

Metals and Mining

Unique assets and product scarcity support credit quality

January 9, 2024

This report does not constitute a rating action.



What's changed?

Prices and profits are down from record highs, but both are holding up. Markets remain balanced for most metals, owing to supply constraints and steady demand.

Disruptions add volatility. Mine output has been disrupted by environmental issues, weather, and public scrutiny. Steel and aluminum output steadied after energy disruptions in 2022.

Free cash flow drops as spending persists. Capital budgets are likely to remain elevated in 2024 despite lower earnings, which will eat into some issuers' cash reserves.

What are the key assumptions for 2024?

Price assumptions supported by tight markets and global production costs. Price downside appears limited, owing to generally low inventories and structurally higher input costs.

Profit measures return toward long-term averages. Return on capital of about 7% in 2023 is lower for the third consecutive year, but still higher than most years in the past 15.

Capex holds around decade highs. Investment should ease in 2026, but we expect a few more years of high capital expenditures (capex) to sustain output and grow future-facing metals.

What are the key risks around the baseline?

Weaker prices consume cash flow while capex stays high. We don't expect capex will drop in 2024 or 2025 because most investments are multiyear and occur regardless of price cycles.

Unpredictable disruptions. Weather events, social unrest, regulatory changes, and geology can all disrupt operations and financial performance for companies or regions.

Looser financial policies. Companies in this volatile industry could use more debt to fund acquisitions or capital plans.

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Ratings Trends: Metals and Mining

Chart 1
Ratings distribution

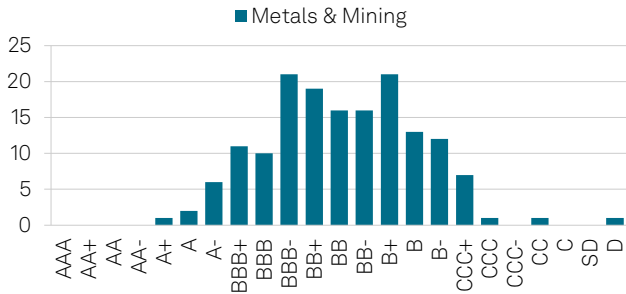


Chart 2
Ratings distribution by region

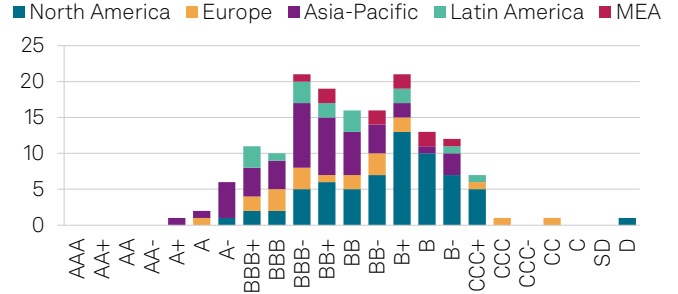


Chart 3
Ratings outlooks

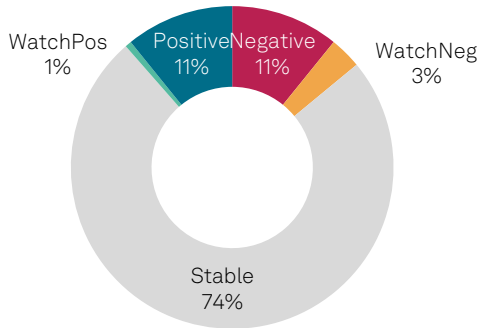


Chart 4
Ratings outlooks by region

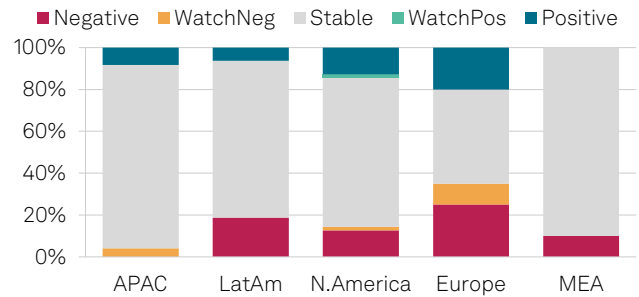


Chart 5
Ratings outlook net bias

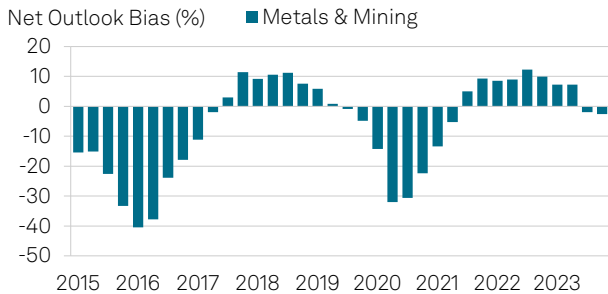
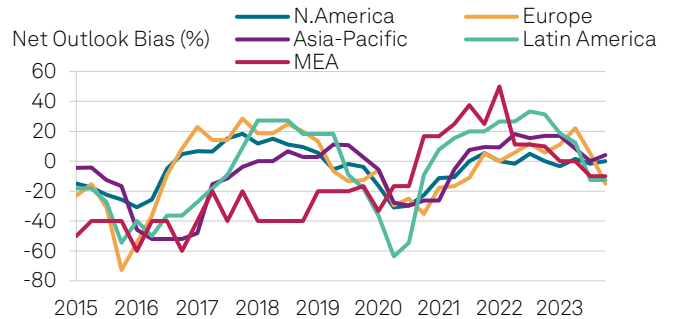


Chart 6
Ratings net outlook bias by region



Source: S&P Global Ratings. Ratings data measured at quarter-end.

Industry Outlook

Ratings trends and outlook

The credit outlook in global metals and mining stabilized at a higher level in 2023. Our rating outlook bias is balanced, with as many positive outlooks as negative ones, and we've been upgrading as many companies as downgrading in the past two to three quarters. In most cases, these rating actions related to company-specific matters rather than a large trend affecting a particular subsector. A spike in earnings and cash flow in 2021 and 2022 accelerated a long, fundamental improvement in credit quality after some difficult years in 2013-2014 and 2019-2020. Total debt in the sector is down over the past three years. After almost a decade of capital restraint, companies deployed windfall cash flows in 2021 and 2022 for new exploration, pent-up capital investments, and shareholder returns. Many issuers now use variable distribution mechanisms that distribute excess cash flow to shareholders during market peaks and cut back as cash flows shrink in a downturn. This appears to have reduced the capacity to deploy cash for large corporate development. In addition, such policies, coupled with the sector's more robust balance sheets, should support credit metrics through weaker price cycles.

The credit outlook in steel and aluminum remains slightly positive, ex-China. We have positive outlooks on a few large names globally (ArcelorMittal S.A., Gerdau S.A., Reliance Steel & Aluminum Co., Tata Steel Limited). Supply constraints and trade moats have supported profitable prices in most regions, even through soft demand from manufacturing and construction in Asia and uneven conditions in the U.S. automotive industry. The recently announced acquisition of U.S. Steel Corp. (BB-/WatchPos/--) by Nippon Steel Corp. (BBB+/WatchNeg/--), and the prior acquisition proposal by Cleveland-Cliffs Inc. (BB-/Positive/--), highlight the strategic importance of those U.S.-domiciled assets, including some of the industry's oldest coal-consuming blast furnaces. U.S. trade barriers have held longer than any the past few decades, and customers have generally passed through higher steel costs amid a cyclical profit upswing for manufacturers.

On the other hand, the outlook for the Chinese steel sector, the world's largest, is more bearish because of ongoing weakness in the property sector. While output has been strong due to demand from infrastructure and the manufacturing sector--noting the rapid growth in electric vehicles (EVs)--margins have been weak and many companies are taking losses. The steel mills continue to produce to keep unit costs low but restoring profitability is likely to depend on stabilization of property sector demand.

Market conditions in Brazilian steel have also been weak. The weak economy has reduced apparent consumption in the country by almost 5%, while competition remained fierce with imported steel, especially from China, squeezing margins and leading to negative EBITDA in some cases. In 2024, we expect lower interest rates and lower inflation to boost consumption, while imported products soften after achieving more than 20% of steel sales in the country.

Steel and aluminum producers will continue spending significantly to complete next-generation assets within the next few years. For example, some steel producers are investing in electric-arc furnace (EAF) steel minimills, and some are investing to replace coal-fired furnaces with hydrogen. Meanwhile, two large aluminum rolling mills are being constructed in the U.S. Even though many of these projects are discretionary, steel and aluminum producers face strategic pressure to reduce carbon emissions from their production processes. Steel is one of the largest emitters of greenhouse gases among industries, and accounts for an estimated 7%-9% of global carbon emissions, according to the World Steel Association. Furthermore, changing

blast furnaces to EAFs involves operational and workforce changes, which can be complex, as shown by Tata's Port Talbot proposals in the U.K.

Miners face rising costs to sustain and grow production. Also, friction around mining operations is fairly common, and public scrutiny or financial demands could be rising with consideration of environmental and social effects. Mineral deposits in many cases are national assets, with extraction and profit rights negotiated with mining companies. And irrespective of negotiated arrangements, numerous local issues can arise for these unique, critical assets. Mines typically become less efficient with higher unit costs as they deplete reserves over the several decades of mine life. The world's easiest and most attractive deposits are already being mined, so new mines tend to be more remote, more expensive, and more difficult to operate. As such, miners face a continual grind on capital and operating costs to advance mines and to support incremental processing with generally declining ore grades.

Main assumptions about 2024 and beyond

1. Price assumptions hold at higher levels than previous downturns.

Production constraints for many metals have contributed to tighter supply-demand balances. Steel and aluminum face persistently high energy inputs, including carbon costs. Several mined metals, notably copper and nickel, require considerable spending to sustain production, let alone grow production as demand rises for electrification.

2. Flexible returns should buffer credit in a downturn.

With more companies using a formulaic and flexible approach to distribute excess cash flows, lower shareholder returns in a downturn should support cash flows in this volatile sector. Large cash distributions to equity followed quickly behind the 2021 spike in prices, so that cash hasn't built up for use in corporate development like large capex or mergers and acquisitions (M&A).

3. Energy transition will require even more capital.

Steel and aluminum capex is higher around the world with the focus shifting toward future-facing commodities and critical minerals, as companies invest to transition to a lower-carbon footprint or to supply growing market segments. Adding capacity in mining is expensive, with world-scale mines typically requiring several billion dollars of capital and more than a decade to develop.

Prices for most metals are down 20%-30% from record highs in 2021 and 2022, but still about 20% higher than before 2020. Fundamentally tight markets for most metals and higher production costs around the world support higher prices.

China's influence on metals markets is changing: Exports of low-cost steel appear less attractive, considering economic tradeoffs for high energy-consuming commodities. China's steel output appeared to level off in 2022 and 2023, but aluminum output keeps climbing, and higher inventories are putting pressure on prices for that metal. Also, global demand and sentiment appear less sensitive to some weaker post-COVID economic data from China. Nevertheless, China's demand for bulk commodities like iron ore and metallurgical coal is still a dominant theme in those markets.

Costs are higher for most metal producers, including consumables, labor, and capital items.

Furthermore, the typically inverse relationship between the U.S. dollar and metal prices has broken down for a few years, so that local currency costs have been rising in many countries, as a

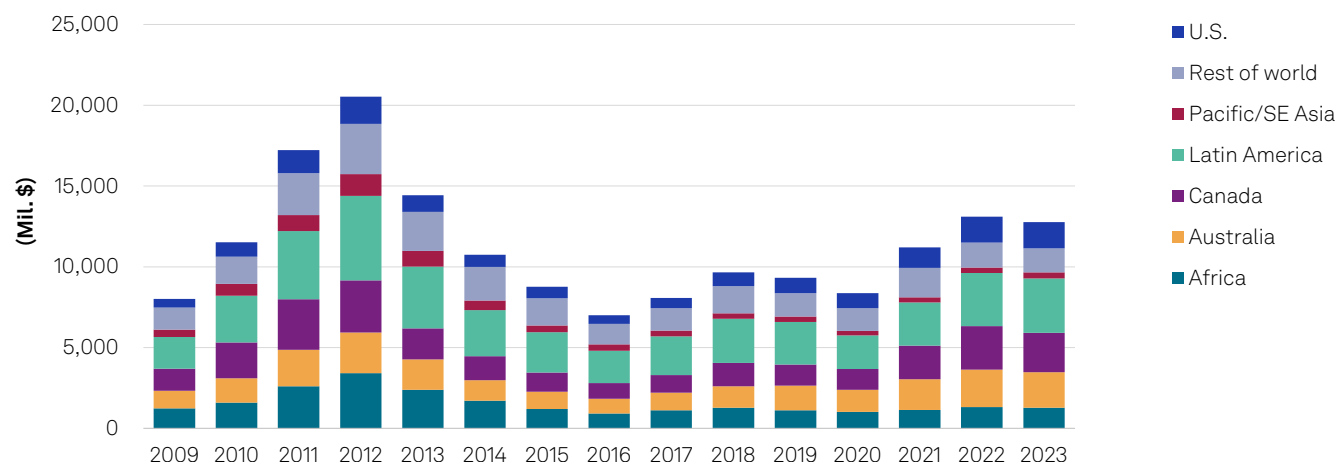
weaker U.S. dollar and lower metal prices coincided. In Europe, energy costs have eased--though are still relatively high--and the availability of electricity has normalized.

Lower prices and higher costs are biting into cash flow, as capex rises back to multiyear highs.

We expect capex to remain elevated in 2024 and 2025, even if spending flattens on a year-over-year basis. Large cash returns to equity for windfall earnings in 2022 have consumed large amounts of excess cash, but we expect those distributions to drop significantly as cash flows weaken. Also, mining companies have increased exploration budgets most years since 2016 but scaled back slightly in 2023 along with weaker market conditions (see chart 7). Exploration spending remains below the peak of more than a decade ago. Gold accounts for most exploration spending (55%), copper is the next largest (21%), and silver is third (6%).

Chart 7

Exploration budgets by location



Source: S&P Global Market Intelligence.

We don't expect capex to drop much unless cash flows weakened sharply. Even then, growth capital projects in this industry tend to be large and run over several years, regardless of market conditions. And new investments in metals output are targeting growing markets and critical minerals like copper, nickel, recycled aluminum, lithium, and cobalt. Also, steel and aluminum producers are spending to reduce greenhouse gas (GHG) emissions from their operations. Commercial grade aluminum in the U.S. was recently added to the Advanced Manufacturing Tax Credit in the Inflation Reduction Act (IRA), which will likely benefit the costs of U.S.-domiciled primary aluminum production. The strategic rationale appears strong for investments in metals production, so we expect elevated capex as companies continue expanding capacity into lower carbon megatrends like lightweighting, recycling, and lower carbon emissions.

Lower debt levels and demands on capital could increase debt usage in 2024 and 2025.

Debt levels for most companies are lower than only a few years ago, which opens up capacity for debt usage for corporate development. Credit ratio buffers have declined for many companies in the past year, as lower EBITDA translates into higher debt leverage and weaker cash flow. Even so, it would still likely take an average-cost company a year or two of 15%-20% lower prices to offset the recent strengthening of earnings and credit ratings. We forecast net debt and adjusted debt to EBITDA for our rated metals and mining companies will likely steady in 2024 after jumping with lower prices in 2023. The metals and mining industry's debt leverage is lower than it's been in almost 15 years, thanks to spending restraint since 2015 and a renewed focus on returns over growth.

Credit metrics and financial policy

Most mining companies are signaling continued capital restraint, particularly as it relates to M&A. Steelmakers, on the other hand, have shown more willingness to stretch to acquire assets. Nippon Steel's all-cash acquisition of U.S. Steel is valued at \$14 billion, including assumed debt. Furthermore, steelmakers have been acquiring to integrate throughout the value chain, sometimes in downstream manufacturing and sometimes upstream in scrap gathering. More consolidation is likely in China as the government encourages industry consolidation among the larger players. This reflects the government's desire to stabilize sector profitability through scale benefits, thereby improving creditworthiness and minimizing disruptions during the industry downturn.

Debt-funded acquisition premiums have been virtually nonexistent in mining because operating synergies and incremental returns are difficult to achieve. Mines are discreet cash flow units that rarely benefit from the integration synergies that would exist by consolidating regional market share in a sector like steel. We still doubt the large wave of debt-funded M&As in 2006-2010 will recur, but debt capacity could get consumed with strategic moves over the next few years. By comparison, Newmont Corp. funded its nearly \$20 billion acquisition of Newcrest Mining Ltd. mostly with a share exchange, and only a \$1 billion cash distribution to the target company's shareholders. BHP Group PLC's \$6.4 billion all-cash acquisition of OZ Minerals underscores the trend of discretionary cash available across the sector, as the company looks to increase its exposure to future-facing minerals like copper and nickel. In contrast, Brazilian miner Vale S.A. sold a 13% stake in its base metals division for \$3.4 billion to help support growth.

We also expect ongoing consolidation of the coal sector in developed markets to manage emissions risks. For example, BHP continues to reduce its exposure to coal following the sale of two of its metallurgical coal mines to coal company Whitehaven Coal. In addition, Teck Resources Ltd. is selling its steelmaking business to Glencore PLC. After the transaction, Glencore is expected to combine the Teck business with its own coal business and within 24 months demerge the combined entity as part of its net zero by 2050 target. We expect the new entity to be a stand-alone coal business that is sufficiently cash generative to be self-funding to bypass capital markets.

The metals and mining industry benefits from major barriers to entry owing to resource scarcity and the capital intensity of the assets, which will likely support credits with hard asset value. On the other hand, cash flows are among the most volatile of any industry we rate, which was a key factor for issuers reducing net debt levels in recent years. Mining companies, in particular, face periods of extraordinary cash windfalls that do not correspond with large capital spending. Many of these companies have adopted scalable shareholder returns that provide a more transparent look at financial policy and cash flows.

Key risks or opportunities around the baseline

1. Supply-demand balance breaks down.

Demand remains good, but key economic indicators for 2024 show a slowdown in key industries like construction and manufacturing. Meanwhile, output for most metals appears intractably constrained because of natural resource limits, energy availability, or trade barriers.

2. Capital investment breaks down.

Capital cost blowouts and project execution problems can drag on financial performance and credit quality.

3. Financial discipline breaks down.

With less debt and fairly strong equity currencies, companies have plenty of financial firepower to deploy for corporate development.

Real constraints on output as well as producer discipline are keeping inventories low for most metals, while demand held up in 2023. Weak demand could pull prices and earnings down closer to previous troughs, especially if higher interest rates around the world hit heavy metal-consuming industries like autos, construction, or manufacturing. More likely, perhaps, is the risk of unexpected disruption. In mining, a range of phenomena can affect output or earnings. For example, copper mines in Peru and Panama stopped output because of social unrest. Alcoa Australia is reworking its bauxite mining plan in Western Australia to address a recent change in its permitting approvals. Disruptions can also be financial if governments adjust taxes or royalties over the life of an asset.

Metals and mining capex have increased steadily since 2016, which includes large copper mine extensions like Teck's Quebrada Blanca Phase 2 and Freeport-McMoRan Inc.'s transition to underground at the Grasberg mine and its smelter construction. Capital cost overruns in mining are frequent for these unusual assets, which often require substantial infrastructure, equipment and operations in difficult physical conditions, and life-of-mine investments for waste containment and closure. Depending on timing of price swings, overruns or delays can materially affect the long-term returns of a single mine.

The biggest risk to credit quality will probably be debt usage and financial policies. These companies with heavy assets have the lowest debt levels in years, so we expect more debt to fund important investments. At the same time, debt-funded equity premiums with low integration potential relies on sustained higher earnings to maintain return on capital, a key indicator of long-term profitability in this capital-intensive industry.

Related Research

- [Cleveland-Cliffs Inc. 'BB-' Issuer Credit Rating Affirmed And Off CreditWatch Developing; Outlook Positive](#), Dec. 22, 2023
- [Nippon Steel 'BBB+' Ratings Placed On CreditWatch Negative After Announcement Of U.S. Steel Acquisition](#), Dec. 20, 2023
- [United States Steel Corp. Rating Placed On CreditWatch Positive On Proposed Acquisition By Nippon Steel Corp.](#), Dec. 20, 2023
- [S&P Global Ratings Metal Price Assumptions: Holding Higher For Longer](#), Oct. 16, 2023

Industry Forecasts: Metals and Mining

Chart 8
Revenue growth (local currency)

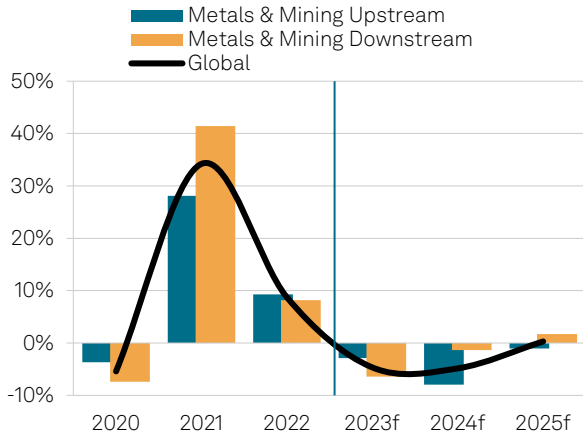


Chart 9
Capex Growth

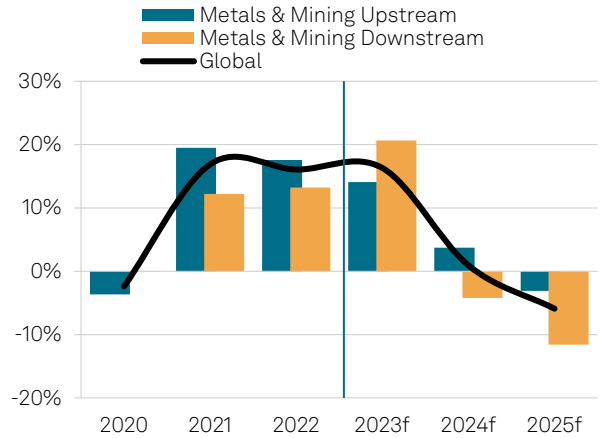


Chart 10
Debt / EBITDA (median, adjusted)

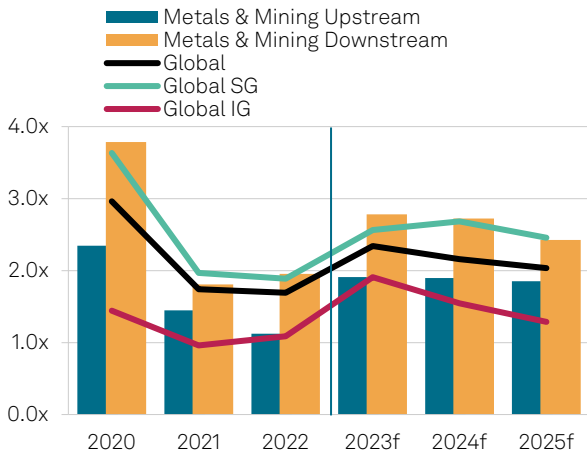
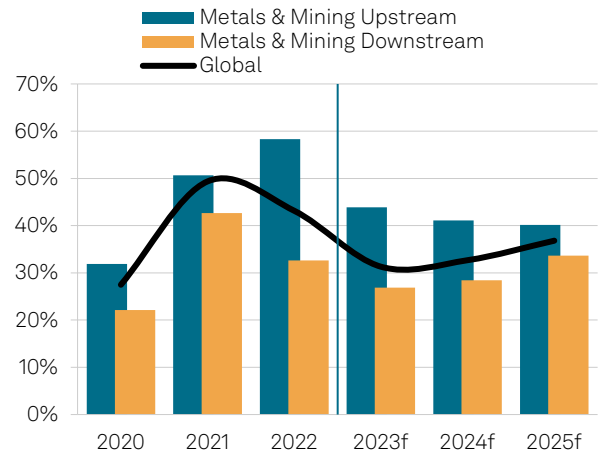


Chart 11
FFO / Debt (median, adjusted)



Source: S&P Global Ratings. f = Forecast.
Revenue growth shows local currency growth weighted by prior-year common-currency revenue share. All other figures are converted into U.S. dollars using historic exchange rates. Forecasts are converted at the last financial year-end spot rate. FFO—Funds from operations.

Cash, Debt, And Returns: Metals and Mining

Chart 12

Cash flow and primary uses

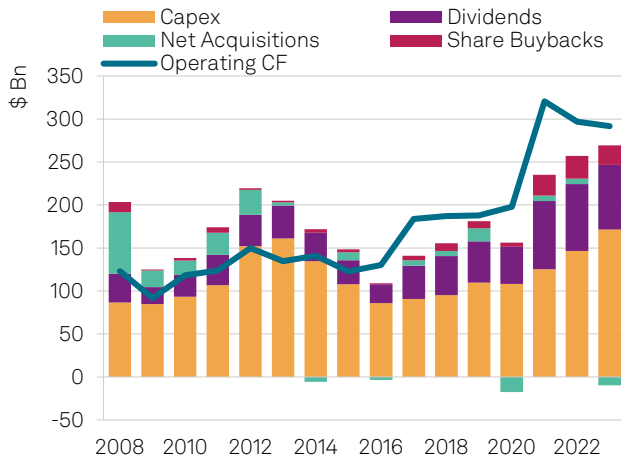


Chart 13

Return on capital employed

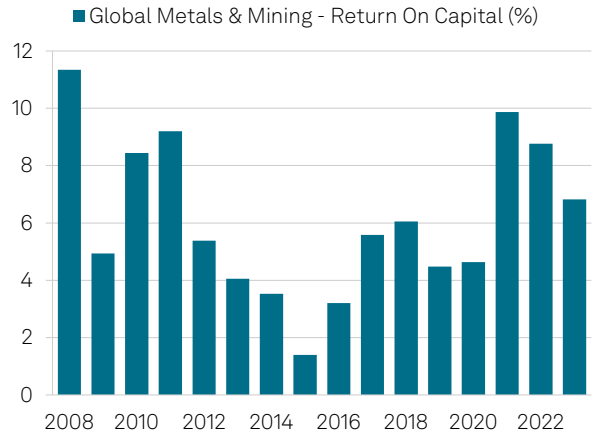


Chart 14

Fixed- versus variable-rate exposure

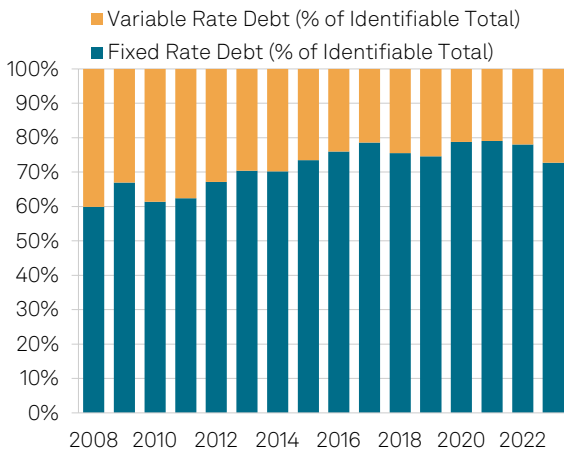


Chart 15

Long-term debt term structure

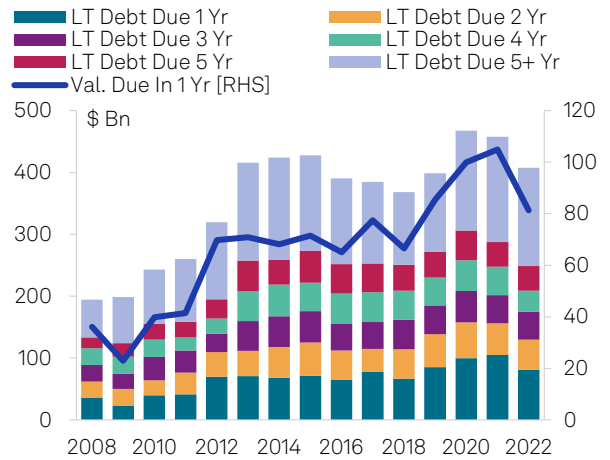


Chart 16

Cash and equivalents / Total assets

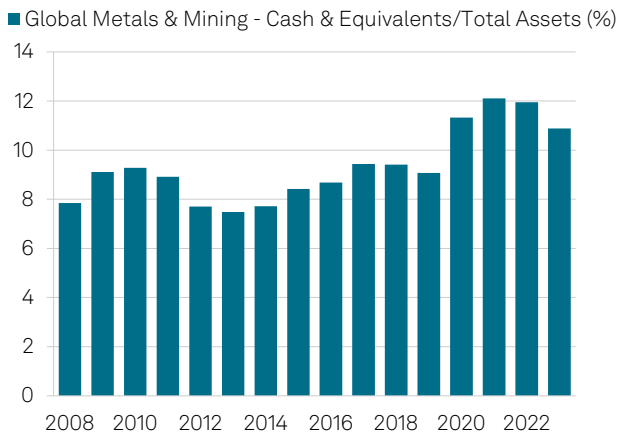
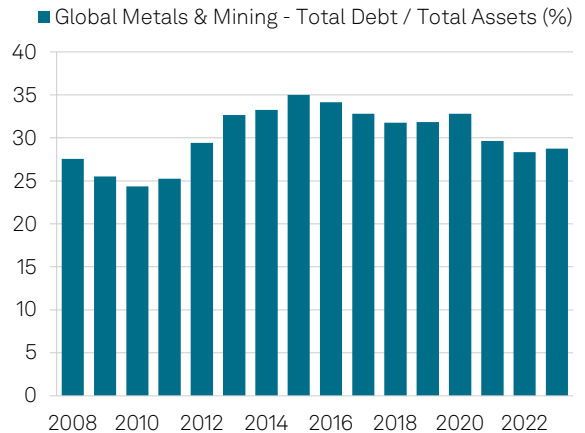


Chart 17

Total debt / Total assets



Source: S&P Capital IQ, S&P Global Ratings calculations. Most recent (2023) figures use the last 12 months' data.

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