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The mining and metals sector is gaining renewed global macro-economic prominence and will be critical to the success of the global energy transition towards a low-carbon future. However, it is a sector that has traditionally been highly exposed to bribery and corruption risks.

As businesses and investors take advantage of the opportunities presented by the transition, they should remain mindful of these risks so that they can create systems and controls in order to effectively manage them.

Minerals including lithium, graphite, and cobalt are critical to the manufacture of renewable energy technologies and are only found in a small number of countries, many of which are considered very high-risk from a bribery and corruption perspective.

The challenge of interacting with government officials in these countries is one contributing factor to this risk. Such interactions are high-risk because of the very low test for bribery under international bribery laws. The risks are acute in the sector because of the need to work closely with government officials throughout the development and operation of projects. The challenge is to maintain good working relationships with government officials, whilst avoiding conduct that could be perceived as falling foul of bribery and corruption laws.

It will be particularly important to avoid making payments, including ‘facilitation’ payments, to government officials (directly or indirectly). Facilitation, or ‘grease’ payments, are made to government officials to expedite routine action. They are illegal in an ever-growing number of jurisdictions, but remain a common and expected part of doing business in some countries.

Engaging third parties also poses bribery and corruption risks, as businesses can be held criminally liable under international bribery laws for bribes paid by those acting for them or on their behalf. Businesses should undertake due diligence into third parties before, and continually monitor them during, engagement. Such monitoring should be conducted by employees with the skills and experience to spot potential bribery and corruption issues.

Meanwhile, the energy transition will likely result in increased investment in the mining and metals sector. Pre-deal due diligence should include checking whether an anti-bribery and corruption framework exists, since it is important to know how typical financial crime risks are managed and establish whether risk-management tools are likely to have been effective. This will enable potential investors to be fully informed of the risks presented by a transaction.

Bribery and corruption risks in the sector will not vanish as a result of the energy transition. Cooperation between agencies at an international level has helped facilitate the enforcement of anti-corruption laws globally, with a significant proportion of enforcement actions in bribery and corruption occurring in the mining industry.

Businesses in the mining and metals sector should therefore spend time focusing on assessing bribery risk and creating and implementing systems and controls to effectively mitigate risks, whilst allowing operations to run smoothly. Such systems and controls should be tailored to the country in question, given that each country will have its own systems and present unique challenges.
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CANADA  Newcrest agrees to acquire Pretium Resources

Newcrest Mining Ltd has entered into an agreement (the arrangement agreement) to acquire all of the issued and outstanding common shares of Pretium Resources Inc. that it does not already own by way of a Canadian Plan of Arrangement (the transaction).

The Board of Directors of Pretium have unanimously recommended that Pretium shareholders vote in favour of the transaction, and have entered into voting support agreements with respect to all of the Pretium shares that they own or control.

Pretium is the owner of the Brucejack operation in the highly prospective Golden Triangle region of British Columbia, Canada. Brucejack began commercial production in July 2017 and is one of the highest-grade operating gold mines in the world.

The Pretium technical report of 9 March 2020 estimated gold production of 311 000 oz/y at an AISC of US$743/oz of gold over a projected 13 year mine life.

Brucejack and surrounding tenements are within the traditional territories asserted by the Tsetsaut Skii km Lax Ha (TSDKL) and Tahltan Nation, and in the Nass Area of Nisga’a Nation as defined in the Nisga’a final agreement.

Brucejack is approximately 140 km from Newcrest’s majority-owned and operated Red Chris mine, located on Tahltan territory. Newcrest will become the operator and 100% owner of Brucejack following completion of the transaction, which is currently targeted for 1Q22.

In line with its vision of being the miner of choice, Newcrest is focused on safety, the environment, developing its people, and fostering strong relationships with the communities near its operations. Newcrest deeply values the relationships it has developed to date with the Tahltan Central Government, Band Councils and the host communities of Iskut, Telegraph Creek, and Dease Lake. Newcrest looks forward to developing similar relationships with the Nisga’a Nation, the Gitanyow Hereditary Chiefs, the Tsetsaut Skii km Lax Nation, and the host communities in the Brucejack mine area.

Newcrest believes that its concurrent operation of both Red Chris and Brucejack mines will provide enhanced opportunities for both workforces, allow for aligned and optimal engagement with the First Nations and the broader community, and will provide the foundation of ongoing future investment in the region.

CHILE  SQM joins Race to Zero programme

SQM, one of the leading global producers of world-class lithium, based in the Salar de Atacama in Chile, has joined the Race to Zero programme as part of its ‘Business Ambition for 1.5˚C’ campaign science-based targets initiative.

As part of the campaign, SQM is committing to the goal of reducing emissions across all its activities in line with the Paris Agreement, with transparent action plans and robust near-term targets.

Race to Zero is a UN global movement that brings together non-state actors across the global economy to take immediate action to halve global emissions by 2030 and deliver a healthier, fairer zero carbon world in time. The Business Ambition campaign is the world’s largest and fastest-growing group of companies that will seek to limit global warming to 1.5˚C and halve global emissions by 2030.

By participating in the Race to Zero, SQM will have to fulfil four requirements: pledge, plan, proceed, and publish.

SQM has already begun exploring its options for making its logistics routes low carbon, by introducing Chile’s first high-tonnage electric truck to be used in large scale mining onto an 86-km route from the company’s Coya Sur plant in Maria Elena to the port of Tocopilla. The 90 diesel trucks which currently make this journey cover an estimated 7500 km per month.

Switching SQM’s fleet of 320 diesel trucks to e-trucks would eliminate approximately 3840 tpy of carbon dioxide.

SQM is currently testing the range, capacity and operability of the trucks, which were designed by Enel X.

If the project is successful, the e-trucks will also be introduced onto the Salar de Atacama-Carmen Lithium Chemical Plant route. This is the highest traffic route for the lithium process, with 230 trucks in service.
**WORLD NEWS**

**MIDDLE EAST** KIZAD and Lepidico sign agreement for lithium production facility

Khalifa Industrial Zone Abu Dhabi (KIZAD), a subsidiary of AD Ports Group’s Industrial Cities & Free Zone (IC&FZ) cluster, has signed an agreement with Lepidico Ltd, a global lithium exploration and development company, for the establishment of the first lithium production facility in the Middle East, utilising a first of its kind designed process. Covering a land area of 57,000 m², the first phase of Lepidico’s development for the AED 348 million (US$95 million) chemical plant will house clean-tech L-Max® and LOH-Max® process technologies. The process extracts lithium and recovers valuable by-products from lithium-mica and phosphate minerals. As an eco-friendly, zero-waste facility, the residue predominantly gypsum, will be repurposed for use in the construction industry.

The vertically integrated Phase 1 Project (P1P) comprises two small scale opencast mines that will feed a mineral concentrator in Namibia, following which the lepidolite concentrate will be shipped to the facility being developed in KIZAD via Khalifa Port.

Lepidico plans to invest approximately US$95 million for the chemical conversion plant in Abu Dhabi for an initial term of 25 years, which will employ the company’s proprietary process technologies, L-Max and LOH-Max. The project is a significant step forward in developing a sustainable lithium hydroxide industry and supports the global clean energy revolution.

**MALI** Kodal Minerals granted Bougouni Lithium Project mining licence

Kodal Minerals, a mineral exploration and development company, has announced that it has been granted a mining licence for its flagship Bougouni Lithium Project in Mali. The project is now fully permitted for development, with the previous approval of the environmental and social impact assessment (ESIA) in November 2019.

Permis d’Exploitation number No2021-0774/PM-RM (mining licence) was granted to Kodal Minerals’ Mali subsidiary company, Future Minerals SARL, and is valid for an initial 12-year term and renewable in 10-year blocks until all resources mined.

The mining licence is granted under the 2019 Mining Code and extends over 97.2 km², covering the proposed opencast mining and processing operation at Bougouni.

As a next step, Kodal has commenced a programme of work to update the feasibility study announced in January 2020 ahead of securing funding for mine development and construction. The programme has a six-month time estimate and will focus on: metallurgical test work for variability testing and confirmation of process flowsheet; investigating the potential for increased metallurgical recoveries; completion of geotechnical and hydrogeological reviews for opencast and the tailings dam; update and finalisation of capital cost estimates and operating costs for the proposed development; and community development and stakeholder engagement activities at Bougouni.

Strongly rising prices for spodumene concentrate highlight opportunity for project development with recent average pricing levels exceeding US$1250/t 5% lithium oxide (Li₂O) spodumene concentrate, compared with the initial US$680/t for 6% Li₂O spodumene concentrate used in the 2020 feasibility study.
The Weir Group has agreed to acquire Motion Metrics, a leading Canada-based global mining technology business, for an initial consideration of £89 million payable in cash upon completion, subject to customary net debt and working capital adjustments. Motion Metrics is a developer of innovative artificial intelligence (AI) and 3D rugged machine vision technology used in mines worldwide. Its technology helps miners increase the safety, efficiency, and sustainability of their operations. As part of the agreement, Motion Metrics Vancouver headquarters will become Weir’s global centre for excellence in AI and machine vision technology.

Motion Metrics’ applications are highly complementary to Weir’s product portfolio. The company will join the ESCO division reflecting the early adoption of its technology in ground engaging tools (GET). Motion Metrics AI and machine vision capabilities are expected to be leveraged across the whole mining value chain served by the Weir Group.

Initial integration efforts will focus on leveraging Weir’s global sales network and the ESCO division’s large installed base to rapidly expand adoption of this value enhancing technology by its mining customers, thereby driving significant revenue growth. Motion Metrics is expected to be accretive to ESCO’s margins by 2023, with returns expected to exceed the group’s cost of capital by 2024 in line with Weir’s capital allocation policy. Up to a further £59 million will be payable in cash by Weir at the end of 2024, depending on revenue and profit performance. The transaction will be funded through cash and existing banking facilities. Over the next two years integration costs are expected to total £3 million.

Miners are increasingly focused on improving the safety, efficiency and sustainability of their operations. Motion Metrics has developed proprietary products and solutions that supports these critical ambitions leveraging innovative Machine Vision, distributed AI, and machine learning.

Motion Metrics will become part of Weir’s ESCO division, with its extensive team of researchers, data scientists, and engineers also supporting the increased digitisation of the broader Weir product portfolio.

The acquisition is expected to complete in 4Q21.

Booming demand for electric vehicles (EVs) and insufficient investment in processing looks likely to result in a global shortage of the metals needed to manufacture lithium-ion batteries, especially nickel. Indeed, global demand for nickel is set to increase dramatically over the next 20 years.

Against this backdrop, British company Altilium Group has announced an agreement with PT Indo Mineral Research, a member of the Sebuku Group (one of Indonesia’s largest mining groups), to co-operate in the development and promotion of the DNi ProcessTM in Indonesia, the country with the world’s largest reserves of nickel. The two companies have agreed to commit financial, technical, and logistical resources to accelerate the adoption of the DNi Process and to play a key role in the EV battery supply chain.

Discussions are now underway with several parties to construct DNi Process plants in Indonesia, with the first plant likely to deliver at least 20 000 tpy of nickel in mixed hydroxide precipitate (MHP), sufficient nickel and cobalt for the equivalent of around 500 000 and 250 000 lithium-ion batteries, respectively. In addition, the DNi Process is capable of producing additional saleable products such as: hematite, magnesium oxide, aluminium hydroxide, and scandium oxide.

The lack of sensitivity of the DNi Process to ore grade is one feature which has Indonesian resource owners excited. This is because it can treat all the ore in a laterite mine and extracts all the metals available in that ore, such that the economics of the process make the utilisation of low-grade ores both possible and profitable.

DNi Process plants will supply markets around the world. Currently, almost all the hydrometallurgical plants operating in Indonesia (which produce MHP) are Chinese owned or backed high pressure acid leach plants which supply the Chinese market.

The process has already been proven in Australia and endorsed by Commonwealth Scientific and Industrial Research Organisation (CSIRO). The process was tested and proven at a pilot plant located at the CSIRO facility in Waterford, Perth, Western Australia.

The first DNi Process plant, delivering 16 000 t of nickel in MHP, is currently being developed by Queensland Pacific Metals Ltd in Australia, with construction expected to commence in April 2022.
THE RESOURCES Rollercoaster
Benedikt Sobotka, Eurasian Resources Group, Luxembourg, reviews the highs and lows of the iron ore market. 

Iron ore rode the resources rollercoaster from the beginning of the COVID-19 outbreak, enduring the fiscal rigmarole and surpassing all kinds of economic forecasts. Yet it was not all smooth sailing, as when the virus began to spread across the world, the market stood static in anticipation; the benchmark price for iron ore slumped to US$80/t, stemming from widespread fears about steel demand in major ore importing regions.

However, with the prompt recovery of China’s economy and the rattling of seaborne supply chains which stood testament to the legacy of lockdowns in key exporting regions, global iron ore prices rebounded and reached a position by the beginning of 2021 that was more than double the 2020 lows. Moreover, the ripples of China’s economic recovery, coupled with effective fiscal stimulus policies, had re-catalysed iron ore prices to an all-time high of US$233/t by May 2021.

Even though the iron ore market was overheated throughout 1H21 and the price correction was inevitable, the 40% decline in prices in August (from US$230/t to below US$150/t) seems to be unsustainable. Nevertheless, global steel output is on the rise with seaborne demand for medium and high-grade iron ore consolidating, regardless of how strictly the Chinese government would enforce its ‘zero growth’ target for crude steel production.

Forecasts by analysts set the benchmark iron ore price at above US$150/t in 2021, up by approximately 50% from 2020.
Demand
On the demand side, while the beginning of the COVID-19 outbreak spurred worries about the short to medium-term demand across commodity markets, overall impact on iron ore prices has been positive – mainly due to a specific supply-demand balance within the market.

Multiple lockdowns in key exporting regions, including Brazil, Canada, Peru and South Africa, cut seaborne supply by almost 5% compared to initial expectations, adding to already existing worries about the availability of seaborne ore.

Notwithstanding the ongoing distortions, seaborne iron ore demand has been outperforming throughout 2020 – 2021, with much of the onus placed on China’s sustained appetite for seaborne raw materials. In fact, country steel output grew by 5% y/y in 2020 and by 12% y/y in 2021, significantly exceeding the market expectations of 1 – 2% y/y growth forecast back in 2018 – 2019. China’s outperforming iron ore demand and dampened seaborne supply had pushed the market into a strong deficit, with market shortage estimations for 2021 forecast at approximately 90 million t, or almost 6% of the global iron ore imports.

While the short-term deficit has eased due to China’s steelmaking restrictions, the seaborne market is still expected to remain in deficit until at least 2024 – 2025, due to a delayed recovery in the seaborne supply of iron ore.

Meeting global demand
China’s shift from an investment-driven economy to a demand-driven one is expected to limit the country’s appetite for finished steel. Nonetheless, with the continued increase in per capita steel consumption and the overall growth in country’s population, China’s steel demand could have the potential to peak beyond 2025.

With China’s participation in the global steel industry’s fight for lower carbon dioxide (CO2) emissions, Eurasian Resources Group (ERG) expects a switch to high-grade fines and pellets in the medium-term, leading to both Chinese and global demand for seaborne iron ore to continue its growth throughout 2021 – 2025. Furthermore, ERG expects China’s domestic iron ore supply to gradually decline in the coming years, driven by the constant depletion of domestic mines, tightening of safety regulations, and, most crucially, increasing demand for iron ore pellets, which require high-grade seaborne pellet feed. The latter is expected to sustain China’s iron ore imports, at least at current levels, for the next 3 – 4 years.

The upcycle in global ferrous demand has gone far beyond market expectations throughout 2020 – 2021. Economic stimulus policies in China, related to the anti-COVID fight, prompted a surge in global demand and subsequently drove commodity prices to new highs. Even though ERG expects the upcycle to end in the near future, China’s infrastructure spending is set to remain as robust as ever, especially due to recent increases in local bonds issuance. The group also expects China’s infrastructure investment to maintain its 5 – 6% y/y growth rates in 2021 – 2022, in line with the average 6.1% y/y growth throughout 2016 – 2020. Further, the two other major steel end-using sectors – property and manufacturing – are expected to maintain at least 4 – 5% y/y growth rates, not much below 5 – 7% y/y growth rates observed in 2016 – 2020.

Yet, despite this, steel demand from the automotive industry remains dampened. Whilst most operational lockdowns in key producing regions were lifted by the end of 2020, production recovery is being delayed due to semi-conductor shortages, which followed disruptions in Japan, Taiwan, and Malaysia. Manufacturers across the US and Europe have already driven their goods inventories to a 30-year low, whilst economic forecasts on automotive production recovery have now been delayed until the new year. That said, this delay will prop up metal consumption in 2022 – adjusting for this, ERG expects the momentum in iron ore and steel end-use demand to slow, but still remain at solid levels for the medium term.

Supply
After a weak performance throughout 2019 – 2020, seaborne supply is yet to recover to normal levels. The supply side has been unable to respond to the high prices as the major producers in the market are already producing as much as their systems allow, while there are few new projects coming to the forefront of
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the market in 2021 – 2022. Operational difficulties in South America, due to the tightening of tailings dam regulation, and port restrictions in many parts of the world made it even more challenging to deliver iron ore from the vessels to the steelmakers in 2021. As a result, the weak performance of key exporting regions in 2Q21, as well as the focus of major suppliers’ on sustaining current production rates, suggests global exports will take longer to recover to full capacity.

Looking forward towards major capacity additions announced for the next 2 – 3 years, ERG expects the biggest chunk of 300 – 330 million tpy capacity, coming from both greenfield and brownfield projects, to mainly substitute depleting 150 – 180 million tpy in Australia, China, North America, and a few other regions. Having said that, ERG expects global seaborne supply to increase by up to 150 – 170 million t by 2023 – 2024, which, however, will not be sufficient to offset the current market deficit of 90 – 100 million t, combined with an expected 85 million t increase in seaborne demand. Hence, the group expects the seaborne market to remain in deficit until 2024 – 2025. Moreover, multiple supply risks remain in place, including weather-related disruptions, the delayed starts of new projects, and delays in the construction of new infrastructure.

**Factors incentivising iron ore production**

ERG’s integrated mining and logistics project in Brazil, BAMIN, is well-placed to enter the iron ore market in the medium-term, primarily thanks to the heightened market focus on high-grade iron ore materials. This is reinforced by BAMIN’s agreement with the Brazilian federal government to complete and operate a section of the FIOL railway, connecting ERG’s Pedra de Ferro mine in Caetite to the Porto Sul port in Ilhéus in the Bahia state. These operations are set to transform Bahia into the third largest iron ore producer in Brazil, with a target capacity of 18 million tpy of iron ore.

Aside from the global steel industry’s focus on reducing CO2 emissions, it is worth emphasising the specifics of iron ore quality market segments. Medium and high-grade products (i.e. above 60% iron) account for almost 70% of the seaborne market, and are forecasted to gain an even bigger share going forward. In particular, quality premiums are expected to stipulate iron ore producers to focus on the improvement of their iron ore products in the nearest term achievable.

High-grade iron ore premiums surged throughout late 2020 and across 1H21, due to China’s outperforming hot-metal output and healthy steel margins. These premiums are set to sustain at high levels in 2021 – 2022, with steelmakers in both Europe and the Middle East and North Africa (MENA) experiencing severe difficulties in sourcing pellet feed for their operations. Recovering steel margins in all parts of the world means that there is an increasingly strong demand for high-quality material, such as: pellets, high-grade fines, and concentrates. At the same time, pellet supply has struggled due to operational issues in Brazil and labour strikes in North America. Trade data shows that European steel mills were importing very low volumes of Brazilian pellets in 2021, even though overall steel output was improving. Even India, which typically supplies pellets to domestic customers or China’s steel market, has started to export pellets to the European consumer base. Moreover, some traditional pellet demand in Europe and MENA was substituted by imports of the South-African lump, whilst recently introduced pellet export duties in Russia pose further risks to the seaborne pellet market.

**Conclusion**

ERG expects the tightness of high-grade iron ore material to remain throughout 2021 – 2022, mainly due to production issues in Brazil and the additional risk of Russian pellet exports falling.
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