

17 NOV 2022

Fitch Affirms Vale S.A. at 'BBB'; Outlook Stable

Fitch Ratings - New York - 17 Nov 2022: Fitch Ratings has affirmed Vale S.A.'s Long-Term Foreign and Local Currency Issuer Default Ratings at 'BBB'. In addition, Fitch has affirmed the senior unsecured debt ratings of Vale Overseas Limited and Vale Canada Limited at 'BBB', and has affirmed Vale's national scale rating at 'AAA (bra)'. The Rating Outlook for all ratings remains Stable.

Vale's ratings reflect its leading cost position and global production scale, but are constrained by its concentrated production in iron ore and exposure to Brazil (BB-/Stable), which represents 90% of its EBITDA. The Foreign Currency rating is not constrained by Brazil's country ceiling, as EBITDA generation from its North Atlantic business should continue to cover its consolidated hard-currency interest expense by 1.0x. Fitch expects Vale to maintain a low leverage profile and to generate strong cash flow, even as prices normalize.

Vale Overseas Limited and Vale Canada Limited are wholly owned subsidiaries of Vale. Due to the strong legal, operational and strategic linkage between these entities and Vale, their bonds are directly linked to Vale's rating per Fitch's "Parent and Subsidiary Rating Criteria."

Key Rating Drivers

Solid Business Profile: Vale is a leading producer of seaborne iron ore with one of the lowest industry cost positions. Its market position is considered sustainable due to its abundant reserves and the competitiveness of its Northern System. Vale's business strength as a low-cost producer is enhanced by the high grade of its iron ore, which allows the company to receive market premiums; these factors largely offset the transportation advantage Australian producers enjoy in delivering ore to China. Although more than 90% of the company's EBITDA comes from iron ore, Vale also has material operations in copper and nickel; these operations annually generate more than USD2.5 billion of EBITDA.

Strong Capital Structure: Vale's strong business position is matched by an equally strong capital structure. The company had USD5.6 billion of Fitch adjusted net debt at the end of September. Vale generated USD24 billion of EBITDA during the LTM ended Sept. 30, 2022. The company's total debt/EBITDA ratio was 0.4x while its net debt/EBITDA ratio was 0.2x. Fitch projects that Vale will end 2022 with a 0.2x net leverage ratio.

Fitch has revised its treatment of the USD2.7 billion participative shareholder debentures from debt to other liabilities, as it better reflects Vale's operating cost nature as part of royalties included in EBITDA. Despite dividends, share repurchases and payments of interest on capital, Fitch expects Vale's net debt to be above USD5 billion by the end of 2024, which would result in longer term net leverage ratios ranging between 0.3x and 0.5x depending on iron ore prices.

Robust Cash Flow Generation: A constrained supply, due to the Russian invasion of Ukraine, weather-related disruptions in Brazil and Australia, and still resilient Chinese demand, where infrastructure stimulus has largely offset the decline of the property sector, have kept iron ore prices relatively elevated. Cash Flow from Operations is expected to remain high in 2023 at around USD13.7 billion before capex and dividend distributions. This figure assumes iron ore prices average USD85 per ton, EBITDA is USD17 billion, and capital expenditures of USD6.0 billion, allowing for higher investments in new projects.

Brumadinho and Mariana: The Integral Reparations Agreement with the authorities of Minas Gerais for damages caused by the collapse of the company's tailings dam at Brumadinho is factored into the company's rating. Provisions remain at USD3.2 billion that reach USD6.7 billion when including de-characterization by Sept. 30 2022. About USD2.1 billion of disbursements, including provisions and incurred expenses related to Brumadinho are expected in 2023. In addition, almost USD1.8 billion of disbursements related to Samarco are expected in 2023, out of the USD3.1 billion provisioned by Sept. 30 2022. A definitive agreement remains under negotiation.

Country Ceiling Assessment: Vale's Foreign Currency IDR is not constrained by a country ceiling. Fitch estimates the EBITDA generated from its nickel North Atlantic Division has and will continue to cover its consolidated hard-currency interest expense by at least 1.0x; therefore, per Fitch's "Non-Financial Corporates Exceeding the Country Ceiling Rating Criteria," its applicable country ceiling is that of Canada.

However, given the company's public announcement that it intends to sell a portion of its Canadian base metals business, the applicable country ceiling may shift from Canada (AAA) to Brazil (BB). That would occur if efforts to boost EBITDA generated from the North Atlantic Division fall short from the coverage of 1.0x of hard-currency consolidated interest expense on a sustainable basis. In that case, Vale's rating would be capped to three notches above Brazil's country ceiling, as the company is expected to maintain hard-currency cash balance abroad, 50% of EBITDA from exports, and committed credit lines that are greater than 1.5x its hard-currency external debt service for at least two years.

Vale has an ESG Relevance Score of '4' for Employee Wellbeing (SEW), given the remaining work required to improve dam monitoring and upstream dams de-characterization. By YE 2022, 18 de-characterization projects are expected to remain from the 30 identified since the Brumadinho event. Vale expects that none of the dams will be at a critical emergency level (Level 3) and to eliminate 60% of the dams by 2025. This has a negative impact on the credit profile, and is relevant to the ratings in conjunction with other factors.

Derivation Summary

Vale is the leading low-cost iron ore producer globally, and one of the top three global mining companies, along with BHP Plc (A/Stable) and Rio Tinto Plc (A/Stable). Vale is also comparable to Anglo American (BBB/Positive).

Vale's iron ore operations are consistently positioned in the first quartile of costs. Rio Tinto moves between first and second quartile of the iron ore cost curve. BHP's assets are placed in the first, second

(iron ore) and third (copper) quartile of the relevant business cost curves. The majority of Anglo American's assets sit in the second or third quartile of their relevant global business cost curves. Rio Tinto and BHP's iron ore businesses are located closer to China, which further differentiates the ratings from Vale's.

Vale is highly concentrated in iron ore (more than 90% of EBITDA), but also has significant contribution from copper, nickel and other minerals. BHP has more balanced product diversification than its peers with material earnings contributions from iron ore and copper and lower earnings contributions from coal and conventional petroleum assets over the medium term. In comparison, Rio Tinto derives more than two-thirds of its EBITDA from iron ore, including the Canadian pellets business, with the remainder primarily coming from aluminium and copper.

Anglo American's portfolio of copper, platinum group metals, diamonds, nickel, high-quality iron ore, and premium metallurgical coal, among others, addresses a broader range of end-markets and exhibits more balanced earnings contributions from individual commodities than those of major peers Vale, Rio Tinto and BHP Group.

Most of the iron ore and copper for Vale comes from Brazil and its nickel from Canada. BHP and Rio Tinto derive a large majority of earnings from assets in OECD countries. BHP and Rio Tinto source most of its iron ore from Australia, with Rio Tinto producing more lump. A large proportion of copper for both companies comes from the Escondida mine in Chile (BHP: 57.5% ownership; Rio Tinto: 30%). Mongolia, where Rio Tinto's large greenfield project Oyu Tolgoi is located, is a more challenging mining jurisdiction as would be Guinea where the Simandou project is located and is currently being considered for development by Rio Tinto and its consortium partners.

Similar to Vale, Anglo American has material exposure to more challenging operating environments than those of BHP and Rio Tinto, like Brazil (BB-/Stable), characterized by increased scrutiny of mining companies linked to governance of operating practices following the Mariana and Brumadinho dam disasters, and South Africa (BB-/Stable), characterized by an active, unionized workforce, comparatively high wage and electricity cost inflation, and electricity shortages.

Vale, Rio Tinto and BHP have similar financial-profile characteristics, with EBITDA gross leverage below 1.0x and EBITDA net leverage below 0.6x over the medium term. We expect these companies to continue to pay significant dividends while maintaining a conservative balance sheet. Anglo American has slightly higher leverage than these companies.

Key Assumptions

Fitch's Key Assumptions Within the Rating Case for the Issuer:

--Benchmark iron ore prices average USD115/ton in 2022, USD85/ton in 2023, USD75/ton in 2024;

--Iron ore fines and pellets volumes sold of 310 million tons in 2022, 360 million tons in 2023 and 400 million tons in 2024;

--Copper prices of USD8,700/ton in 2022, USD8,000/ton in 2023 and USD7,500/ton in 2024;

--Capex of USD5.7 billion in 2022, USD6.0 billion in 2023 and USD6.5 billion in 2024;

--Dividend distribution at Vale's policy of 30% of EBITDA less sustaining capex. Forecast also includes USD4 billion discretionary special dividend in 2023;

--No debt funded acquisitions;

--Participative shareholder debentures are considered an operating cost and part of other liabilities instead of debt.

RATING SENSITIVITIES

--Additional progress in dam decommissioning;

--Increased output of iron ore from dry processing;

--Consistent net debt/EBITDA ratio below 1.0x.

Factors that could, individually or collectively, lead to negative rating action/downgrade:

--Cash flow from its North Atlantic business fails to cover its annual consolidated hard-currency interest expense by 1.0x and a downgrade of Brazil's country ceiling.

--Net debt/EBITDA above 2.0x on a sustained basis.

Best/Worst Case Rating Scenario

International scale credit ratings of Non-Financial Corporate issuers have a best-case rating upgrade scenario (defined as the 99th percentile of rating transitions, measured in a positive direction) of three notches over a three-year rating horizon; and a worst-case rating downgrade scenario (defined as the 99th percentile of rating transitions, measured in a negative direction) of four notches over three years. The complete span of best- and worst-case scenario credit ratings for all rating categories ranges from 'AAA' to 'D'. Best- and worst-case scenario credit ratings are based on historical performance. For more information about the methodology used to determine sector-specific best- and worst-case scenario credit ratings, visit <https://www.fitchratings.com/site/re/10111579>.

Liquidity and Debt Structure

Ample Liquidity: Vale ended Sept. 30, 2022 with USD5.2 billion of cash and marketable securities, USD5.0 billion of credit lines and only USD11 billion of Fitch adjusted total debt and equity credit, including USD550 million of short-term debt payments till 2023. The company further enhanced its liquidity and debt maturity profile in June when it repurchased USD1.3 billion of its bonds. More than half of the company's debt matures in 2030 or later.

Issuer Profile

Vale is one of the world's leading mining companies, along with Rio Tinto and BHP Billiton. It is the

world's largest producer of iron ore and iron ore pellets and one of the largest producers of nickel. The company is present in approximately 30 countries.

REFERENCES FOR SUBSTANTIALLY MATERIAL SOURCE CITED AS KEY DRIVER OF RATING

The principal sources of information used in the analysis are described in the Applicable Criteria.

ESG Considerations

Vale S.A. has an ESG Relevance Score of '4' for Employee Wellbeing due to the remaining work required to improve dam monitoring and upstream dams de-characterization. By YE 2022, 18 de-characterization projects are expected to remain from the 30 identified in 2019. Dams at critical levels are expected to be de-characterized by 2025. This has a negative impact on the credit profile, and is relevant to the rating[s] in conjunction with other factors.

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of '3'. This means ESG issues are credit-neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

Fitch Ratings Analysts

Hector Collantes

Associate Director

Primary Rating Analyst

+1 212 908 0369

Fitch Ratings, Inc. Hearst Tower 300 W. 57th Street New York, NY 10019

Fernanda Rezende

Senior Director

Secondary Rating Analyst

+55 21 4503 2619

Saverio Minervini

Senior Director

Committee Chairperson

+1 212 908 0364

Media Contacts







Elizabeth Fogerty

New York





+1 212 908 0526

elizabeth.fogerty@thefitchgroup.com

Rating Actions

ENTITY/DEBT	RATING	RECOVERY	PRIOR	
Vale Overseas Limited				
• senior unsecured ^{LT}	BBB	Affirmed	BBB	
Vale S.A.	LT IDR	BBB 	Affirmed	BBB 
	LC LT IDR	BBB 	Affirmed	BBB 
	Natl LT	AAA(bra) 	Affirmed	AAA(bra) 
• senior unsecured ^{LT}	BBB	Affirmed	BBB	
• senior unsecured ^{Natl LT}	AAA(bra)	Affirmed	AAA(bra)	
Vale Canada Limited				
• senior unsecured ^{LT}	BBB	Affirmed	BBB	

RATINGS KEY OUTLOOK WATCH

POSITIVE		
NEGATIVE		
EVOLVING		
STABLE		

Applicable Criteria

[Corporate Rating Criteria \(pub.28 Oct 2022\) \(including rating assumption sensitivity\)](#)

[National Scale Rating Criteria \(pub.22 Dec 2020\)](#)

[Non-Financial Corporates Exceeding the Country Ceiling Rating Criteria \(pub.08 Jan 2021\)](#)

[Parent and Subsidiary Linkage Rating Criteria \(pub.01 Dec 2021\)](#)

[Sector Navigators: Addendum to the Corporate Rating Criteria \(pub.28 Oct 2022\)](#)

Applicable Models

Numbers in parentheses accompanying applicable model(s) contain hyperlinks to criteria providing description of model(s).

Corporate Monitoring & Forecasting Model (COMFORT Model), v8.1.0 (1)

Additional Disclosures

[Solicitation Status](#)

Endorsement Status

Vale Canada Limited EU Endorsed, UK Endorsed

Vale Overseas Limited EU Endorsed, UK Endorsed

Vale S.A. EU Endorsed, UK Endorsed

DISCLAIMER & DISCLOSURES

All Fitch Ratings (Fitch) credit ratings are subject to certain limitations and disclaimers. Please read these limitations and disclaimers by following this link: <https://www.fitchratings.com/understandingcreditratings>. In addition, the following <https://www.fitchratings.com/rating-definitions->

[document](#) details Fitch's rating definitions for each rating scale and rating categories, including definitions relating to default. ESMA and the FCA are required to publish historical default rates in a central repository in accordance with Articles 11(2) of Regulation (EC) No 1060/2009 of the European Parliament and of the Council of 16 September 2009 and The Credit Rating Agencies (Amendment etc.) (EU Exit) Regulations 2019 respectively.

Published ratings, criteria, and methodologies are available from this site at all times. Fitch's code of conduct, confidentiality, conflicts of interest, affiliate firewall, compliance, and other relevant policies and procedures are also available from the Code of Conduct section of this site. Directors and shareholders' relevant interests are available at <https://www.fitchratings.com/site/regulatory>. Fitch may have provided another permissible or ancillary service to the rated entity or its related third parties. Details of permissible or ancillary service(s) for which the lead analyst is based in an ESMA- or FCA-registered Fitch Ratings company (or branch of such a company) can be found on the entity summary page for this issuer on the Fitch Ratings website.

In issuing and maintaining its ratings and in making other reports (including forecast information), Fitch relies on factual information it receives from issuers and underwriters and from other sources Fitch believes to be credible. Fitch conducts a reasonable investigation of the factual information relied upon by it in accordance with its ratings methodology, and obtains reasonable verification of that information from independent sources, to the extent such sources are available for a given security or in a given jurisdiction. The manner of Fitch's factual investigation and the scope of the third-party verification it obtains will vary depending on the nature of the rated security and its issuer, the requirements and practices in the jurisdiction in which the rated security is offered and sold and/or the issuer is located, the availability and nature of relevant public information, access to the management of the issuer and its advisers, the availability of pre-existing third-party verifications such as audit reports, agreed-upon procedures letters, appraisals, actuarial reports, engineering reports, legal opinions and other reports provided by third parties, the availability of independent and competent third-party verification sources with respect to the particular security or in the particular jurisdiction of the issuer, and a variety of other factors. Users of Fitch's ratings and reports should understand that neither an enhanced factual investigation nor any third-party verification can ensure that all of the information Fitch relies on in connection with a rating or a report will be accurate and complete. Ultimately, the issuer and its advisers are responsible for the accuracy of the information they provide to Fitch and to the market in offering documents and other reports. In issuing its ratings and its reports, Fitch must rely on the work of experts, including independent auditors with respect to financial statements and attorneys with respect to legal and tax matters. Further, ratings and forecasts of financial and other information are inherently forward-looking and embody assumptions and predictions about future events that by their nature cannot be verified as facts. As a result, despite any verification of current facts, ratings and forecasts can be affected by future events or conditions that were not anticipated at the time a rating or forecast was issued or affirmed.

The information in this report is provided "as is" without any representation or warranty of any kind, and Fitch does not represent or warrant that the report or any of its contents will meet any of the requirements of a recipient of the report. A Fitch rating is an opinion as to the creditworthiness of a security. This opinion and reports made by Fitch are based on established criteria and methodologies

that Fitch is continuously evaluating and updating. Therefore, ratings and reports are the collective work product of Fitch and no individual, or group of individuals, is solely responsible for a rating or a report. The rating does not address the risk of loss due to risks other than credit risk, unless such risk is specifically mentioned. Fitch is not engaged in the offer or sale of any security. All Fitch reports have shared authorship. Individuals identified in a Fitch report were involved in, but are not solely responsible for, the opinions stated therein. The individuals are named for contact purposes only. A report providing a Fitch rating is neither a prospectus nor a substitute for the information assembled, verified and presented to investors by the issuer and its agents in connection with the sale of the securities. Ratings may be changed or withdrawn at any time for any reason in the sole discretion of Fitch. Fitch does not provide investment advice of any sort. Ratings are not a recommendation to buy, sell, or hold any security. Ratings do not comment on the adequacy of market price, the suitability of any security for a particular investor, or the tax-exempt nature or taxability of payments made in respect to any security. Fitch receives fees from issuers, insurers, guarantors, other obligors, and underwriters for rating securities. Such fees generally vary from US\$1,000 to US\$750,000 (or the applicable currency equivalent) per issue. In certain cases, Fitch will rate all or a number of issues issued by a particular issuer, or insured or guaranteed by a particular insurer or guarantor, for a single annual fee. Such fees are expected to vary from US\$10,000 to US\$1,500,000 (or the applicable currency equivalent). The assignment, publication, or dissemination of a rating by Fitch shall not constitute a consent by Fitch to use its name as an expert in connection with any registration statement filed under the United States securities laws, the Financial Services and Markets Act of 2000 of the United Kingdom, or the securities laws of any particular jurisdiction. Due to the relative efficiency of electronic publishing and distribution, Fitch research may be available to electronic subscribers up to three days earlier than to print subscribers.

For Australia, New Zealand, Taiwan and South Korea only: Fitch Australia Pty Ltd holds an Australian financial services license (AFS license no. 337123) which authorizes it to provide credit ratings to wholesale clients only. Credit ratings information published by Fitch is not intended to be used by persons who are retail clients within the meaning of the Corporations Act 2001.

Fitch Ratings, Inc. is registered with the U.S. Securities and Exchange Commission as a Nationally Recognized Statistical Rating Organization (the "NRSRO"). While certain of the NRSRO's credit rating subsidiaries are listed on Item 3 of Form NRSRO and as such are authorized to issue credit ratings on behalf of the NRSRO (see <https://www.fitchratings.com/site/regulatory>), other credit rating subsidiaries are not listed on Form NRSRO (the "non-NRSROs") and therefore credit ratings issued by those subsidiaries are not issued on behalf of the NRSRO. However, non-NRSRO personnel may participate in determining credit ratings issued by or on behalf of the NRSRO.

Copyright © 2022 by Fitch Ratings, Inc., Fitch Ratings Ltd. and its subsidiaries. 33 Whitehall Street, NY, NY 10004. Telephone: 1-800-753-4824, (212) 908-0500. Fax: (212) 480-4435. Reproduction or retransmission in whole or in part is prohibited except by permission. All rights reserved.

Endorsement policy

Fitch's international credit ratings produced outside the EU or the UK, as the case may be, are endorsed for use by regulated entities within the EU or the UK, respectively, for regulatory purposes, pursuant to the terms of the EU CRA Regulation or the UK Credit Rating Agencies (Amendment etc.) (EU Exit) Regulations 2019, as the case may be. Fitch's approach to endorsement in the EU and the UK can be found on Fitch's [Regulatory Affairs](#) page on Fitch's website. The endorsement status of international credit ratings is provided within the entity summary page for each rated entity and in the transaction detail pages for structured finance transactions on the Fitch website. These disclosures are updated on a daily basis.