

CREDIT OPINION

23 September 2026

Update



Send Your Feedback

RATINGS

Banco Industrial do Brasil S.A.

Domicile	Sao Paulo, Sao Paulo, Brazil
Long Term CRR	Ba1
Long Term Deposit	Ba2
Type	LT Bank Deposits - Fgn 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.

Contacts

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

Alexandre +55.11.3043.7356
 Albuquerque
 VP-Ratings
 alexandre.albuquerque@moodys.com

Lucas Ivanov +55.11.3043.7300
 Ratings Associate
 lucas.ivanov@moodys.com

Banco Industrial do Brasil S.A.

Update to credit analysis

Summary

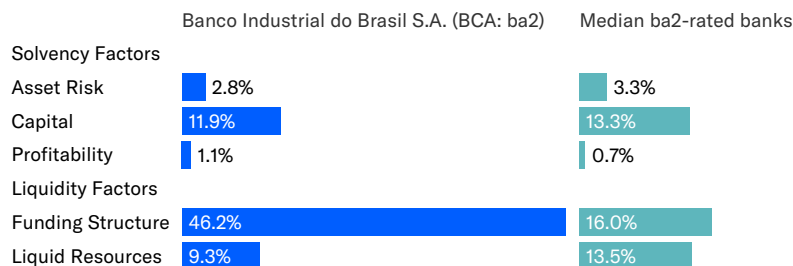
[Banco Industrial do Brasil S.A.](#)'s (BIB)'s ba2 BCA reflects the bank's long-standing track record of consistent profitability, adequate credit risk management supported by ample reserves and collateral, and capital buffers. These credit strengths help offset rising asset risks as elevated interest rates and tighter refinancing conditions constrain small and mid-sized enterprises' (SMEs) repayment capacity.

BIB's ratings also incorporate its reliance on a wholesale, confidence-sensitive funding mix, although risks are tempered by disciplined management of asset and liability maturities and increasing diversification through locally issued debt and borrowings from foreign banks, including multilateral institutions. Intense competition in the bank's core markets, along with a cautious risk appetite and a challenging operating environment, will continue to constrain loan origination, margins and profitability in the near term.

Exhibit 1

Rating Scorecard - Key financial ratios

Scorecard ratios as of June 2026



Note: Ratios are from Moody's banking scorecard. Capital ratio is as of most recent period; Asset Risk and Profitability ratios are the worse of the most recent year-to-date period or the average of the last three years and the most recent year-to-date; Funding Structure and Liquid Resources ratios are as of the most recent year-end.

Source: Moody's Ratings

Credit strengths

- » Consistent business strategy focused on secured SME lending, complemented by payroll products to active public servants
- » Adequate capitalization
- » Asset quality reflects prudent risk management and high volume of collateralized loans

Credit challenges

- » BIB's targeted SME segment is one of the most affected by double digit policy interest rates and is more susceptible to economic downturns
- » Profitability could weaken because of intense competition in BIB's core markets
- » High reliance on confidence-sensitive funding sources

Outlook

The stable outlook on BIB's Ba2 deposit ratings reflects our expectation that the bank will maintain adequate capitalization and prudent underwriting standards, supporting its ability to navigate rising asset risks across the banking system.

Factors that could lead to an upgrade

Upward pressure on BIB's ratings could result from consistent, significant improvement in profitability fundamentals while maintaining capital buffers.

Factors that could lead to a downgrade

BIB's BCA could be downgraded if the bank experiences a sustained reduction in earnings potential driven by weakening franchise strength or adverse competitive factors. A significant deterioration in asset quality or capital position could also negatively impact its ratings.

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's.com> for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2

Banco Industrial do Brasil S.A. (Unconsolidated Financials) [1]

	06-26 ²	12-25 ²	12-24 ²	12-23 ²	12-22 ²	CAGR/Avg. ³
Total Assets (BRL Million)	8,311.2	8,512.4	7,115.0	6,649.9	6,197.1	8.7 ⁴
Total Assets (USD Million)	1,605.7	1,553.4	1,151.7	1,369.0	1,173.7	9.4 ⁴
Tangible Common Equity (BRL Million)	749.8	756.3	776.9	743.3	691.6	2.3 ⁴
Tangible Common Equity (USD Million)	144.9	138.0	125.8	153.0	131.0	2.9 ⁴
Problem Loans / Gross Loans (%)	2.8	2.1	2.2	1.1	0.5	1.8 ⁵
Tangible Common Equity / Risk Weighted Assets (%)	11.9	11.9	13.1	12.5	13.4	12.6 ⁶
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	17.6	13.7	13.4	6.8	3.6	11.0 ⁵
Net Interest Margin (%)	4.4	4.4	5.4	5.7	5.1	5.0 ⁵
PPI / Average RWA (%)	1.8	3.1	2.7	3.2	2.8	2.7 ⁶
Net Income / Tangible Assets (%)	1.1	1.0	1.1	1.6	1.4	1.2 ⁵
Cost / Income Ratio (%)	69.9	53.1	58.4	51.9	55.4	57.7 ⁵
Gross Loans / Due to Customers (%)	346.2	272.2	204.2	203.7	213.2	247.9 ⁵
Core Banking Liquidity (Non-HQLA) / Tangible Banking Assets (%)	6.9	9.3	2.9	--	--	--
Less-stable Funds (Non-LCR) / Tangible Banking Assets (%)	43.0	46.2	33.8	--	--	--

[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. Further to the publication of our revised methodology in November 2025, only ratios from annual 2024 onwards included in this report apply reported risk weights for all exposures, discontinuing our previously applied standard adjustment for certain government securities.

Sources: Moody's Ratings and company filings

Profile

BIB is a medium-sized credit-oriented bank, with assets of BRL8.3 billion, loans of BRL6.0 billion and customer deposits of BRL1.7 billion as of June 2026. It was constituted in 1988 as Banco Santista de Investimentos and was acquired by Mr. Carlos Mansur in 1994.

The bank's business strategy in Brazil consists of providing working capital loans backed by self-liquidating receivables to SMEs, in addition to corporate overdraft accounts, and import and export financing. In addition, BIB also provides payroll lending to active public employees, and, at a minor extent, private sector workers.

Headquartered in Sao Paulo, the bank has 11 physical branches spread across the main cities of Brazil (Sao Paulo, Campinas, Rio de Janeiro, Belo Horizonte, Curitiba, Recife, Goiânia, Salvador, Macapá, Manaus and Rio Branco), in addition to an offshore branch in Nassau (Bahamas).

Detailed credit considerations

High reserves and collateral support asset quality amid industry-wide increase in delinquency

We assign a ba1 Asset Risk score that reflects our problem loans to gross loans ratio of 2.8%, which we consider to be strong, and is adjusted for BIB's high single-name borrower concentration, as well as our expectation of a challenging operating environment over the next 12-18 months, as small and medium-sized enterprises (SMEs), BIB's core lending segment, continue to face elevated borrowing costs and a slowing economy.

BIB's loan portfolio is predominantly focused on secured lending to SMEs which represented 78.6% of gross loans as of June 2026. BIB had 489 customers in this segment as of June 2026 with annual sales starting at BRL100 million. Payroll loans made up the remaining 21.4%, reflecting the bank's growing presence in the segment when compared to its share of 16.4% a year earlier. The loan mix supports the short-term nature of the bank's operations, with 42.2% of loans maturing in three months and 23.6% in three to 12 months, thus allowing the flexibility to better manage credit exposure in a downturn. In terms of geography, around 87% of the SME loans are granted to companies in the southeast and south regions, the most developed regions of Brazil, while payroll loans are mainly provided to active public servants in the north of the country. Borrower concentration remains elevated, with the exposure to the 20 largest borrowers accounting for 222% of tangible common equity (TCE) in June 2026.

BIB's problem loan¹ ratio rose 36 bp in June 2026 from 2.5% in June 2025, reflecting both persistently high funding costs among SME borrowers and continued transition effects from Resolution 4,966. BIB's asset quality has remained relatively resilient amid rising

delinquencies across the Brazilian banking system, with the systemwide ratio of SME loans past due by more than 90 days increasing to 4.6% in June 2026 from 3.8% a year earlier.

As of June 2026, loan loss reserves covered 125% of problem loans, while collateralization remained above 100% of gross loans, consisting mainly of self-liquidating receivables and pledges. We expect BIB's reserves and collateral will continue to provide an adequate buffer above the loan balance in an environment where elevated policy rates continue to constrain the debt-servicing capacity of its target segment.

Return to profitability supports capitalization

We assign a ba2 score for Capital that reflects our tangible common equity to risk weighted assets (TCE/RWA) ratio of 11.9%, which we consider to be moderate, and reflects our expectation that the bank will continue to gradually rebuild capital following the impact of a fraud-related expense of around BRL100 million recognized in the first half of 2025.

BIB's Moody's-adjusted capital ratio, measured as TCE to reported risk-weighted assets (RWA), remained stable from December 2025 and rose 60 bp from 11.3% a year earlier. The increase reflects the bank's return to recurring profitability, which allowed it to rebuild retained earnings after posting a loss in 2025 because of cyber fraud expenses and provisioning tied to Resolution 4,966. The bank's capitalization remains above that of domestic peers, and we expect it to hold at current levels over the next 12-18 months, supported by consistent core earnings generation. Shareholders also have a track record of injecting fresh capital when needed.

In June 2026, BIB reported regulatory common equity capital ratio (CET1) of 12.0%. The small difference between the CET1 ratio and our TCE ratio primarily reflects our cap on deferred tax assets (DTAs) eligible for inclusion in TCE. In June 2026, DTAs accounted for 1.2% of total assets and 13.1% of TCE.

Earnings recover from non-recurring incident, though still constrained by margin pressures

We assign a ba2 score for Profitability that reflects our net income to tangible assets ratio of 1.1%, which we consider to be moderate, and is adjusted for the bank's lower earnings diversification and exposure to competitive pressure on margins.

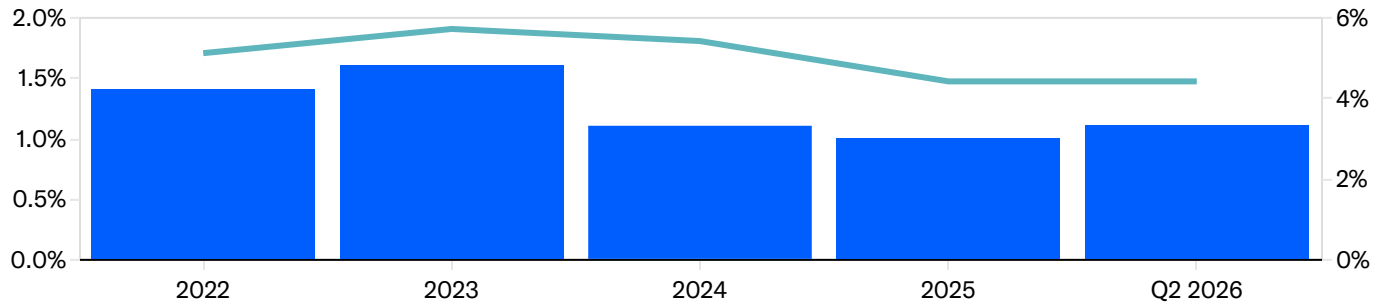
Recurring pre-tax income declined to BRL31.6 million in the first half of 2026 from BRL46.9 million a year earlier, mainly reflecting higher personnel and leasing expenses. However, reported profitability improved because the first half of 2025 included a BRL57.4 million pre-tax loss related to a cyber fraud incident at a third-party technology provider connected to Brazil's Pix instant-payment system.

BIB's net interest margin (NIM) stabilized at 4.4% in H1 2026, unchanged from H1 2025 but still below the 5.6% average between 2018 and 2024, reflecting compressed spreads amid intense competition and a more cautious risk appetite. We expect margins to remain narrow over the next 12-18 months, particularly given BIB's modest earnings diversification, as fee income still represents a small share of total revenue, a structural feature that leaves profitability more exposed to competitive pricing pressure.

Exhibit 3

Lower loan origination volumes and compressed spreads have weighed on profitability since 2024

■ Net income % Tangible assets (LHS) — NIM (RHS)



NIM: Net interest margin.

Source: Moody's Ratings

Diversified longer-tenor funding sources partly offset wholesale base

We assign a b1 score for Funding Structure that reflects BIB's less-stable funds to tangible banking assets (TBA) ratio of 46.2%, which we consider to be weak, and is adjusted to account for the bank's more concentrated wholesale funding base, exposing it to confidence-sensitive, price-driven investors.

BIB's total funding base rose to BRL7.3 billion from BRL6.7 billion a year earlier. The local funding base, including deposits, deposit-like instruments and local notes, totaled BRL4.3 billion, with 76% of resources provided by investment funds and financial institutions, up from 70% in June 2025, while companies and individuals accounted for 16% and 4% of local funding, respectively. Complementary foreign funding sources included trade financing facilities from correspondent banks and long-term funding from multilateral agencies, including the International Finance Corporation (IFC), Deutsche Investitions- und Entwicklungsgesellschaft (DEG), Société de Promotion et de Participation pour la Coopération Economique S.A. (Proparco) and the Eco-Business Fund, together totaling BRL1.8 billion as of June 2026.

As part of its strategy, BIB reduced its reliance on time deposits sourced through third-party digital platforms and interbank deposits, which declined 46.7% and 31.9% year-over-year, respectively, in the 12 months to June 2026. These time deposits offer a granular investor base but are more price-sensitive and dependent on the commercial strategies of a small number of third-party platforms. The bank is transitioning these third-party deposit issuances toward financial bills, which carry longer maturities and support the extension of BIB's overall funding tenor, benefitting from ample liquidity in Brazil's domestic capital markets.

Modest liquidity supported by disciplined asset-liability management

We assign a ba2 score for Liquid Resources that reflects our core banking liquidity (CBL) to TBA ratio of 9.3%², which we consider to be moderate.

BIB's modest liquidity is counterbalanced by the bank's tight management of its asset and liability maturities. In June 2026, the average duration of funding was 483 days, longer than the 366-day average for lending, resulting in a positive 117-day gap.

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

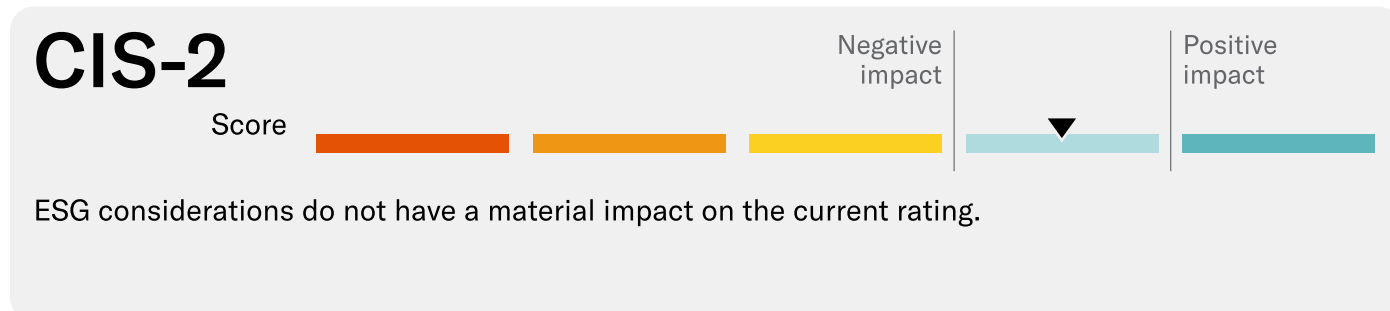
Brazil's (Ba1 stable) Macro Profile of "Moderate" is supported by the country's large and highly diversified economy with limited exposure to external financing risks. It also incorporates our improvements in the business environment for banks from recent reforms, including the independence of the central 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 real GDP growth to level off at 2.0% in 2026 and 2027, from 2.1% in 2025. Our assessment acknowledges the historically low unemployment and steady, though high, household debt, which together will help contain risks in 2026 as banks moderate risk taking. Ample domestic liquidity should keep supporting banks' funding needs.

ESG considerations

Banco Industrial do Brasil S.A.'s ESG credit impact score is CIS-2

Exhibit 4

ESG credit impact score

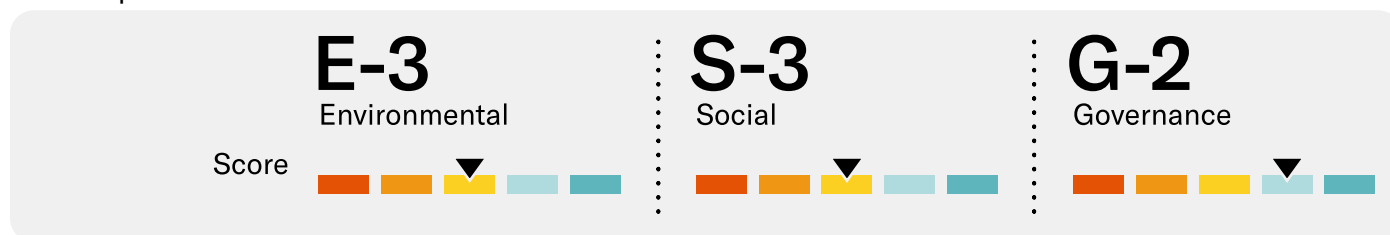


Source: Moody's Ratings

BIB's **CIS-2** reflects the limited credit impact of environmental and social factors on the rating to date. BIB is entirely owned by its founder, and has a track record of consistent earnings recurrence, supported by conservative risk management practices.

Exhibit 5

ESG issuer profile scores



Source: Moody's Ratings

Environmental

E-3. BIB has exposure to environmental risk related to carbon transition risks, in line with the predominant participation of operations with corporate clients in the bank's loan book. In line with its peers, the bank is facing mounting regulatory and stakeholder pressure to meet broader carbon transition goals.

Social

BIB faces moderate social risks related to customer relations. The bank's developed policies and procedures, mitigate risk associated with the distribution of financial products such as conduct, regulatory and reputational risks, as well as exposure to litigation; BIB has activities primarily in Brazil, a country which has imposed only moderate penalties in relation to consumer protection. Continued investments in technology and the bank's long track record of handling sensitive customer data, as well as appropriate culture and governance that ensure adherence to regulatory standards, help to manage high cyber and personal data risks. Opportunities from financial inclusion are reflected in a better than industrywide exposure to demographic and societal trends.

Governance

G-2. BIB has exposure to governance risks related to concentrated ownership. While the bank is wholly-owned by its founder, governance risks are mitigated by a good track record of consistent recurring earnings generation as well as risk management policies and procedures that align with industry best practices. Following non-recurring fraud losses involving a third-party service provider in June 2025, we expect the bank to further strengthen its governance and risk controls.

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.

Support and structural considerations

Government support considerations

There is a low likelihood of government support for BIB's rated deposits, which reflects the bank's small share of deposits and assets in Brazil's banking system.

Counterparty Risk (CR) Assessment

BIB's CR Assessment is positioned at Ba1(cr)/Not-Prime(cr)

The CR Assessment is one notch above the bank's Adjusted BCA of ba2 and, therefore, above the bank's deposit ratings, reflecting our view that its probability of default is lower at the operating obligations than at deposits. BIB's CR Assessment does not benefit from government support because such support is not incorporated into the bank's deposit ratings.

Counterparty Risk Ratings (CRRs)

BIB's CRRs are positioned at Ba1/Not-Prime

BIB's global local-currency CRRs are positioned at Ba1 and Not Prime, one notch above the bank's Adjusted BCA, reflecting the lower probability of default of CRR liabilities and our expectation of a normal level of loss given default.

Methodology and scorecard

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 6

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	2.8%	baa2	↔	ba1	Single name concentration	Expected trend	
Capital							
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	11.9%	ba2	↔	ba2	Expected trend		
Profitability							
Net Income / Tangible Assets	1.1%	baa3	↔	ba2	Expected Trend		
Combined Solvency Score		baa3		ba2			
Liquidity							
Funding Structure							
Less-stable Funds / Tangible Banking Assets	46.2%	ba3	↔	b1	Funding concentration		
Liquid Resources							
Core Banking Liquidity / Tangible Banking Assets	9.3%	ba2	↔	ba2			
Combined Liquidity Score		ba3		ba3			
Financial Profile		ba1		ba2			
Qualitative Adjustments				Adjustment			
Business and Geographic Diversification				0			
Complexity and Opacity				0			
Strategy, Risk Appetite and Governance				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)		
Deposits	0	0	ba2	0	Ba2	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 7

Category	Moody's Rating
BANCO INDUSTRIAL DO BRASIL S.A.	
Outlook	Stable
Counterparty Risk Rating	Ba1/NP
Bank Deposits	Ba2/NP
Baseline Credit Assessment	ba2
Adjusted Baseline Credit Assessment	ba2
Counterparty Risk Assessment	Ba1(cr)/NP(cr)

Source: Moody's Ratings

Endnotes

- 1 In light of the revised Brazilian accounting standards of Resolution CMN No 4,966 effective in 2025, Moody's changed the definition of problem loans to stage 3 loans.
- 2 Since BIB isn't required to report high-quality liquid assets (HQLA), CBL includes cash & equivalents, securities held at fair value and sovereign securities measured at amortized cost, applying a 50% haircut to both types of securities. While our CBL metric excludes amounts due to financial institutions, we qualitatively adjust the liquidity metric to incorporate reverse repos that are very short-term, low-risk, centrally cleared instruments.

© 2026 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 LEGAL, COMPLIANCE, INVESTMENT, FINANCIAL OR OTHER PROFESSIONAL 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 or assessment 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 or assessment 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 or assessment 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 Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' 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 ir.moody.com under the heading "Investor Relations — Corporate Governance — Charter and Governance 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., Moody's Local PA Clasificadora de Riesgo S.A., Moody's Local CR Clasificadora de Riesgo S.A., Moody's Local ES S.A. de CV Clasificadora de Riesgo, Moody's Local RD Sociedad Clasificadora de Riesgo S.R.L. and Moody's Local GT 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 61 003 399 657 AFSL 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 and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore.

EU: In the European Union, each of Moody's Deutschland GmbH and Moody's France SAS provide services as an external reviewer in accordance with the applicable requirements of the EU Green Bond Regulation. JAPAN: In Japan, development and provision of SPOs and NZAs 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.

REPORT NUMBER 1490665