

# **Credit Opinion: Bandeirante Energia S.A.**

Global Credit Research - 17 Jun 2013

Sao Paulo, Brazil

## **Ratings**

Category	Moody's Rating
Outlook	Stable
Issuer Rating -Dom Curr	Baa3
Subordinate -Dom Curr	Ba1
NSR LT Issuer Rating -Dom Curr	Aa1.br
NSR Subordinate -Dom Curr	Aa2.br
Ult Parent: Energias de Portugal, S.A.	
Outlook	Negative
Issuer Rating	Ba1
Senior Unsecured -Dom Curr	Ba1
Commercial Paper -Dom Curr	NP
Parent: EDP - Energias do Brasil S.A.	
Outlook	Stable
Issuer Rating -Dom Curr	Ba1
Senior Unsecured -Dom Curr	Ba1
NSR Senior Unsecured -Dom Curr	Aa2.br
NSR LT Issuer Rating -Dom Curr	Aa2.br

## Contacts

Analyst	Phone
Jose Soares/Sao Paulo	55.11.3043.7300

Alexandre De Almeida Leite/Sao

Paulo

William L. Hess/New York City 1.212.553.1653

## **Key Indicators**

[1]Bandeirante Energia S.A.						
ACTUALS	LTM 1Q2013	2012	2011	2010	2009	2008
(CFO Pre-W/C + Interest) / Interest Expense	4.3x	4.6x	5.9x	6.0x	8.8x	6.2x
(CFO Pre-W/C) / Debt	23.1%	26.1%	56.3%	45.4%	51.5%	63.3%
(CFO Pre-W/C - Dividends) / Debt	16.5%	19.7%	23.2%	20.9%	22.6%	13.1%
Debt / Capitalization	50.4%	51.6%	50.3%	52.7%	50.5%	47.5%

[1] All ratios calculated in accordance with the Regulated Electric and Gas Utilities Rating Methodology using Moody's standard adjustments.

Note: For definitions of Moody's most common ratio terms please see the accompanying <u>User's Guide</u>.

## **Opinion**

## **Rating Drivers**

- Solid credit metrics
- Resilient access to the local banking market
- Lower tariffs from the third tariff review implemented in October 2012
- Weaker liquidity from the acquisition of more expensive thermal energy
- The level of support of its parent company, EDB

#### **Corporate Profile**

Bandeirante Energia S.A., headquartered in São Paulo, Brazil, is an electricity distribution utility fully controlled by EDP - Energias do Brasil (EDB) that serves around 1.6 million clients in the eastern portion of the industrialized state of São Paulo. In the last twelve months ended March 31, 2013, Bandeirante reported net revenues of BRL2.5 billion (USD1.2 billion), which does not include construction revenues of BRL97 million, on sales of 14,953 GWh, representing around 3.2% of the electricity consumed in Brazil's integrated system.

#### **SUMMARY RATING RATIONALE**

The Baa3 rating for Bandeirante reflects the stable and predictable cash flows from its regulated distribution business, strong credit metrics for its rating category, the overall investment grade credit profile of the EDP-Energias do Brasil group and its resilient access to the local banking and capital markets. The ratings are constrained by the high dividend pay-out ratio, the relatively sizeable capital expenditures and the evolving Brazilian regulatory environment. The recent deterioration in liquidity further constrains the ratings.

#### **Recent Events**

On June 5, 2013, Moody's America Latina Ltda (Moody's) affirmed the ratings of Energias do Brasil S.A. (EDB, Ba1; Aa2.br), Bandeirante Energia S.A (Bandeirante, Baa3; Aa1.br), Espirito Santo Centrais Eletricas S.A. (Escelsa, Baa3; Aa1.br) and Energest S.A. (Energest, Baa3; Aa1.br). The outlook for all ratings remained stable.

On March 7, 2013, the Federal Government published decree law #7,945 with the following objectives:

- 1) Use of financial resources from the sector's regulatory charge CDE (Energy Development Account) to fund distribution companies for additional costs incurred with the acquisition of more expensive thermal power so as to avoid the permanent transfer of these costs to electricity tariffs.
- 2) Changes in the criterion to calculate PLD (spot prices) by including associated costs with the dispatch of energy out of the order of merit.
- 3) Costs associated with promoting energy safety are to be shared among all the electricity industry's players including generators, distributors, traders and free consumers.

On February 16, 2012, Moody's downgraded Energias de Portugal SA (EDP), its finance subsidiary EDP Finance BV (EDP Finance) and its Spanish subsidiary, Hidroelectrica del Cantabrico (HC Energia) to Ba1 from Baa3. Moody's also downgraded the rating of EDP and EDP Finance's EMTN program to (P)Ba1 from (P) Baa3. Concurrently, Moody's downgraded the short-term ratings of EDP, EDP Finance and HC Energia to Not-Prime from Prime-3. The assigned outlook on all affected ratings was negative.

These announcements followed Moody's earlier decision to downgrade the Republic of Portugal's sovereign rating to Ba3 with a negative outlook from Ba2 with a negative outlook, as announced on 13 February 2012.

#### **DETAILED RATING CONSIDERATIONS**

## HISTORICALLY STRONG CREDIT METRICS

Bandeirante had historically posted strong profitability and cash flows for five consecutive years up until 2011 driven by the fairly stable nature of its regulated distribution business. In this period, cash drains mainly consisted of capital expenditures and the distribution of dividends, which have been in line with the company's internal cash generation. This is evidenced by the steady financial leverage as measured by the three-year average (2009-2011) of CFO-WC over Debt ratio of 50.8% and retained cash flow (CFO Pre-WC - dividends) over debt ratio of 22.2 %.

We expected that Bandeirante would record a weaker operating performance in 2012 as result of the tariff freeze imposed by the regulator since October 2010 to partly offset the non-application of the third tariff review the company was scheduled to go through in October 2011 until October 2012 due to the delay by the regulator in publishing the methodology and operational procedures of the third tariff review. Consequently, lower operating margins would result from the combination of the tariff freeze along with increased costs belonging to both categories part A and Part B of the tariff structure. The regulator applied the same tariff freeze procedure to all distribution companies initially scheduled to have their electricity tariffs reviewed in 2011 in accordance with the operational procedures of the third tariff review.

In 2012, Bandeirante posted a weaker operational and financial performance, which was in line with what we had previously anticipated, as evidenced by CFO-WC over Debt ratio of 26.1%. This weaker cash flow ratio was tempered by much lower dividend payment of BRL 54 million in 2012 down from the previous three-year average of BRL 242.7 million, which led to a lower but still strong RCF over debt ratio of 19.7% in 2012.

In addition, Bandeirante's lower profitability and cash generation was also impacted by lower energy volume sales along with a higher than expected increase in costs with the acquisition of more expensive thermal energy in the fourth quarter of 2012.

In 2012, Bandeirante's total volume sales decreased by 1.1% to 15,003 GW/h from 15,169 GW/h in 2011, considering all market segments, i.e., regulated, free and spot. The regulated market grew by 1.4% fueled by the significant growth of the commercial and residential consumer classes, which increased electricity consumption by 9.7% and 3.5%, respectively. This significant sales growth was hurt by the regulated industrial consumers, which reduced their electricity consumption by 7%.

The free market segment, which largely consists of large industrial consumers and represents around 35.6% of the company's total volume sales, reduced its electricity consumption by 1.2% which basically reflected the relatively weaker economic activity in the state of São Paulo last year.

Increases in the cost of acquiring thermal energy hurt Bandeirante's cash flow primarily in the fourth quarter of 2012, which resulted in BRL 135.5 million in net regulatory assets, which were not recovered in the company's tariffs in 2012. The company is entitled to receive higher tariffs to recover any cost not covered by tariffs, which historically has been granted once a year to the distribution companies, which in the case of Bandeirante occurs every October.

Given the magnitude of the higher costs associated with the acquisition of the more expensive thermal energy, the federal government earlier this year published a provisional measure to be utilized to alleviate the liquidity pressure of virtually all Brazilian distribution companies due to these unrecovered costs but to also prevent the obvious negative impact these costs could have on inflation.

On March 7, 2013, the federal government approved the use of existing financial resources from the sector's regulatory fund CDE (Energy Development Account) to alleviate the tighter liquidity position experienced by most of the Brazilian electric distribution utilities due to the higher thermal energy costs. Use of these funds is to prevent the permanent transfer of the more expensive thermal power acquired during this past 12 months under what is viewed as rather unusual circumstances to the current electricity tariffs.

Bandeirante received BRL 58.8 million in the first quarter of 2013 from CDE. These payments not only reduced the amount of regulatory assets the company had been forced to recognize in 2012 but also contributed to a reduction in the pressure on their liquidity.

The debt capitalization ratio has remained stable over the past five years, which stems from the company's historical high dividend pay-out ratio close to 95% over the past five years. As of March 31, 2013, Bandeirante showed a debt to capitalization ratio of 50.4%, slightly below the previous four-year average of 51.3%.

#### **CREDIT METRICS TO IMPROVE FROM 2012**

We forecast that Bandeirante will present stronger credit metrics within our three-year projections in comparison with 2012 but weaker than the previous five years. FFO (Funds from operations) is expected to increase in 2013 either from the receipt of resources from the CDE fund or the pass-through of some portion of the regulatory asset amounts to tariffs, which reached BRL 164.2 million as of March 31, 2013. A forecasted 3% annual growth in sales volume will also contribute to higher operating margins over the next three years.

Our projections indicate that CFO before changes in working capital will average around BRL 280 million, with an

equivalent ratio over debt of around the mid thirties over the next three years down from the previous 42.6% three-year average; interest coverage should be around 4.5x in the same period. The RCF over debt ratio is expected to average 19% over the next three years largely as result of lower expected dividend payments in 2013.

The reduction in CFO in comparison with historical levels has stemmed from the application of the regulator's third tariff review in October 2012 with effects retroactive to October 2011. As a result, the regulator reduced the so-called Part B of the company's tariff structure by 22.2%, which ultimately decreased tariffs by 6.1%.

Given the expected lower dividend pay-out ratio in 2013, as recently indicated by the company's management, the debt capitalization ratio is forecasted to decrease in 2013 to the mid forties. The BRL 85 million capital injection executed by EDB in the first quarter of 2013 will also contribute to the improvement of this ratio. We believe that the company will resume the distribution of dividends to historical levels when the company accomplishes a more comfortable liquidity standing, which should bring the debt capitalization ratio to the high forties after 2014.

The projected credit metrics will decrease going forward from historical levels but are expected to remain compatible for the Baa3 issuer rating. The key factor will be how the company will balance capital expenditures and the payment of dividends in the face of lower cash from operations from the third tariff review. We will closely monitor the company's performance to evaluate how the company will balance the interests of shareholders and creditors.

#### LOWER TARIFFS FROM THE TARIFF REVIEW IN OCTOBER 2012

According to the Brazilian electricity regulatory model, all Brazilian electricity distribution companies are subject to periodic tariff reviews every four to five years in order to transfer any productivity gains to consumers.

In October 2012, the regulator ANEEL applied the new methodology for its tariff review to Bandeirante, which transferred productivity gains to consumers. The application incorporated a lower WACC of 7.5% down from 9.95% in the second tariff review in the face of lower capital costs (equity and borrowings) experienced among the Brazilian electricity distribution companies. The new procedures of the third tariff review have been applied to the Brazilian distribution companies since 2011 and are expected to be completed in 2013.

In accordance with ANEEL's technical note #352/2012 on the application of the operational procedures of the third tariff review on Bandeirante' tariffs, the company's part B of the tariff structure was reduced by 22.2%, with an equivalent reduction in tariffs by 6.1%. As a result, the company's regulatory EBITDA would be around BRL 290 million at the currency value as of October 01 , 2012, with effects retroactive to October 2011.

The part B of the tariff formula mainly consists of the operating costs (reference company), depreciation and the remuneration amount. Bandeirante has consistently posted higher levels of EBITDA in comparison with that envisaged in the regulator's tariff methodology, which suggests that Bandeirante has adequately managed its operating costs. We foresee that the company's normalized EBITDA will most likely keep exceeding the parameters determined by the regulator.

### HIGHER VOLATILITY IN FFO FROM THE IMPLEMENTATION OF IFRS

The implementation of the International Financial Reporting Standards (IFRS) comprising the 2009, 2010, 2011 and 2012 financial statements of Brazilian public companies, i.e. companies with shares traded at the Brazilian stock market or that issued public debentures has caused some difficulties in the interpretation of their financial statements.

Unlike the previous Brazilian GAAP accounting method, the International Financial Reporting Standards (IFRS) does not recognize the concept of regulatory assets and liabilities. As a result, Moody's expects higher volatility in cash flow parameters as measured by funds from operations (FFO) under IFRS since any change in the so-called regulatory assets and liabilities will be recognized either as an expense or revenue item in the profit-and-loss statement.

The change of the accounting principles from the Brazilian GAAP to the IFRS for Bandeirante's 2009, 2010, 2011 and 2012 financial statements does not interfere with our comparative analysis of the utility's cash flow statements for these years against previous years. This stems from the fact that the main cash flow parameter used in Moody's methodologies for electric utilities, cash from operations pre- working capital needs (CFO Pre-WC), already excludes any variations in regulatory assets and liabilities.

Under the IFRS accounting procedures the increased supply costs will be expensed in the same period the cash is disbursed, generating a reduction in FFO. In the following period, FFO should expand in light of the expected

increase in tariffs to compensate for the increased costs.

#### LEVEL OF SUPPORT OF EDP PORTUGAL

The ratings assigned for the EDB group also factor in the ownership by its parent company, EDP Portugal (Ba1; negative outlook). While EDP does not guarantee EDB's debt, the Portuguese parent expects that its subsidiaries will remain financially self sustainable, as stated in its published policies. We believe that the Brazilian operations of EDP play an important role in the group's growth strategy. The rating downgrades and changing the outlook to negative could potentially limit the ability of EDP Portugal to eventually step in to support its subsidiaries with a material undertaking in case of financial distress.

In this context, we believe that ownership by EDP does not support a one notch of uplift of the rating on the global scale. EDB's Ba1 issuer rating is largely based on EDB's overall investment grade characteristics on a consolidated basis supported by adequate credit metrics for the rating category, and the relatively stable cash flows emanating from the regulated distribution utilities and the long-term supply contracts underpinning the generation business along with continued conservative financial management.

In addition we believe that the Brazilian subsidiaries, mainly the distribution companies, are to a large extent insulated from any potential credit deterioration of their ultimate parent company. This results from regulatory oversight and existing financial covenants embedded in most of the debt contracts, which prevent those subsidiaries from increasing their leverage over a certain agreed limit.

We further believe that EDP Portugal will continue to support the activities of EDB by preserving the current strong capital structure of its Brazilian subsidiary; however, we will continue to monitor the evolvement of the creditworthiness of EDP Portugal and the potential impact that any further rating deterioration could have on the financial strength of EDB.

#### **EVOLVING BRAZILIAN REGULATORY ENVIRONMENT**

A major important factor constraining the ratings has been the Brazilian regulatory framework, which has a history of being unpredictable but has undergone substantial change over the past several years. The electricity regulatory model implemented in 2004 has mitigated the uncertainties brought about by constant changes in the Brazilian regulatory framework over the past two decades. This model provides a more supportive environment for acceptable rates of return since the current rules for electric utilities have been transparent and technically driven, thus increasing the predictability of return on invested capital.

Nonetheless, we still believe there is a lower assurance of timely recovery of costs and investments in Brazil since the new framework has not yet experienced a prolonged period of high inflation, exchange rate devaluation or electricity rationing. Potential future electricity shortages due to a relatively tight reserve margin, limited independence of the regulator and minimal jurisprudence backing the new regulatory framework were also taken into consideration in our evaluation of this factor.

The publication of the federal government's provisional measure #579 last year has caused uneasiness within the electricity industry because the government's proposal to renew the generation and transmission concessions expiring between 2015 and 2017 was materially more costly versus the expectations of most market participants, including both concessionaries and investors.

Regardless of the legal aspects involving the implementation of this provisional measure which could potentially generate lengthy series of judgments and appeals in the Brazilian courts, the manner in which the government handled the whole process since the initial disclosure and subsequent discussion and communication was very poorly handled in our opinion since it has created uncertainties about the quality and the level of supportiveness of the Brazilian electricity regulatory environment.

For Moody's, the stability and the predictability of the regulatory framework (Factor 1) and the ability to recover costs on a timely manner (Factor 2) are major drivers in the rating assessment of a given issuer pursuant to our methodology "Regulated Electric and Gas Utilities". We believe that the significant improvements that the Brazilian regulatory framework had accomplished since the new model was implemented in 2004 have been tempered to a certain extent by the manner in which the federal government addressed the renewal of concessions expiring between 2015 and 2017.

The current low Ba rating assigned to these two factors largely reflects the increased levels of uncertainty relative to the continued development of the Brazilian regulatory framework and the timeliness of recovering costs and earning an adequate return recognizing that there have been inconsistencies in the way the framework has been

applied as evidenced by some of the operational procedures contained in the federal government's provisional measure #579.

## Liquidity

Like most Brazilian companies, Bandeirante does not have any committed banking facility to accommodate any unexpected cash disbursements. The company has been facing a tight liquidity position since the last quarter of 2012 as it has been forced to acquire the more expensive thermal energy at unusual very high prices. Typically, Bandeirante, as any other distribution company, is eligible to be reimbursed trough the pass-through mechanism to tariffs of any increased cost of part A of the tariff structure, which consists of the so-called non-controllable costs.

In light of the severe liquidity stress faced by virtually all Brazilian distribution companies during this period and to avoid the permanent transfer of the incurred increased energy costs to tariffs the federal government has stepped in by determining the transfer of resources from the CDE fund. In the first quarter of 2013, Bandeirante received BRL 58.8 million from this fund. As of March 31, 2013, Bandeirante was eligible to receive an additional BRL164.2 million, which management believes will be mostly received in 2013.

Moody's understands that Bandeirante has successfully managed its liquidity position considering the rather unfavorable environment the Brazilian distribution companies have been facing since mid 2012. In addition to the receipt of the CDE funding, its shareholder EDB capitalized Bandeirante by BRL 85 million in the first quarter of 2013.

More important for the company's somewhat more comfortable current liquidity standing was management's ability to reduce capital expenditures and the payment of dividends in 2012, which allowed Bandeirante to maintain a virtually unchanged level of debt that is largely concentrated in the long-term despite material shrinkage in cash from operations during this period. Total adjusted debt increased from BRL 760 million in 2011 to BRL 808 million in 2012, which basically stemmed from the company's recognition of an additional BRL 62 million in unfunded pension fund liabilities.

We believe that EDB's resilient access to the local banking and capital markets is an important mitigating factor for potential additional pressure on liquidity. Nevertheless, we understand that it is very important that EDB and its subsidiaries, including Bandeirante, are able to secure long-term funding and balance capital expenditures and the distribution of dividends to improve their capital structure and liquidity standing so that they remain commensurate with the Baa3 rating category.

We view the current liquidity standing of the holding parent company EDB and some of its subsidiaries as being inadequate when compared with the typical liquidity characteristics of other investment grade issuers in Brazil. EDB's weaker liquidity position has resulted from the delay in the start-up of operations of the PECEM project and the forced purchase of higher priced energy to meet the obligations of its PPAs and the poorer financial performance of its distribution subsidiaries Bandeirante and Escelsa.

In order to support the weaker cash generation of its subsidiaries and added capital injections in PECEM, EDB has tapped the local market over the past ten months by raising BRL 950 million during this period. Going forward, EDB will need to be more effective in handling its overall liquidity position given the scheduled maturity of BRL 450 million in February 2014, the maintenance of a historically high dividend pay-out ratio along with sizeable capital expenditures over the next couple of years.

#### **Corporate Governance**

Bandeirante's rating considers that EDB has corporate governance practices that are above the average of Latin American issuers. EDB is a publicly listed company with shares traded on the Novo Mercado of Bovespa. While its shares are only traded on the São Paulo stock exchange, the company has undertaken several steps beyond what is legally required to adapt the U.S. Sarbanes-Oxley act as part of its commitment of practicing superior standards of corporate governance.

EDB's Board of Directors is made up of eight members, of which four are considered independent (two appointed by minority shareholders). The board relies on three support committees: Audit, Sustainability and Corporate Governance, and Compensation. The Audit and the Sustainability Committees are permanent in nature and are comprised of three members where at least one is independent. There is also a Fiscal Council composed of three members and three alternates elected for a maximum term of one year; however, this committee is non-permanent and convened only when requested by shareholders.

## **Rating Outlook**

The stable outlook derives from our expectation that Bandeirante will continue to prudently balance capital expenditures and the distribution of dividends in the light of expected lower cash generation from the application of the third tariff review so that the company's credit metrics remain compatible with the Baa3 rating category. As we previously commented, CFO is bound to improve in 2013 in comparison with 2012 given the expectation that most of the existing BRL 164.2 million in regulatory assets will be received this year.

The stable outlook also reflects our expectation that EDB on a consolidated basis will continue to prudently manage capital expenditures in tandem with its subsidiaries' cash flow capacity and will efficiently handle its liquidity position so that retained cash flow remains above 10% of total debt on a consolidated basis.

## What Could Change the Rating - Up

Given the recent deterioration in EDB' consolidated credit metrics and our expectation that Bandeirante is slated to resume the high payment of dividends in 2014 an upgrade rating action is unlikely in the short to medium term. Quantitatively, an upgrade could result from retained cash flow to total debt of above 20% and interest coverage above 4.0x on a sustainable basis along with an expectation that EDP Portugal will not undertake any actions to materially alter the current capital structure of EDB.

## What Could Change the Rating - Down

A downgrade of Bandeirante could be triggered by a material deterioration of its credit metrics so that RCF over debt ratio is below 10% and interest coverage is below 3.5x on a sustainable basis. A downgrade of EDB's ratings could trigger a downgrade of Bandeirante, which could occur if the consolidated RCF over debt ratio is below 10% and interest coverage is below 3.5x on a sustainable basis. Deterioration in the level of supportiveness of the Brazilian regulatory environment for regulated utilities could also prompt a negative rating action for Bandeirante and EDB.

#### **Other Considerations**

The principal methodology used in rating Bandeirante was Moody's Regulated Electric and Gas Utilities Rating Methodology, published in August 2009 and available on www.moodys.com in the Rating Methodologies subdirectory under the Research & Ratings tab. Other methodologies and factors that may have been considered in the process of rating this issuer can also be found in the Rating Methodologies sub-directory on Moody's website.

### **Rating Factors**

#### Bandeirante Energia S.A.

Regulated Electric and Gas Utilities	Current 12/31/2012		Moody's 12 - 18 month Forward View	
Factor 1: Regulatory Framework (25%)	Measure	Score	[1]Measure	Score
a) Regulatory Framework (25%)		Ва		Ва
Factor 2: Ability to Recover Costs and Earn Returns (25%)		Ва		Ва
Factor 3: Diversification (10%)				
a) Market Position (10%)		Ва		Ва
b) Generation and Fuel Diversity (0%)				
Factor 4: Financial Strength, Liquidity & Financial				
Metrics (40%) [2]				
a) Liquidity (10%)		Ва		Ва
b) CFO pre-WC + Interest / Interest (7.5%) (3yr Avg)	5.6x	Α	4.5x - 4.8x	Α
c) CFO pre-WC / Debt (7.5%) (3yr Avg)	42.5%	Aaa	30.8% - 33.2%	Aa
d) CFO pre-WC - Dividends / Debt (7.5%) (3yr Avg)	21.2%	Α	10.1% - 24.4%	Baa
e) Debt / Capitalization or Debt / RAV (7.5%) (3yr	51.5%	Baa	46.1% - 49.2%	Baa

Avg)			
Rating:			
a) Methodology Implied Issuer Rating	Baa3		Baa3
b) Actual Issuer Rating			Baa3

[1] 12 - 18 month Moody's forecast [2] 3-year historical average



© 2013 Moody's Investors Service, Inc. and/or its licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. ("MIS") AND ITS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. 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. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK. INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK. MARKET VALUE RISK. OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE. AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

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. 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 rating process. Under no circumstances shall MOODY'S have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of MOODY'S or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis,

interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if MOODY'S is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities. Each user of the information contained herein must make its own study and evaluation of each security it may consider purchasing, holding or selling. NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

MIS, 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 MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <a href="https://www.moodys.com">www.moodys.com</a> under the heading "Shareholder Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

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 clients. It would be dangerous for retail clients to make any investment decision based on MOODY'S credit rating. If in doubt you should contact your financial or other professional adviser.