

How Would The Top Five Global Miners Fare In A Downturn?

July 9, 2018

Thanks to healthy demand and relatively low growth in supply, global mining companies continue to enjoy a rally in commodity prices that has now lasted two years. Given the industry's pronounced cyclicality, it's likely that sooner or later prices will run out of steam--whether due to a policy change in China, an incipient trade war, or something else. Our ratings on the large global miners already anticipate some price cyclicality, but just how resilient would they be to a downturn?

To investigate whether a price shock would be likely to trigger a change in rating, we applied a stress scenario to the "big five" miners: BHP, Rio Tinto, Glencore, Anglo American, and Vale. We modeled a one-year price collapse as a result of a sudden shock to Chinese demand, as we see this factor as one of the most likely causes of a downturn for the mining industry. China remains the key consumer of iron ore, copper, coking coal and other primary resources produced by the big five.

Key Takeaways

- The major miners are well-positioned to absorb a potential external shock after completing their debt reduction plans, supported by a currently low commitment to growth capital expenditure (capex). Under our stress test, an extended price shock does not lead to downgrades.
- Negative rating actions could result from a change in miners' financial policies, such as large growth projects, opportunistic debt-funded acquisitions, or other actions that increase leverage. These would weaken the companies' financial bulwarks against price drops.
- Country risk is on the rise again, creating some uncertainty, as miners' outsize profits are generating political pressures for higher taxes and wages in their countries of operation.

The results of our stress test suggest that it will take more than a price shock to shake the balance sheets of the big five. In our view, the miners' ongoing deleveraging process and their flexible financial policies should make them resilient not only through normal industry cyclicality but also under more severe stresses. We found that an unforeseen, one-year price shock in the market would not necessarily result in negative rating actions.

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If that is the case, then what could trigger downgrades of miners? The short answer is a deviation from their current financial policies, especially in tandem with a material drop in prices. Such a change could take the form of large growth projects, opportunistic acquisitions, or pressure from shareholders to optimize the capital structure by increasing leverage. We do not currently anticipate the miners taking such actions, however, given the lessons learnt in the last downturn.

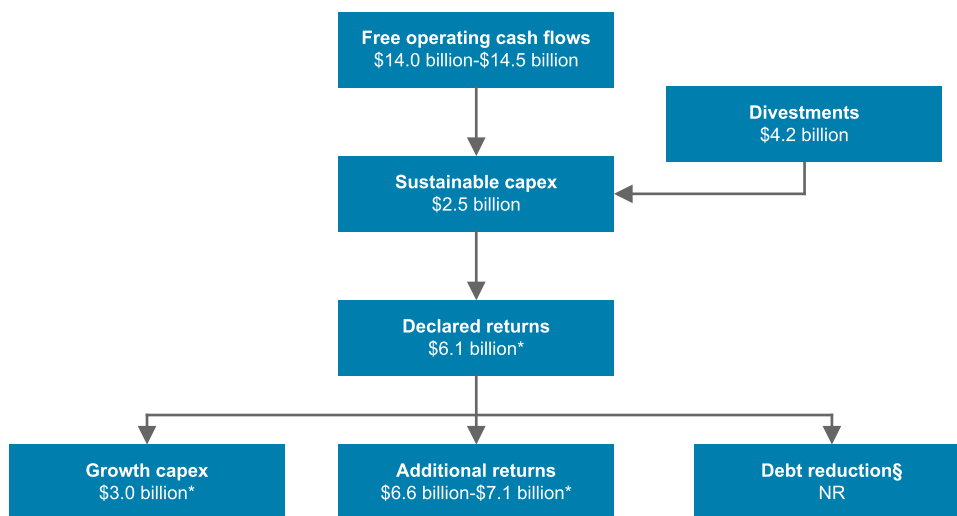
Miners' Financial Policies Focus On Maintaining Limited Capex And High Returns To Shareholders

Miners' current robust rating headroom derives partly from their relatively cautious financial policies, in combination with the high commodity prices. Under the largest miners' generic financial policy framework, the first priority is essential investment in sustaining capex, followed by ordinary dividends, with the rest spread over competing growth projects, debt management, and further cash payments to shareholders (see chart 1). Some miners have articulated more prudent financial policy frameworks, including absolute debt constraints or specific leverage ratios.

The impressive recovery in commodity prices in the last two years, together with the focus on balance sheet improvement, turned the companies into cash machines, allowing them to reduce their absolute debt level quicker than expected. As of December 2017, most of the big miners had already achieved their leverage targets. Going forward, we expect them to distribute more cash flow to shareholders (see chart 2).

Chart 1

Example Capital Allocation For A Big Miner: Rio Tinto (Base-Case FY2018)



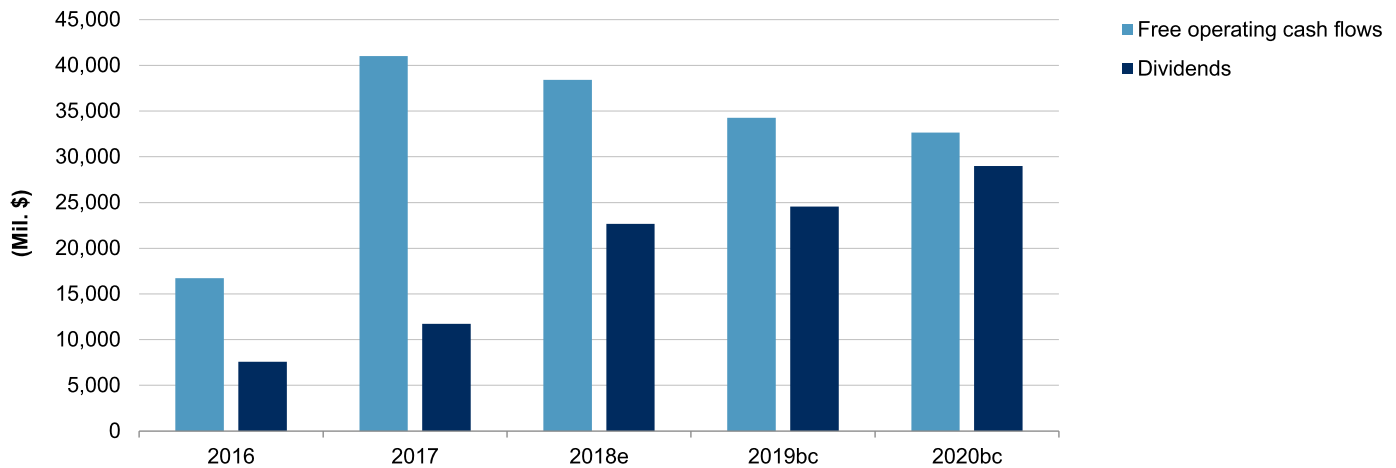
*Comprising the final dividend for 2017 of \$3.2 billion, with the rest linked to the completion of the share buyback program (includes the proceeds of the Coal & Allied transaction. The additional returns will be subject to completion of the divestments).

\$As of Dec. 31, 2017, Rio Tinto's net debt was \$3.8 billion. We assume that the company's medium-term reported net debt will be in the range of \$7 billion-\$8 billion.

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Chart 2

Big Five Miners' Expected Higher Returns To Shareholders



e--Estimate. bc--Base case.

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What about the other priorities, capex and mergers and acquisitions (M&A)? From the big five's recently published capex guidance, it looks as if they will restrain themselves from investing material amounts in new projects over the coming years. Instead, their focus will remain on completing existing projects and cherry picking new projects that look very profitable.

As for M&A, there is little sign of major deals on the horizon. Miners' cost-cutting initiatives and divestments in the last three years have focused on improving their position on global cash cost curves, holding first quartile assets, and getting rid of less-profitable assets. This, by itself, will exclude from the target list most assets that are either small or less-competitive. However, Tier 1 assets--those that are sizable and highly competitive--are nowhere to be found and potentially very expensive, as their values have been inflated by the rally in prices. Additionally, with better cash flow, companies have much less incentive to sell their key assets.

Our Stress Scenario: A Slowdown In China, Causing Prices To Fall

Rather than increased supply, we see weaker demand or perceived demand as the most likely driver of weaker iron ore, copper, and coking coal prices in the next few years. In general, existing ongoing projects provide good visibility of the flow of new supply. Where we stand today, we see a limited number of new projects being completed in 2019 and 2020. On the flipside, we see some operation challenges with some existing mines, such as industrial actions and technical issues. This is likely to result in a potential downside to supply, further supporting the current prices. Moreover, the impact of decisions today to invest in new capacity are not likely to be reflected in current prices, as projects tend to take several years until volumes come to the market.

In testing how resilient the top five mining companies would be to a more stressful operating environment, we have not attempted to model a full-blown trade war or the paths that could lead to such an outcome. A key reason for this is that we want to limit arbitrary assumptions about possible actions and reactions by companies and governments. We rely instead on actual

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historical inputs.

As we want to test the resilience of our ratings to a severe downside scenario, we've taken the most recent low point in metals prices, the fourth quarter of 2015, and extended this to a whole year. This approach also enables us to use the corresponding historical exchange rates. We outline our detailed stress-case assumptions for this hypothetical market crash below.

A prolonged global and Chinese economic slowdown--for more than a year--would likely have an even more pronounced impact on demand, sentiment, prices, and companies' cash generation. We have simplified our analysis by limiting it to one year, however. From a modeling perspective, in an extended stress scenario beyond 12 months, we find the potential extent and timing of the impact on ratings becomes increasingly a function of the assumptions used to make a forecast internally consistent and reasonable. Such assumptions would cover the miners' abilities to mitigate the pressure, through measures such as cutting back on capex, divesting assets, cutting costs, or closing down lossmaking operations. In addition, an extended period of low prices is likely to put material pressure on the less-competitive miners, which may lead to some capacity being shut down and ultimately to prices recovering.

In our view, the aggressive cuts and changes that miners have made to their costs, capex, and financial frameworks since the 2012-2015 downturn mean that they are better placed in 2018 than they were in 2012--as this downside stress analysis shows. But it also means that companies already run their operations very efficiently, and there is no low-hanging fruit for cuts to operating expenditure and capex. For more on these decisive changes and their consequences for cash generation and ratings, see "Strong Cash Flows: The Latest Surprise For Big Miners," published on March 13, 2017, RatingsDirect. In addition, for an insight into what is preoccupying these companies' management teams in their results calls, see the sidebar below, "Mining Managers Are Talking More About Cash And Less About Costs".

We caution that the results of our stress tests on the biggest miners should not be extrapolated to all smaller mining industry companies. A severe stress could have a more differentiated impact on other companies depending on their position on the cost curve, commodity and geographical diversification, debt burden, liquidity, or other factors.

Our stress scenario assumptions

The starting point in our price stress scenario is our recently published base-case scenarios for the big five, which take into account our current view on prices, production levels, and the companies' capital allocation framework. We then assume that a sudden shock in the Chinese economy will roll over into a collapse of prices for a period of 12 months as early as the beginning of the financial year 2019. For context, our economic base-case assumptions behind our sovereign and corporate ratings include Chinese real GDP growth slowing to 6.1% in 2020 from 6.9% in 2017. The comparable figures through the last downturn were 7.8% in 2013, 7.3% in 2014, 6.9% in 2015 and 6.7% in 2016.

We used our assumptions consistently across the different companies. In this scenario, we assumed that dividend distribution would be the only variable that management would engage, in line with the companies' existing financial policies.

Other assumptions include:

- Prices: The fourth quarter of 2015 represents a trough for prices in the mining industry in the past few years. We assume that prices will fall by 10% below the average prices in the fourth quarter of 2015, and will remain without a change for a period of one year. This assumption ignores the fundamentals of the specific commodities. We assume that those price levels,

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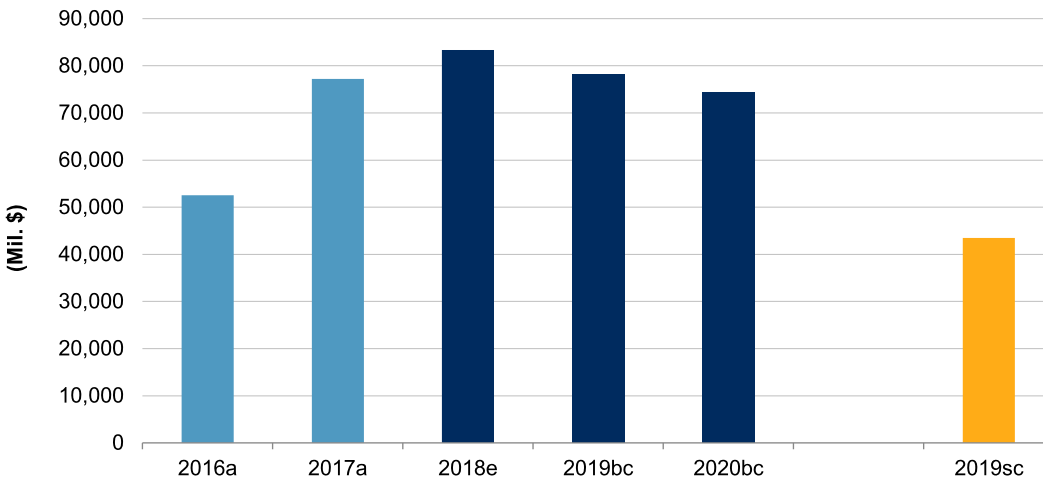
which may not be sustainable for some of the players, will not trigger a closure of less-competitive mines.

- Volumes: No changes from the existing base case.
- Exchange rates: Historically, there has been a negative correlation between commodity prices and exchange rates. In our scenario, we assume rates in line with the rates in the fourth quarter of 2015 (in practice, the additional 10% haircut to prices may lead to some slightly more supportive exchange rates).
- Capex: In line with the companies' existing guidance. We did not adjust our figures according to the exchange rate assumptions.
- Dividends: In the last few years, the major mining companies adopted new dividend policies. In most cases, the policies guide a minimum payout, which could be topped up with available unallocated free operating cash flows. As part of our price stress analysis, we assume that the companies will pay the same dividend for the previous year (2018), in line with our base case. Unless outlining other assumption, we assume that the dividend paid in the second half of 2019 (the tested year) will reflect the company's financial policy (for example, if a company has a minimum distribution of 40%, we assume that the interim dividend will be 40% of the half-year net income).
- Divestments: We assume proceeds from potential divestments are distributed to shareholders, with a neutral impact on credit metrics.

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Chart 3

Aggregated EBITDA: Base Case And Stress Case

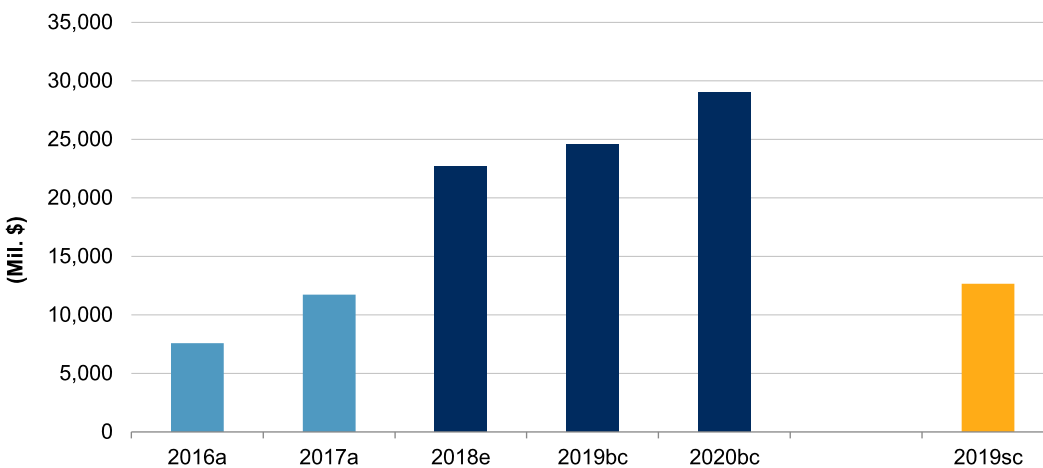


a--Actual. e--Estimate. bc--Base case; we see an upside to returns to shareholders because we did not include proceeds from ongoing divestments in our base-case scenario. sc--Stress case.

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Chart 4

Aggregated Returns To Shareholders: Base Case And Stress Case



a--Actual. e--Estimate. bc--Base case; we see an upside to returns to shareholders because we did not include proceeds from ongoing divestments in our base-case scenario. sc--Stress case; the aggregate returns to shareholders do not include additional returns above the companies' policies.

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How Each Miner Handled The Stress Test

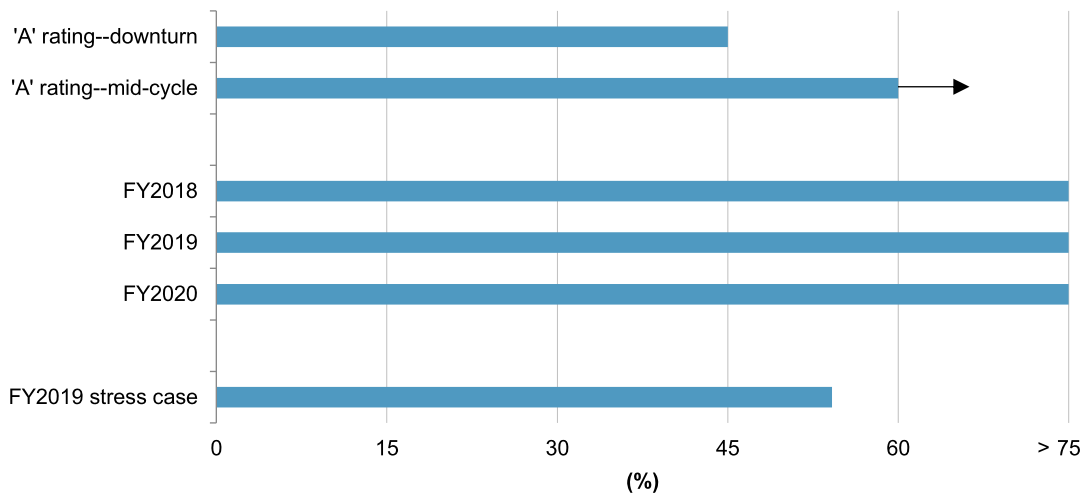
BHP (A/Stable/A-1)

Under BHP's existing capital allocation framework, the first priority for operating cash flows is maintenance capital, followed by a strong balance sheet, and then dividends equivalent to 50% of underlying attributable profit. In addition, BHP is aiming to maintain its reported net debt range of \$10 billion-\$15 billion in the medium term.

Based on the recently reported and distributed shareholder returns, the year-to-date commodity prices, and relatively modest growth projects, we assume that the company will be in the lower part of the \$10 billion-\$15 billion debt range by June 30, 2018.

Chart 5

BHP FFO-To-Debt Ratio Under Different Scenarios



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We view funds from operations (FFO) to debt of comfortably above 60% mid-cycle and 45%-60% for a year or so during a downturn as commensurate with the 'A' rating on BHP. Under our base-case scenario, the company will report adjusted FFO to debt of 100% and above in the next few years (see chart 5). This is based on our assumed iron prices of \$60-\$65 per ton and Brent oil price of \$60-\$65 per barrel (bbl) in the next 12 months.

Under the price shock scenario, we calculate that BHP will be able to achieve adjusted FFO to debt higher than 45% in FY2019. We also tested the company's ability to meet this threshold using different absolute debt levels at the beginning of the tested period, including reported net debt of \$15 billion. This led to the same conclusion.

Furthermore, we added another layer of stress by assuming that the company would distribute all of its excess cash flows (operating cash flows minus capex) during the tested period, well above its minimal dividend payout. This revised scenario did not result in a deviation from the original findings.

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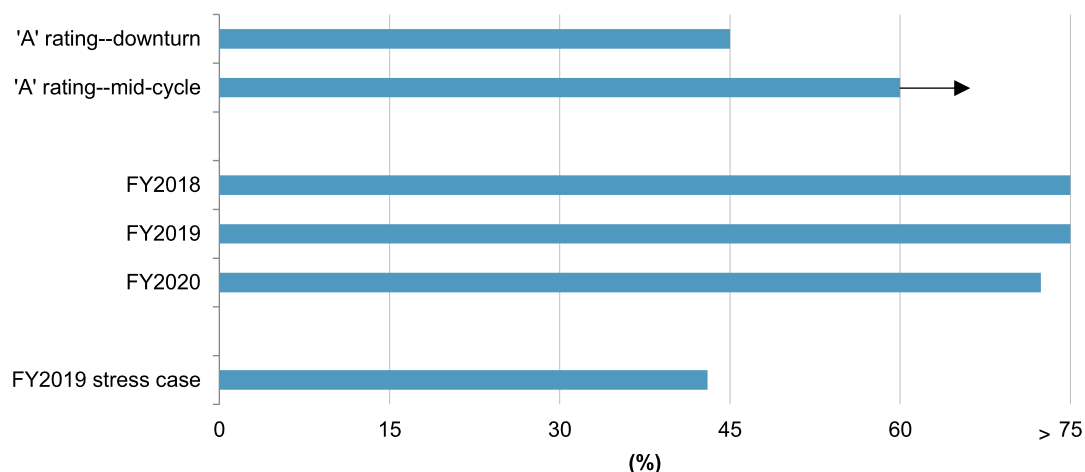
Rio Tinto (A/Stable/A-1)

For the current rating, we expect Rio Tinto to maintain FFO to debt comfortably above 60% during mid-cycle conditions, and 45%-60% for a year or so during a downturn.

Under our base-case scenario, we project FFO to debt of well above 80% in the coming years. Those credit metrics factor in a prudent assumption of some increase in Rio Tinto's reported net debt to about \$7 billion-\$8 billion in FY2018 and FY2019. From FY2020, we assume a further increase in the absolute debt level toward the company's public leverage target (20%-30% net debt to equity), resulting in a slight drop in adjusted FFO to debt (see chart 6).

Chart 6

Rio Tinto FFO-To-Debt Ratio Under Different Scenarios



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Under our stress scenario, we project Rio Tinto's adjusted FFO to debt would be around 45%, in line with the current threshold. In order to further stress the company's balance sheet, we assumed that the final dividend for FY2018 (to be paid in early 2019) would be 50% of net income, compared to a policy of 40%-60%. In addition, we assumed that the interim dividend will be equal to the company half-year free operating cash flow (FOCF). Under the revised scenario, Rio Tinto's adjusted FFO to debt would fall slightly below 45%, indicating some pressure on the rating. In practice, the company has flexibility with the interim dividends, and generally they are skewed toward the final dividends.

Under our calculations, a downgrade would be warranted if the company increased its leverage to 20% in the coming 12 months and experienced our price stress scenario.

Country Risk Adds Uncertainty To Miners' Outlooks

Improving commodity prices and reports of miners' records profits have previously caught the eyes of both governments, leading to changes in taxes, but also the companies' employees, prompting demands for higher wages. Recently, these developments have been visible again in many regions, and specifically in the Democratic Republic of Congo, Zambia, and Peru. The question is whether these events signal a new round in the ongoing tug of war between miners and local communities. In our view, the outcomes could be either positive or negative for miners' profitability. That said, any lack of long-term transparency and stability would discourage miners from committing to large projects. In this respect, South Africa can be considered as a precedent, as it missed the last mining cycle boom on the back of limited mining projects in the country.

In general, country risk encompasses a broad range of risks related to the economy, political and legal institutions, and the financial system that arise from doing business with or in a specific country. These risks can affect an issuer's credit quality, likelihood of default, and recovery potential. In our view, country risk will become more important over time, as the production from OECD countries gradually declines and is replaced by new production in Africa, South America, and other regions (though this does not exclude the possibility of OECD countries increasing taxes on miners).

Recent examples of country risk include important changes in the mining tax regime in the DRC, which is responsible for 60% of global cobalt production and 5% of global copper production. The new mining code introduces a 50% tax on "super profits" and a new category of "strategic substances," including cobalt, with a 10% royalty rate. These measures will translate into higher payments for existing foreign players, but on the other hand, given the importance of the DRC's cobalt production on a global scale, we would expect any disruption to have a positive impact on supply and, implicitly, prices.

Australia is the hub for all major miners. As of today, it remains one of the favourite regions for miners, but proposals to change royalties and tax regimes could threaten this status. For example, in 2016, Western Australia's National Party argued unsuccessfully that the levies on iron ore production should increase by as much as 20 times. A more modest hike was passed in 2017, when the government of Western Australia increased gold royalties to 3.75% when the gold price goes above \$1,200 an ounce, from the previous rate of 2.5%.

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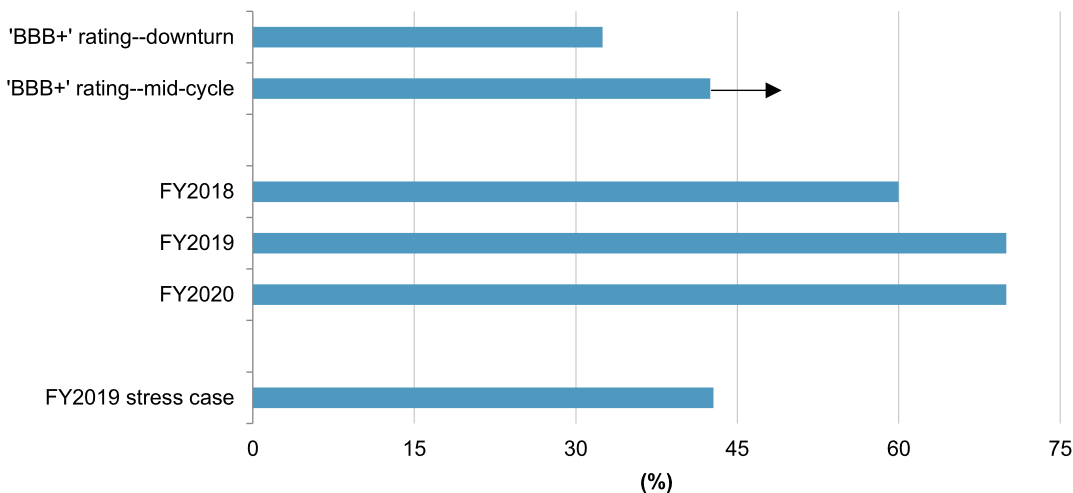
Glencore (BBB+/Stable/A-2)

We expect Glencore to maintain FFO to debt of 42.5% or more during mid-cycle conditions, and 32.5% on a temporary basis during a downturn. In our current base case, we expect FFO to debt to be about 60%, improving to 70% by 2020 (see chart 7). Our base case incorporates the company's capital allocation framework of balancing reinvestment into the business with stable shareholder returns, to ensure preservation of the balance sheet. Glencore aims to keep its reported net debt between \$10 billion and \$16 billion and net debt to EBITDA below 2x. In addition, we understand that the company will prefer to remain towards the lower part of the target debt range, maintaining some headroom for potential acquisitions.

Glencore's existing distribution policy is for a \$1 billion fixed payment from marketing free cash flow and a variable payment representing a minimum of 25% of the industrial asset cash flow.

Chart 7

Glencore FFO-To-Debt Ratio Under Different Scenarios



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Under our price stress scenario, we project that adjusted FFO to debt in 2019 would be about 45% above the threshold for the current rating during a downturn (above 32.5%). This scenario takes into account the somewhat unrealistic combination of distribution and acquisitions that would bring Glencore's absolute debt to \$16 billion. It also assumes a positive contribution from a material working capital inflow driven by the lower commodity prices.

In practice, acquisitions tend to be pro-cyclical and would naturally bring cash flows. Moreover, we believe that the Glencore's distribution policy is somewhat more modest than some of the peers. We consider that a more realistic combination of distribution and acquisition spending would result in an adjusted FFO to debt above 45%.

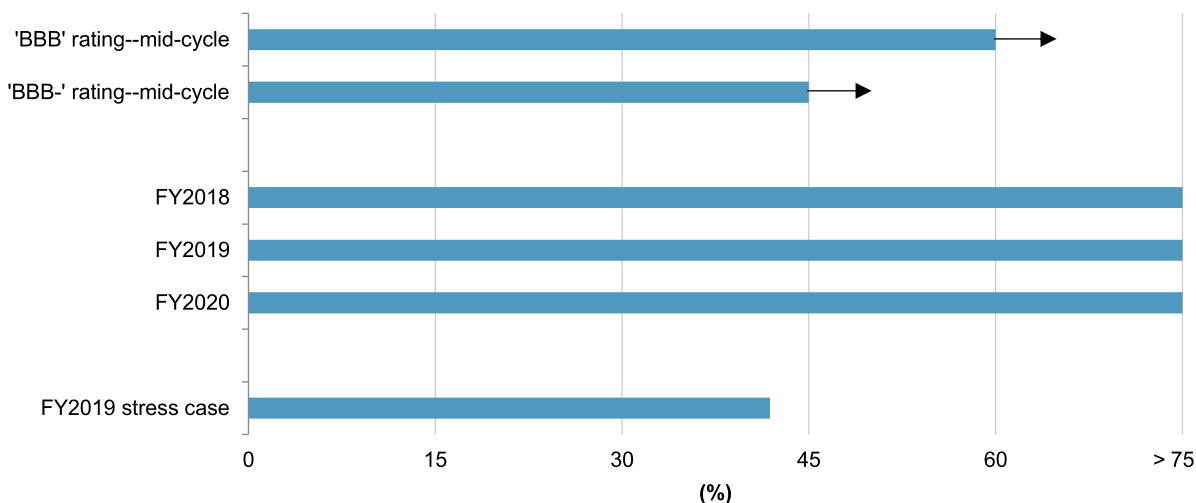
Anglo American (BBB-/Positive/A-3)

The current 'BBB-' rating is supported by Anglo American's ability to maintain FFO to debt (using proportional consolidation) above 45% during mid-cycle conditions. For a higher rating we would expect FFO to debt above 60%. Under our base-case scenario, we project FFO to debt close to 100% in the coming years (see chart 8). As the positive outlook indicates, we consider that these credit metrics support a potential upgrade over time.

As of Dec. 31, 2017, Anglo American had a reported net debt of \$4.5 billion, well below the company's previous guidance. As of today, the company has no public target for its absolute debt level. Under our base-case scenario, we expect the company to further decrease its absolute debt level in 2018. That said, we view the company's current balance sheet to be underleveraged, and expect absolute debt to increase moderately over time.

Chart 8

Anglo American FFO-To-Debt Ratio Under Different Scenarios



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Under our stress-case scenario, we believe that Anglo will see more pronounced impact on its profitability and cash flows than other peers, partly due to its relatively sizable capex program. We project a drop of 50% in the company's EBITDA and negative FOCF in 2019.

In our view, the combination of negative FOCF in 2019 and the final dividends for FY2018 (which would be made before the drop in commodity prices), offset by the underleveraged balance sheet, would result in a material drop in our calculated adjusted FFO-to-debt ratio to slightly below 45%, the threshold for the existing 'BBB-' rating. That said, even under this unlikely scenario, we would probably not take a negative rating action. We believe that Anglo, like its peers, would be able to use some of its financial levers to absorb the shocks, maintaining FFO to debt above 45%.

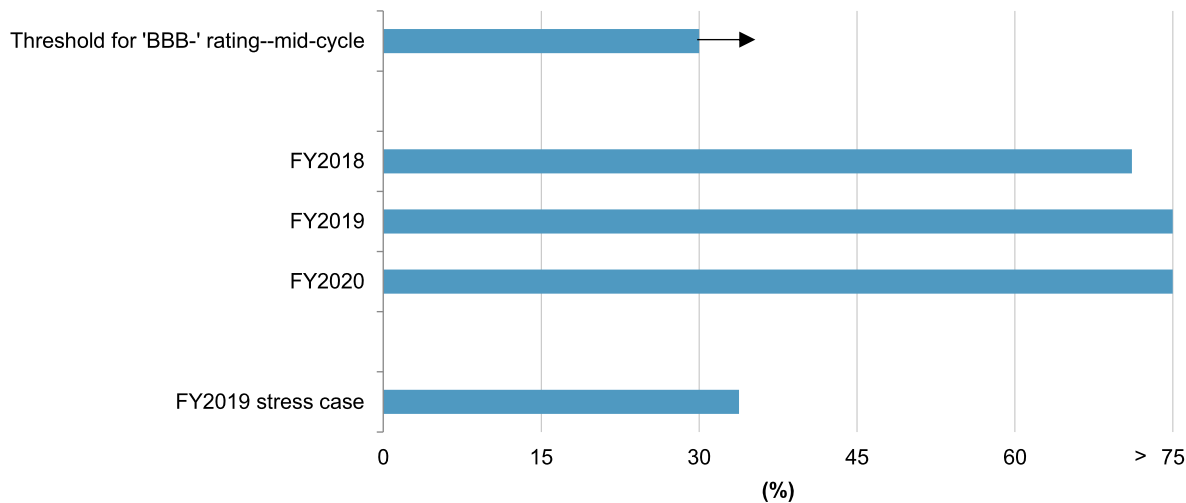
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Vale (BBB-/Stable/--)

Our rating on Vale continues to be capped by its exposure to Brazil. For the existing 'BBB-' rating we expect Vale to maintain FFO to debt of 30%-45%, depending on the industry's business cycle. As of Dec. 31, 2017, Vale's adjusted FFO to debt was close to 40%. Under our base-case scenario, the current iron ore prices and declining capex will support a quick reduction in its debt level (between \$5 billion-\$6 billion this year), translating into FFO to debt of more than 60% starting in 2018 (see chart 9).

Chart 9

Vale FFO-To-Debt Ratio Under Different Scenarios



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Under our stress-case scenario, with a drop of close to 50% in EBITDA, the company would generate modest free cash flows, supporting only a limited reduction in debt compared to our base-case scenario. That said, even under this scenario, Vale would be able to return FFO to debt of more than 30%. Vale is still in a transitional phase of strengthening its balance sheet, which its peers have already completed. This means that if the stress were to occur later, in 2020 for example, Vale's credit metrics would fare better.

Mining Managers Are Talking More About Cash And Less About Costs

The metals and mining industry environment, and the timing of a turn in the currently favorable cycle, depends largely on when miners, including the big five, start to reinvest massively in increasing production, and notably commission the big greenfield projects. The previous downturn in 2015-2016 followed a period of very high investment in 2011-2013, which in turn was triggered by very high prices and cash flow generation in 2010-2011. As mentioned above, we don't anticipate material supply additions coming to the market soon, as capex guidance for 2018 remains prudent and it takes several years at least to develop a major project. To look at when management's stance could change, we have used natural language processing techniques to

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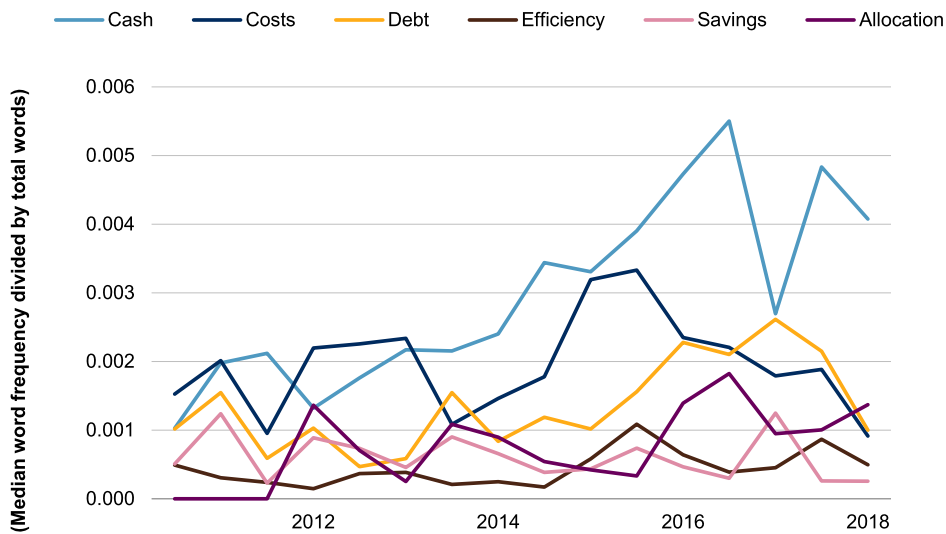
analyze executives' communication during the public conference calls related to their result presentations for the five big miners. In particular, we aimed to determine whether reference to particular topics exhibits cyclical behavior similar to that of the sector.

We found that the importance of capex in management's communication is picking up after several "trough" years and is now similar to 2011 levels. Together with exploration spending, which started to increase in the industry from the very low levels seen in 2015-2017, it may be an early indicator that capex levels will go up from still very prudent levels announced for 2018. Given the lead times of four-to-seven years for big greenfield projects, and at least a couple of years for significant brownfield expansions, the supply-demand balance should remain intact for the next couple of years, which is consistent with our current view on the sector.

We note that "costs" are discussed much less frequently now than a couple of years ago. Cost-cutting was one of the most important levers companies pulled to offset the decline in prices in 2015-2016, but most of the cost reduction has by now been achieved. At the same time, the discussion of cash that went up during the downturn remains high by historical standards as cash generation enabling distributions to shareholders remains near the top of managements' agendas.

Chart 10

Frequency Of Various Words In Issuers' Presentations



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- Anglo American PLC, June 14, 2018
- Rio Tinto PLC, June 1, 2018
- Global Mining And Trading Group Glencore PLC Upgraded To 'BBB+' On Robust Financial Framework; Outlook Stable, May 29, 2018
- Vale S.A. Outlook Revised To Stable From Positive On Insufficient Geographic Diversification; Ratings Affirmed, March 20, 2018
- The Top Five Rating Factors For Emerging Market Steelmakers, Jan. 30, 2018
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