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Brazil Mining 2016

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Tough Times

A look at the current crisis facing Brazil

Brazil is facing dark days. Political and economic instability caused by the plummeting approval rate of president Dilma amidst the globally publicized Petrobras scandal, known locally as "lava-jato", has shaken the country at its roots. Over a million people were made unemployed in 2015 and the once strong Brazilian real today is valued at around 4 to 1 against the U.S. Dollar. Former President Da Silva's (more widely known throughout Brazil as Lula) recent detention may signal the end of a rather ugly era in Brazil's history that is seeing the country dragged through its worst economic crisis since its emergence as one of the BRIC members.

No sector has been left unscathed including Brazil's mining industry. But before we take a closer look at what is happening in the country, let us first examine the mining sector on a global scale.

Global commodities prices have fallen sharply in recent years. Fluctuation in prices is a well-known phenomenon but the current low ebb has reached crisis levels. Supply and demand play a constant game of catch up. China's economic boom meant a dramatic increase in the need for steel for its industrial development. Brazil, as one of the largest iron ore producers in the world, benefitted from this hugely and mining companies flocked to the world's eighth largest economy to capitalize on the rising price of iron ore and the country's vast unexplored mineral deposits. But as with all things, what goes up must come down.

2015 saw China's slowest economic growth since 1990, with Beijing affirming that a multiyear slowdown was hitting the Eastern power, and shows little sign of abating. World supply of iron ore has gradually caught up with demand, and the price has plummeted from $180 per metric ton (mt) in January 2011 to below $50/mt by the end of 2015. Today, the global mining community faces an international commodities crisis that is affecting not only iron ore producers, but also those involved in mining copper, bauxite, and platinum, to name a few. Even gold, which is Brazil's second largest mineral export, has seen its price fall from over $1800 per ounce (oz) in early 2011 to roughly $1200/oz at the beginning of 2016.

But for Brazil the problems do not stop there. Political turmoil, a weak real and uncertainty over potential regulatory reforms have landed Brazil's mining industry in the throes of a perfect storm. "All these factors added to the decrease of the commodities prices have created a climate of low expectations in Brazil," explained Fernando Coura, president of the Brazilian Mining Association (IBRAM). "However, it is important to think of the mineral activity as cyclical [and] we are confident in a revitalization of growth in the industry in three or four years." •

"We are confident in a revitalization of growth in the industry in three or four years."

- Fernando Coura,
President,
IBRAM

IMAGE: Courtesy of Moba

Sailing Steady Through the Storm

What companies are doing to survive

Iron Ore

It is important to point out that Brazil's iron ore output in terms of tonnage has seen no real change. However, the historically low prices of this mineral have had serious adverse effects on the revenues of companies operating in this sector. As such, there has been a considerable slowdown in new project development and exploration, an important driver for Brazil's mining industry.

Vale, the Brazilian mining behemoth and largest producer of iron ore globally, accounts for around 90% of all iron ore mined in the country. In 2014, it was the company with the largest planned investments into new projects, but with a number of these projects being brought into operation and the drop in iron prices, the prospects of further investment from Vale have diminished somewhat. Even some of its existing projects face potential closure. The Brazilian iron ore producer's future now depends on the success of S11D, the largest iron ore project ever undertaken that should begin operating in the second half of 2016 and reach a production of 90 million mt/y by 2018. This project, set to be the first 'truckless' mining operation in the world, comes at a time when demand is behind supply. Some have raised concerns that this flood may have seriously detrimental effects on the already low competitiveness of the iron ore sector in Brazil.

Size has not protected Anglo American either. Another major miner of iron ore in Brazil, Anglo American has already put its $1billion niobium and phosphate business up for sale and may even be planning an entire withdrawal of all operations in Brazil. This speculation comes after reports that the London based giant may sell its expansive Minas Rio iron ore project, which only began operating last year.

Iron ore is important for the Brazilian economy and remains by far the most important mineral in Brazil's mining industry. In 2014 it accounted for 73% of export income. It still presents opportunity for explorers and small junior companies, but the country has other challenges for them usually in the form of licensing procedures. Crusader Resources is an Australian junior that recently started producing iron ore from its Posse mine located not far from Minas Gerais' capital Belo Horizonte. "When the market picks up again, the weak real will make Brazil an attractive destination for investment, but difficult-to-navigate licensing procedures may stem the investment inflow," said Robert Smakman, managing director.

Crusader's focus is entirely on the domestic pig iron market. Though the company has experienced its fair share of hardship, Crusader is confident for the future and hopes that the revenues generated from its iron ore mine will contribute to the development of the company's gold projects in the north of Brazil.•

"When the market picks up again the weak real will make Brazil an attractive destination for investment, but difficult-to-navigate licensing procedures may stem the investment inflow."

- Robert Smakman, Managing Director, Crusader Resources

IMAGE: Courtesy of KOMATSU

Gold

Gold is Brazil's second most important mineral and is the focus of the majority of exploration work being carried out in the country. Though large players such as AngloGold Ashanti, Kinross and Yamana Gold do operate in Brazil, this mineral segment does seem to be more dynamic than that of iron ore and, as such, offers more opportunity to smaller players. Serabi Gold, a London based junior, began producing gold from its Palito mine in 2014 and expects to start production from its Sao Chico mine later this year. For Serabi to conduct further exploration it is important to increase productivity in both these operations. "Serabi wants to continue to invest in increasing productivity on our operational projects so as to reduce our costs to the range of $850 to $800 per ounce," said Ulisses Melo, general manager in Brazil. "In terms of exploration, we hope to use some of the cash flow generated through the operations to target two to three areas in the 12,000 hectares that we have."

However, some seem to think that numerous small projects will not actually do much to stimulate the growth of this sector. "In terms of increased gold production I don't think Brazil has a bright perspective at the moment," said Victor Belo, the Brazilian director for Carpathian Gold. "We have lots of small projects but nothing major in the pipeline."•

"Serabi wants to continue to invest in increasing productivity on our operational projects as to reduce our costs to the range of $850 to $800 per ounce."

- Ulisses Melo, General Manager, Serabi Gold

Brazil's Other Minerals

Alumina and bauxite production remain relatively stable with half the bauxite production in Brazil coming from Rio do Norte (MRN). The major contributors to the remaining half are Hydro Brasil, Alcoa and Votorantim Metais. The latter company is the main contributor to potential increased production of aluminum with new projects set to come on stream in Para.

Other minerals in Brazil are copper, which is now Brazil's third most important mineral, nickel and zinc. However, Brazil is yet to become a leader in these segments. Mineral fertilizers are of interest for some. Despite Brazil's vast deposits of potassium and phosphate, the country has in the past imported the majority of mineral fertilizers in order to support its vast agriculture sector. The reason being that this method was cheaper, but today this is no longer the case. In order to reduce dependence on increasingly costly imports made so by the weak real, Brazilian producers have investment plans in mineral fertilizers that add up to around $3 billion.

Contrary to the trend in Brazil to export the majority of the minerals produced in the country, Ferbasa, one of the 500 largest companies in Brazil, is focused mainly on the domestic market. Ferbasa is a leader in the production of ferroalloys and the largest integrated producer of ferrochrome in the Americas. Its mining operations are focused on the extraction of chromite. "The open pit mine located in Campo Formoso has been operating since 1978, and today we are developing economic viability studies that aims to make an evaluation of the deposit and the possibility to transform it into an underground mine," said Wanderley Lins, Ferbasa's mining director.

While the mining of chromite may not present much opportunity for foreign explorers, it is safe to say that Brazil offers more in the way of minerals than just iron.

IMAGE: Courtesy of Vale


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Exploring New Opportunities

The strategies of the suppliers

And what are the suppliers doing to survive? Many engineering services and equipment providers that were able to ride along with the boom of the country's mining industry now have to seek either new industry segments or international markets in which to apply their expertise. A strategy of diversification has become the most common course of action. "Steinert's approach to the Brazilian market has changed completely and we are currently focusing our attention on recycling," said Paulo da Pieve, managing director of Steinert Latinoamericana, a German headquartered provider of separation equipment for materials handling. "We are still capable to assist the mining market in Brazil, but to survive we had to diversify our markets."

Trado, which manufacturers lightweight drills for exploration work, has not been able to diversify into other industries due to the niche nature of the company's product. They are instead looking to break into other geographical markets. "Trado has been exploring foreign markets for some time now," said Alexandre Neto, Trado's general manager. "Today, however, there is a serious imperative for us to do so as the internal market has become so small."

Another strategy some manufacturers are taking is to focus on the aftermarket services. The decreasing number of new projects and a general reluctance from the industry to invest in new equipment means that miners are now looking to maintain and optimize existing fleets rather than replace them. In this sense, the suppliers are pushing for long-term contracts with their customers to provide on-site maintenance. However, unlike other Latin American mining countries, post-sale contracts are not common in the Brazilian market with companies preferring to simply buy a piece of equipment and operate and maintain it themselves. "Unfortunately, Brazil is not very fond of maintenance contracts compared to places like Chile. When the mining industry started in Chile, mining companies did not have enough skilled employees to maintain their equipment and they relied on the manufacturing company for maintenance services," explained Francisco Macedo, vice president of mining at Komatsu in Brazil. "[This] is not the case in Brazil where there is availability of skilled labor and the companies have their own maintenance crews."

"We are still capable to assist the mining market in Brazil, but to survive we had to diversify our markets."

- Paulo Da Pieve, Managing Director, Steinert

"Nowadays, with smaller projects being developed, customers are looking to rent rather than buy equipment, therefore we are developing our rental business."

- Odilon Mendes, Managing Director, Normet do Brasil

Normet, which is an international company that provides solutions for underground mining operations, still continues to expand the fleet it has in Brazil, but also sees a rental service as offering potential. "Normet is also focusing on replacing the older machines in the fleet with newer models and improving our technical support services throughout full time on-site contracts," said Odilon Mendes, managing director of Normet Brasil. "Nowadays, with smaller projects being developed, customers are looking to rent rather than buy equipment, therefore we are developing our rental business."

IMAGE: Courtesy of Rosetti

A company of interest is U&M; a business that is unique in being a contract miner. U&M specializes in earth movement so that its customers can focus on their core competencies and avoid purchasing and operating their own equipment. "U&M's current major clients include Alcoa, Vale and Yamana Gold. We have just started a new project with Vale and we are excited to showcase our abilities on this project," said Sergio Machado, the company's CEO. "We aim to prove to our clients that using U&M can be less expensive than investing in equipment and the goal is also to be competitive to the client's own standards and set a benchmark for production."

"Last September, due to the low value of the Brazilian Real, Neuman and Esser decided to produce a whole mill entirely in Brazil."

- Marcelo Veneroso, President, Neuman & Esser Sistemas de Moagem

"We aim to prove to our clients that using U&M can be less expensive than investing in equipment and the goal is also to be competitive to the client's own standards"

- Sergio Machado, CEO, U&M

One potential opportunity is that the weak real means that it could be the right time for international equipment suppliers to localize aspects of their supply chain. Brazil has a rich history in metal mechanics nurtured by the automotive industry. Most of the equipment manufacturers selling to the mining sector in Brazil still import the vast part of their machinery. Neuman and Esser, a German headquartered company that manufactures mills for non-metallic minerals, is one company that has capitalized on this opportunity. "Last September, due to the low value of the Brazilian Real, Neuman and Esser decided to produce a whole mill entirely in Brazil," said Marcelo Veneroso, president, Neuman & Esser Sistemas. "With this decision we will reach almost 100% of the milling system produced locally giving to our products a high commercial competiveness."

The reluctance of companies like Sandvik and Atlas Copco, to migrate manufacturing capabilities to an important market of theirs seems strange. Brazil's tendency towards 'protectionism' leads one to believe that there would be more in the way of promoting local manufacturing capabilities and incentivising a decrease in imports.

The Way Forward

The importance of embracing technology and innovation

Ultimately though, the opportunity lies in technology. Miners are turning to technology driven and innovative companies to develop solutions that optimize existing operations while boosting a project's environmental and safety controls.

The Samarco incident in November 2015 brought worldwide scrutiny to business' adherence to environmental regulations. The collapse of the tailings dam belonging to the company owned in equal part by Vale and BHP Billiton resulted in the death of 17 people and immeasurable devastation to local communities and the environment. This generated a surge in the number of companies seeking to optimize their waste management systems. For Outotec, an international technology and service provider, this presented an opportunity to aid the mining sector in its progression towards sustainability. "After the incident at Samarco, it will be significantly more difficult to get approval and licenses for new tailings dams and thus miners are starting to look at more sustainable solutions," said Lars Duemmel, executive director. "Outotec is currently in the final stage of delivering a filtration plant for Alunorte, which is the largest alumina refinery in the world, so as to avoid the storing of wet tailings."

As well as improving waste management systems, Outotec is also today more focused on the small brownfield projects, as is Modular Mining Systems, a U.S. software company that provides fleet optimization technology. Davi Freire, general manager of the company's Brazil office, said: "Like any company, Vale's main focus is cost reduction […] and Modular was aggressive in offering our solution for predictive maintenance; the MineCare Solution. In using our solution, along with some other tools, Vale Carajas publicly presented that they reduced significantly the annual cost of corrective maintenance since they started to use it in 2010".

"After the incident at Samarco, it will be significantly more difficult to get approval and licenses for new tailings dams and thus miners are starting to look at more sustainable solutions."

- Lars Duemmel, Executive Diretor, Outotec

"Like any company, Vale's main focus is cost reduction"

- Davi Freire, General Manager, Modular Mining Systems

Technology always has been and continues to be crucial for the development and maturation of an industry. Companies must not lose sight of the fact that, despite the current situation, investing in new technologies is essential. "It is how we deal with the crisis that will discern whether a company survives or not," said Marco Aurelio Soares Martins, director of operations at CEMI, a local software and solutions provider. "I think what is crucial for every member of the industry to understand today is the fundamental importance of technology. One must overcome hesitancy and invest in new technology which will not only ultimately save expenditure, but also prevent accidents." •

Brazil's New Mining Code is Old News

First announced as one of Dilma Rouseff's flagship policies back in 2009 and formally discussed in congress since 2013, the 'new' mining code has become old news and the subject of frustration for many miners in Brazil. While a number of attempts have been made to speed the passage of this bill, the country's political disturbance has prevented this. A special committee headed by congressman Gabriel Guimarães is currently discussing the code.

It is certainly in the government's favor to have this bill passed, as the new regulations will see in increases in the royalties paid by miners. Another key aspect of the new code is to introduce a bidding process for licenses on undeveloped mineral deposits. This will replace the current 'first come, first served' model. This system was designed to prevent companies from sitting on deposits and instead give the rights to develop the lands to those with the abilities to do so. However, many have raised concerns that this will push out the smaller players that would be unable to compete against majors in such a process. This may prove a threat to exploration in Brazil, which is primarily driven by small juniors. The bill would also see the creation of a new agency called the National Mining Agency (ANM) and the dissolution of the current National Department of Mining Policy (DNPM). The establishment of an independent agency is a feature favored by most as it may go someway to easing the highly complicated licensing procedures.

"There is a long way to go to pass new mining legislation. It still needs to be voted by the Lower House and reviewed by the Senate. If the Senate decides to introduce any changes, it will have to go back to Lower House and the process will be repeated. If there is a real interest and commitment on behalf of stakeholders involved to approve this legislation, it may take as little as six months. Yet we do not see this kind of interest and willingness at the moment. The government is not interested in creating an independent mining agency because it will raise costs. We will have to wait and see what the next move is."

- Carlos Vilhena,
Partner,
Pinheiro Neto Advogados

Whether companies are in favor of the new bill or against it, the uncertainty over its future is a cause for concern and certainly is making potential foreign investors more reluctant. In 2014, IBRAM estimated that Brazil had missed out on R$20 billion of investment due to the uncertainty surrounding the new mining code. Unfortunately, with the political situation as it is at the moment, it is doubtful that we will see any significant movement on this in the near future. Should Dilma be ousted and a new government be installed, the bill may be entirely sidelined. It is important that collectively the industry highlight to the lawmakers the importance of having regulatory stability because without it Brazil may continue to lose out on even more investment. •

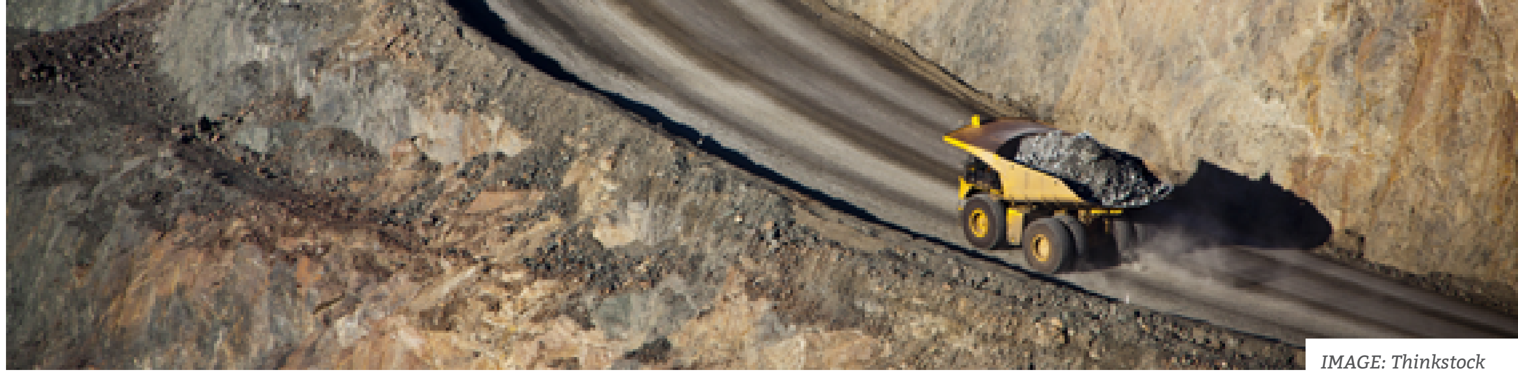

IMAGE: Thinkstock

The Only Way From Here is Up

Though times are difficult for all those involved in the mining industry here in Brazil, there can nevertheless be felt a sense of optimism. The mining industry is a cyclical one and, as such, global commodity prices will pick up again, although most likely not to the level we saw in 2011. For Brazil. in particular. a lot now depends on the country's political and economic situation. The current troubles are delaying the passage of the new mining code and lending further uncertainty to potential investors. The new mining code, if passed, will address Brazil's current licensing procedures amongst other aspects. "We believe that the mining industry will turn and recover," said Leonardo Parreiras, director of Inmeco, a local Brazilian company that manufacturers nuckets for heavy vehicles. "The difficulty is that the current government does not have the capacity to improve the current situation and the crisis has become so severe that the government will collapse."

What is needed now is a collaborative approach between government and industry to address the issues facing Brazil, encourage further investment and be ready for when the market picks up again. "I do see light at the end of the tunnel," said Victor Becattini, global account manager at Sandvik, "I just hope it is not an oncoming locomotive!" •

"We believe that the mining industry will turn and recover."

-Leonardo Parreiras,
Director,
Inmeco

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