



Moody's ratifica *rating* Baa2 da Vale

Rio de Janeiro, 19 de novembro de 2025 – A Vale S.A. ("Vale" ou "Companhia") informa que, em relatório divulgado hoje, a Moody's Investor Service ("Moody's"), em revisão periódica do *rating* da Companhia, manteve a nota da Vale em Baa2 estável. O relatório está disponível no idioma inglês no website da Moody's, e como anexo a esta comunicação. Uma versão em tradução livre para o idioma português será divulgada ao mercado em breve.

Marcelo Feriozzi Bacci
Vice-Presidente Executivo de Finanças e Relações com Investidores

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CREDIT OPINION

19 November 2025

Update



Send Your Feedback

RATINGS

Vale S.A.

Domicile	Rio de Janeiro, Brazil
Long Term Rating	Baa2
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Vale S.A.

Update following affirmation of Baa2 rating

Summary

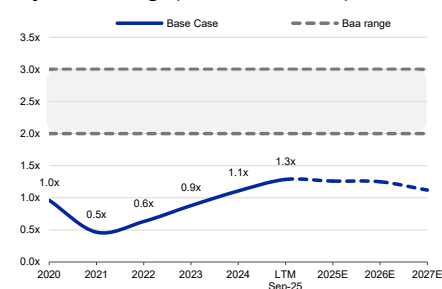
On November 17, we affirmed [Vale S.A.](#)'s Baa2 ratings and stable outlook, and assigned a Baa3 rating to the \$750 million in hybrid notes issued to replenish part of Vale's cash used to fund the tender offer for the "debentures participativas", which closed on October 31, 2025.

Vale's Baa2 ratings continues to reflect the company's solid credit profile, supported by its market position as one of the largest mining companies globally, with a dominant market share in iron ore and nickel, and increasing position in copper. The rating is further supported by Vale's relatively low cost position and strong balance sheet, with leverage below 1.5x (total debt/EBITDA) since 2020. Moreover, Vale has excellent liquidity, supported by \$6.1 billion in cash and \$5.0 billion available under its revolving credit facility agreements as of the end of September 2025.

The rating is constrained by the sovereign rating of the [Government of Brazil](#) (Ba1 stable) as a result of Vale's asset concentration in Brazil (about 75% of total fixed assets), mostly in iron ore. Given the significant reliance on cash flow from iron ore assets located in Brazil, we are unlikely to widen the rating differential to the Government of Brazil's rating.

Exhibit 1

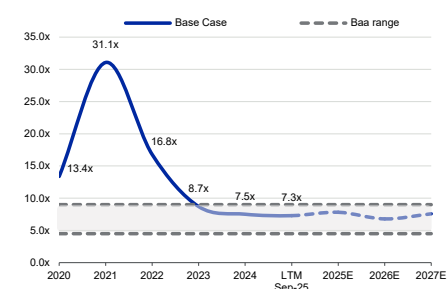
Credit metrics remain adequate within the Baa rating level Adjusted leverage (total debt/EBITDA)



Projections assume iron ore prices at \$100/ton in 2025F, \$90/ton in 2026F and \$85/ton in 2027F.
Source: Moody's Ratings

Exhibit 2

Interest coverage Adjusted interest coverage [(EBITDA - Capex)/ Interest Expense]



Projections assume iron ore prices at \$100/ton in 2025F, \$90/ton in 2026F and \$85/ton in 2027F.
Source: Moody's Ratings

Credit strengths

- » Large scale in the global iron ore and nickel markets, with a growing position in copper
- » Competitive cost position, and focus on profitability in iron ore and base metals
- » Focus on high-quality iron ore, which reduces margin volatility
- » Low leverage and comfortable debt amortization schedule, which help it better manage commodity price volatility
- » Reduction in environmental, social and governance (ESG) risks, with an improvement in corporate governance, risk management and operational safety

Credit challenges

- » Risk of additional cash outflows related to the tailings dam accidents — in particular related to [Samarco Mineração S.A.](#) (B2 positive) - not yet contemplated in the Settlements
- » Concentration in iron ore, which makes the company's performance dependent on steel industry fundamentals, particularly the steel production levels in China

Rating outlook

The stable outlook reflects Moody's expectation that Vale will maintain its strong operating and financial performance over the next 12-18 months, keeping its financial discipline in capital allocation, excellent liquidity, a conservative balance sheet and strong debt protection metrics while it continues to invest in growth. We expect that the expansion in nickel and copper will lead to a more balanced cash flow contribution between iron ore and base metals. The stable outlook also incorporates our expectation that there will be no significant increase in provisions and cash disbursements related to Brumadinho or Samarco that could affect the company's liquidity or leverage.

Factors that could lead to an upgrade

A rating upgrade would require sustainably strong performance, supported by leading market position in its main segments and low-cost operations, and positive free cash flow (FCF) generation through different industry cycles, with further diversification coming from stronger contribution of the base metals segment to cash flow. An upgrade would also depend on the maintenance of excellent liquidity and a continued disciplined approach to capital allocation related to capital spending and shareholder returns. Moreover, an upward rating movement would be subject to the relative position of Vale's rating to Brazil's sovereign rating. Quantitatively, an upgrade would be considered if the company can sustain:

- » Moody's-adjusted total debt/EBITDA below 2x;
- » interest coverage, measured by (EBITDA - capex)/interest expense, above 8x; and
- » retained cash flow (RCF)/debt above 40%.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody.com> for the most updated credit rating action information and rating history.

Factors that could lead to a downgrade

We could downgrade Vale's ratings should the actual costs related to the disasters at Brumadinho or disbursements related to Samarco be substantially above the amounts already provisioned due to higher fines and settlements, litigations and class actions, or if operations face production disruptions, higher costs or lower commodity prices, affecting profitability and FCF generation, leading to a deterioration in liquidity. Evidence that ESG initiatives, enhanced risk control and governance oversight fail to progress as planned could also lead to a negative rating action. A downgrade of the Government of Brazil's rating would also trigger a downgrade of Vale's rating. Quantitatively, we could downgrade the rating if, on a sustained basis:

- » leverage (total debt/EBITDA) rises toward 2.5x
- » interest coverage, measured by (EBITDA - capex)/interest expense, falls below 5.5x
- » RCF/debt stays below 35%

Key indicators

Exhibit 3

Vale S.A.

US Millions	Dec-20	Dec-21	Dec-22	Dec-23	Dec-24	Moody's Forward LTM (Sep-25)	Moody's Forward View for the next 12-18 months
Revenue	39,545.0	54,502.0	43,839.0	41,784.0	38,056.0	37,467.0	38,000 - 40,000
EBIT Margin %	33.6%	49.9%	40.4%	31.7%	29.9%	30.6%	25.0% - 30.0%
Debt / EBITDA	1.0x	0.5x	0.6x	0.9x	1.1x	1.3x	1.0x - 1.5x
(EBITDA - CAPEX) / Interest Expense	13.4x	31.1x	16.8x	8.7x	7.5x	7.3x	6.4x - 8.0x
RCF / Debt	88.5%	93.9%	86.7%	79.4%	42.2%	45.3%	50.0% - 55.0%

All figures and ratios are calculated using Moody's estimates and standard adjustments. The forecasts (f) or projections (proj.) are Moody's opinion and do not represent the views of the issuer. Periods are financial year-end unless indicated.

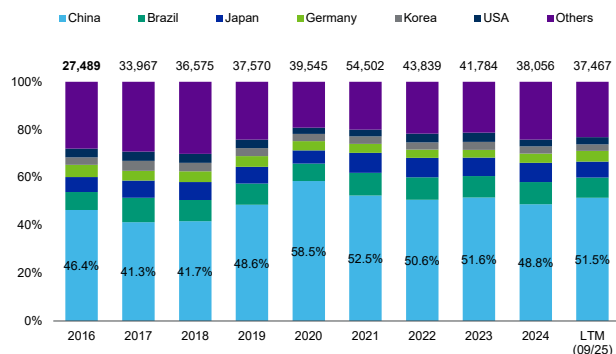
Source: Moody's Ratings

Profile

Headquartered in Rio de Janeiro, Vale S.A. is one of the world's largest mining companies. It is among the world's top producers of iron ore and nickel, with substantial operations in copper and supplemental positions in energy production. The company's principal mining operations are in Brazil and Canada, and also Indonesia. Despite Vale's geographic and commodity diversification, its Brazilian iron ore operations and its strong position in the seaborne iron ore markets remain the main drivers of revenue and cash flow. As of September 2025, ferrous minerals (primarily iron ore and pellets) accounted for around 80% of the company's net revenue, while the remaining 20% was mainly related to energy transition metals (primarily nickel and copper). In the 12 months that ended September 2025, Vale reported net operating revenue of \$37.5 billion.

Exhibit 4

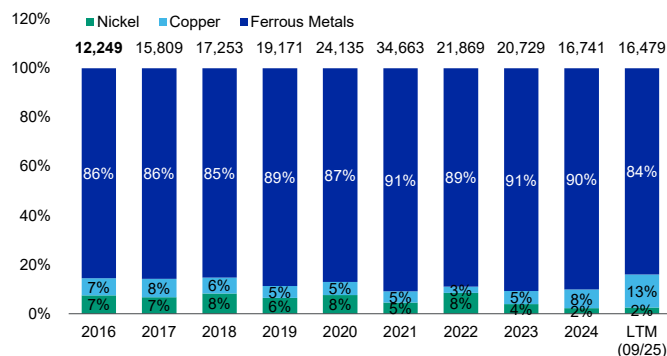
China, as the largest steel producer globally, remains the main market, accounting for more than 50% of revenue since 2020
In \$ million



Source: Company filings

Exhibit 5

EBITDA remains highly concentrated in iron ore, but declining costs across commodities and higher production volumes are gradually increasing the contribution of copper to cash flow
In \$ million



Adjusted EBITDA from continuing operations reported in Vale's filings.
Source: Company filings

Detailed credit considerations

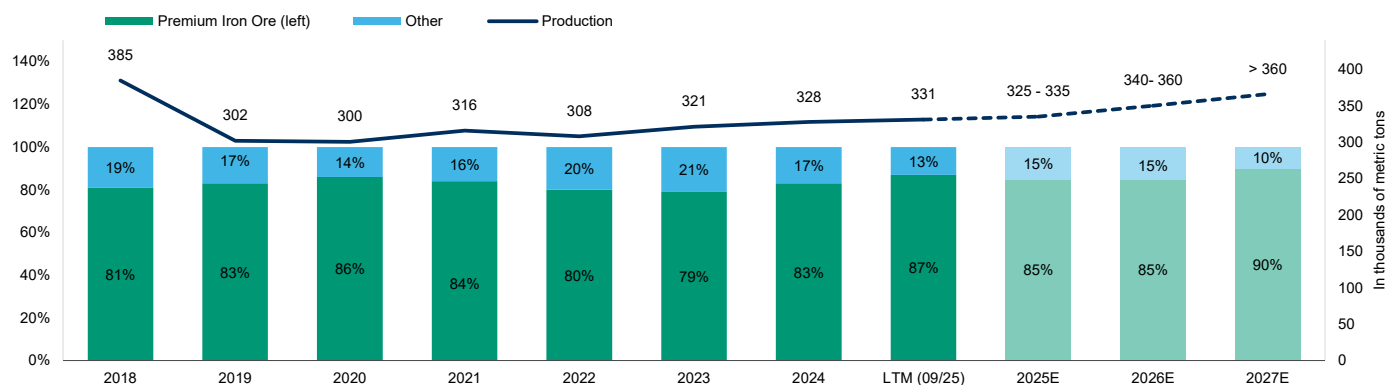
Low-cost, gradual volume increase and continued improvement in mix of iron ore will support a strong business profile and reduce costs

Vale is one of the world's largest diversified mining companies (along with [Rio Tinto Limited](#) [A1 stable], [BHP Group Limited](#) [BHP, A1 stable] and [Anglo American plc](#) [Baa2 stable]). Vale's large scale and low-cost profile have historically supported its strong credit metrics. Vale benefits from its global business platform, and significant strength in iron ore and base metals, particularly nickel. With growth projected in copper, the company will become a significant global copper producer in the long run (beyond 2030).

In the 12 months that ended September 2025, iron ore production volumes stayed at 331 million tons, in line with the company's annual guidance of 325-335 million tons. Vale expects production volumes to increase to 340-360 million tons in 2026 after the completion of its projects in the Vargem Grande complex (started in September 2024), Capanema (started in November 2024) and S11D (likely to start in H2 2026). Beyond 2030, Vale aims to produce around 360 million tons but with a much stronger focus on high-quality products (64%-65% iron content). Vale expects to increase the share of premium products (Carajas ore, Brazilian Blend Fines, pellets and briquettes) to 85% in 2026 and 90% in the long run from the current 75%. At the same time, Vale will increase the share of high-grade iron ore agglomerates over time.

Exhibit 6

Vale will increase its share of premium iron ore, which will bring higher margins

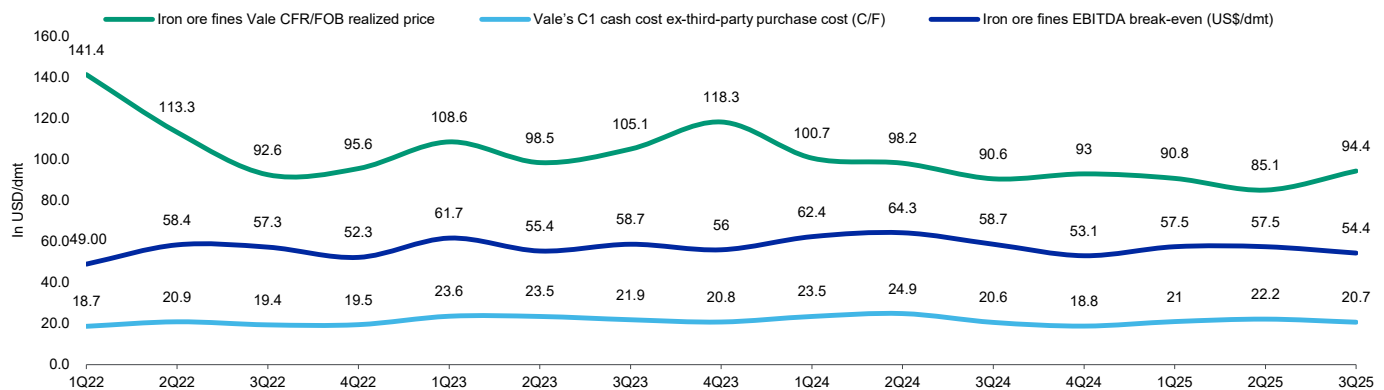


Source: Company's filings

Despite Vale's large scale, the company's costs increased in 2023-24, following an industrywide cost increase. C1¹ cash costs totaled \$21.8 per ton (excluding third-party purchases) in 2024, up from \$19.6 per ton in 2022, but lower than the \$22.3 per ton in 2023. This increase is explained by the effect of overall inflationary pressures on the mining industry, such as on diesel and raw materials, including freight costs. In the first nine months of 2025, C1 cash costs declined toward \$20.0 per ton, in line with the company's guidance that C1 costs will be in the \$20.5-\$22.0 per ton range in 2025. Vale expects C1 cash costs to decline below \$20 per ton in 2026 and beyond, in line with those of large iron ore producers globally.

Exhibit 7

Iron ore C1 cash costs (excluding third-party purchases) and break-even costs increased because of industrywide cost pressures, but are declining \$/dry metric ton (dmt)



Source: Company filings

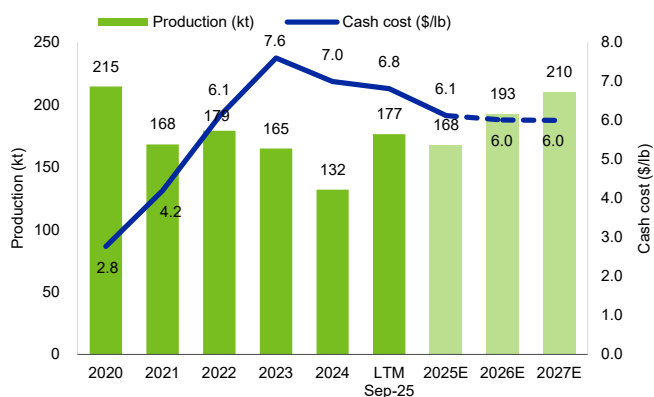
Expansion in base metals enhances diversification and brings higher earnings stability

Vale has a significant pipeline of projects to expand the production of copper and nickel, and increase the contribution of base metals in its consolidated results. The increase in base metal production volumes will reduce Vale's cash flow reliance on iron ore, enhance its geographic diversification and position it as a key participant in commodities that are likely to see increased demand due to energy transition. Vale is already among the top producers of nickel, but the expansion in copper will place the company among the largest copper producers globally.

In nickel, [Vale Base Metals Limited](#) (VBM, Baa3 stable) plans to reach annual production of 160,000-175,000 tons in 2025, supported by projects currently underway in Canada (Sudbury, Voisey's Bay and Thompson), in line with the 176,500 tons produced in the 12 months that ended September 2025; and aims to increase production further to 175,000-210,000 tons in 2026, supported by projects in Canada and Brazil (Onça Puma and Voisey's Bay Mine Expansion (VBME) ramp-up). VBM has revised its long-term goal (2030 and beyond) for annual nickel production to 210,000-250,000 tons from 300,000 tons, following the reduction in its stake in PTVI in Indonesia, which is no longer consolidated within VBM. For copper, growth will come from projects in Brazil and Canada, with annual production estimated at 340,000-370,000 tons in 2025 and 350,000-380,000 tons in 2026, supported by Salobo III. In the long run (beyond 2030), Vale plans to reach about 700,000 tons of copper production, supported by growth in Brazil, with Alemão and other projects in the Carajás region (Novo Carajás, announced in February 2025).

Exhibit 8

Nickel production will increase, supported by Onça Puma, Sudbury and Voisey's Bay, while costs will decline

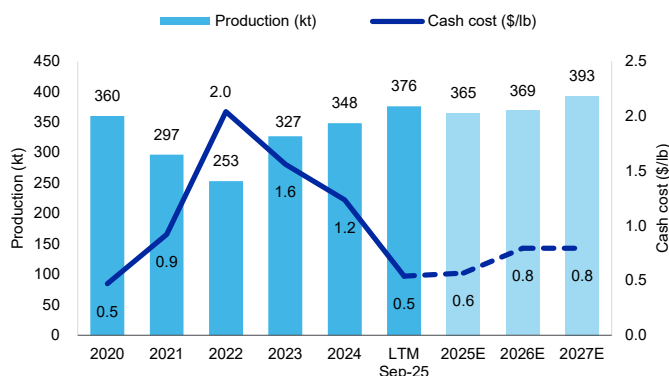


Historical includes New Caledonia. The forecasts are Moody's opinion and do not represent the views of the issuer.

Sources: Company's filings and Moody's Ratings

Exhibit 9

Copper production will increase as well, and Vale will become a key participant in this commodity



The forecasts are Moody's opinion and do not represent the views of the issuer.

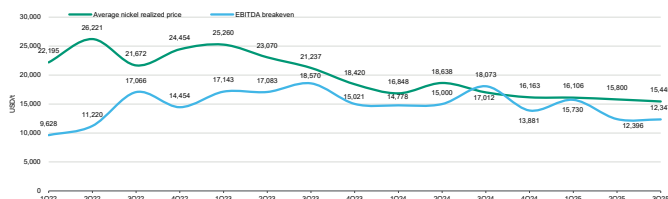
Sources: Company's filings and Moody's Ratings

All-in costs for base metals (copper and nickel) will remain below market prices. In Q3 2025, all-in costs for nickel and copper were revised down, driven by solid operational performance and strong metal prices. For 2025, copper all-in cost guidance was revised to \$1,000-\$1,500 per ton and nickel all-in cost was revised to \$13,000-\$14,000 per ton. All-in sustaining costs for copper and nickel decreased in the first nine months of 2025, driven by higher production volumes, operational efficiencies and enhanced byproduct revenue. We expect further savings on operational expenses and capex through 2027.

Over time, energy transition will further support demand for nickel and copper, and we expect stronger EBITDA contribution from these two metals to the consolidated cash flow of Vale.

Exhibit 10

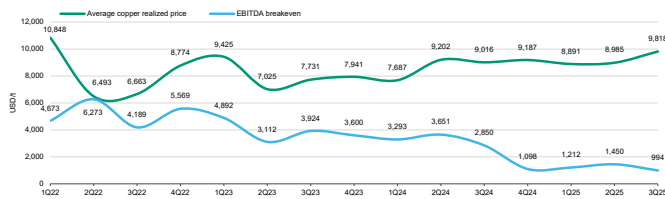
EBITDA breakeven for nickel has remained below average realized prices during 2025
\$/ton (t)



Source: Company filings

Exhibit 11

EBITDA breakeven for copper better positioned relative to average realized prices
\$/ton (t)



Consider EBITDA break-even (ex-Hu'u, copper project in Indonesia) for Q3 2023 and Q4 2023.

Source: Company filings

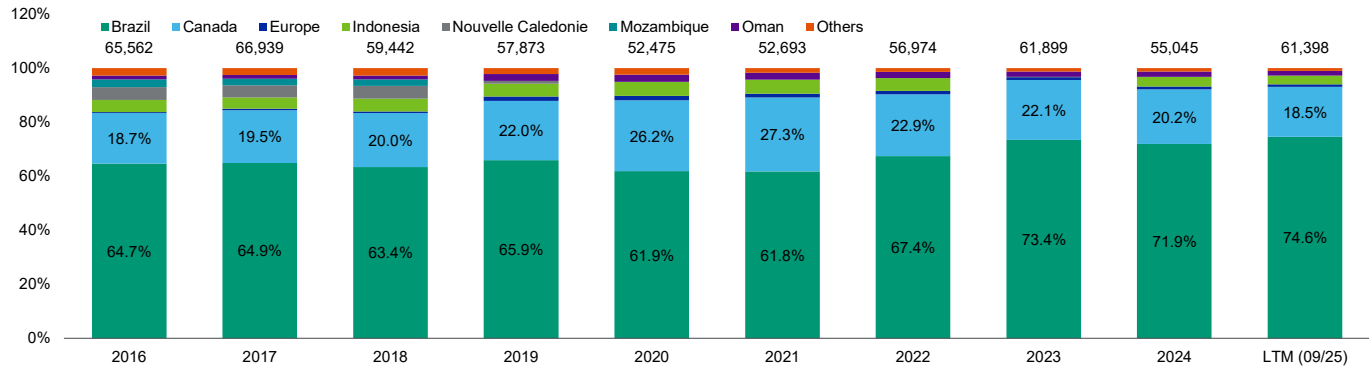
Iron ore asset concentration in Brazil constrains the rating

Vale is currently rated two notches above the rating of the Government of Brazil, supported by the company's position as the largest iron ore producer globally, with its cash flow and profitability having minimal correlation with domestic economic conditions. Vale is highly unlikely to default as a consequence of sovereign credit stress or default because its high reliance on China and large developed countries provides reasonable insulation from Brazil's macroeconomic and political environment. About 90% of Vale's revenue is generated outside Brazil. Moreover, cash generated outside Brazil covers debt service and principal payments; therefore, restrictions on capital flows are unlikely to constrain Vale's ability to service debt.

However, about 75% of Vale's total fixed assets are located in Brazil, most of which are iron ore, followed by Canada at about 20%. To be rated more than two notches above the sovereign rating, a company would need to have a substantial majority of its operating assets located outside the country and generate a significant portion of its cash flow outside of the country. Given Vale's large share of assets in Brazil and high cash flow reliance on assets located in the country, the sovereign rating remains a constraint to the company's rating.

Exhibit 12

Significant asset concentration in Brazil, followed by Canada In \$ million



Source: Company filings

Settlement for the Fundão dam collapse reduces uncertainty related to Samarco

In October 2024, Samarco, Vale and BHP Billiton Brasil LTDA entered a final agreement with the Federal Government of Brazil, the states of Minas Gerais and Espírito Santo, public prosecutors and public defenders (public authorities) to settle the Framework Agreement obligations, the Federal Public Prosecution Office civil claim and other claims by public authorities related to Samarco's Fundão dam collapse in November 2015. The agreement was approved by Brazil's Supreme Court in November 2024.

The settlement agreement defines Samarco's legal liabilities, enhances cash flow visibility and reduces the risk of future disbursements from Samarco, Vale and BHP. Furthermore, in August 2025, Samarco's judicial reorganization process was concluded, and the company will comply with the remaining obligations, according to the terms established.

The BRL170 billion (\$31.7 billion) final agreement includes past and future obligations: BRL38 billion (\$7.9 billion) had already been disbursed for remediation and compensation measures by Q3 2024 (as of Q3 2025, \$13.1 billion had been already disbursed); BRL100 billion (\$18 billion) to be paid in 20 installments over 20 years to the federal government, the states of Minas Gerais and Espírito Santo, and the municipalities to fund compensatory programs and actions tied to public policies; and BRL32 billion (\$5.8 billion) in performance obligations by Samarco to the Brazilian government for initiatives related to individual indemnification, resettlement and environmental recovery.

Exhibit 13

Provisions and expenses related to the Samarco accident since 2016

In USD million	2016	2017	2018	2019	2020	2021	2022	2023	2024	LTM (09/25)
Balance at the beginning of period		1,077	996	1,121	1,700	2,074	3,112	3,321	4,427	3,663
Provisions	1,163	38	403	758	1,095	1,700	89	1,200	956	182
Disbursements	(139)	(294)	(290)	(315)	(394)	(392)	(338)	(553)	(808)	(2,122)
Others adjustments	53	175	12	136	(327)	(270)	458	459	(912)	678
Balance at the end of period		1,077	996	1,121	1,700	2,074	3,112	3,321	4,427	2,401
Working capital contributions to Samarco	71	142	84	102	166	21	0	0	0	0

Source: Company filings

Legal uncertainties persist for Vale and BHP related to lawsuits in the UK and the Netherlands stemming from the Samarco dam collapse. In December 2022, BHP filed a Contribution Claim against Vale in the UK, seeking shared responsibility for potential indemnification in a group action. Separately, in March 2024, a Dutch court froze shares in Vale Holdings B.V. as a guarantee for claims initially valued at \$986 million, later reduced to \$877 million. These actions were initiated by Brazilian municipalities and organizations representing affected individuals and businesses. In July 2024, Vale and BHP entered a confidential agreement to equally share any liabilities arising from these cases, without admitting fault. The UK trial's first phase concluded in early 2025, and the case is scheduled to proceed in three stages — jurisdiction, liability and damages. On November 14, Vale confirmed that the English Court has found BHP Group Ltd and BHP Group UK ("BHP") liable for the failure of the tailings dam. A second-stage trial is currently scheduled to start in October 2026 and run until Q2 2027. Following any decisions and appeals, a third-stage trial may be scheduled. Vale has announced that it will add \$500 million in provisions to reflect a potential increase in claims coming from these trials.

Continued improvements in safety of tailings dams reduce risks related to Brumadinho

An important component of lowering risk of tailings dams is the continuous increase in the share of dry processing production. In 2024, about 77% of total iron ore production did not rely on tailings dams, which compares to 40% in 2014.

Since 2019, Vale has consistently made progress in its commitment to eliminate all its upstream tailings dams in Brazil. To execute the program, Vale has already disbursed more than BRL12.8 billion (\$2.3 billion). Out of the 30 inactive upstream dams of Vale in 2019, 18 had been decharacterized by October 2025, while the remaining 12 are undergoing decharacterization. As of the end of September 2025, Vale had \$2.3 billion in provisions for the de-characterization of tailings dams and \$1.9 billion related to the Brumadinho dam incident, including provisions for remediation and reparation obligations under the judicial settlement for reparation, individual indemnification and other commitments. Out of a total of BRL37.7 billion under the framework agreement settled in February 2021, Vale had already achieved 79% of reparations as of September 2025.

Exhibit 14

Provisions and expenses related to the Brumadinho accident since 2019

In USD millions	2019	2020	2021	2022	2023	2024	LTM (09/25)
Balance at the beginning of the period	0	5,472	6,864	7,060	6,611	6,511	4,183
Provisions	6,550	4,747	1,926	472	629	(90)	(64)
Disbursements	(989)	(2,122)	(1,726)	(1,440)	(1,788)	(1,442)	(866)
Other adjustments	(89)	(1,233)	(4)	578	1,059	(796)	1,013
Balance at the end of period	5,472	6,864	7,060	6,611	6,511	4,183	4,266

Source: Company filings

Exhibit 15

Vale has been fulfilling all agreed commitments, and visibility of future cash outflows reduces liquidity risk

Future expected cash flows (in USD billion)	2025	2026	2027	2028	2029	2030	Average 2031-2035
Brumadinho	0.9	0.7	0.5	0.2	0.2	0.2	0.2
Samarco	2.5	0.9	0.6	0.4	0.3	0.3	0.0
Decharacterization of tailing dams	0.4	0.5	0.4	0.2	0.2	0.2	0.2
Others	0.4	0.3	0.3	0.2	0.2	0.0	0.0
Total	4.2	2.4	1.8	1.0	0.9	0.7	0.4

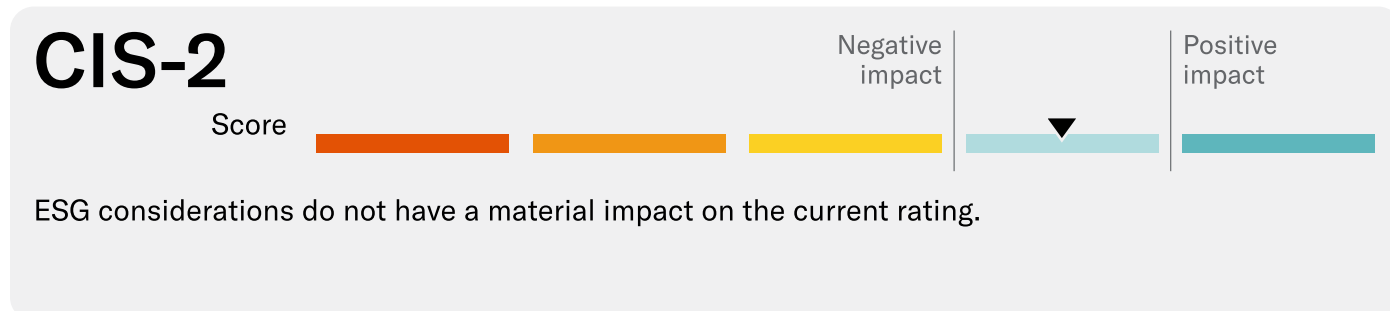
Source: Company filings

ESG considerations

Vale S.A.'s ESG credit impact score is CIS-2

Exhibit 16

ESG credit impact score

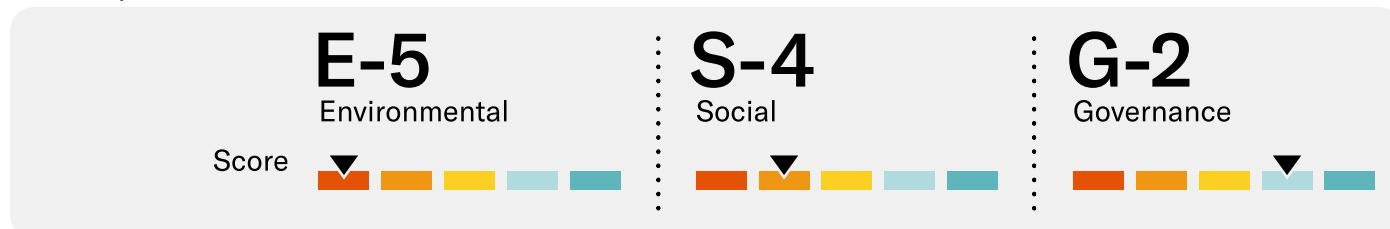


Source: Moody's Ratings

Vale's credit Impact score reflects our assessment that ESG attributes are overall considered as having a neutral-to-low impact on the current rating, because the rating is constrained by the sovereign rating of the government of Brazil. Still, Vale has high exposure to environmental risks associated primarily with natural capital (mine closure and decommissioning of structures) and waste and pollution (including tailings dams). Vale's high exposure to social risks arises mainly from health and safety concerns around the operations as well as responsible production, given the previous tailings dams' accidents. The company's governance considerations reflect Vale's financial strategy, strong balance sheet, solid liquidity and enhanced risk management following the dam collapse in 2019.

Exhibit 17

ESG issuer profile scores



Source: Moody's Ratings

Environmental

Vale credit exposure to environmental risks mainly related to natural capital and waste and pollution. The tailing dam incident in Brumadinho in 2019, which resulted in a large number of fatalities, extensive environmental damage and loss of production, and resulted in fines (\$7 billion settlement) and litigations is an important consideration, as tailings dam management is the primary waste and pollution risk for this sector. Vale's operations are located in areas of abundant water availability, but has certain exposure to physical climate risk, in particular floods during the summer season in southern Brazil. However, Vale's large scale and footprint, and mine diversification mitigates climate hazards. Moreover, carbon transition risk is mitigated by the growing portfolio of base metals products, including nickel and copper, which will benefit by growing demand from energy transition.

Social

Vale is exposed to social risks, in particular those related to health and safety and responsible production. Improvements in safety of operations through initiatives taken to enhance the risk management control, particularly as the company progresses with the decommissioning of upstream tailings dams, jointly with the construction of backup dams (containment structures) and preventive removal of workers and civil population of riskier areas, have reduced the exposure to social risks, in particular health and safety. However, the tailings dam incident and its implications related to safety of operations, employee well-being and community stakeholder engagement and reputation remains an important credit consideration, reflected mostly in responsible production. Vale's

exposure to other social risks such as human capital is not as high as most mining companies, given the absence of union disputes and strikes, while exposure to demographic and societal trends is somewhat mitigated by the company's exposure to commodities (copper, nickel) that are linked to battery production and the green economy, despite the concentration in iron ore.

Governance

Vale's governance score reflects Vale's solid financial strategy, strong balance sheet, robust liquidity and enhanced risk management after the tailings dam accident in January 2019.

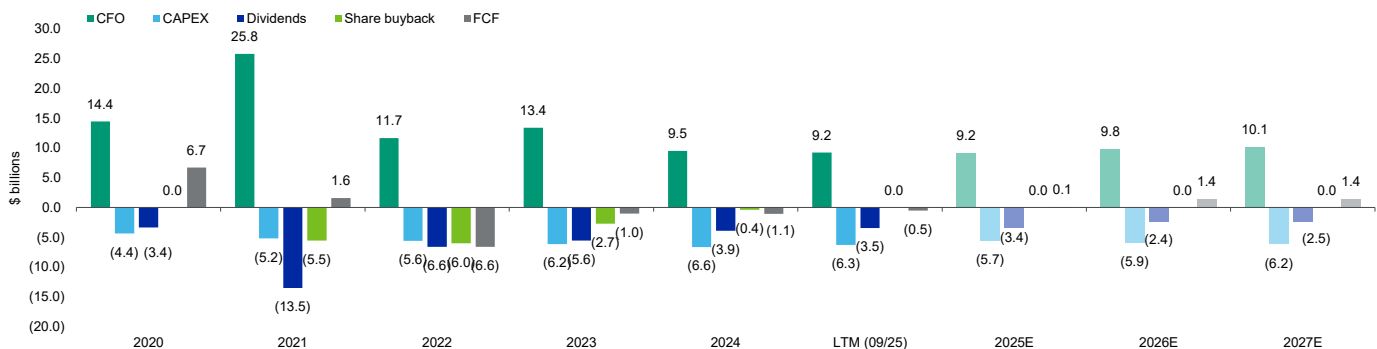
ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Liquidity analysis

Vale has excellent liquidity, supported by \$6.1 billion in cash and the \$5.0 billion available under its revolving credit facility agreements (\$2 billion due in November 2026 and \$3 billion due in February 2029) as of the end of Q3 2025. The company generated cash flow from operations of \$9.2 billion in the 12 months that ended September 2025, and after dividend distribution of \$3.5 billion and capex of \$6.3 billion, FCF was negative at \$545 million. All figures include our standard adjustments.

Exhibit 18

Stronger positive free cash flow driven by higher volumes, stable iron ore prices (\$90-\$100/ton) and relatively stable capital spending



Source: Company filings

Vale has a conservative approach to capital allocation relative to capital spending, dividend distribution and debt levels. The company aims to maintain expanded net financial debt between \$10 billion and \$20 billion, aiming at the center of the range (\$15 billion), and including commitments related to Brumadinho and Samarco. The company's debt amortization schedule is very comfortable, with maturities concentrated beyond 2029.

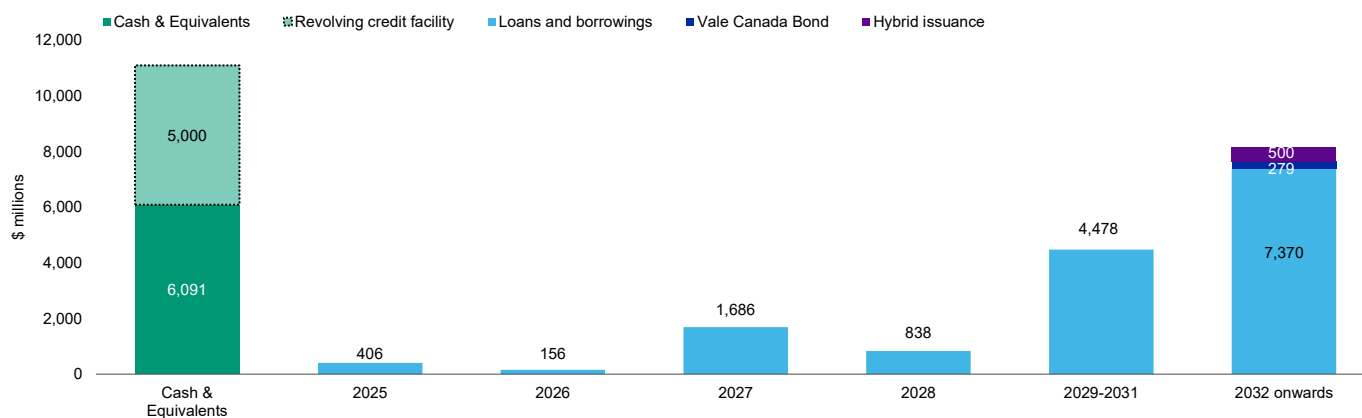
Vale's dividend payout is based on the policy established in March 2018, which is 30% of EBITDA minus sustaining capex, with payments set twice a year — in September for H1 results and in March of the following year for H2 results.

In the first nine months of 2025, Vale increased its 30-year \$1 billion bond issued in 2024 by \$750 million, using the proceeds to repurchase bonds maturing in 2034, 2036, and 2039. Additionally, Vale issued \$1.1 billion in debentures to support infrastructure investments in railway concessions. Moreover, in November 2025 Vale issued \$750 million in hybrid notes for general corporate purposes, including replenishing part of Vale's cash used for funding the optional tender offer for the "debentures participativas", announced in early October. These liability management initiatives are part of Vale's ongoing efforts to reduce debt costs and optimize overall financial expenses.

Exhibit 19

Debt amortization schedule as of September 2025; total reported financial debt of \$18.3 billion*

*Considers \$1 billion hybrid notes issuance, which Moody's treats as 50% equity and 50% debt



Does not include accrued interest and leases.*

Sources: Company filings and Moody's Ratings

Vale's leverage (Moody's-adjusted total gross debt/EBITDA) was 1.3x for the 12 months that ended September 2025, and it has remained close to (or below) 1x since 2020. Some of the company's financing documents contain covenants related to debt/EBITDA and the interest coverage ratio, but debt with financial covenants represents less than 20% of its total debt. The company is in full compliance with these covenants.

Hybrid notes will fund the tender offer for debentures participativas

Vale issued a hybrid instrument for general corporate purposes, including to replenish part of Vale's cash used to fund an optional tender offer to acquire the "debentures participativas", which was announced on October 6, 2025, and settled on November 5, 2025. The hybrid bond is an unsecured and subordinated obligation, junior to all senior unsecured debt instruments issued by [Vale Overseas Limited](#) (Baa2 stable) and guaranteed by Vale S.A. Key features of the bond include optional coupon deferral with mandatory interest arrear settlement; initial maturity of at least 30 years; and no significant coupon step-up before year 10, with any increase capped at 100 basis points.

Under our methodology, the hybrid notes have equity-like features, and are treated as 50% equity and 50% debt when calculating credit ratios. As the notes are a junior, subordinated instrument, they should be rated one notch below the senior unsecured debt instruments issued by Vale Overseas and by the guarantor (Vale), currently rated at Baa2.

The issuance has no impact on leverage from Vale's perspective because the "debentures participativas" are not considered financial debt on the company's balance sheet, and the hybrid instrument will receive the same treatment. As the hybrid notes have 50% equity credit, the impact on leverage will not be substantial. The transaction amounted to \$750 million which represents an additional debt of \$375 million (50% debt and 50% equity).

Structural considerations

Vale Base Metal (VBM) and [Vale Canada Ltd.](#) (VC) Baa3 senior unsecured ratings reflect the intrinsic operational, financial, strategic and legal links between VBM, VC and Vale S.A. The current one-notch differential to Vale's rating reflects the fact that Vale does not guarantee Vale Canada's 2032 notes (\$279 million outstanding as of September 2025) and debt at VBM. But the ratings incorporates Vale's ability to support VBM and VC. Although VBM's contribution to Vale's consolidated revenue (20.2% as of the 12 months that ended September 2025) is still relatively small, the business is an important component of the parent company's strategy for growth and diversification in base metals. Vale Canada is part of VBM, a company created in 2023 that incorporates base metal assets within Vale, namely nickel and copper assets in Brazil, Canada and Indonesia.

While most of Vale's iron ore and mining operations are under the parent company, it also has subsidiaries, associates and joint venture interests, both domestically and abroad. Although some of these entities may have debt and creditor obligations, which have the first claim on cash flow before distribution to the parent, they are relatively modest compared with the assets held within and the

earnings generated by the parent company. Vale's debt-financing requirements are met by bonds, bank loans, debentures and other trade finance vehicles. Vale Overseas, incorporated as a Cayman Islands-domiciled company, is a wholly owned finance subsidiary of Vale and is used as a vehicle to issue US dollar-denominated notes.

Methodology and scorecard

Vale's scorecard-indicated outcome under our Mining rating methodology is Baa1, based on data for the 12 months that ended September 2025. On a forward-looking basis for the next 12-18 months, the scorecard-indicated outcome maps to Baa1, under our 12-month price assumption of iron ore at \$90/ton, but with higher volumes offsetting weaker prices. The current rating is Baa2, which remains constrained by the sovereign rating.

Exhibit 20

Vale S.A.

Global Mining Industry Scorecard	Current LTM September 30 2025		12-18 Month Forward View	
	Measure	Score	Sub-Factor	Scorecard Indicated Outcome
Factor 1: Scale (15%)				
a) Revenue (USD Billion)	37.5	A	38.0 - 40.0	A
Factor 2: Business Profile (30%)				
a) Business Profile	Baa	Baa	Baa	Baa
Factor 3: Profitability And Efficiency (10%)				
a) EBIT Margin	30.6%	A	25.0% - 30.0%	A
Factor 4: Leverage And Coverage (25%)				
a) Debt / EBITDA	1.3x	A	1.0x - 1.5x	A
b) (EBITDA - CAPEX) / Interest Expense	7.3x	Baa	6.0x - 8.0x	Baa
c) RCF / Debt	45.3%	Baa	50.0% - 55.0%	A
Factor 5: Financial Policy (20%)				
a) Financial Policy	Baa	Baa	Baa	Baa
Rating:				
a) Scorecard-Indicated Outcome		Baa1		Baa1
b) Actual Rating Assigned				Baa2

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

[2] As of September 30, 2025(LTM)

[3] This represents Moody's Forward View; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures

Source: Moody's Ratings

Ratings

Exhibit 21

Category	Moody's Rating
VALE S.A.	
Outlook	Stable
Issuer Rating - Dom Curr	Baa2
Senior Unsecured	Baa2
VALE OVERSEAS LIMITED	
Outlook	Stable
Bkd Senior Unsecured	Baa2
Subordinate	Baa3
VALE BASE METALS LIMITED	
Outlook	Stable
Issuer Rating	Baa3
VALE CANADA LTD.	
Outlook	Stable
Senior Unsecured	Baa3

Source: Moody's Ratings

Appendix

Exhibit 22

Peer comparison

Vale S.A.

(in US millions)	Vale S.A.			Rio Tinto plc			Fortescue Ltd			Anglo American plc			BHP Group Limited		
	Baa2 stable			A1 stable			Ba1 Stable			(P)Baa2 Stable			(P)A1 Stable		
	FYE Dec-23	FYE Dec-24	LTM Sep-25	FYE Dec-23	FYE Dec-24	LTM Jun-25	FYE Jun-24	FYE Jun-25	LTM Jun-25	FYE Dec-23	FYE Dec-24	LTM Jun-25	FYE Jun-24	FYE Jun-25	LTM Jun-25
Revenue	\$41,784	\$38,056	\$37,467	\$54,041	\$53,658	\$53,729	\$18,220	\$15,541	\$15,541	\$30,656	\$27,354	\$26,740	\$55,658	\$51,262	\$51,262
EBITDA	\$16,199	\$15,078	\$15,340	\$20,954	\$21,660	\$20,745	\$10,757	\$7,804	\$7,804	\$9,644	\$7,924	\$7,351	\$25,436	\$24,900	\$24,900
Total Debt	\$14,226	\$16,685	\$19,723	\$14,913	\$14,342	\$24,127	\$5,400	\$5,439	\$5,439	\$17,705	\$19,027	\$17,808	\$22,242	\$25,284	\$25,284
EBIT Margin	31.7%	31.1%	30.6%	29.3%	29.3%	27.0%	47.3%	34.1%	34.1%	22.7%	18.2%	16.3%	36.2%	37.6%	37.6%
EBIT/Avg. Tang. Assets	16.6%	15.6%	14.6%	16.7%	16.0%	13.8%	29.9%	17.8%	17.8%	10.8%	7.8%	7.1%	19.9%	18.5%	18.5%
EBIT / Int. Exp.	11.5x	10.6x	9.3x	12.3x	12.9x	10.9x	27.5x	17.2x	17.2x	5.0x	3.2x	2.8x	12.1x	12.8x	12.8x
(EBITDA - Capex) / Int Expense	8.7x	7.5x	7.3x	10.4x	9.5x	7.4x	30.1x	24.9x	13.4x	2.4x	1.2x	1.3x	17.6x	9.7x	9.9x
Debt / EBITDA	0.9x	1.1x	1.3x	0.7x	0.7x	1.2x	0.5x	0.7x	0.7x	1.8x	2.4x	2.4x	0.9x	1.0x	1.0x
Total Debt/Capital	25.4%	32.3%	31.8%	20.3%	19.2%	26.8%	20.4%	20.2%	20.2%	32.9%	36.2%	37.7%	29.9%	31.4%	31.4%
(CFO - Dividends) / Debt	55.0%	33.5%	29.3%	59.1%	59.8%	36.5%	69.3%	66.0%	66.0%	20.5%	31.8%	25.3%	49.6%	38.8%	38.8%
RCF/Debt	79.4%	49.2%	45.3%	63.0%	64.2%	38.7%	74.6%	74.4%	64.8%	25.3%	19.4%	17.4%	29.5%	53.7%	40.2%

All figures and ratios calculated using Moody's estimates and standard adjustments. FYE = Financial year-end. LTM = Last 12 months.

Source: Moody's Ratings

Exhibit 23

Moody's-adjusted debt breakdown

Vale S.A.

(in US Millions)	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-23	FYE Dec-24	LTM Ending Sep-25
As Reported Debt	15,027.0	13,782.0	12,712.0	13,923.0	15,505.0	18,543.0
Pensions	641.0	204.0	269.0	303.0	1,180.0	1,180.0
Operating Leases	0.0	0.0	0.0	0.0	0.0	0.0
Non-Standard Adjustments	431.0	0.0	0.0	0.0	0.0	0.0
Moody's-Adjusted Debt	15,668.0	13,986.0	12,981.0	14,226.0	16,685.0	19,723.0

All figures are calculated using Moody's estimates and standard adjustments.

Source: Moody's Ratings

Exhibit 24

Moody's-adjusted EBITDA breakdown

Vale S.A.

(in US Millions)	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-23	FYE Dec-24	LTM Ending Sep-25
As Reported EBITDA	11,434.0	33,299.0	23,489.0	15,252.0	12,958.0	12,837.0
Pensions	25.0	21.0	19.0	28.0	78.0	78.0
Unusual	4,824.0	-3,215.0	-2,927.0	919.0	97.0	480.0
Moody's-Adjusted EBITDA	16,283.0	30,105.0	20,581.0	16,199.0	15,078.0	15,340.0

All figures are calculated using Moody's estimates and standard adjustments.

Source: Moody's Ratings

Endnotes

¹ C1 cost is a standard metric of the mining industry to denote the direct production costs of mining operations.

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