

CREDIT OPINION

7 October 2024

Update

Send Your Feedback

RATINGS

Banco Regional de Desenv do Extremo Sul

Domicile	Porto Alegre, Rio Grande do Sul, Brazil
Long Term CRR	Ba1
Type	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Issuer Rating	Not Available
Type	Not Available
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.

Contacts

Lucas Viegas +55.11.3956.8717
VP-Senior Analyst
lucas.viegas@moodys.com

Daniel Girola +55.11.3956.8729
VP-Senior Analyst
daniel.girola@moodys.com

Ceres Lisboa +55.11.3043.7317
Associate Managing Director
ceres.lisboa@moodys.com

Guy Bernardet, CFA +55.11.3956.8789
Ratings Associate
guy.bernardet@moodys.com

CLIENT SERVICES

Americas 1-212-553-1653
Asia Pacific 852-3551-3077
Iapan 81-3-5408-4100

Banco Regional de Desenv do Extremo Sul

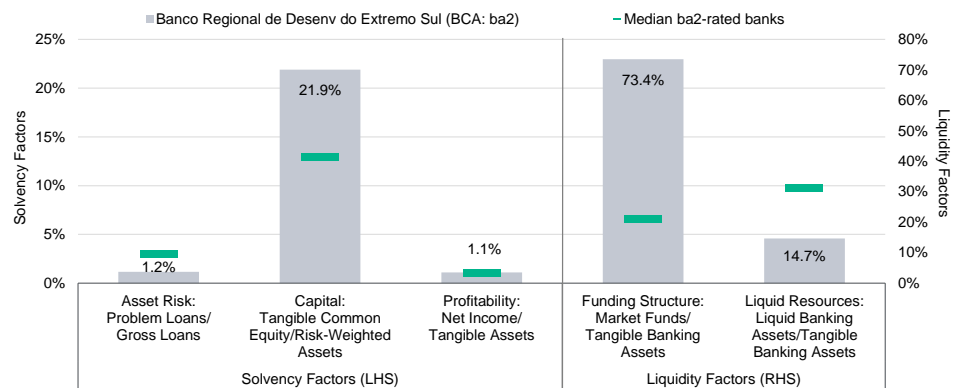
Update to credit analysis

Summary

[Banco Regional de Desenv do Extremo Sul's](#) (BRDE) BCA of ba2, reflects the bank's established role in fostering development in the southern states of Brazil, its position as one of the largest on-lender of [Banco Nac. de Desenv. Economico e Social's](#) (BNDES, Ba1 positive, ba1¹) funds to the agricultural sector, and sound capitalization levels. BRDE's stable funding structure is a key factor supporting its ratings, despite its high concentration given the predominance of funds sourced from BNDES. The BCA also incorporates BRDE's loan book concentration by sector and borrower owing to its footprint in the southern states whose economies have relevant contribution from agriculture, in addition to a moderate profitability due to its development bank role.

BRDE's Ba2 issuer rating is derived from its BCA of ba2 and does not receive any support uplift from its owners.

Exhibit 1
Rating Scorecard - Key financial ratios
Scorecard ratios as of June 2024



For the asset risk and profitability ratios, we calculate the average of the three latest year-end numbers and the latest quarterly data if available, and the ratio used is the weaker of the average and the latest period. For the capital ratio, we use the latest reported figure. For the funding structure and liquid resources ratios, we use the latest year-end figures
Source: Moody's Ratings

Credit strengths

- » Established role as a regional development bank, with steady loan growth and focus on the agricultural industry
- » Solid capitalization levels
- » Limited susceptibility to political influence because of its three-state ownership

Credit challenges

- » Concentrated funding structure, with high reliance on funds from BNDES
- » Geographical and sectorial concentrations

Rating outlook

The outlook on BRDE's ratings is stable.

Factors that could lead to an upgrade

- » BRDE's ba2 BCA is at the level of Brazil's sovereign rating. An improvement in the metrics would only lead to upward pressure in the event of an upgrade in Brazil's bond rating.

Factors that could lead to a downgrade

- » A significant weakening of BRDE's financial fundamentals, resulting from a larger-than-expected deterioration in the quality of the loan book and an ensuing reduction in capitalization levels, could have a negative effect on the bank's ratings.

Key indicators

Exhibit 2

Banco Regional de Desenv do Extremo Sul (Consolidated Financials) [1]

	06-24 ²	12-23 ²	12-22 ²	12-21 ²	12-20 ²	CAGR/Avg. ³
Total Assets (BRL Million)	23,202.5	21,098.4	19,099.2	17,138.5	16,652.0	9.9 ⁴
Total Assets (USD Million)	4,177.3	4,343.4	3,617.4	3,073.4	3,205.9	7.9 ⁴
Tangible Common Equity (BRL Million)	4,468.0	4,184.1	3,940.7	3,488.4	3,223.3	9.8 ⁴
Tangible Common Equity (USD Million)	804.4	861.3	746.4	625.6	620.6	7.7 ⁴
Problem Loans / Gross Loans (%)	1.2	0.5	0.5	0.5	0.4	0.6 ⁵
Tangible Common Equity / Risk Weighted Assets (%)	21.9	21.7	20.8	21.1	19.5	21.0 ⁶
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	4.7	2.1	1.9	1.7	1.6	2.4 ⁵
Net Interest Margin (%)	5.0	6.4	6.3	4.9	4.3	5.4 ⁵
PPI / Average RWA (%)	3.8	4.6	4.7	3.5	3.0	3.9 ⁶
Net Income / Tangible Assets (%)	1.1	2.5	2.4	1.6	1.2	1.7 ⁵
Cost / Income Ratio (%)	35.0	31.9	28.8	34.0	36.0	33.1 ⁵
Market Funds / Tangible Banking Assets (%)	73.6	73.4	72.8	73.3	74.6	73.5 ⁵
Liquid Banking Assets / Tangible Banking Assets (%)	13.9	14.7	17.2	16.8	17.0	15.9 ⁵
Gross Loans / Due to Customers (%)	4484.9	22643.8	130702.2	44904.0	--	50683.7 ⁵

[1] All figures and ratios are adjusted using Moody's standard adjustments. [2] Basel III - fully loaded or transitional phase-in; LOCAL GAAP. [3] May include rounding differences because of the scale of reported amounts. [4] Compound annual growth rate (%) based on the periods for the latest accounting regime. [5] Simple average of periods for the latest accounting regime. [6] Simple average of Basel III periods.

Sources: Moody's Ratings and company filings

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.

Profile

Founded in 1961, Banco Regional de Desenvolvimento do Extremo Sul (BRDE) is a regional development bank owned by the relatively prosperous states of Rio Grande do Sul, Santa Catarina and Parana, which together contribute around 17% of Brazil's GDP. BRDE's operations are focused in these states, where BRDE has a mandate to foster development.

The bank lends directly to private-sector companies, largely agricultural producers, cooperatives and infrastructure projects.

Detailed credit considerations

Geographic and sector concentrations are mitigated by low level of problem loans and high coverage

As of June 2024, BRDE's problem loan² ratio increased to 1.2% from 0.6% one year earlier due to specific cases, remaining below the pre-pandemic average and significantly below the industry average of 3.8%. The bank's strong coverage alleviates any pressure from increases in problem loans. In H1 2024, loan loss reserves to problem loans was 208%, down from 297% a year earlier. Additionally, a significant portion of the bank's operations are secured by guarantees, enhancing the recovery rate of its charge-offs. Loans renegotiated in the previous twelve months accounted for 2.0% of the portfolio. Going forward, we expect asset quality to remain stable, although with some downside risk, particularly for renegotiated loans, stemming from climate events that impacted the state of Rio Grande do Sul in May, where the bank has around a third of its operations.

As a result of the importance of the agricultural sector in southern Brazil, it traditionally represents around 50% of BRDE's loan portfolio. Both smaller operations and larger agroindustrial cooperatives are among BRDE's clients. The bank has acted as a conduit for growth in the agricultural industry in the region and its credit portfolio has grown accordingly. As of June 2024, the bank's loan operations increased 20.0% when compared to June 2023. Loan disbursements in H1 2024 increased 34.4% year-over-year, reaching BRL2.9 billion, supported by BRDE's strong relationships with regional credit cooperatives, which channel resources to smaller producers and provide strong loan guarantees. The bank mainly provides long-term loans and its credit portfolio has an average maturity of more than seven years. BRDE also lends to infrastructure projects, mostly in the energy industry, and offers some working capital financing.

The bank's inherent focus on the southern states constrains its operations to a single region, and also results in a less diversified revenue structure than that of its peers with nationwide coverage. These relatively high geographic and sectorial concentrations carry additional risks, especially from climate events.

Similar to other regional development banks, BRDE is responsible for the origination of loans and for monitoring credit allocation of federal and state governments funds. The bank does not share the credit risk and receives around 3% of disbursements as management fees.

High capitalization acted as buffer for concentration risks

BRDE's capitalization, which we measure as tangible common equity/risk-weighted assets (RWA)³, increased to 21.9% as of June 2024 from 21.2% in June 2023, and its regulatory Common Equity Tier 1 capital ratio was of 21.6% as of June 2024, well above the minimum regulatory.

We expect BRDE to maintain its capital above the regulatory minimum levels, particularly in light of a 2015 resolution, through which the bank will transfer profits into its capital reserves semiannually.

Profitability remains adequate despite higher loan loss provisions and interest expense

Although BRDE's mandate is not focused on profitability but on ensuring development, economic prosperity and job creation in the south of Brazil through its lending, the bank's recurring earnings generation has historically been adequate to maintain capital at sound levels.

In H1 2024, net income to tangible assets ratio decreased to 1.1%, from 2.4% in H1 2023, but in line with the pre-pandemic average. The ratio was impacted by the increase in loan loss provisioning related to specific cases, following multiple years of low provisioning and reflecting the industry's overall deterioration on asset risk. Loan loss provisions to gross loans grew to 1.3% in the first half of 2024, from 0.9% in 2023 and 0.1% in 2022. Furthermore, net interest income was weighed by higher interest expenses from foreign multilateral borrowings as the bank diversifies its funding sources, and by lower rates on government securities that impacted trading income. Finally, operating expenses increased 8.1% in the first six months 2024 versus a year earlier, mainly due to higher personnel expenses.

Looking forward we expect profitability to improve gradually with increases in the benchmark rate (Selic) and higher loan volumes, although partly mitigated by the need for more provision expenses, as well as a potential impact from the climate events in Rio Grande do Sul.

Increasing on funding diversification reduces BRDE's reliance on BNDES

Given its policy role as a development bank, BRDE naturally aligns with BNDES policies by acting as an intermediary to connect national policies at the regional level. As a result, in June 2024, BNDES funds accounted for 60.7% of total loans and 66.0% of the bank's total funding of BRL18.1 billion. The rest of BRDE's onlending funding base is composed of resources from [Caixa Economica Federal \(CAIXA\)](#) (Ba1 positive, ba2), Fundo de Garantia do Tempo de Serviço (FGTS), [Banco do Brasil S.A.](#) (Ba1 positive, ba1) and federal government investment funds.

However, since 2018, BRDE has been diversifying its funding sources, accessing multilateral agencies such as the Agence Francaise de Developpement (AFD), [European Investment Bank](#) (EIB, Aaa stable), [Corporacion Andina de Fomento](#) (CAF, Aa3 stable), [World Bank](#) (Aaa stable) and New Development Bank (NDB). It also has a USD 150mm facility with the [Inter-American Development Bank](#) (Aaa stable) to focus on SME clients. Funding from multilateral agencies represented 14.0% of the total funding. Additionally, the bank has begun to leverage local capital markets by issuing agriculture-related fixed-income instruments, known as Letra de Crédito do Agronegócio. Since July 2024, it has also gained the ability to issue a new debt instrument exclusive to development banks, the Letra de Crédito de Desenvolvimento (LCD). As a result of these efforts, BNDES' resources represented 41.9% of new loans as of June 2024, compared with 94.0% in 2017. Notwithstanding, we expect the lion's share of funding to continue to come from BNDES.

BRDE's rating is supported by Brazil's Moderate Macro Profile

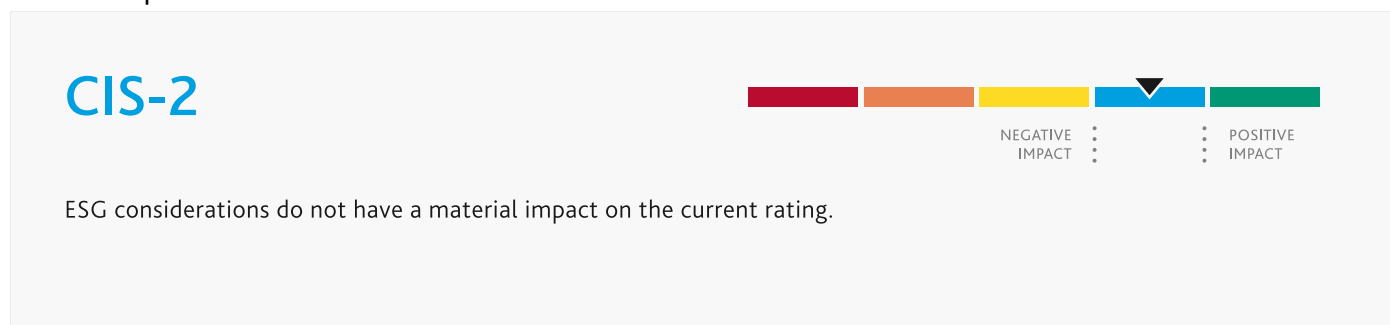
[Brazil's](#) (Ba1 positive) Macro Profile of "Moderate" is supported by the country's large and highly diversified economy with limited exposure to external financing risks. It also incorporates our improvements in the business environment for banks from recent reforms, including the independence of the central bank; the state-owned company law; labor reform; and a collateral framework that reduced uncertainties about judicial disputes and the potential for political intervention in the financial system. We forecast a real GDP growth to moderate in 2024 and 2025 to 2.2% after growing around 3.0% in the previous couple of years. Our assessment acknowledges the current momentum as Brazil's banking system moves out of the credit cycle's downturn, with declining but still-high delinquency ratios and household indebtedness amid tighter liquidity on global capital markets, which will continue to pressure credit conditions ahead.

ESG considerations

Banco Regional de Desenv do Extremo Sul's ESG credit impact score is CIS-2

Exhibit 3

ESG credit impact score

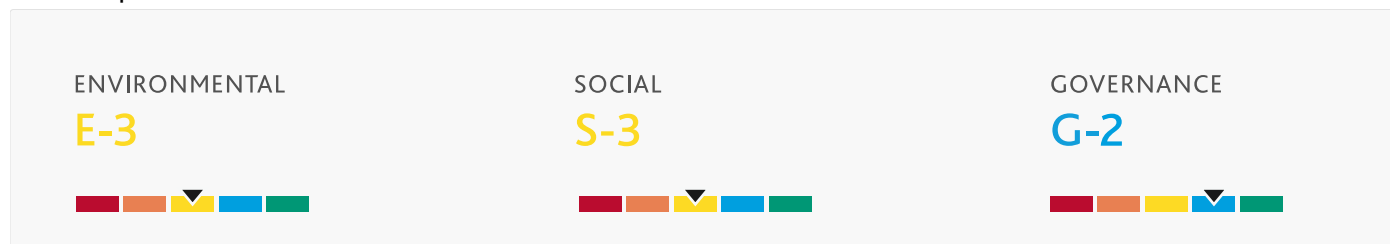


Source: Moody's Ratings

BRDE's **CIS-2** reflects the limited credit impact of environmental, social and governance factors on the rating to date. Despite the bank's government ownership, its corporate governance practices have remained consistently strong over the past years, supporting the bank's credit profile.

Exhibit 4

ESG issuer profile scores



Source: Moody's Ratings

Environmental

BRDE faces moderate exposure to environmental risks because of its portfolio exposure to carbon transition and physical climate risks associated with agricultural and industrial loans in the Southern States of the country.

Social

BRDE faces moderate social risks, reflecting the bank's exposure to risks associated to customer relations and data privacy. BRDE also plays an important role in developing Brazil's Southern states, especially in rural areas by providing long-term financing to the agriculture segment. BRDE faces moderate social risks, reflecting the bank's exposure to risks associated to customer relations and data privacy. BRDE also plays an important role in developing Brazil's Southern states, especially in rural areas by providing long-term financing to the agriculture segment.

Governance

BRDE present low exposure to governance risks, reflecting the bank's strong corporate governance practices and the good track record of its management in delivering on strategic goals. BRDE's ownership is divided among three different States, which reduces the possibility of political interference and influence its corporate governance practices positively. BRDE present low exposure to governance risks, reflecting the bank's strong corporate governance practices and the good track record of its management in delivering on strategic goals. BRDE's ownership is divided among three different States, which reduces the possibility of political interference and influence its corporate governance practices positively.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.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.

Support and structural considerations

Notching considerations

In the absence of a bail-in resolution regime framework in Brazil, the ratings follow the additional notching guidelines, according to our Banks rating methodology. In these cases, the approach takes into account other features specific to debt classes, resulting in additional notching from the issuer's Adjusted BCA.

Affiliate support

BRDE's Adjusted BCA of ba2 receives no uplift from its ba2 standalone BCA.

Government support

We believe there is a low likelihood of government support for BRDE's liabilities. This reflects the bank's reduced market share of deposits in Brazil.

Counterparty Risk (CR) Assessment / Counterparty Risk Rating (CRR)

BRDE's CR Assessment and CRR are one notch above its Adjusted BCA and, therefore, above its issuer ratings, reflecting our view that the probability of default is lower for operating obligations and other contractual commitments than for deposits or unsecured debt.

These obligations will be more likely preserved in order to minimize losses, avoid disruption of critical functions and limit contagion. They are less likely to be subject to the application of a resolution tool to ensure the continuity of operations.

About Moody's Bank Scorecard

Our Scorecard is designed to capture, express and explain in summary form our Rating Committee's judgment. When read in conjunction with our research, a fulsome presentation of our judgment is expressed. As a result, the output of our Scorecard may materially differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The Scorecard output and the individual scores are discussed in rating committees and may be adjusted up or down to reflect conditions specific to each rated entity.

Rating methodology and scorecard factors

Exhibit 5

Rating Factors

Macro Factors						
Weighted Macro Profile	Moderate	100%				
Factor	Historic Ratio	Initial Score	Expected Trend	Assigned Score	Key driver #1	Key driver #2
Solvency						
Asset Risk						
Problem Loans / Gross Loans	1.2%	baa1	↔	ba2	Sector concentration	
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	21.9%	a2	↔	baa2	Expected trend	
Profitability						
Net Income / Tangible Assets	1.1%	baa3	↔	ba1	Earnings quality	
Combined Solvency Score		baa1		ba1		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	73.4%	caa3	↔	b1	Extent of market funding reliance	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	14.7%	ba3	↔	ba2		
Combined Liquidity Score		b3		ba3		
Financial Profile				ba2		
Qualitative Adjustments				Adjustment		
Business Diversification				0		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				0		
Sovereign or Affiliate constraint				Ba1		
BCA Scorecard-indicated Outcome - Range				ba1 - ba3		
Assigned BCA				ba2		
Affiliate Support notching				0		
Adjusted BCA				ba2		
Instrument Class	Loss Given Failure notching	Additional notching	Preliminary Rating Assessment	Government Support notching	Local Currency Rating	Foreign Currency Rating
Counterparty Risk Rating	1	0	ba1	0	Ba1	Ba1
Counterparty Risk Assessment	1	0	ba1 (cr)	0	Ba1(cr)	
Senior unsecured bank debt	0	0	ba2	0	Ba2	

[1] Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information.

Source: Moody's Ratings

Ratings

Exhibit 6

Category	Moody's Rating
BANCO REGIONAL DE DESENV DO EXTREMO SUL	
Outlook	Stable
Counterparty Risk Rating	Ba1/NP
Baseline Credit Assessment	ba2
Adjusted Baseline Credit Assessment	ba2
Counterparty Risk Assessment	Ba1(cr)/NP(cr)
Issuer Rating -Dom Curr	Ba2
ST Issuer Rating -Dom Curr	NP

Source: Moody's Ratings

Endnotes

- 1 The bank ratings shown in this report are the bank's domestic deposit rating (issuer rating when not available), outlook and Baseline Credit Assessment.
- 2 We consider as problem loans the loans overdue rated between E and H under Brazilian Central Bank's resolution 2,682/99.
- 3 Our preferred measure of capitalization, which deducts from capital the intangible assets and a significant portion of deferred tax assets that do not provide significant loss absorption, and we adjust the bank's RWA by applying a risk factor of 100% to its significant holdings of the Brazilian government securities, weighted 0% by local regulations.

© 2024 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Clasificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesses", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454