

PRACTICE GUIDES

Mining

Third Edition

Contributing Editor
Michael J Bourassa



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Practice Guide

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Covid-19's Impact on Mine Valuations

Isabel Santos Kunsman and Alexander Lee¹

Dealing with disruption is commonplace for the mining industry. Mining companies regularly face environmental and logistical challenges owing to the nature of their operations and remote locations. The markets for their products are volatile and they operate in jurisdictions that exert significant political, regulatory and financial pressures on their businesses and operations. However, few could have predicted the reverberating and amplifying effect of the covid-19 pandemic, a single disruptive event, across geographies, industries and supply chains.

As we discuss in this chapter, overall the mining sector has fared better than most other economic sectors. However, so far there have been some winners and losers as a result of mostly external factors beyond management's control.

The covid-19 crisis will eventually pass, but, we suspect, its impact on mining valuations will be felt for years to come. Mining companies are still in the midst of assessing the impairment losses as a result of covid-19 that they will need to make on their year-end financial statements. Moreover, although governments continue to consider various options for targeted support of mines negatively affected by the crisis, they have been reluctant so far to offer any meaningful reduction of royalties or other mining taxes despite requests from mining companies.² In fact, some jurisdictions are looking to mining companies as a source of revenue to restore public finances.³

1 Isabel Santos Kunsman is a managing director and Alexander Lee is a senior vice president with AlixPartners.

2 See, for example, www.taxpayer.net/energy-natural-resources/blm-rejects-covid-19-royalty-relief-for-wyo-mines/.

3 See, for example, the case of the state of Nevada in the US or Ghana, <https://taxfoundation.org/nevada-mining-tax-increase-amendment/>; www.igfmining.org/three-lessons-from-global-mining-tax-policy-responses-to-covid-19/.

To avoid making this chapter overly broad, we focus on these two major issues faced by mining companies during disruptive events in general and during the covid-19 crisis in particular:⁴

- potential impairment losses that companies will book as a result of covid-19; and
- tax policy responses to the impact of covid-19 on the mining sector.

Why are impairment losses recognised?

Large groups of assets held by companies, such as mining projects or downstream processing plants, are typically organised into cash-generating units (CGU) for accounting purposes, representing 'the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets'.⁵ Under International Financial Recording Standards (IFRS)⁶, International Accounting Standard (IAS) 36 Impairment of Assets provides guidance on how companies should test for and book impairment losses. According to IAS36, on an annual basis, companies must assess if they believe there are any indicators that the CGU has been impaired and, if such an indicator exists, estimate the recoverable value (RV) of the CGU.⁷ If a company believes its CGU may be impaired, it must calculate the amount it could recover by either:

- disposing of the CGU in the open market; or
- operating as is and generating cashflows in the foreseeable future.

When the RV is greater than the carrying amount (CA – ie, the book value of the CGU), the CGU is deemed to be impaired and the CGU must be written down to the RV.⁸

IAS36 contains guidance on the mechanics of impairment testing and clarifies specific considerations for impairment testing as well as providing exception cases when testing may not be necessary despite the presence of indicators of impairment. One of the considerations provided is a non-exhaustive list of indicators of impairment that companies should consider when deciding if they should test for impairment. Some examples are:

- External: observable indications that the CA has declined more than expected as a result of the passage of time or normal use; material adverse changes in the market that have affected or will affect the profitability of the company and therefore the CGU; increases in market interest rates that affect the implied discount rate, reducing the RV below the CA; or where the CA of the CGU is greater than the market capitalisation of the company.
- Internal: the CGU's assets are damaged or obsolete; material adverse changes in the company have affected or will affect the profitability of the company and therefore the CGU; or internal reporting indicates that performance will be materially worse than expected.

4 Energy companies (ie, coal, oil and gas, etc) are subject to similar economic pressures, but are facing their own unique challenges as a result of covid-19.

5 IAS36 ¶6.

6 This chapter refers to IFRS accounting standards, which may differ, in some cases materially, from other accounting standards (eg, US Generally Accepted Accounting Principles).

7 IAS36 ¶9. IAS36 ¶6 defines RV as 'amount of an asset or a cash-generating unit is the higher of its fair value less costs of disposal and its value in use'.

8 IAS36 ¶8. IAS36 ¶6 defines CA as 'amount at which an asset is recognised after deducting any accumulated depreciation (amortisation) and accumulated impairment losses thereon'.

While IAS36 provides guidance for impairment testing generally, IFRS6 'Exploration for and Evaluation of Mineral Resources' provides additional guidance specific to early stage mining projects, noting the following additional potential indicators of impairment:⁹

- the exploration period is set to expire;
- additional exploration work is not budgeted or planned;
- exploration has not been successful in defining mineral resources; or
- data exist that, although development may proceed, the CA of the exploration assets is higher than the RV.

An economic downturn is one example of a material adverse change under IFRS that mining companies should consider when examining whether a CGU is impaired. Prior to covid-19, a previous industry-wide downturn was brought on by the collapse of the global commodity market that started in 2013. Between December 2012 and December 2014, the World Bank's precious metals index fell from 140.18 to 92.12, a decrease of approximately 33 per cent.¹⁰

During this previous downturn, as a result of falling commodity prices, several companies began to suspend mining operations, divested marginal projects, changed capital expenditure plans, pursued cost optimisation initiatives, and recognised significant impairment losses.¹¹ In the 2013 and 2014 fiscal years alone, the top 40 mining companies in the world collectively recognised US\$58 billion and US\$27 billion in impairment losses.¹²

Looking at more recent examples, two material impairment losses recognised by large public mining companies since 2019 are:¹³

- US\$2.5 billion for Vale's New Caledonian nickel mine; and
- US\$395 million for IAMGOLD's Westwood gold mine.

In Vale's case, the indicator of impairment was a change in the mine's business plan necessitated by production and processing issues at the project, while at the IAMGOLD site the preliminary mine plan developed in 2019 led the company to materially revise its production estimates downward. Although both impairments were recognised at the end of the 2019 financial year, were the result of project-specific issues at each mine, and predated covid-19, the effect of the coronavirus pandemic may similarly affect production and profitability estimates.

Unlike in 2014, the disruption caused by covid-19 has not yet resulted in a significant decline in metals commodity prices. From December 2019 to September 2020, the World Bank's precious metals index actually increased from 111.93 to 148.11, or approximately 32 per cent.¹⁴ However, many mining companies have suspended operations as they, as well as their suppliers and customers, have been affected by the pandemic mitigation measures taken around the world.

9 IFRS6 ¶20.

10 World Bank, 'Commodity Price Data: Monthly: Indices'. The base metals index fell by a smaller amount, starting at 99.59 and dropping to 86.25 in the same period, a decrease of approximately 13 per cent.

11 PWC, 'Mine 2015: The gloves are off', p3.

12 *ibid*, p23.

13 Vale, 'FY 2019 Annual Report, p49; IAMGOLD, FY 2019 Annual Report, p88.

14 World Bank, 'Commodity Price Data: Monthly: Indices'. The base metals index fell marginally from 80.71 to 80.18, a decrease of approximately 1 per cent.

Depending on how long and pervasive covid-19's impact is on the global economy, mining companies may be forced to perform impairment tests, which may result in the recognition of material impairment losses.

Impairment losses and valuation

Given the potential materiality of future impairment losses, it is important to understand how these losses are calculated. As discussed in the previous section, impairment losses are recognised when the RV of a CGU is lower than its CA. As the CA is just the pre-impairment value of the CGU on a company's financial statements, the RV is the key variable when it comes to impairment testing. The RV of a CGU is the higher of either:

- fair value less costs of disposal (FVLCD); or
- value in use (VIU).

Both are determined by valuing the CGU using different inputs. FVLCD has two primary components:

- fair value (FV): 'The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date';¹⁵ less
- costs of disposal: 'Incremental costs directly attributable to the disposal of an asset or cash-generating unit, excluding finance costs and income tax expense'.¹⁶

In order to calculate FVLCD, companies prepare a valuation of the CGU (or engage a third party to prepare the valuation) and consider what potential price reasonable buyers and sellers would negotiate to transact for the assets acquired. IFRS13 'Fair Value Measurement' discusses the three primary valuation approaches for determining FV: the income approach, the market approach and the cost approach.¹⁷

The income approach involves forecasting the CGU's future income and then discounting it to a calculation date in order to determine a single value that should serve as a proxy for the market's expected value of the CGU. 'Income' in this case can refer to either accounting earnings or cashflows, depending on the methodology selected. The income approach includes the discounted cashflows and capitalised cashflows methodologies, among others.

The market approach uses publicly available information such as quoted trading prices (of either the subject company or comparable companies) and announcements about transactions for comparable assets in the market to estimate the market's expected value for the CGU. The market approach includes the comparable companies trading multiple and comparable transaction multiples methodologies, among others.

Finally, the cost approach attempts to estimate the amount of investment required by a third party to replicate an asset in its current state. The cost approach typically employs the current replacement cost methodology, among others.

Selecting the appropriate approach is a matter of professional judgement. When it comes to mining assets specifically, several mining standards bodies have provided guidance. For the

15 IAS36 ¶6.

16 IAS36 ¶6.

17 IFRS13 'Fair Value Measurement' ¶61, B5-B11.

purposes of this chapter, we refer to the Special Committee of the Canadian Institute of Mining, Metallurgy and Petroleum on the Valuation of Mineral Properties (CIMVAL) standard.¹⁸ CIMVAL's recommended valuation approaches are based on the development status of the project itself; income approaches are recommended for more advanced projects where income estimates are more readily available, while cost approaches are only recommended for early-stage projects that have yet to define mineral resources.¹⁹

In contrast, VIU is defined as 'the present value of the future cashflows expected to be derived from an asset or cash-generating unit'.²⁰ IAS36 restricts this expectation in terms of what could reasonably be forecast by the company continuing to make use of the CGU and specifically prohibits the effect of cash inflows or outflows that arise from future restructurings or from improving or enhancing the asset's performance.²¹ As the VIU definition refers specifically to calculating the present value of future cashflows, the valuation should be conducted using the discounted cashflows technique.

Therefore, applying a FVLCD calculation can allow companies to consider the potential upside value of a CGU, while VIU is more prescriptive, focusing on the value of the CGU as it is currently planned to be operated. As the standard looks to compare the greater of FVLCD and VIU to the CA, it is often the case that a company can elect to only calculate the FVLCD and conclude that it is greater than the VIU, so long as either is estimated to be greater than the CGU's CA.²²

Valuation and the implementation of valuation concepts for impairment testing are both expansive topics and we hope that this chapter serves as a useful introduction to them. However, we want to make clear that an exhaustive review of those issues is beyond the scope of this chapter and that there are further external resources available that cover these topics.

Valuation and covid-19

So how would covid-19 potentially affect the valuations performed as part of the potential impairment testing? First, the company would need to identify an indicator of impairment affecting one of its CGUs, be it from changes to production schedules or investments brought on by the pandemic (internal indicators) or the continued downturn in the global economy (external indicators). Second, assuming an indicator of impairment has been identified, the company would then conduct a valuation under either the FVLCD or VIU approaches.

For the purposes of this chapter, we will refer to an example of a producing mine held by a multinational mining company. If we assume that the subject company determines that there have been indicators of impairment in 2020 and conducts a FVLCD analysis applying the income approach and the discounted cashflow methodology, then we should now consider

18 Some examples of other international valuation standards for mining projects are VALMIN from Australia and SAMVAL from South Africa.

19 CIMVAL, p16.

20 IAS36 ¶6.

21 IAS36 ¶33.

22 IAS36 ¶19.

how covid-19 could affect this analysis.²³ A discounted cashflow has many components, but for purposes of this chapter we will simplify it to two:²⁴

- expected future cashflows: these are the expected inflows and outflows of the CGU that a potential buyer and seller would estimate; and
- discount rate: the rate at which the expected future cashflows are adjusted in order to determine their present value, including consideration of the time value of money, the uncertainty of achieving the cashflows, the CGU's credit risk, and other risk factors that market participants would take into consideration.

All inputs being equal, increases in expected cashflows would result in increased FVLCD, while decreases in cashflows reduce FVLCD. Some examples of how expected cashflows could be impacted directly by covid-19 are:

- revenue could either increase or decrease due to the greater volatility of commodity price forecasts as prices have become less predictable owing to covid-19;
- revenue could decrease due to slowed production rates resulting from covid-19 safety measures or further mining sector shutdowns;
- revenue expectations could decrease due to lower overall economic growth expectations in future years, suppressing demand for commodities;
- expenses could increase due to covid-19 safety measures;
- expenses could decrease due to reduced production rates or cost-saving process redesigns spurred on by covid-19;
- expected cashflows could change due to government intervention, such as reductions or increases in royalties and taxes (discussed later in this chapter); and
- expected cashflows could decrease due to longer collection periods on payments from customers who are trying to manage payments to suppliers owing to the global economic downturn.

This list is not meant to be exhaustive, as the true scope of the economic impact of the pandemic remains to be seen.

As discussed above, valuations attempt to forecast the expected future cashflows and the risks of achieving those cashflows. The risk can be estimated in two places, the cashflows themselves and the discount rate.

Assuming that the cashflows are fixed, increasing the discount rate decreases FVLCD, as the present value of future cashflows is calculated to be lower; the opposite is also true, lowering the discount rate results in a higher FVLCD. As a result of the global economic downturn, some typical determinants of the discount rate have dropped, such as government bond yields and equity risk premiums. However, the overall uncertainty in the global economy has increased, which could lead to the overall cost of raising both equity and debt capital increasing as investors and creditors are less likely to invest and lend.

23 CIMVAL, p17. Both the income approach and the discounted cashflow methodology are considered primary approaches for valuing mines that have reached the production stage of development.

24 IFRS13 ¶B13.

Furthermore, if the cashflows cannot be reasonably adjusted for the additional uncertainty associated with the pandemic because of this risk's overall impact on many aspects of the forecast, it is sometimes appropriate to account for this uncertainty in the discount rate itself in the form of a specific risk premium. Therefore, if the FVLCD of a CGU is materially reduced due to either declining cashflows or increased discount rates, greater impairment losses may be recognised by companies at the end of the 2020 fiscal year.

Mining tax policy responses to covid-19

Mining is a highly regulated sector, particularly in relation to taxes and permitting. Accordingly, mine valuations require a thorough assessment of the level of regulatory risk and its impact on future cashflows. During particularly disruptive periods, it is crucial to understand the adaptability of the fiscal regime to the stressors provoked by the disruption and the factors influencing the regulators' response. The drivers of the fiscal regulatory regimes in which the subject of the valuation operates should be analysed to properly project the level and risk of future cashflows. Similarly, when performing a market-based valuation, to assess the comparability between mining companies or projects the difference between the fiscal regimes under which the companies or project operate should be assessed since some multiples might need adjustments to account for those differences.

In this section, we discuss the major fiscal levers regulators use to tax the mining industry, what factors influence the selection of particular levers, and the issues regulators consider when deciding whether to change the current fiscal regimes to address the economic impact of the pandemic.

Fiscal regimes in the mining sector

Taxes levied on mines originate from multiple sources such as the general tax code of the jurisdiction, tax laws specific to the mining industry, and the contract or concession agreement for the specific mining project. Jurisdictions rich in mineral resources tend to create tax codes specific to the sector or even individual to the mineral project due to the following:

- mining results in the permanent loss of a non-renewable resource that is often owned by the state;
- mining projects are very capital-intensive, with the largest proportion of capital costs incurred during the lengthy pre-production period and once the mine ceases operations;
- rents from mining can comprise a very significant share of all government revenues. For example, mineral rents in Mongolia, Suriname and Mauritania represent over 20 per cent of their GDP;²⁵
- mining can be the key source of a country's foreign currency reserves. This is the case in Peru, Zambia and Chile where the mining sector is the primary source of US dollars, accounting for more than 50 per cent of each of those countries' exports;²⁶

25 World Bank, World Development Indicators dataset: Mineral Rents (percentage of GDP) Code: NY.GDP.MINR.RT.ZS

26 World Bank, World Development Indicators dataset: Ores and metals exports (percentage of merchandise exports) (TX.VAL.MMTL.ZS.UN) for 2018 and 2019.

- some large-scale mining projects are in remote areas where there are few if any employment opportunities outside of the project. The governments in these instances often rely on the project company to provide the infrastructure, healthcare services and schools to the community;²⁷ and
- mining projects can have significant impacts on the environment well after the mine ceases operations.

The extraction costs, price volatility and environmental impact can vary greatly depending on the mineral extracted and the size of the project. Accordingly, in many jurisdictions the taxes levied will vary by mine and type of mineral extracted, often with individually negotiated rates for each specific contract or concession agreement.

Fiscal regimes in the mining sector are designed to provide sufficient incentives to attract investment while ensuring that the state is adequately compensated for the extraction of non-renewable resources. Governments try to design fiscal regimes that will perform well under various economic scenarios such as low or high metal prices and high or low input costs. There is a plethora of fiscal tools designed to influence the timing of the cashflows to the state and the investors, and the allocation of risks between the two.

With regards to the timing of the revenues some fiscal tools such as bonus payments or unit-based royalties will generate tax revenues for the state early in the project. These tools transfer more of the project risk to the investors since the projects have to pay taxes even when they are incurring losses. Other fiscal tools such as income-based royalties, corporate income taxes or state equity participation take longer to generate revenue for the state but might be more effective in attracting further investment into the sector.

Unit-based or income-based fiscal tools can be neutral, regressive or progressive. Neutral tools apply the same tax rate whether income or the base unit increases or decreases. Regressive tools apply a higher tax rate as income, or the base unit increases, while progressive fiscal tools apply a lower tax rate as income, or the base unit increases.

Depending on the desired outcome, some of these tools might be more attractive than others. For example, if the state wants to attract more investments progressive fiscal tools can be more effective. Progressive tools are typically more attractive to investors since they cushion the impact of periods of low or negative profitability on investors' profits. These tools also delay the state's take from the project and transfer greater risk to the state if the project does not perform as well as expected. However, if the project does better than expected the state benefits from a greater share of the profits.

In some cases, constraints on the resources available to manage and monitor fiscal compliance will prevent some fiscal tools from working as intended. For example, progressive fiscal tools based on specific accounting metrics require closer auditing measures to prevent fraud. As a result, those fiscal tools are more effective if the tax authorities have the relevant experience, are well staffed and well funded.

27 IGF, The impact of Covid-19 on employment in mining, June 2020.

Fiscal response to the current crisis in the mining sector

Governments are being advised to avoid implementing fiscal measures specifically targeted to aid the mining industry, since mining has performed relatively well compared with other sectors in the economy and the impact has been uneven across regions, commodities and mine operations.²⁸

The impact of the pandemic has varied by state

Restrictions on mining operations have varied widely across countries and in some cases within countries. Some mine operations have been allowed to continue; some have been limited to essential operations only; and some have ceased for certain periods.

In South Africa, for example, mining was suspended for three weeks across the country at the end of March 2020.²⁹ After the three-week suspension, some mines were allowed to reopen at reduced capacity with increased safety measures.³⁰ In some countries, such as the United States, Canada and Australia, mining operations have been declared an essential service and critical mining workers have been exempted from lockdown orders. However, operations are subject to specific restrictions for safety and control measures.³¹

The impact of the pandemic on mineral prices had been uneven

Mineral prices have not been uniformly affected by the economic fallout of the pandemic. Prices of safe haven minerals such as gold and silver have increased. The average price of gold in July 2020 increased by 31 per cent from the same period the previous year.³² The prices of some minerals such as copper and aluminium dropped significantly during the initial stages of the crisis, but have rebounded as economic activity restarts in some parts of the world.³³ During certain periods, concerns of covid-19-related supply disruptions have put upward pressure on the prices of some minerals. For example, the average price of copper in April 2020 was down by 21 per cent from the same period the previous year.³⁴ However, it began to recover in April as the lockdown measures in China, one of the largest consumers of copper, subsided. Thereafter copper prices further recovered, fuelled by greater consumption in China driven by a monetary and fiscal stimulus and fears of supply shortages due to the covid-19 outbreak in

28 IMF, Natural Resource Fiscal Regimes Tax Policy Response, 20 April 2020; OECD, ATAF, IGF, Mining Taxation during and after Covid-19, June 2020; IGF and African Tax Administration Forum, Mining Tax Policy Responses to Covid-19, April 2020.

29 Argus Media, 'South African mining restart awaits lockdown decision', 9 April 2020, www.argusmedia.com/en/news/2095345-south-african-mining-restart-awaits-lockdown-decision.

30 Reuters, 'South Africa to allow mines to operate at 50 per cent capacity during lockdown', 16 April 2020, www.reuters.com/article/us-health-coronavirus-safrica-mining/south-africa-to-allow-mines-to-operate-at-50-capacity-during-lockdown-idUSKBN21Y2LI.

31 www.millerthomson.com/en/publications/communiques-and-updates/mining-bulletin/april-7-2020-mining/impacts-of-covid-19-on-the-canadian-mining-industry/; www.mining-technology.com/features/timeline-how-australian-mining-reacted-during-covid-19/; www.miningnewsnorth.com/story/2020/04/03/news/mining-essential-to-us-covid-19-response/6228.html.

32 World Bank, 'Commodity Price Data: Monthly: Indices'.

33 BHP, BHP's economic and commodity outlook (FY20 full year), 18 August 2020.

34 World Bank, 'Commodity Price Data: Monthly: Indices'.

Chile and Peru.³⁵ By July 2020 the average price of copper was up by 7 per cent from the same period the previous year. Finally, the prices of some minerals are decreasing not just because of the pandemic but also because of other structural factors, such as environmental regulatory changes in the case of energy coal.³⁶

The impact of the pandemic has differed depending on the type, stage and automation of the mine

The impact of the pandemic on mine operations has varied depending on the type (open-pit or underground), stage and level of automation of the project. Underground mines have halted operations more often and for longer periods than open pit mines since they are considered to carry higher risks of contagion. The closures have been mandated by the authorities, as in the case of South Africa, or voluntarily imposed by the industry, as in the case of Poland.³⁷ Travel restrictions and supply chain disruptions have affected mines in the development stages more since these stages require access to more workers, technical specialists and specialised machinery and equipment that often needs to be imported.³⁸ Finally, more automated mines have been able to lessen the impact of the pandemic on operations. In some cases, like the fully automated Syama underground gold mine in Mali, the impact of the pandemic on operations has been negligible.³⁹

Mining companies have benefited from the general tax relief measures and economic aid countries were implementing shortly after the pandemic began.⁴⁰ Some of the most commonly used general fiscal relief measures that mining companies have benefited from are:

- tax payment deferrals;
- enhanced tax refunds;
- reductions in social security, payroll and property taxes;
- additional allowances to offset tax losses; and
- greater accelerated depreciation allowances.⁴¹

Regulators have been relying on these country-wide economic measures and the automatic stabilisers built into the various mining sector-specific fiscal tools before providing government aid support specifically targeted at the mining sector. As of July 2020, only a handful of jurisdictions have implemented tax relief measures specifically targeted at the mining sector. Some examples are:

- Zambia: the government suspended import duties on mineral concentrates and export duties on precious metals;⁴²

35 Glencore, 2020 Half Year Report, 6 August 2020; BHP, BHP's economic and commodity outlook (FY20 full year), 18 August 2020.

36 BHP, BHP's economic and commodity outlook (FY20 full year), 18 August 2020; World Bank, 'Commodity Price Data: Monthly Indices'.

37 IGF, The impact of Covid-19 on employment in mining, June 2020.

38 *ibid.*

39 <https://mqworld.com/2020/04/02/mining-consider-automation-survive-coronavirus-expert-warns/>.

40 IGF and African Tax Administration Forum, Mining Tax Policy Responses to Covid-19, April 2020.

41 OECD, Tax and Fiscal Policy in Response to the Coronavirus Crisis: Strengthening Confidence and Resilience, Updated 19 May 2020.

42 www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-Covid-19.

- South Australian government: reduction of exploration and licence fees;⁴³
- Canada: greater allowance to offset exploration expenses;⁴⁴
- Quebec, Canada: postponement of mining taxes in the province;⁴⁵ and
- Colombia: tax incentives for investment in the mining sector.⁴⁶

Governments continue to consider various options for targeted support but have been reluctant so far to offer any meaningful reduction of royalties or other mining taxes despite requests from the mining sector.⁴⁷ Moreover, some jurisdictions are considering increasing mining taxes to restore public finances.⁴⁸ Even before the current crisis there was a concern that resource nationalisation and regulatory disruption in the mining sector was on the rise, particularly in Africa.⁴⁹ Governments across the world have seen a reduction in fiscal revenues combined with an increase in spending to fund measures to combat the pandemic and cushion the economic impact of the pandemic on the most affected. While some countries can raise debt to finance the fiscal deficits, others have more limited options. Resource-rich countries with limited financing options will look to the mining sector as an alternative source of fiscal revenues.

Valuation issues to consider in the fiscal response in the mining sector

From a valuation perspective the fiscal response in the mining sector should be analysed in terms of magnitude of the impact on cashflows, timing of that impact and effect on the reliability of the forecast. The fiscal measures in response to the crisis can be cashflow positive, negative or neutral on a mine valuation. However, the impact can vary over time. For example, governments might at first provide aid to the mining sector to avoid layoffs, but once the economy recovers the government might increase the tax burden beyond the original levels to make up for the budget shortfalls generated by the initial aid. The risk in realising the projected cashflows can also vary based on the stability of the fiscal regime. For example, the stability of the fiscal regime could warrant a decrease of the discount rate in a discounted cashflow valuation.

The impact of the pandemic on the fiscal regime on a mining project can be incorporated into a discounted cashflow valuation through the forecast cashflows or through the discount rate. The choice of where to incorporate the impact of these factors on the valuation will be

43 www.australianmining.com.au/news/south-australia-halts-fees-for-mineral-exploration-licences/#:~:text=The%20South%20Australian%20Government%20has,until%20the%2031%20December%202020.

44 ey-tax-covid-19-response-tracker-23-august-2020.pdf.

45 *ibid.*

46 *ibid.*

47 See, for example, www.taxpayer.net/energy-natural-resources/blm-rejects-covid-19-royalty-relief-for-wyo-mines/.

48 See, for example, the case of the state of Nevada in the US or Ghana, <https://taxfoundation.org/nevada-mining-tax-increase-amendment/>; www.igfmining.org/three-lessons-from-global-mining-tax-policy-responses-to-covid-19/.

49 <https://riskandcompliance.freshfields.com/post/102fuyv/resource-nationalism-on-the-rise-10-issues-for-mining-companies-and-their-invest>; <https://uk.reuters.com/article/uk-mining-nationalism-explainer/explainer-how-countries-are-getting-tougher-with-mining-companies-idUKKCN1RG1DB>.

very case-specific and could vary over time. What is key is to ensure that the same factor is not accounted for in both the cashflows and the discount rate, since it would constitute double counting.

The cashflow projections can directly account for the short-term impact of the pandemic on changes in royalty rates resulting from lower or higher expected profits; general tax relief measures; or already announced specific tax relief measures for the mining sector. However, it is harder to account in projected cashflows for the timing or the magnitude of additional fiscal measures that governments might impose on mining projects to either relieve or increase their tax burdens. Consequently, it may be better to account for that additional risk in the discount rate. Some of the factors that should be analysed when trying to predict the type and effect of fiscal regulatory responses on specific mining projects are:

- the country's and jurisdiction's economic reliance on the mining sector in general and on specific minerals in particular;
- the type of fiscal regime in place – progressive, neutral or regressive;
- the type and impact of pandemic-related restrictions on mining operations;
- the effectiveness and impact on public finances of the fiscal and stimulus measures already implemented; and
- the fiscal measures implemented by other countries with significant mining operations.

In analysing these factors, the valuation professional should explore some of the following questions:

- Is the government looking to mining projects that have benefited from the pandemic, such as goldmines, as a source of revenue to make up for the loss of fiscal revenues on other sectors of the economy and additional expenditures due to the pandemic?
- Is the relief provided in exchange for equity in the project company or treating waived tax or royalty amounts as a loan?
- Is the tax relief offered conditioned on limiting the distribution of dividends, maintaining a specific level of employees or restricting bonus payments?
- Will the tax relief be contingent on altering corporate tax structures, transfer pricing practices or mineral pricing policies?
- For temporary tax measures, what are the factors that will determine whether they are renewed or left to expire?

This list is not meant to be exhaustive, as the full effect of the pandemic on the world economy and mining operations remains to be seen. There are also specific issues to consider based on the context of the valuation. For example, if the valuation is being performed in the context of a dispute, the legal merits of the case may dictate what tax assumptions should be made in the valuation.

Conclusion

In closing, covid-19 has resulted in significant upheaval around the world affecting all industries differently. In the mining sector, we believe that the uncertainty created by the pandemic and its impact on the industry may make impairment testing more prevalent for financial year 2020. This may or may not result in additional impairment losses being recognised, but it is important to be aware of the potential issues ahead of year-end.

The response from regulators has been more decisive, but diffuse, with relief considerations appearing catered to individual jurisdictions or projects depending on their needs. In the context of valuations, it is important to consider the specific circumstances of the project being valued, as commodity or region-level considerations may be too broad to present an accurate representation of the specific project.

Appendix 1

About the Authors

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Isabel Santos Kunsman is a managing director in AlixPartners' investigations, disputes and risk practice, based in Washington, DC.

Isabel is an experienced expert witness on financial, valuation and quantum matters, bilingual in English and Spanish. For the past 15 years, Isabel has assisted clients, regulators, and arbitral tribunals in matters related to the valuation of complex financial instruments, concessions, or companies in such sectors as construction, banking, infrastructure, transportation, energy, mining, and oil and gas. She has been regularly retained as a quantum and valuation expert to provide testimony in both English and Spanish in bilateral investment treaty arbitrations before ICSID and UNCITRAL, in international commercial disputes before the ICC, and in domestic regulatory proceedings in Latin America. Isabel has an MBA with honours in international finance from Georgetown University's McDonough School of Business.

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Alexander Lee is a senior vice president in AlixPartners' investigations, disputes and risk practice, based in New York City.

Alexander specialises in business valuation and damages quantification and has led teams over multiple jurisdictions in preparing expert reports for commercial and investor-state disputes for nearly the past decade. He works with counsel and technical experts to develop economic models that assess and quantify damages to communicate those opinions to stakeholders. He has experience in a wide variety of industries including energy, mining, banking, commodities trading and real estate development. He also provides transaction advisory services such as valuation and bid strategy analysis. He also has expertise in the assurance, tax and forensic audit sectors. Alexander holds a master of accounting degree from the University of Waterloo. He is a chartered professional accountant, chartered accountant, and chartered business valuator.

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