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Are environmental liabilities becoming an ever-larger burden for miners?

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- ESG factors have a large impact on the mining sector
- Long-term provisions needed for sizable future clean-up costs
- Liabilities are credit risks, more disclosure is needed

At Robeco we aim to link environmental, social and governance (ESG) indicators to the financial health and performance of companies. The mining sector is an investment area with a large ESG impact, and therefore deserves detailed attention.

Mining companies are already obliged to make provisions for so-called restoration and decommissioning of their assets. These provisions are liabilities to restore the environmental disturbance that was caused by the operations of the mining sites and to rehabilitate the environment when the asset is depleted and closed.

‘Remediation sometimes costs hundreds of millions of dollars per site’

Every large mining company remains responsible for a sizeable number of closed mining sites, including the tailings dams used to store by-products of mining operations, along with old processing facilities and so forth. For example, Rio Tinto has 13 old mine sites in closure, some of them decades old, plus 200 other industrial legacy sites, compared to 57 active mine sites. Remediation sometimes costs hundreds of millions of dollars per site, and often requires costly annual monitoring and maintenance.

By way of comparison, about 20% of BHP's total provisions are reserved for closed sites. One of Rio Tinto's most expensive projects – the former Holden copper mine in Washington state – cost the company USD 500 million and took five years to rehabilitate. Environmental regulation across the world is becoming more demanding and can be an inflationary cost factor.

Examples of the type of remedial work needed are the removal of industrial facilities and waste rock storage, building tailings dams and cleaning contaminated land. The monitoring needed includes checking dam integrity, slope and earth stability, groundwater quality, and flora and fauna reports.

For this article, we used information from the annual reports of the past decade of the five largest diversified miners: BHP Billiton, Rio Tinto, Anglo American, Freeport McMoran and Vale.

How does the provisioning system work?

When developing a mining site, the company builds closure cost estimates into its future cash projections. A provision is recognized on the balance sheet for the present value of such costs, based on the management's estimate of the legal and constructive obligations incurred. For new mines, these imply costs that will be incurred over a period in excess of 20 years, though this will be shorter for mines that have a short life. These amounts are discounted at a rate dependent on risk, maturity and location. Some of these costs are expensed when they become due, while others are capitalized when the site is being built or expanded.

The size of these provisions is not only subject to cost estimates and realization, but also to items such as assets sales, a change in the scope of consolidation, currency fluctuations and a change in discount rates. Countries like Australia and the US often demand a surety bond in the form of a bank guarantee to make sure that companies meet their obligations to rehabilitate. In some cases, when the financial strength of a mining company became very weak, governments converted these guarantees into cash bondings. Often this comes at a time when liquidity is already weak for these companies, so what seemed like distant spending can suddenly result in a more immediate credit impact.

Another example is when low commodity prices force a company to close its mine, bringing forward the liability at a time when the firm is financially under pressure. An interesting remark made by Christine Reddell, an attorney of the Centre for Environmental Rights, was that the public disclosures of 11 listed South African mining companies about their rehabilitation costs and their ability to cover these costs were inconsistent, unclear and sometimes unreliable. At Robeco, we share this opinion, and advocate for a more detailed disclosure of this sizeable and material liability.

Managing environmental provisions in a dynamic way; modern mining

The amount of environmental provisions is not a static number; it reflects the current expected future cash outlays and risks in the mine life cycle plans of a mining company's portfolio of assets. Estimated costs can change if the company encounters changing circumstances when executing its mine plan, but also when requirements or community expectations are increasing.

In the past, problems were solved when they occurred. In modern mining, the companies' pro-actively anticipate future costs and risks and try to reduce them in advance. For example, mining companies can choose not to mine lower grade areas to avoid an escalation of rehabilitation costs in the future. They can take timely measures to assure physical and geochemical ground stability, and take precautionary measures in terms of groundwater flows. They can also apply new mining technologies that can be used to limit the environmental impact and therefore the cost.

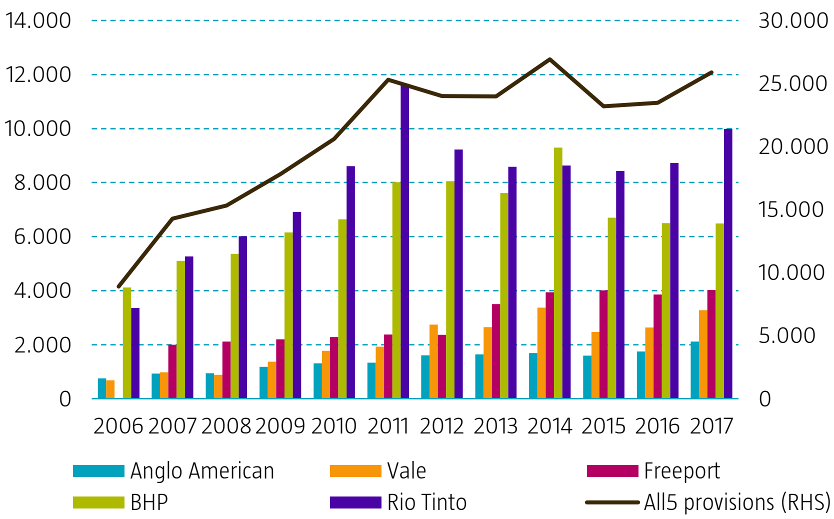
Another way to mitigate future costs is to consider how redundant sites could be utilized by local communities. This can vary from recreational use like creating a swimming lake, golf course or historical heritage site, to handing it over for military or agricultural use. The University of Eastern Finland found that of the 51 former mining sites that it studied, one-third of them were used for recreational purposes, one-third were turned into industrial sites, 12% were used as military or fire practice sites, and the rest were retained for possible reopening.

Figure 1 | Goldcorp's Marlin mine open pit closure

What is the size of provisions in the industry, and relative to the company's size?

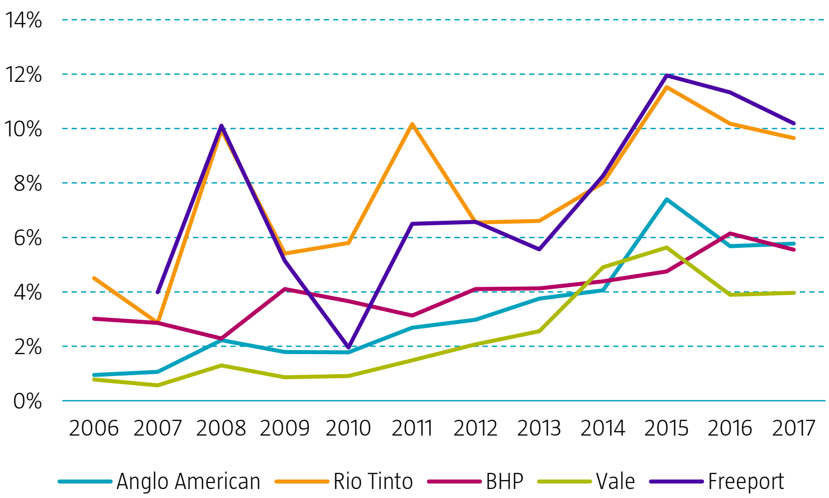
The top five pure-play mining companies have set aside almost USD 26 billion in environmental provisions. The total amount increased every year until 2011 and has been more or less stable since then. However, taken as a percentage of total enterprise value, this figure has increased on average from as low as 2.3% before the financial crisis to the current levels of 7% of total company value. In other words, the burden gets larger over time relative to company value.

Figure 2 | Absolute size of environmental provisions



Source: The companies' annual reports

Figure 3 | Environmental provisions as percentage of enterprise value



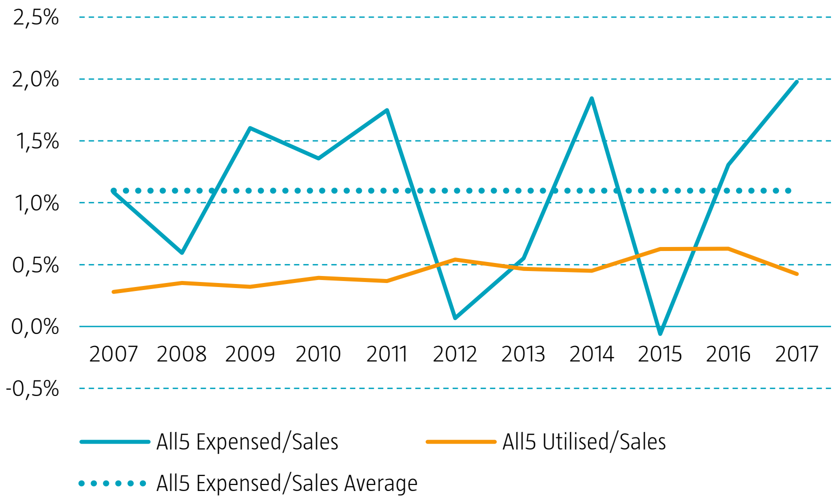
Source: The companies' annual reports

How are credit metrics such as profitability or leverage impacted?

One could make the argument that if the standards of environmental protection are increasing, and the number of legacy mines is changing, then there could be an inflationary impact coming from charges for environmental costs and provisions. The annual cash cost reflected in the number of utilized provisions has also been steadily rising from 0.3% of sales to 0.6% in the period 2007-2016, but in 2017 the rising trend paused.

The amount that is charged against profits through the income statement from an accounting perspective shows no clear trend. The latter number is impacted through items such as currency fluctuations and discount rate changes, so it becomes more volatile. However, one could argue that in the longer term, these levels of cash outlays (utilized) should converge with the accounting charges. If this happens, the cash costs are bound to move up, as the average expense rate was 1.1% of sales among the top five mining companies.

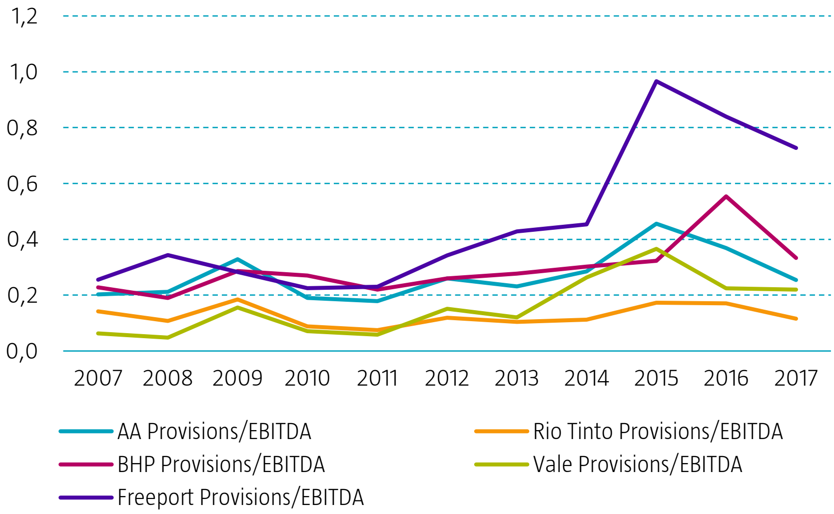
Figure 4 | Annual costs expensed or utilized (cash costs) on environmental rehabilitation



Source: The companies' annual reports

Provisions are debt-like liabilities that need to be paid sometime in the future. The leverage impact can be measured in terms of EBITDA. In figure 5, we see that the highest leverage impact was with the most financially leveraged company, Freeport, which has a Ba2/BB rating. For this company, the impact was equivalent to 0.7x EBITDA. For all other companies with an investment grade rating, the burden is less than 0.5x EBITDA.

Figure 5 | Size of debt adjustments when provisions treated as financial liabilities



Source: The companies' annual reports

What is the assessment of mining companies within the Sustainable Development Goals (SDG) framework?

From a starting point, we generally see mining companies potentially contributing to SDG 7 – affordable, reliable and modern energy services; SDG 9 – building resilient infrastructure and promoting sustainable industrialization; and SDG 11 – supporting sustainable cities by building safe and affordable housing and removing slums. In practice, companies that have a sizeable number of coal assets such as Anglo American get a negative score.

Most miners do not get more than a neutral rating, as they have sustainability issues in one way or another. A few companies that produce industrial metals get a positive but low impact score, under the criteria that they have good policies and have not been involved in controversies.

Conclusion

In absolute terms, the provisions are sizeable, a significant item on the balance sheet, and a burden on total enterprise value. We see a risk that cash costs for environmental rehabilitation might rise over time and become an accounting expense in the income statement. In terms of the credit impact, we see that the costs are about 0.5% of sales annually, which means they are a manageable but not negligible item for investment grade companies.

For high yield companies like Freeport McMoran, environmental provisions result in higher adjustments to their leverage. A more detailed disclosure is needed. Liabilities such as

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pensions and leases get a lot more attention, while this type of environmental liability is also a real financial one.

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