

MOODY'S

INVESTORS SERVICE

Credit Opinion: **Vianorte S.A.**

Global Credit Research - 22 May 2015

Brazil

Ratings

Category	Moody's Rating
Outlook	Stable
Issuer Rating -Dom Curr	Ba1
Senior Secured -Dom Curr	Ba1
Senior Unsecured -Dom Curr	Ba1
NSR Senior Secured	Aa2.br
NSR Senior Unsecured	Aa2.br
NSR LT Issuer Rating	Aa2.br

Contacts

Analyst	Phone
Marcos, De Oliveira/Sao Paulo	55.11.3043.7300
Jose Soares/Sao Paulo	
William L. Hess/New York City	1.212.553.1653

Key Indicators

[1]VianorteS.A.	12/31/2014	12/31/2013	12/31/2012	12/31/2011	12/31/2010
Cash Interest Coverage	6.1x	7.8x	102.2x	4.3x	2.7x
FFO / Debt	41.1%	47.0%	30.7%	25.9%	20.1%
Moody's Debt Service Coverage Ratio	1.2x	1.6x	0.7x	1.0x	1.1x
RCF / Capex	4.0x	8.1x	16.2x	18.0x	4.6x
Concession Life Coverage Ratio	1.3x	1.8x	0.8x	1.2x	1.3x

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

Note: For definitions of Moody's most common ratio terms please see the accompanying [User's Guide](#).

Opinion

Rating Drivers

- Strong operating performance supported by traffic growth of 9.6% in 2013 and 3.2% in 2014
- Relatively stable regulatory environment in the state of Sao Paulo
- Operates within a relatively small service area with a short remaining life of concession
- Track record of high dividend distributions
- Potential higher leverage to fund capital expenditures at parent Arteris' federal concessions

Corporate Profile

Vianorte S.A. (Vianorte) is an operating subsidiary of Arteris S.A. (Arteris, not rated). Arteris (f/k/a OHL Brasil S.A.) is a holding company with approximately 3,250 kilometers of operating toll roads under concession in Brazil consisting of four concessions in the state of Sao Paulo (Baa2 negative) and five federal concessions in the states of Sao Paulo, Minas Gerais, Rio de Janeiro, Parana and Santa Catarina. Combined tolled traffic was 726 million equivalent vehicles in FY 2014 (717 million in FY 2013). In 2014, Vianorte's Revenues and EBITDA represented, respectively, 8% and 1.7% of Arteris' consolidated Tolls Revenues and EBITDA. In 2014, Vianorte reported net sales of BRL295 million, EBITDA of BRL269 million, and net profit of BRL96 million, using Moody's standard adjustments.

Vianorte has a 20-year concession to operate the toll road services of four small adjacent roads in the interior of the state of Sao Paulo, which the state regulatory agency ARTESP granted under a single concession in March 1998, which leaves less than 3 years remaining.

Vianorte is indirectly controlled by Abertis Infraestructuras S.A. (Abertis, not rated) and by Brookfield Brazil Motorways Holdings SRL, (Brookfield Brazil, not rated) through their respective ownerships of 51% and 49% in Participes en Brasil S.L. (Participes, not rated), which owns 69.3% of Arteris. Abertis, a company listed on the Spanish stock exchange for more than 25 years, having been included in the IBEX 35 since its creation. It operates in two sectors in 12 countries: highway concessions and telecommunications infrastructure with public-private partnership contracts and highway concessions worldwide.

Brookfield Brazil Motorways Holdings SRL is indirectly controlled by Brookfield Asset Management Inc., a company listed on the NYSE and the Toronto Stock Exchange, with than US\$200 billion in assets under management. Brookfield Asset Management has been operating in Brazil since 1899, with a direct or indirect presence in about half of the Brazilian with revenues of \$1.8 billion (10% of the group's total sales) and assets of \$11.8 billion (9% of the group's total assets). In Brazil, it operates primarily in the real estate, renewable energy, infrastructure and private equity segments.

Recent Developments

On March 2, 2015 Brazil's President Dilma Roussef approved Law 13.103 ("Lei dos Caminhoneiros"), which: (i) suspended the idle axles charge for unloaded trucks; (ii) defined the overload weight increase to 10% from 5%, which may result in more maintenance costs for the toll roads; (iii) created more "resting/supporting" areas for trucks/truck drivers; (iv) exonerated truckers from penalties from the last two years related to overload-weight.

On June 30, 2014, Vianorte had a 5.58% tariff adjustment approved to the period July 1st, 2014 up to June 30, 2015, 0.75% lower than the inflation rate for the period. Vianorte filed a lawsuit against the regulator to receive the full index adjustment provided in the concession contract which was the IPC-A of 6.37% for the period. ARTESP said the lower percentage was to counterbalance the benefits Vianorte had with the 50% reduction of the variable concession fees payable to ARTESP to 1.5% from the previous 3.0% of gross toll revenues and by the charge of idle truck axles since July 28, 2013.

On February 03, 2014, Moody's America Latina (Moody's) assigned a Ba1 rating on the global scale and Aa2.br rating on the Brazilian National Scale to the 36-month unsecured BRL150 million non-convertible debentures, which was issued by Vianorte S/A in March 2014. At the same time, Moody's affirmed Vianorte's Ba1 and Aa2.br issuer ratings the Company's outstanding senior secured debentures which mature in 2017. The outlook was stable for all ratings. The proceeds of this issuance will be used to prepay maturing debt, including BRL50 million of existing debentures as well as for general corporate purposes, including CAPEX, dividend distributions and intercompany loans to the parent holding company.

On June 24, 2013, the Governor of the State of Sao Paulo suspended the annual tariff adjustment for all toll road concessionaires. Toll tariffs, which were scheduled to be adjusted for inflation on July 1st, were frozen for one year, until July 1, 2014. The Governor's decision followed intense public protests against tariff increases (later revoked) in the public transportation system in the city of Sao Paulo.

In August 2012, Abertis and OHL Concesiones S.A. (OHL, Ba2, negative) reached an agreement through which Abertis purchased 100% of the shares of Participes, previously owned by OHL. As a result, Vianorte is now indirectly controlled by Abertis and by Brookfield through their respective ownerships of 51% and 49% in Participes. The operation involved (i) the exchange of 100% of Participes' capital stock for 10% of Abertis' capital stock, (ii) the assumption, by Abertis, of approximately R\$1.2 billion in intercompany loans between OHL and

Participes, and (iii) the payment of EUR 10.7 million. In order to make the operation feasible, Abertis formalized an agreement with the Canadian fund Brookfield for the joint acquisition of Participes. All government approvals were received and the transaction was finalized in December 2012, which allowed Abertis to become the global leader in highway management.

Rating Rationale

The Ba1 and Aa2.br issuer ratings of Vianorte reflect the mature nature of the concession, as evidenced by its solid and stable historic performance. The stable outlook reflects our opinion that Vianorte's operational performance will remain solid during the remaining life of the concession in light of strong credit fundamentals boosted by the expected continued growth in the Brazilian GDP. The rating is also supported by solid credit metrics for the rating category and the relatively strong track record of operating performance since 1998 and by the track record of a regulatory environment that has been generally supportive of operating toll road concessionaires in the State of Sao Paulo.

The rating also incorporates potential increases in leverage as a result of potential transfer of resources to the holding company to help finance large capital expenditure programs at the parent's federal concessions, planned contract amendments, potential investments in new concessions, as well as dividend distributions to shareholders. The rating is further pressured by the rather short remaining life of the Vianorte' concession, which expires in less than three years with little prospects for renewal or extension coupled with the potential for issues arising at concession termination with reimbursement for the non-depreciated assets utilized from the Government of the State of Sao Paulo.

Covenants included in the debentures limit the distribution of dividends and a significant leverage increase of Vianorte. Specifically, the covenants limit the maximum amount of net debt to 3.5x the annual EBITDA minus fixed concession payments and require cash coverage of short term debt obligations to be equal to or higher than 1.2x. As of December 30, 2014, these covenants were relatively loose given that the net debt to EBITDA ratio was 1.5x while the cash coverage of short-term debt was higher than 5.0x, according to the definition of the covenants.

DETAILED RATING CONSIDERATIONS:

Asset Type and Service Area

Vianorte has a 20-year concession to operate the toll road services of four small adjacent roads in the interior of the State of Sao Paulo, which the State regulatory agency ARTESP granted under a single concession in March, 1998, which leaves less than 3 years of remaining life. The four roads consist of 237 kilometers and 4 toll plazas which had annual traffic of approximately 38 million of equivalent vehicles in 2013. The region covered by the concession includes fourteen cities with an estimated population of around 1.1 million people.

Vianorte's assets operate within an economically robust service area although the demographics are relatively smaller and less diversified than for other operating roads in the region; however, there is limited competition envisioned over the remaining life of this concession.

The most populated cities along Vianorte's concession area are: Ribeirao Preto, Jardinopolis and Sertaozinho. The economic base of this service area is well diversified. Ribeirao Preto is one of the wealthiest regions of the country with a relevant presence in agricultural businesses. The primarily agricultural commodities produced in the region are oranges and sugar cane. The robustness of the service area also benefits from the traffic of industrialized products to and from the North of the state of Sao Paulo and the South of Minas Gerais state, which contributes to a higher diversification of the traffic in the region. Despite a relatively strong economic base, a higher rating on this sub-factor is limited by the uncertainty about the trend of demographics over time.

We consider Vianorte well positioned for an Baa rating on this factor, primarily due to the strong economic characteristics of the area in which it operates and the maturity of its road network that has relatively stable and predictable traffic levels and operating cash flows. Fundamentals of the service areas are also considered favorable given the strong traffic correlation with past national economic trends, and the increasing car ownership rates in the most densely populated cities.

As Brazil's largest state, Sao Paulo has a population of about 40 million and contributes more than one-third of the country's GDP. The State's economic base is highly diversified, reflecting its role as the country's industrial engine. Wealth levels are relatively high compared to the national average, and the State's economic performance has outpaced Brazil's in recent years. We estimate the GDP per capita in the service area of Vianorte is currently about USD12,000, which is among the highest in Latin America. Historically, Brazil has had a dynamic market-

oriented economy characterized by a diversified export base; however, according to Moody's forecast, Brazil's overall GDP growth will be in the range of 1% negative in 2015.

Traffic Profile and Performance Trends

Vianorte's seventeen-year history of tolled traffic shows that the user profile is well balanced between heavy trucks and commuters. Commercial vehicles currently represent around 57% of the road traffic in terms of equivalent vehicles. Although the traffic of freight vehicles tends to be more volatile and move in tandem with the country's GDP, traffic at Vianorte has been relatively predictable. From 2010 through 2014, Vianorte's toll traffic presented an annual average growth rate of 6.4%, which compares slightly more favorably with the average Brazilian GDP performance during the same period of 3.2% per year. In 2014, tolled traffic at Vianorte increased 3.2% reaching 38.9 million equivalent vehicles when compared to 2013 levels of 37.7 million equivalent vehicles mainly as a result of the expansion in the agricultural business, the use of some of Vianorte's roads to reach Santos port as a way to export soya in the first semester 2014 due to the flood of Madeira river and by the fact that idle truck axles started to be charged on July 01, 2013 as a government measure to compensate for the tariffs being frozen from July 2013 to July 2014.

Concession and Regulatory Framework

We view the regulatory environment for toll road operators in Brazil, and specifically in the State of Sao Paulo as generally supportive in terms of transparency for the tariff-setting mechanism and protection against events outside the control of the concessionaire. Despite being relatively new and not completely independent of political pressure, the rated private toll road concessions have a reasonable track record of cost recovery and adequate returns on invested capital. Toll rates are adjusted annually by inflation according to the General Price Index (IGP-M).

The Agencia Reguladora de Servicos Publicos Delegados de Transporte - ARTESP is the transportation regulatory agency responsible for overseeing toll road concessions in the State of SP. ARTESP has been generally supportive of toll road concessionaires in the State of Sao Paulo, as demonstrated by previous amendments made in December 2006 when ARTESP extended the concession of Intervias for an additional 95 months in order to restore the financial equilibrium of the concessionaire as a result of events outside management's control. The extension was triggered by an increase in costs associated with the taxes on revenues that were not clearly defined in the original concession agreement. Another example was the extension of the concession contract of Autoban and Ecovias dos Imigrantes as a result of negotiations between the companies and ARTESP which restored the economic/financial equilibrium of those concession contracts.

We view this as evidence of the supportiveness of the regulatory framework. Toll road tariffs are adjusted annually every year in the month of July. However, on June 27, 2013, the Governor of the State of Sao Paulo suspended the annual tariff adjustment for all toll road concessionaires. Toll tariffs, which were scheduled to be adjusted for inflation on July 1st, were frozen for one year, until July 1, 2014. The Governor's decision followed intense public protests against tariff increases (later revoked) in the public transportation system in the city of Sao Paulo.

In order to preserve the financial-economic equilibrium of the concessionaires' contracts the main compensating measures announced by the State Governor were: (i) a 50% reduction of the variable concession fees payable to ARTESP to 1.5% from the previous 3.0% of gross toll revenues; and (ii) idle truck axles started to be charged on July 28, 2013. These additional measures taken to preserve the economic/financial equilibrium of the concession confirms our opinion of ARTESP's continued support of private-sector concessionaires in the State of Sao Paulo.

Nevertheless, according to our Operating Toll Roads rating methodology, we have adjusted the rating of subfactor 3a ("Ability to Increase Tariffs") to Baa from Aa, which reflects our perception of potentially greater political interference and increased uncertainty as to the consistency and predictability of the concession and regulatory framework (Factor 3 in our methodology).

Additional compensation for new investments or changes in business circumstances that do not include traffic volatility are subject to negotiation. At termination, the assets associated with the toll road concession are to be returned to the concession authority, and non-depreciated investments required to maintain the quality of road service during the last five years of operations are subject to indemnification; however, it should be noted that no toll road concessions have terminated to date so there is no evidence of how well the indemnification process will work.

Given Vianorte's strong cash flow generation of BRL160 million per year on average over the past three years and limited maintenance capital expenditures of just BRL19 million in 2014, overall credit metrics will remain at

sufficiently strong levels for the current rating category based on Moody's sensitivities. An extension of concession life would be viewed positively.

Financial Policy

Among Arteris' concessions in the State of Sao Paulo, Vianorte has a low planned CAPEX per year (BRL2 million on average) other than maintenance for the next 3 years.

Revised estimates from Arteris indicate a significant additional amount of CAPEX (BRL4 billion) will be spent between 2015 and 2018, mostly related to its five federal concessions, which had their respective concession contracts amended given delays due to environmental licensing, project redesign, and land expropriations.

Nevertheless, the negative economic impact resulting from said delays has been relatively minor to date. The financing for this CAPEX is expected to come from a combination of dividends and intercompany loans from the state owned concessions and new debenture issuances as well as additional financing from BNDES.

As of December 31, 2014, the group had BRL532 million of long term credit lines (up to 15 years) approved by BNDES to finance its planned CAPEX. Although Arteris' access to the capital markets and to the BNDES has been resilient, significant additional investments could lead to a deterioration in liquidity and further borrowing needs when access to the capital markets are less favorable.

Consequently, the ratings of Vianorte are constrained by the significant cash needs of Arteris, the parent company, which is forecasted to require sizeable dividends as well as increased leverage in order to pay for ongoing and new CAPEX investments at the federal toll road concessions. Consequently, we have lowered our rating for the Financial Policy factor from Baa to Ba to reflect this more aggressive financial strategy. However, the following financial covenants embedded in the recent debenture issuance limits the Company's re-leveraging capability, a mechanism which could be pursued by the Company to raise funds to on-lend to the parent company in the form of related-party debt. Vianorte's last debenture issuance includes the following financial covenants: i) Net Debt-to-EBITDA less fixed concession payments equal to or less than 3.5x and ii) Debt Service Coverage Ratio equal to or higher than 1.2x.

The indenture of the debenture has also a CAP of BRL75 million for additional intercompany loans on top of the current BRL164 million exposure as of December 31, 2014. Our projections indicate that the covenants will remain achievable throughout the duration of the debentures even if Vianorte transfers the BRL 75 million in intercompany loans with the assumption of a 100% dividend pay-out. Further, the short remaining life of the concession somewhat limits Vianorte's leveraging capability in the absence of an extension of concession term.

Our projections indicate that the covenants will remain achievable throughout the duration of the debentures even assuming the maximum 100 dividend pay-out, but just considering the repayment of the intercompany loans in 2018, the last year of the concession, instead of from 2015 to 2018 as the company has forecasted.

Given the expectation that Vianorte's cash flow generation will be higher than BRL200 million per year on average until the end of the concession and capital expenditures will be BRL30 million per year on average including maintenance CAPEX, our forecast shows overall credit metrics are expected to remain strong for the rating category even if Vianorte doesn't receive repayment of the intercompany loans until 2018 from its holding company parent.

Coverage and Leverage

Vianorte has strong credit metrics for the rating category. Toll related revenues in 2014 increased 6.0% compared to 12.1% in 2013, stemming from the 3.2% increase in toll traffic which was also aided by the fact that idle truck axles started to be charged on July 01, 2013 to preserve the financial-economic equilibrium of the concessionary contract as on June 24, 2013, the Governor of the State of Sao Paulo suspended the annual tariff adjustment for all toll road concessionaires.

From 2012 to 2014, Vianorte's FFO / Debt was 40.5% on average with a corresponding cash interest coverage ratio of 39.4x, while the RCF to Capex was 9.7x. These ratios slightly improved over the prior three year period as a result of the previously mentioned higher traffic and lower operating expenses. In 2014, despite the BRL150 million debenture raised in March 2014 the leverage and coverage ratios were not significantly affected due to the growth in cash generation.

Going forward, we see these metrics improving as cash generation is forecasted to continue to increase while CAPEX will not significantly increase. The above mentioned forecasted ratios include the remaining capital

expenditures of about BRL102 million from 2015 to 2018 including the maintenance CAPEX, which will allow constant free cash generation to start to reduce the debt position.

Liquidity

Like other Brazilian companies, Vianorte does not have committed banking facilities to face any unexpected cash disbursements. In spite of this lack of committed credit facilities, the company has an adequate liquidity position in light of its sizeable cash position of over BRL182 million as of December 31, 2014 and the company's favorable debt profile with short-term debt reflecting only the current portion of long term debentures of BRL117 million.

Vianorte has a healthy cash generation and capital structure financial profile. As a mature operating concession, capital expenditures primarily consist of maintenance requirements of approximately BRL30 million per year and the other main cash use is the BRL50 million annual payment to the granting authority (the Department of Highways of the State of Sao Paulo) in the form of fixed concession payments.

The major credit risk will be further borrowings to meet the cash needs of its shareholders, either through dividend payments or through the extension of additional inter-company loans. These new borrowings by the parent could deteriorate the company's liquidity position if the capital markets were to become less favorable. However, the existing debt structure offers investors some debt protection by limiting the maximum level of debt to the equivalent of 3.5x EBITDA and cash coverage of short term debt obligations to a minimum of 1.2x. In the indenture of the debenture there is a limit of additional intercompany loans of BRL75 million which should give creditors some comfort.

Rating Outlook

The stable outlook reflects our view that Vianorte will continue to generate stable cash flows given the mature nature of the concession, the expected growth of the domestic GDP and by the experienced management team remaining focused on improving operating performance. Moody's expects that the payment of dividends and extension of intercompany loans will continue for the remainder of the concession, but that both potential cash outlays will be prudently managed so that the credit metrics remain within the proposed financial covenants. The stable outlook also reflects our expectation that the concession and regulatory framework in the State of Sao Paulo will continue to be supportive of private sector toll road concessionaires, and that tariff adjustments in July 2015 will resume pursuant to the terms and conditions of the concession contract.

What Could Change the Rating - Up

The rating could be upgraded if the company were to steadily improve its liquidity profile and produce credit metrics in line with historical performance so that the FFO to debt ratio stays above 40% and the interest coverage stays above 4.0x on a sustainable basis.

What Could Change the Rating - Down

The rating or the outlook could be downgraded if there is a significant and sustained deterioration in credit metrics so that FFO to debt ratio falls below 30% and interest coverage ratio remains below 3.0x for an extended period. Deterioration in the credit quality of the parent holding company Arteris S.A., further political interference in the normal course of business of the Company or a deterioration in the quality of the concession and regulatory framework could also prompt a downgrade rating action.

Rating Factors

VianorteS.A.

Privately Managed Toll Roads Industry Grid [1][2]	Current LTM 12/31/2014		[3]Moody's 12-18 Month Forward ViewAs of 5/15/2015	
Factor 1 : Asset Type and Service Area (25%)	Measure	Score	Measure	Score
a) Asset Type	Ba	Ba	Ba	Ba
b) Competing Routes	Aa	Aa	Aa	Aa
c) Economic Resilience of Service Area	Baa	Baa	Baa	Baa
Factor 2 : Traffic Profile and Performance Trends (15%)				

a) Traffic Profile	Ba	Ba	Ba	Ba
b) Track Record and Stability of Tolloed Traffic	A	A	A	A
c) Traffic Density	Baa	Baa	Baa	Baa
Factor 3 : Concession and Regulatory Framework (10%)				
a) Ability and Willingness to Increase Tariffs	Baa	Baa	Baa	Baa
b) Protection Provided by the Concession and Regulatory Framework	Baa	Baa	Baa	Baa
Factor 4 : Financial Policy (10%)				
a) Financial Policy	Ba	Ba	Ba	Ba
Factor 5 : Coverage and Leverage (40%)				
a) Cash Interest Coverage	39.4x	Aaa	7.3x	Aa
b) FFO / Debt	40.5%	Aaa	58.1%	Aaa
c) Moody's Debt Service Coverage Ratio	1.2x	B	1.2x	B
d) RCF / CAPEX	9.7x	Aaa	4.2x	Aaa
e) Concession Life Coverage Ratio	1.3x	B	1.3x	B
Rating:				
Indicated Rating from Grid Factors 1-5		Baa3		Baa3
Rating Lift				
a) Indicated Rating from Grid		Baa3		Baa3
b) Actual Rating Assigned		Ba1		Ba1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. [2] As of 12/31/2014; Source: Moody's Financial Metrics [3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

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

MOODY'S
INVESTORS SERVICE

© 2015 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 INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") 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. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. 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, 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 AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS FOR RETAIL INVESTORS TO CONSIDER MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS IN MAKING ANY 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.

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 or in preparing the Moody's Publications.

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 SUCH RATING OR 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 rating, agreed to pay to Moody's Investors Service, Inc. 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 www.moody's.com under the heading "Investor 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.

For Japan only: MOODY’S Japan K.K. (“MJKK”) is a wholly-owned credit rating agency subsidiary of MOODY’S Group Japan G.K., which is wholly-owned by Moody’s Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody’s SF Japan K.K. (“MSFJ”) is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization (“NRSRO”). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000. MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.