to settle the case.

DIRECTORS OF UK COMPANIES SHOULD ALSO BE AWARE OF THE EFFECT OF THE UK BRIBERY ACT 2010

The Act which came into force in July 2011, gives the UK government a much broader range of outlawed activities and remedies than the US Foreign Corrupt Practices Act in several regards. For example, the Act is not limited to bribes paid to foreign officials: the Act prohibits the payment of bribes to any individual to provoke them to act.

- The Act itself creates four offences: two general offences of paying and receiving bribes, the bribery of foreign public officials and the offence committed by the failure of commercial organisations to prevent bribery.
- The organisation will be guilty of an offence if an associated person, including an employee, commits bribery to obtain or retain business or an advantage in the conduct of business for the organisation – it is not necessary now to find a 'directing mind' of a corporate entity. Now the only requirement on the prosecution is to prove failure to prevent bribery. The sole defence available to the organisation is to show that it had adequate procedures to prevent bribery.
- The Act will lead to increased enforcement activity and the likelihood of follow-on civil litigation. Attention will need to be paid to whether or not one's D&O policy will pick up the investigation costs and defence fees.

It is still too early to be able to demonstrate the number of claims brought under the Bribery Act by the regulators; however, the current regulatory environment will no doubt ensure that claims will be forthcoming. Once again, carefully attention will need to be given to the D&O wording to ensure that the policy will respond to protect the directors who are being investigated at an early stage rather than a later one.

FSA'S ASSESSMENT OF ANTI-BRIBERY AND CORRUPTION SYSTEMS AND CONTROLS

In March 2012, the FSA published the findings of its review of anti-bribery and corruption systems and controls at investment banks. In its review, the FSA found most firms had not properly taken account of applicable anti-corruption rules, that nearly half of the firms sampled did not have adequate anti-bribery controls and corruption risk assessment systems in place, and only two of 15 firms had conducted a compliance audit during the past two years.

Further, the FSA found "significant weaknesses in firms' dealings with third parties used to win or retain business". These findings will likely support forthcoming proposed amendments to the FSA's regulatory guidance on financial crime, which applies to all firms within the jurisdiction of the FSA, not only investment banks. The FSA has also signalled that its review will result in enforcement actions against some of the individual banks reviewed.

The fact that these comments were directed at the FSA's investigation into investment banks does not mean that the same could not be said of other business sectors including the mining sector.

The anti-corruption enforcement activities of the first half of 2012 demonstrate that the vigour of FCPA and international anti-corruption enforcement efforts has not subsided. Regulators remain in contact with their international counterparts and have learned to conduct effective, collaborative cross-border investigations.

64% of those polled believed criminal and regulatory fines and penalties pose the greatest significant risk to directors and officers

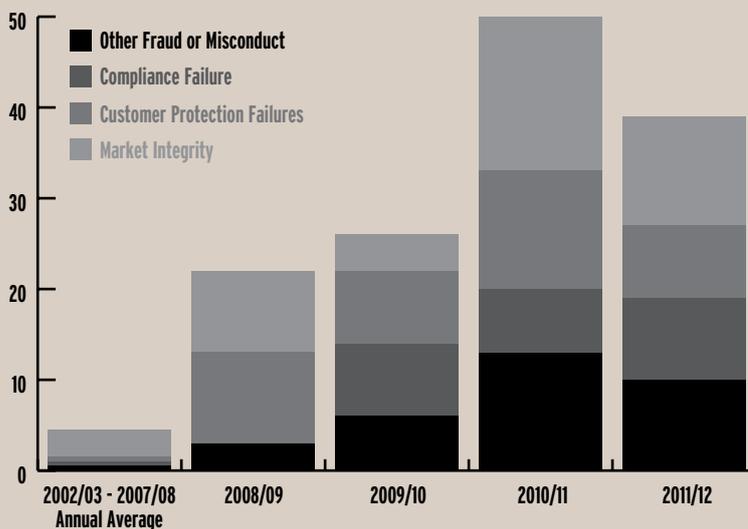
Regulatory fines and penalties against directors and officers under English law causes a significant problem because the law does not allow them to be indemnified by the company. Public policy insurance protection is not available if the fine flows from a dishonest or intentional act. The UK Bribery Act allows for personal liability in the case of directors. It also allows for the prosecution of individuals if with their "consent or connivance" a bribery offence was carried out by the company. It is not just in the UK, for example in the US, the Foreign Corrupt Practice Act allows for the prosecution of directors and officers where wrongdoing is found.

The D&O policy will usually cover defence costs until final adjudication. It will not pay the fine.

Attention needs to be given to the D&O policy exclusions to ensure the widest coverage is available especially for civil fines and penalties. In 2010/2011, the FSA made headlines with several record-breaking fines against firms; in the most recent financial year, it imposed fines of unprecedented size on individuals.

Whilst the statistics here relate to the financial markets what is important from these statistics is the category of misconduct that can affect any industry sector especially the compliance failures and fraud and other misconduct failures.

Annual FSA fines against individuals 2002/03 - 2011/12

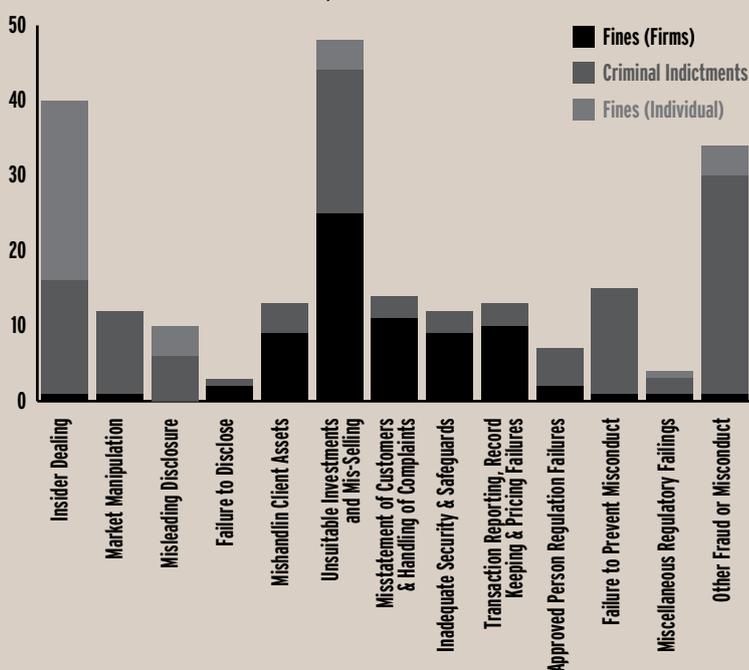


Source: Nera Trends in Regulatory Enforcement in UK Financial Markets Fiscal Year 2011/2012

Our other key findings include:

- Consistent with the FSA’s declared intention of concentrating its enforcement activities on high-profile individuals, the fines imposed on the directors and executives of large companies have increased in both number and magnitude over the past two years.
- Recent increases in penalties have occurred in advance of the widespread official implementation of the FSA’s revised penalty framework. The increasing focus on high-profile individuals and the effect of the revised framework may further increase fine amounts.
- The number of fines imposed on individuals in 2011/2012 approached the record level for 2010/2011 after accounting for the eight cases that were referred to the Upper Tribunal. The number of fines imposed on firms reverted to a level close to the average observed during the “light-touch” era of 2002/2003 to 2007/2008.

FSA fines and criminal indictments by category of alleged misconduct 2009-10 - 2011/12



Source: Nera Trends in Regulatory Enforcement in UK Financial Markets Fiscal Year 2011/2012

FUTURE OF ENFORCEMENT BY THE FINANCIAL CONDUCT AUTHORITY

The FSA is to be dissolved in early 2013. Under the new structure to be introduced at that time, three bodies will share responsibility for financial regulation:

- The Financial Policy Committee (FPC)
- The Prudential Regulation Authority (PRA)
- The Financial Conduct Authority (FCA).

The FPC will be a committee of the Bank of England responsible for macro-prudential regulation, with the power to issue directives and recommendations to the other two regulators; the PRA will concentrate on micro-prudential regulation; and the FCA will be required to maintain market integrity, protect consumers, and promote competition in financial services.

Being sued abroad was identified by 48% of those polled as an area of concern and from a coverage point of view 67% were worried whether or not the D&O policy will be able to respond in all jurisdictions

International trade and the global reach of corporations extends across many boundaries and jurisdictions. It should come as no surprise that regulators have become far more co-operative and joined up in their approach to going after alleged wrongdoers running large international organisations.

A D&O policy might say it has worldwide capability and therefore should cover all international subsidiaries but in reality, this is often not the case. Much will depend on where the subsidiaries are based and whether or not those countries accept non admitted insurance, ie insurance placed in an overseas territory purporting to cover the local directors. Some countries have strict laws which require that risks relating to the country must be placed in the country by a locally licensed carrier.

It is important for directors running international companies, to know whether or not the policy bought and placed in London, New York, Sydney or Moscow is able to respond to a local matter relating to one of its subsidiaries in Brazil, China or India. Corporations not only need to be compliant with the local laws and regulations but also a head office director may well be sitting on the local board and, if sued locally, needs to be sure that the company’s D&O programme is able to respond in that particular territory.

As the company expands overseas so too must its D&O policy be able to respond. If a locally admitted insurer is required in order to pay a claim locally then a local policy in that territory must be contemplated.

49% of those polled believe that co-ordination of the D&O policy with the company's indemnification obligations is a significant issue of policy coverage

Well advised directors, where legally possible, have both company indemnities and D&O insurance protection. Whilst the cover afforded does overlap, each has its advantages and disadvantages.

Criminal and regulatory fines cannot be indemnified by UK companies on behalf of their directors because the Companies Act prohibits this and likewise, insurance cover is not available to protect them if the fine or penalty flows from a dishonest or intentional act by the insured. With an increase in regulatory activity against companies and their boards, directors are looking to their companies for support. Unless specific indemnification agreements are in place, it should be noted that a company is not obliged to indemnify a director. However, directors of most large international corporations do negotiate indemnity agreements with their companies prior to becoming a director. Where in claim situations, the director is on good terms with the company, it is often easier to turn to the indemnity agreement than rely on the D&O policy, as the policy might well have exclusions and policy language that limits or minimises the insurers' exposure. Most important will be to make sure that any defence costs are picked up by the D&O policy even if they are initially paid for by the indemnification agreement. This is because defence costs under an indemnification agreement are only available as incurred on the basis of a loan, which potentially will have to be repaid if the director's defence fails.

Restrictions on the extent to which directors may be indemnified does create difficulties for insurers providing D&O cover for directors who have been found liable for a breach of duty and/or attendant defence costs. The difficulty is whether or not the insurer should insure the directors and ignore the indemnification that may or may not be available from the company or, should it instead, reimburse the company once the company has indemnified the directors, assuming it is permissible to do so? In practice insurers do both. Nearly all standard D&O policies have cover for the directors where the company does not indemnify and reimbursement cover for where the company has indemnified.

The problem with this dual prong approach is that it is not always clear whether, in any given case, a loss is indemnifiable or not. D&O insurance has, as a core premise, that wherever a company can indemnify its directors, it should. Many D&O policies apply a retention to the company reimbursement section of the policy and none to the non indemnifiable section of the policy. If there is a distinction to be found between non indemnifiable and indemnifiable loss, it is normally to do with whether or not there is the possibility of a retention being applicable to the claim. The size of the retention can, in some cases, be significant. The argument as whether or not a claim is indemnifiable or not can and does lead to difficulties depending on the language within each policy; for example, advancement provisions only apply to defence costs, leaving the directors exposed to other forms of loss. The definition of indemnifiable loss in many D&O policies reveals that the effective trigger for the insurer to advance payments is a legal prohibition on indemnification. This can lead to a problem where indemnification is permissible, the advancement trigger may not be actioned.

Many D&O policies do not have time limits within which to sort out legal arguments on whether or not to indemnify and the need to advance defence costs. This is often the case, even where the policy allows for advancement by the insurer, in the event the policyholder declines to indemnify.

The most important thing that has to be kept in mind is how the costs of the lawyers will be funded. Can the company fund the costs via the indemnification agreement and are such costs covered under the D&O policy? What happens if the company cannot indemnify or will not indemnify? Have insurers, under the D&O policy, agreed to the use of separate lawyers and payment of them where there is a divergence of interest between the policyholder and the directors? D&O policies differ quite considerably and attention needs to be given to the actual definition of "investigation" within the policy terms and conditions. It might be that early discussion with the regulators by the directors does not trigger the policy because it is only "formal" investigations that are covered or where directors are "required to attend" a hearing.

Willis has responded to this dilemma by designing a new policy form called DARCstar. This is where insurers provide direct access to insurance coverage regardless of a company's ability or otherwise to indemnify. Instead of the conventional dual insuring clause approach, with indemnification being the barrier between the two, DARCstar contains just one insuring clause, with a nil deductible and with insurers waiving their rights of recourse, in all circumstances, against the policyholder, for indemnifiable loss. This removes the doubts and uncertainties created by company indemnification where permissible.

ANNEXE 2: THE TOP 20 COUNTRIES FOR NUMBER OF REPORTED KIDNAPS

RANK	COUNTRY	MINERALS MINED (EXCLUDES OIL, GAS)	NOTES ON MINING	GEOPOLITICAL ISSUES
1.	Nigeria	Tin, columbite, coal, gold, lead, tungsten, zinc	Tin, columbite and coal extraction are 3 out of the 4 top industries in Nigeria.	Kidnap for financial and political reasons by militant groups (e.g. Boko Haram, MEND) and criminal gangs. Endemic corruption, poor infrastructure and political uncertainty temper investors' interest.
2.	Pakistan	Chromite, copper, gold, iron ore	Reko Diq Complex is one of the world's largest copper deposits. 400 million tons of commercially viable iron ore has been reportedly discovered in Baluchistan.	Investors have been put off Pakistani opportunities due to widespread violence and political instability. Kidnaps are perpetuated by Islamist groups and criminal gangs. High risk regions include Baluchistan and the Federally Administered Tribal Areas.
3.	Mexico	Silver, gold, bismuth, celestite, lead, manganese, copper, zinc, arsenic	Northern Mexico has vast mineral reserves, ranking first in the production of silver, bismuth and celestite.	Mexico's status as a kidnapping hotspot has been maintained by the increasing violence of the drug cartels and a reluctant and corrupt police force.
4.	Afghanistan	Iron, copper, cobalt, gold, lithium, coal	Afghanistan has potentially \$1 trillion of mineral reserves. Reserves of high-grade iron ore, discovered in Bamyán Province, are estimated to total 2 billion tons.	Continued war, the shortcomings of the local security forces and poor to non-existent infrastructure have resulted in little foreign investment.
5.	Venezuela	Iron, bauxite, aluminium, gold	The country is the world's largest producer of direct-reduced iron. Other minerals are also found in abundance, especially bauxite and aluminium.	Kidnapping has been a serious problem in Venezuela for many years, due to the country's high unemployment and weak security forces. Cross-border Colombian guerrilla activity as well as dependent-targeting criminal gangs make the country a high-risk region.
6.	India	Coal, zinc, bauxite, iron ore, copper, gold, silver, manganese, chromite	India has an estimation of \$200 billion of as-of-yet untouched mineral reserves. More than 80 mineral commodities are produced and India ranks amongst the world's leaders in iron, bauxite, zinc and coal.	In recent years India has ranked in the top 10 for kidnapping. This has been fuelled by vast income disparities, overstretched law enforcement and ethnic and political tensions. Individuals working in the mining sector have traditionally been targeted.

RANK	COUNTRY	MINERALS MINED (EXCLUDES OIL, GAS)	NOTES ON MINING	GEOPOLITICAL ISSUES
7.	Philippines	Copper, gold, chromite, silver, nickel	Although mining has declined in importance, the Philippines remains the second in the Asia-Pacific region in terms of mineral prospectivity. Japan is their primary export market, with copper and gold the principal commodities.	Kidnapping has been traditionally associated with the island of Mindanao. The island has intensive copper mining; employees and managers have frequently been targeted.
8.	Iraq	Iron ore, copper, gypsum	Iraq's minerals industry has traditionally been dominated by the hydrocarbon sector with other mineral resources relatively limited. Geological surveys do, however, indicate some usable deposits of copper and iron.	Since the 2007 US troop surge, development of the Iraqi armed forces and political shifts, kidnapping for ideological reasons has reduced. However, kidnapping for financial gain has remained a problem.
9.	Honduras	Silver, zinc, copper, gypsum, gold, lead, cadmium	Honduras are a leading exporter of zinc, with the largest operating base metal mine El Mochito in Santa Barbara with proven reserves of 3.4 million tons at an average grade of 6.8% zinc.	Honduras' former president Ricardo Maduro led a crackdown on criminal gangs, however, kidnappers still routinely target business personnel and foreign nationals.
10.	Colombia	Platinum, gold, coal, dolomite, gypsum, calcite, zinc, nickel	Colombia is a leading gold and nickel producer. The country is also Latin America's only producer of platinum and is endowed with the largest coal reserves in South America.	Colombia, under President Juan Manuel Carlos's tenure as defence minister in Alvaro Uribe's administration, managed to drastically reduce kidnapping rates. Nevertheless, kidnapping conducted by leftist groups such as ELN and FARC remains a threat, and foreign business personnel are considered as lucrative targets.
11.	Brazil	Bauxite, iron ore, tantalum, aluminium, manganese, gold, columbium, silver, titanium, zinc, gypsum, tin, chromium, copper	Brazil, the largest Latin American economy, is richly endowed with diverse mineral resources which make up a significant part of export earnings and are a crucial source of industrial raw materials.	Although kidnap-for-ransom has been reduced, an inefficient justice and penal system and poorly funded security forces have not been able to deal efficiently with criminal gangs. Middle-class business personnel and students are the most common targets.
12.	Guatemala	Gold, iron, antimony, lead, iron ore, nickel, gold, gypsum, copper, uranium, manganese	Guatemala has substantial nickel deposits, especially in the Lake Izabal region, with an annual production capacity of 9,000 tons.	Guatemala has one of the highest violent crime rates in Latin America. Kidnapping gangs are most often connected to narcotraffickers and target foreign nationals as well as Guatemalan business personnel.

RANK	COUNTRY	MINERALS MINED (EXCLUDES OIL, GAS)	NOTES ON MINING	GEOPOLITICAL ISSUES
13.	Turkey	Barite, magnetite, coal, chromite, copper, zinc, boron	Turkey is the leading exporter of boron (with an estimate of 63% of the world's reserves) and mineral mining is Turkey's 4th biggest industry.	Kidnapping in Turkey has been mostly associated with the PKK Kurdish militant group; however, criminal gangs have also been known to consider foreign nationals as potentially lucrative targets for ransom.
14.	Kenya	Aluminium, barite, anhydrite, gold, titanium, coal	Mining is not a substantial part of the Kenyan economy; however, the Migori gold deposit contains 1.6 million tons at a grade of 4.3 grams per ton of gold.	Risk varies across the country but high levels of violence have been reported especially in Nairobi. Kidnapping poses a very serious risk to business personnel and tourists.
15.	Malaysia	Tin, barite, bauxite, coal, copper, gold, iron ore	Tin used to be one of peninsular Malaysia's leading exports but the country's mining industry has been in decline.	Islamist groups pose a kidnapping threat to business personnel, the eastern islands and state of Sabah are of particular high risk.
16.	Yemen	Gypsum, zinc	The Yemeni economy is dominated by hydrocarbons. The Al-Jabail zinc deposit is a potentially lucrative mine.	Violence in the country has skyrocketed since 2010 due to political instability, endemic corruption and poverty. Kidnapping is a risk, especially in the north of the country.
17.	Argentina	Copper, gold, silver, aluminium, lithium, lead, zinc, platinum, palladium, boron, uranium, columbium	Argentina is richly endowed with mineral reserves, especially the mountainous northwest. The country is a major regional exporter of silver, gold, lead and copper.	Buenos Aires and Mendoza are the hotspots for crime in Argentina. Express kidnappings are reported relatively frequently, but serious kidnappings ending in the death of the victim are quite rare.
18.	Nepal	Lead, zinc, iron, cobalt	Nepal's mineral resources have been little exploited and is mostly limited to small-scale mining.	Most kidnap reports have come from Kathmandu, criminals often disguising themselves as security personnel. Foreigners are considered lucrative targets.
19.	Sudan	Gold, chromite, gypsum, manganese, copper, iron ore, tungsten, nickel, zinc	Sudan is not rich in minerals. Gold is the most mined metal in the country. Other mineral deposits have been discovered, including substantial reserves of iron ore near Port Sudan.	On-going conflict between the north and south has kept foreign investment to a minimum. Kidnapping is relatively common due to lawlessness and endemic poverty.
20.	China	Antimony, bauxite, coal, gold, tin, iron ore, lead, tungsten, copper, silver, nickel, manganese, uranium, zinc, coal	China is the global leading exporter of tungsten and antimony, and mineral fuels rank fifth among China's export commodities.	Kidnapping is mainly done by criminal gangs for financial gain.

ANNEXE 3: CONTRIBUTORS

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ANNEXE 4: SOURCES

Willis has used publicly available information from these sources in compiling this Review.

Page 27, Figure 1: *China National Bureau of Statistics; The Beijing Axis Analysis*

Page 27, Figure 2: *CNBS; World Bank; IMF; The Beijing Axis Analysis*

Page 28, Figure 3: *IMF; The Beijing Axis Analysis*

Page 28, Figure 4: *USGS; BP; WGC; USDA; Various; The Beijing Axis Analysis*

Page 29, Figure 5: *USGS; BP; WGC; USDA; Various; The Beijing Axis Analysis*

Page 35, Figure 1: *Mining Business Outlook Report 2012–13, Newport Consulting, Sydney*

Page 35, Figure 2: *Mining Business Outlook Report 2012–13, Newport Consulting, Sydney*

Page 35, Figure 3: *Publicly available information and Ernst & Young analysis*

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