

CREDIT OPINION

13 March 2023

Update



RATINGS

The African Trade Insurance Agency

Domicile	Upperhill, Kenya
Long Term Rating	A3
Туре	Insurance Financial Strength - Fgn Curr
Outlook	Positive

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Will Keen-Tomlinson +44.20.7618.2442

VP-Senior Analyst
will.keen-tomlinson@moodys.com

Pei-Shuang Jen +44.20.7772.1939 Associate Analyst

peishuang.jen@moodys.com

Antonello Aquino +44.20.7772.1582

Associate Managing Director
antonello.aquino@moodys.com

CLIENT SERVICES

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

The African Trade Insurance Agency

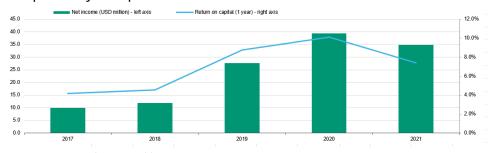
Update to credit analysis following change in outlook to positive

Summary

The African Trade Insurance Agency's (ATI) A3 insurance financial strength rating (IFSR) reflects its strong capitalization and liquidity relative to its insured exposures, high quality and conservative investment portfolio, strong underwriting profitability, strong relationships with a number of global reinsurers that provide significant risk-bearing capacity, good market position and reputation in originating credit and political risk insurance on a pan-African basis and facilitating trade and investment into Africa. In addition, Moody's noted that ATI benefits from preferred creditor status (PCS) with all of its member sovereigns, which moderates its exposure to defaults on a large portion of its portfolio.

These strengths are partially offset by the challenging operating environment with elevated risk of default amongst a number of sovereigns to which ATI is exposed. In addition ATI has limited direct access to capital markets with dependence on low-rated sovereign members for access to additional funding in case of need, although it has good relationships with large DFIs that regularly provide support for new member capital contributions. ATI's PCS is likely to enable it to recover any claim payments it makes related to these sovereigns and its significant capital buffer positions it the company to absorb losses in a range of stress scenarios in the unlikely event of the PCS not being upheld.

Exhibit 1
ATI's profitability development



Source: Company annual report, Moody's Investors Service

On the 2 March 2023, we affirmed ATI's ratings and changed the outlook to positive.

Credit strengths

- » Strong capitalization and liquidity relative to its insured exposures, supported by preferred creditor status with member states
- » High quality and conservative investment portfolio
- » Strong and well-established relationships with a number of global reinsurers and development finance institutions (DFIs)
- » Good market position and reputation on a pan-African basis including significant cooperation with leading development finance institutions
- » Strong and consistent underwriting profitability

Credit challenges

- » The high risk nature of its insured exposures and the related weak operating environments amongst African sovereigns
- » Ensuring that its risk management infrastructure and capabilities keep pace with its growing portfolio and elevated risk environment
- » Financial flexibility partially constrained by no established direct access to capital markets and reliance on member states for access to capital

Rating outlook

The outlook for ATI is positive, reflecting its strong growth in membership base and strengthened capitalization and the good track-record of underwriting profitability, along with its growing importance in facilitating investment into Africa and our expectation that its PCS will be upheld by member states.

Factors that could lead to an upgrade

- » Continued demonstration of strong underwriting performance and ability to recover claims under the preferred creditor arrangements
- » Strong capital adequacy, with net portfolio leverage remaining comfortably below 4x
- » Demonstrated ability to retain strong reinsurance support

Factors that could lead to a downgrade

- » An increase in net insured portfolio leverage to be consistently above 4x shareholders' equity.
- » A sustained decrease in underwriting profitability, with loss ratios in excess of 40%
- » Significant reduction in reinsurance availability or quality of reinsurers
- » Evidence of difficulty in securing reimbursement of claims from member states through ATI's preferred creditor status, including deterioration in ATI's standing with member states and overall market position
- » A reduction in shareholders' equity of more than 10% over a one-year basis.

Key indicators

Exhibit 2

Key financial indicators

The African Trade Insurance Agency

The African Trade Insurance Agency [1][2] 2021 2020 2019 2018 2017

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.moodys.com for the most updated credit rating action information and rating history.

As Reported (US Dollar Millions)

7.5 Nepontee (00 2 0 mm : mmone)					
Gross Premiums Written	144	126	112	66	45
Net Premiums Written	19	19	19	12	14
Net Income (Loss) Attributable to Common Shareholders	35	39	28	12	10
Total Shareholders' Equity	516	411	349	262	242
Moody's Adjusted Ratios					
High Risk Assets % Shareholders' Equity	3.1%	3.8%	3.8%	3.2%	3.2%
Reinsurance Recoverable % Shareholders' Equity	28.8%	40.4%	38.5%	33.3%	14.9%
Goodwill & Intangibles % Shareholders' Equity	0.4%	0.4%	0.6%	0.7%	0.5%
Net Total Exposure % Shareholders' Equity	1.8x	2.4x	3.1x	3.9x	3.6x
Net Underwriting Leverage (Credit Insurers)	5.8%	9.6%	14.6%	10.5%	11.6%
Combined Ratio (1 yr.)	14.8%	14.4%	10.8%	24.0%	36.8%
Sharpe Ratio of ROC (5 yr.)	269.3%	157.7%	145.9%	191.2%	158.3%
Adjusted Financial Leverage	1.5%	2.0%	2.8%	3.6%	4.0%
Total Leverage	1.5%	2.0%	2.8%	3.6%	4.0%
Earnings Coverage	176.2x	235.1x	128.3x	78.5x	109.9x

[1] Information based on IFRS financial statements as of the fiscal year ended 31 December. [2] Certain items may have been relabeled and/or reclassified for global consistency. Source: Moody's Investors Service

Profile

Established in 2001, ATI is a pan-African financial institution that provides credit and political risk insurance to companies, investors and lenders undertaking transactions in Africa. ATI, headquartered in Nairobi, Kenya, is a supranational organization, established by international treaty, and owned and governed by its members, predominantly a number of African sovereigns.

Detailed credit considerations

Insurance Financial Strength Rating

Market position: Good market position in Africa, driven by local expertise and strong relationships

ATI has a good market position in Africa, based on its scale and the depth and breadth of its underwriting penetration. In terms of scale and market share, while ATI is significantly smaller than the large global credit insurers, it is estimated to be one of the top ten credit insurers in terms of African exposure. In addition, ATI benefits from significant local expertise and understanding in a number of African countries, and underwrites a range of exposures of varying sizes and industry sectors, demonstrating its solid expertise and strong relationships. This is supported by the fact that it is owned by a number of African sovereigns, which have an interest in supporting ATI's operations in their respective economies.

Notwithstanding its good position in the African market, its predominant focus on the region weakens its market position relative to its global credit insurance peers, that write business in a number of countries across the globe, and are therefore less exposed to competitive and market pressures in any one particular region. ATI has steadily added new member states to its ownership base, which serves to enhance ATI's relevance and further strengthen its market position. During 2021 and 2022, ATI added two new member states, for a total of 20 member states and 12 institutional members as at October 2022. Capital contributions from new members supported growth in ATI's equity capital over that period, to \$530 million at 30 June 2022, from \$446 million at 30 June 2021.

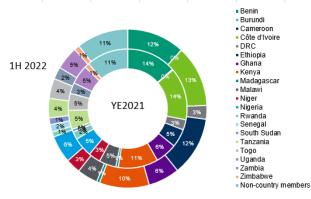
ATI's primary means of originating new insurance business is through direct interaction with insureds and intermediaries, such as lenders. ATI's strong relationships across the continent, and increasing membership base amongst African states support its direct origination strategy. In addition, ATI increasingly distributes through a number of insurance brokers, which provide access to transactions outside of ATI's direct relationships. The corporation's ability to grow is net exposure is to some extent limited by the counterparty risk limits at the lenders that benefit from its guarantee. This requires ATI to continually broaden its base of lender counterparties.

Product Risk and Diversification: High risk exposures moderated by good sector diversification

ATI's primary products are political risk insurance and medium-term credit insurance, with a small amount of traditional whole-turnover trade credit insurance. It benefits from good diversification of exposures by industry sector and geography, although geographic diversification is constrained by its focus on Africa, where Cote d'Ivoire is its highest country exposure at 13% of total gross exposure at 30 June 2022. ATI has only modest exposure to non-member states, which accounted for 10.6% of gross exposure at 30 June 2022, down from 11.4% at year-end 2021. ATI does not benefit from PCS with respect to non-member state exposures, and

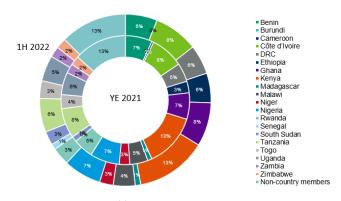
therefore relies more heavily on facultative reinsurance to manage these exposures. At 30 June 2022, its net insured exposures (net of reinsurance) represented approximately 13.3% of its total c.\$7.15 billion gross exposures, reflecting its significant use of reinsurance. Gross exposure had grown to \$7.15 billion at 30 June 2022, with net exposure remaining constant at \$955 million. Over time, as ATI further expands its member base, we expect it to benefit from increased geographic diversification.

Exhibit 3
ATI's gross exposures as at YE 2021 and 1H 2022



Source: Company reports, Moody's Investors Service

Exhibit 4
ATI's net exposures as at YE 2021 and 1H 2022



Source: Company reports, Moody's Investors Service

We evaluate product risk as being high, due to the high-risk nature of ATI's insured exposures, generally being to lower credit-quality sovereigns and corporates, as well as the medium term (3 to 5 years) duration of its insured portfolio. This is a key difference to ATI's global credit insurance peers, which predominantly provide very short-term whole-turnover trade credit insurance, that allows significant flexibility in managing their exposures, to buyers of significantly higher credit quality.

ATI's product risk is somewhat offset by its preferred creditor status with member sovereigns. This status, which applies to approximately 79% of ATI's insured exposures, is a legal obligation of member sovereigns to reimburse ATI for claims it pays on obligations of sovereign-related debtors in each respective country.

Asset Quality: Conservative fixed income focused portfolio with limited African exposure

ATI's asset quality is good, supported by its high quality and conservative investments, comprised predominately of hard-currency cash and short-term instruments, and investment grade fixed income securities. At year-end 2021, approximately 93% (2020: 90%) of ATI's investment portfolio was rated single-A and above with the majority held outside the African continent. ATI's high risk assets as a % of shareholders' equity was very low at 3.1% at YE2021 (3.8% at YE2020) and compares favorably to our rated credit insurance peers. ATI's policy of holding its invested assets predominantly in highly-rated countries limits the level of correlation between its assets and its insured exposures, which are all Africa-based.

While ATI's high reliance on reinsurance to support its underwriting capacity places it at risk in case of dislocation in the reinsurance market, the high quality of its reinsurance panel serves to moderate counterparty risk associated with its elevated reinsurance cessions. While ATI's extensive use of reinsurance does expose them to changes in supply and price of reinsurance, their long-track record with reinsurers, and strong reputation in underwriting African PRI and Credit risk, positions them as a strong partner to reinsurers, and somewhat mitigates this risk. In addition, majority of its reinsurance cessions were to reinsurers rated A1 or higher as at 30 June 2022 and, despite the high reinsurance reliance, the recoverables from reinsurers were modest relative to shareholders' equity, reducing to 28.8% at YE2021 (40.4% at YE2020).

In addition to its good underwriting track record, ATIs PCS protection is a key driver of reinsurers' appetite for exposure to ATI. While ATI has demonstrated a strong track record of using its PCS to recover claims paid, which we expect to continue going forward, any potential future deterioration in its ability to uphold its PCS would likely have a negative impact on its ability to secure reinsurance on the currently favourable terms.

Capital Adequacy: Strong capital adequacy driven by low portfolio leverage and preferred creditor status

ATI's strong capital adequacy is driven by its high level of capital relative to insured exposures, with net portfolio leverage of approximately 1.8x at 30 June 2022, down from 2.4x at year-end 2020. The significant improvement in ATI's portfolio leverage reflects its increased equity capital, as a result of growth in member contributions and retained earnings, and slight reduction in net exposure.

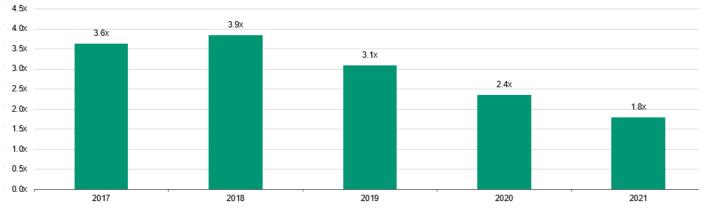
As a result of the weak and uncertain operating environment over the past few years, ATI had adopted a relatively conservative risk management stance, allowing its net exposure to decline slightly while its gross exposure remained relatively steady. While we expects ATI's exposure to increase in the future, once conditions improve, net exposure leverage should remain comfortably below 4x for the foreseeable future.

Total shareholders' equity increased to \$530 million at 30 June 2022, from \$516 million at YE2021, largely due to capital additions and full-year positive net income. In the first half year of 2022, its gross exposures increased to \$7.15 billion from \$6.6 billion in YE2021, reflecting new business added to the portfolio.

Its high capital levels mitigate some of the risk associated with its higher risk exposures, both in terms of credit quality and exposure duration of insured portfolio. In contrast to its global credit insurance peers, ATI's portfolio exposures are geographically concentrated in one region, Africa (around 97% in 2021 based on gross exposures), and are mainly to lower credit quality entities than is the case with its global peers. In addition, the majority of its exposures are medium term in duration and with higher single risk exposures due its portfolio being comprised of less granular exposures than a typical trade credit insurance book. Nonetheless, good diversification amongst African countries and industry sectors to some extent mitigates ATI's exposure to single obligors or events.

Supporting its own capitalisation, ATI has strong and long-standing relationships with a number of large global reinsurers that enable it to increase its underwriting capacity while retaining conservative levels of capitalisation. At 30 June 2022, its net insured exposures amounted to \$955 million (\$933 million at YE2021), representing approximately 13% of its total \$7.2 billion gross exposures (YE2021: \$6.6 billion).

Exhibit 5
ATI's portfolio leverage on a net basis



Source: Company filings, Moody's Investors Service

Similar to other multilateral development institutions, ATI benefits from preferred creditor status (PCS) with its member sovereigns. This PCS, which is required to be enacted into local laws of each member state, gives ATI priority above other creditors and requires the related sovereign to reimburse ATI for any claims paid on behalf of that sovereign or its related sub-sovereign entities. ATI's good track-record of recoveries from sovereign members – albeit with some delayed payments in recent years - and its increasing prominence as a key player in facilitating investment into Africa - demonstrates the effectiveness of the PCS protections as a means to limit its exposure to losses. Strengthening the PCS protections is ATI's ability to write-off member capital to cover losses that have not been reimbursed in line with the PCS requirements. The ability to write off capital - which ATI has done in the past - increases the incentive for member sovereigns to honour their obligations under the PCS, albeit that this tool tends to be used as a last resort because in most cases of distress, member states have reimbursed ATI in a timely manner, even whilst under debt rescheduling talks with creditors.

Profitability: Strong underwriting profitability, and improved return on capital reported in recent years

Being a development institution, ATI's primary focus is on facilitating investment into Africa, while pricing appropriately for the risk it assumes, and generating a sustainable return on its capital. In line with this development focus, ATI's return on capital has historically been relatively low, primarily due to its conservative capitalization. However, return on capital (Moody's calculation) has improved in recent years, supported by portfolio growth and a stronger underwriting performance, with return on capital improving to 10.1% in 2020 from 4.5% in 2018, albite it reduced to 7.4% in 2021 due to reduced net financial income and equity increased by 26%. ATI's underwriting performance, as measured by its combined ratio (Moody's calculation), has been consistently strong with a 5-year average of 20.2% in 2021, demonstrating the strength of ATI's underwriting and risk pricing capabilities.

Reserve Adequacy: Prudent reserving approach balances reserving risk that is elevated relative to typical credit insurers

Reserving risk at ATI is elevated by the longer duration of exposures relative to a typical credit insurer. However the low frequency nature of its losses mean that management can spend more time assessing the reserves (as opposed to reliance on actuarial reserving for very large portfolios), reducing the risk of reserve development. ATI calculates reserves based on case reserves, an IBNR, and also a more forward-looking Statistical reserve that takes into account claims frequency and severity to predict expected portfolio losses, and provides an additional level of prudence. ATI's strong track-record in recovering claims paid and reprofiling guaranteed exposures further reduces its reserve risk.

Financial Flexibility: Strong leverage and coverage metrics, but partially constrained by dependence on low-rated member states

ATI's financial leverage and coverage metrics are very strong, given that it is predominantly equity funded with only a small amount of debt. Despite very strong metrics, Moody's considers ATI's overall financial flexibility to be constrained by the limited financial flexibility of many of its member states and its lack of direct access to capital markets.

Offsetting these limitations, we note that large development finance institutions - notably the World Bank (Aaa stable), African Development Bank (AfDB, Aaa stable), European Investment Bank (EIB, Aaa stable) and KfW (Aaa stable) - have regularly funded a portion of the capital contribution required for countries to become members of ATI, or to increase the size of their membership. As such ATI is indirectly supported by these institutions, although there is no formal guarantee or agreement for the institutions to continue with this practice, or more important, to contribute new capital in the event of capital erosion. In addition, we believe that because ATI is a key organization that supports trade and investment into their economies, member states would be incentivized to support ATI in the event needed, albeit that their ability to do so may be limited in certain instances.

Operating Environment: Negligible exposure to Kenyan operating environment given supranational status

ATI is a supranational entity and, as such, not subject to local regulation or economic constraints, with the majority of its invested assets and cash reside offshore. As a result we believe that the Kenyan operating environment does not have a meaningful impact on ATI's credit profile. The extent to which its insured exposures are impacted by the weaker operating environments in which they are located is reflected in our assessments of ATIs scores for Product Risk and Capital Adequacy.

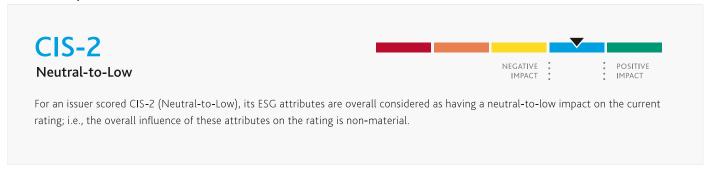
The Operating Environment factor and score serves to capture relevant economic, social, judicial, institutional and general business conditions in a particular country as regards the insurance sector, and therefore the extent to which external conditions can exert a meaningful influence on an insurer's credit profile. The operating environment score in Kenya is suppressed by relatively low insurance penetration and density, as well as weaker economic and institutional strength at the national level and elevated susceptibility to event risk.

ESG considerations

The African Trade Insurance Agency's ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 6

ESG Credit Impact Score



Source: Moody's Investors Service

ATI's ESG Credit Impact Score is neutral-to-low (CIS-2), reflecting the limited credit impact of environmental and social risks on the rating to date. ATI's strong governance and predominant focus on trade credit and investment insurance with its diversified portfolio of short-to-medium term exposures help mitigate its exposure to environmental risks.

Exhibit 7
ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

ATI faces moderate environmental risks, in particular physical climate risk and carbon transition risks related to these risks being faced by many of its member states where its guaranteed exposures reside. For example, economies of some member states are hydrocarbon dependent, exposing them to transition risk, while others are heavily dependent on agriculture or have significant infrastructure exposed to physical climate risk. These risks are somewhat mitigated by ATI's good diversification of guaranteed exposures, the short-to-medium term duration of these exposures that allows ATI to reduce exposure as these risks grow, and access to significant reinsurance capacity to support its own capital.

Social

ATI is exposed to social risks, both through its own operations and through the guarantees it provides on debtors in a wide variety of industries and African countries, some of which have significant social risk. ATI's exposure to these risks is mitigated by the diversification of its portfolio, strong underwriting and risk management. In addition, ATI benefits from certain demographic and societal trends due to its development mandate and alignment with priorities of its member state governments and multilateral development institutions.

Governance

ATI faces neutral-to-low governance risks, with good risk management, policies and procedures that are suitable for the breadth and complexity of its exposures. Management has a track record of meeting business and profitability objectives, and maintaining

conservative financial policies and good internal controls. The company benefits from strong alignment of its objectives with those of its member states, as well as good cooperation with large multilateral development institutions.

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

Although ATI receives no explicit support from its member sovereigns or other third parties, it does benefit from preferred creditor status (PCS) with its member sovereigns, and receives indirect support from certain development banks in the form of them funding new member capital contributions.

Preferred creditor status, which is required to be enacted into local laws of each member state, gives ATI priority above other creditors and requires the related sovereign to reimburse ATI for any claims paid on behalf of that sovereign or its related sub-sovereign entities. ATI's good track-record of recoveries from sovereign members – albeit with some delayed payments in recent years - and its increasing prominence as a key player in facilitating investment into Africa - demonstrates the effectiveness of the PCS protections as a means to limit its exposure to losses. Strengthening the PCS protections is ATI's ability to write-off member capital to cover losses that have not been reimbursed in line with the PCS requirements. The ability to write off capital - which ATI has done in the past - increases the incentive for member sovereigns to honour their obligations under the PCS, albeit that this tool tends to be used as a last resort because in most cases of distress, member states have reimbursed ATI in a timely manner, even whilst under debt rescheduling talks with creditors.

In addition, because ATI's aim is to facilitate trade and investment for member sovereigns, we believe that member sovereigns are incentivised to ensure that ATI is appropriately supported. We expect this level of implicit support to increase as more and larger states become ATI members, further increasing ATI's relevance as a development finance institution.

Rating methodology and scorecard factors

Exhibit 8

The African Trade Insurance Agency

Financial Strength Rating Scorecard [1][2]	Aaa	Aa	Α	Baa	Ba	В	Caa	Score	Adj Score
Business Profile								Ва	Baa
Market Position and Brand (10%)								Ва	Ваа
-Relative Market Share Ratio							Х		
-Distribution and Access to New Markets			Х						
Product Focus and Diversification (20%)								Ва	Ва
-Business Diversification					Х				
-Flexibility of Underwriting				Х					
-Risk Diversification					Х				
Financial Profile								Aa	Α
Asset Quality (15%)								Aaa	Aa
-High Risk Assets % Shareholders' Equity	Х								
-Reinsurance Recoverable % Shareholders' Equity	28.8%								
-Goodwill & Intangibles % Shareholders' Equity	0.4%								
Capital Adequacy (20%)								Aaa	Α
-Net Total Exposure to Shareholders' Equity	Х								
-Net Underwriting Leverage (Credit Insurers)	Х								
Profitability (20%)								Aa	Α
-Combined Ratio (5 yr. avg.)	20.2%								
-Sharpe Ratio of ROC (5 yr.)			269.3%						
Reserve Adequacy (5%)								Aaa	Α
-Worst Reserve Development for the Last 10 Years % Beg. Reserves	0.0%								
Financial Flexibility (10%)								Aaa	Ваа
-Adjusted Financial Leverage	1.5%								
-Earnings Coverage (5 yr. avg.)	145.6x								
Operating Environment								Aaa - A	Aaa - A
Preliminary Standalone Outcome								A1	A3
[1] Information based on IEDS financial statements as of fiscal year ended December 31	2021 [2] The C	corocard	rating is an i	mportant co	mponent o	f the com	any's pub	lichad rati	na

[1] Information based on IFRS financial statements as of fiscal year ended December 31, 2021. [2] The Scorecard rating is an important component of the company's published rating, reflecting the standalone financial strength before other considerations (discussed above) are incorporated into the analysis.

Source: Moody's Investors Service

Ratings

Exhibit 9

Category	Moody's Rating
THE AFRICAN TRADE INSURANCE AGENCY	
Insurance Financial Strength	A3
Outlook	Positive
Source: Moody's Investors Service	

© 2023 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 BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") 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 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. AND/OR ITS AFFILIATES, MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 ITS 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, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS 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 PUBLICATIONS 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.

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

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its 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 such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

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

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT

RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

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

Additional terms for 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 credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

REPORT NUMBER

1359134

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454



11