

CREDIT OPINION

7 July 2017

Update

Rate this Research >>

Contacts

Brandan Holmes 44-20-7772-1605
 VP-Senior Analyst
 brandan.holmes@moodys.com

Antonello Aquino 44-20-7772-1582
 Associate Managing
 Director
 antonello.aquino@moodys.com

Atradius N.V.

Semi-Annual Update

Summary Rating Rationale

The A3 insurance financial strength (IFS) ratings of Atradius Insurance Holding N.V.'s (Atradius) main operating companies reflects the group's very strong position in the credit insurance industry, its conservative balance sheet profile in terms of investments and capitalization, good profitability and moderate financial leverage. These strengths are partially offset by the group's limited diversification beyond credit insurance, an inherently cyclical industry with meaningful exposure to country-specific risks and the global economic environment. In addition, although Atradius is well diversified by country, its largest exposures, at approximately 16% of the group's 2016 insured exposure, are to Spain and Portugal, two of the Eurozone countries with weaker credit profiles. That notwithstanding, the company has demonstrated significant improvement in underwriting profitability for exposures in Spain and Portugal in recent years. Atradius' other large exposures include Germany (14%) and United States of America (8%).

Atradius Insurance Holding N.V. (Atradius) is the Netherlands based holding company for the group of insurance operating companies that primarily include Atradius Crédito y Caución S.A. de Seguros y Reaseguros (ACyC), Atradius Trade Credit Insurance Inc. (ATCI, USA) and Atradius Reinsurance DAC (AtradiusRe, Ireland). On 30 December, 2016, Atradius N.V. announced completion of the merger of its two European credit insurance entities, Atradius Credit Insurance (ACI) and Compañía Española de Seguros y Reaseguros de Crédito y Caución, S.A.U. (CyC) into one single legal entity, ACyC. On completion of the merger, ACI has ceased to exist.

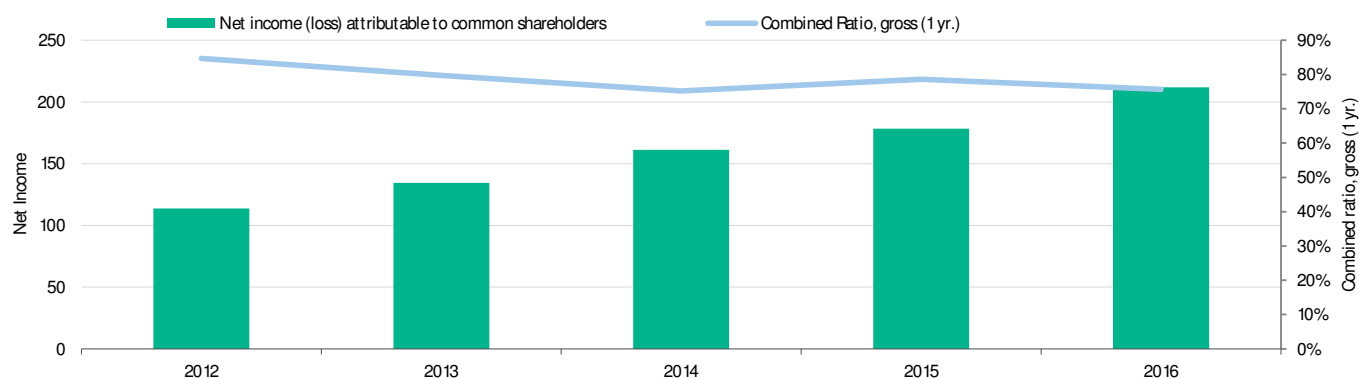
Grupo Catalana Occidente (GCO), the parent of Atradius N.V., owns 83% of its capital. GCO is a listed Spanish insurance group with a diversified portfolio of life and non-life insurance operations, including credit insurance. The group operates through several insurance entities and brands, including Atradius which accounts for approximately 40% of GCO's 2016 revenue.

Atradius' A3 IFS rating is positioned above the credit profile of its parent Grupo Catalana Occidente's (unrated) Spanish retail business, which is constrained by the Spanish sovereign rating (Government of Spain, Baa2 stable), given its investment concentration in Spanish sovereign bonds. As a result, a potential downgrade of the Spanish sovereign rating could put downward pressure on the rating of Atradius. See more details in the section below, entitled "Notching Considerations".

Exhibit 1

Net Income and Combined ratio, gross (1 yr.)

Good profitability, although some recent pressure on combined ratio



Source: Company reports and Moody's Investors Service

Credit Strengths

- » Leading market position as the second largest global credit insurer
- » Conservative balance sheet profile with a modest level of investment risk and sound liquidity
- » Good capitalisation, with low net underwriting leverage and moderate credit limit exposure relative to capital
- » Moderate financial leverage

Credit Challenges

- » Pursuing growth in revenues whilst maintaining a strong underwriting discipline in the challenging global macro economic environment
- » Limited diversification from credit insurance, a cyclical industry
- » A relatively high exposure to Spain which, although currently showing strong loss ratios against the backdrop of an improved economic outlook, has a track record of volatile profitability
- » Highly competitive environment in credit insurance as a whole

Rating Outlook

The outlook is stable, and reflects the group's very strong position in the credit insurance market, along with good capitalisation and profitability and its conservative investment portfolio. In addition, the stable outlook is in line with the outlook for the Government of Spain.

Factors that Could Lead to an Upgrade

The following factors could place upward pressure on Atradius' ratings:

- » Meaningful improvement in the group's business diversification beyond trade credit insurance;
- » Sustainable improvements in underwriting profitability on a through-the-cycle basis;
- » Meaningful reduction in the extent of the group's higher-risk insured exposures;
- » Consistently strong economic capital coverage and approval of Solvency II internal model;

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

- » Upgrade in the rating of the Government of Spain (Baa2, stable)

Factors that Could Lead to a Downgrade

The following factors could place downward pressure on Atradius' ratings:

- » Material deterioration or downgrade in the rating of the Government of Spain (Baa2, stable);
- » Material deterioration in Atradius' underwriting profitability, with a 5-year combined ratio above 100% on a through-the-cycle basis;
- » Significant deterioration in the group's capitalisation, with net total exposure to shareholders equity above 300x and net underwriting leverage above 170%;
- » Substantial weakening in the group's market position and franchise

Key Indicators

Exhibit 2

Atradius NV[1][2]	2016	2015	2014	2013	2012
As Reported (Euro Millions)					
Gross Premiums Written	1,565	1,554	1,504	1,405	1,457
Net Premiums Written	900	877	843	761	802
Net income (loss) attributable to common shareholders'	212	178	161	135	114
Total Shareholders' Equity	1,626	1,500	1,393	1,287	1,196
Moody's Adjusted Ratios					
High Risk Assets % Shareholders' Equity	21.6%	20.6%	19.6%	20.8%	20.1%
Reinsurance Recoverable % Shareholders' Equity	38.9%	47.5%	49.7%	52.7%	62.0%
Goodwill & Intangibles % Shareholders' Equity	17.7%	15.8%	16.6%	18.3%	19.4%
Net Total Exposure % Shareholders' Equity	213.2x	216.7x	211.7x	207.9x	219.9x
Net Underwriting Leverage (Credit Insurers)	90.8%	99.0%	99.4%	103.5%	118.9%
Combined Ratio (1 yr.)	75.7%	78.6%	75.2%	79.7%	84.7%
Sharpe Ratio of ROC (5 yr. avg)	934.8%	1293.7%	1241.2%	69.8%	6.8%
Financial Leverage	21.3%	19.6%	22.4%	19.5%	21.4%
Earnings Coverage (1 yr.)	13.0x	13.3x	16.6x	12.6x	11.4x

[1] Information based on IFRS financial statements as of Fiscal YE December 31

[2] Certain items may have been relabeled and/or reclassified for global consistency

Source: Company reports and Moody's investors Service

Notching Considerations

Atradius' A3 IFS rating reflects its standalone credit fundamentals and its partial insulation from GCO due to a combination of: (1) its limited correlation with GCO's credit profile due to the different business models within the group, and (2) Moody's expectation that GCO will remain committed to maintaining Atradius' solid capitalisation. While we consider the partial insulation of Atradius from the GCO group to be meaningful, and sufficient to support our assessment of its credit profile on a standalone basis, there remains a link between the credit profiles of Atradius and its parent, GCO. Further, the merger into a Spanish domiciled entity increases fungibility of capital within the GCO group and leads to greater linkage and parental constraints given that both ACyC and GCO have the same regulator.

The Ba1(hyb) rating of the backed subordinated notes issued by Atradius Finance B.V. is four notches below Atradius's A3 IFS rating, and reflects the unconditional and irrevocable subordinated guarantee from Atradius N.V., and Moody's standard notching for debt issued or guaranteed from insurance holding companies.

The P-2 short term IFSR of ACyC reflects its solid liquidity including a highly liquid investment portfolio of relatively short duration, supported by contractual accommodations specific to credit insurers, such as simultaneous settlement provisions in reinsurance agreements which provide the Group with additional sources of liquidity in the event of large claims.

Detailed Rating Considerations

Moody's rates Atradius A3 for insurance financial strength, which is three notches below the Aa3 unadjusted score produced by Moody's rating scorecard, and primarily reflects Atradius' limited diversification beyond credit insurance, elevated exposure to Spain and Portugal, and partial linkage to GCO and therefore the Spanish sovereign.

Market Position and Distribution: A - STRONG FRANCHISE AS TOP TIER INSURER IN THE GLOBAL CREDIT INSURANCE MARKET

As the second largest trade credit insurer by premiums (22.7% of 2015 global credit insurance premiums, according to the latest available data compiled by the International Credit Insurance & Surety Association, "ICISA"), Atradius has a very strong position in the global credit insurance market.

Consistent with its credit insurance peers, third-party brokers are Atradius' main form of distribution, followed by direct sales. Direct sales comprise a meaningful portion of the group's distribution capabilities, particularly in Spain, where it has a strong distribution network. In addition to its primary credit insurance business, Atradius provides reinsurance to a number of smaller credit insurers, through its Irish based reinsurer, Atradius Re, which further broadens its market access and adds to the diversification of its portfolio. However, despite its direct sales and reinsurance business, Atradius remains heavily dependent on third-party brokers, a feature that we believe reduces the group's ability to control pricing and access to markets.

Notwithstanding Atradius's very strong position in the credit insurance market, we believe the group's overall franchise strength is somewhat constrained by its limited diversification beyond credit insurance, an industry that we view as highly competitive and exposed to economic cycles.

Product Risk and Diversification: A - STRONG SECTOR AND COUNTRY DIVERSIFICATION AMONGST INSURED EXPOSURES BUT LIMITED DIVERSIFICATION BEYOND CREDIT INSURANCE

Consistent with its peers, Atradius is heavily focused on credit insurance, with only 12% of its 2016 premiums being sourced from business lines not related to credit insurance or bonding, and includes revenue from credit checking and debt collection services. As a specialist credit insurer, Atradius' product risk focus is typically dependent on market-specific credit and economic dynamics. The group's exposure is granular and well diversified by country and by sector, although Atradius has elevated concentrations to certain countries, including Spain and Portugal, two of the Eurozone countries with weaker credit profiles. At YE2016, the group's largest country exposures were Spain/ Portugal (15.9%), Germany (14.1%), USA (8.3%), France (7.4%) and UK (6.8%).

Atradius had meaningfully reduced its exposure to Spain following the deterioration in the economic environment during the sovereign crisis and the surge in insolvencies in the aftermath of 2008. Furthermore, following the risk mitigating actions and Spain's economic recovery, Atradius has consistently reported exceptionally low claims ratios in Spain. We expect loss ratios in Spain to remain strong,

in-line with Spain's economic recovery; nevertheless we think the Spanish loss ratios will likely increase from the very low level reached in recent years and remain more volatile compared to rest of the group.

Atradius has meaningful exposure to multi-year policies which could potentially restrict the flexibility of underwriting, however we believe this risk is mitigated by the fact that the vast majority of multi-year policies still have cancelable limits, and many contain break clauses or premium surcharge features that allow the group to either cancel the policy or change pricing and/or policy features if the claims environment deteriorates substantially. While multi-year policies could have a negative impact on underwriting flexibility, they also benefit the group as a protection against price decreases, and year-to-year competition to secure renewal business. Similar to its peers, Atradius has a small, but growing, special products business that provides non-cancelable trade credit insurance. The absence of cancelable limits is a negative, however, it is largely offset by more stringent policy conditions and underwriting relative to policies with cancelable limits.

Asset Quality: Aa - HIGH QUALITY, CONSERVATIVE INVESTMENT PORTFOLIO ADDS STRENGTH TO BALANCE SHEET

Asset quality is a key credit strength for Atradius, and reflects a modest level of investment risk and low level of intangible assets, slightly offset by an elevated level of reinsurance recoverables, relative to peers. The group's high-risk assets as a percentage of shareholders' equity is very low at 21.6%, and is comprised mainly of equities, and money market mutual funds classified as equities for reporting purposes. The majority of the portfolio is comprised of high-quality short-term and fixed income securities, with no exposure to investments in Eurozone peripherals.

While reinsurance recoverables have decreased significantly in recent years, down to 39% of shareholders' equity at YE2016, from 83% at YE2009, they remain at a level higher than peers due to the group's reliance on quota share reinsurance. Reliance on reinsurance to support capital requirements on new business exposes the group to potential capacity constraints in the reinsurance markets in stressed scenarios. However, the group also benefits from strong and long-standing relationships with its panel of quality reinsurers that provides a valuable source of capital and loss management capacity in down cycles. Atradius' reinsurance exposure is to strong reinsurance counterparties, rated single-A or higher, mitigating the credit risk associated with the group's reinsurance recoverables.

Moody's also considers Atradius' liquidity to be good, as the group's assets are predominantly invested in high-quality and liquid assets with relatively short durations. In addition, reinsurance treaties benefit from certain liquidity covenants (e.g. cash call agreements) enabling the group to settle large claims in a very short period of time, if necessary.

Atradius holds a moderate amount of intangible assets, at 18% of shareholders' equity at YE2016.

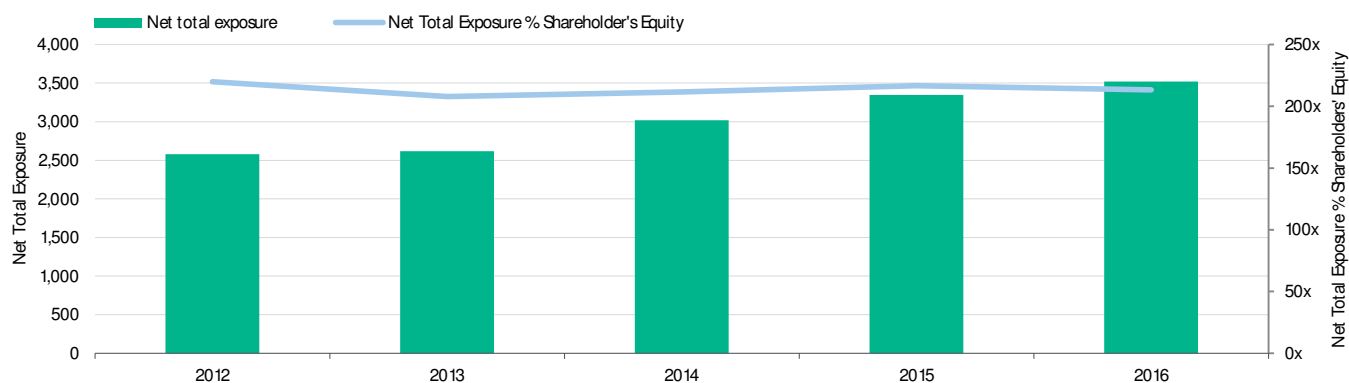
Capital Adequacy: A - STRONG CAPITAL ADEQUACY METRICS SUPPORTED BY GOOD QUALITY OF CAPITAL

Moody's views Atradius' capitalization as good, driven by strong capital metrics and good quality of capital. The group's net exposure to shareholders equity has decreased slightly to 213x in 2016 (2015: 217x) mainly reflecting higher shareholders' equity, as exposure grew slightly too (up by 4% to EUR612 billion). Net underwriting leverage remained very strong at 0.9x in 2016.

Solvency II led to significant increases in capital requirements for global credit insurers, particularly under the standard formula. Atradius has applied for regulatory approval of its partial internal model under Solvency II, and is expected to report a Solvency II ratio under the partial internal model for YE2017. The recent merger of ACI and CyC into ACyC is likely to improve Atradius' Solvency II position as a result of a simplified legal structure and consequently greater diversification benefits. While Atradius does not yet report a capital ratio under Solvency II, it is included in GCO's consolidated Solvency II ratio, on the Standard Formula, of ~185% (or ~200% with transitional measures) at YE2016.

Shareholders' equity has increased significantly over recent years, to EUR1.6 billion at YE2016, up from EUR0.9 billion at YE2009. The primary drivers of the growth in equity included robust earnings, and a conservative dividend policy post-financial crisis. In addition to higher capital levels, the group has improved its risk management framework, including more conservative limits on insured exposure relative to equity, and a focus on improved insured portfolio quality, including increased geographic diversification, and significant reductions in the exposure to lower-rated buyers and countries with more difficult operating environments.

Exhibit 3

Net Total Exposure and Net Total Exposure % Shareholders' Equity

* Estimated based on the reported gross total exposure and the premium retention rate
 Source: Company reports and Moody's Investors Service

Profitability: A - GOOD PROFITABILITY THROUGH-THE-CYCLE DESPITE SUSCEPTIBILITY TO PERIODS OF VOLATILITY

Atradius' underwriting profitability has improved significantly over recent years, driven by ongoing risk mitigation actions and relatively benign economic conditions. We expect Atradius' underwriting profitability to remain strong in the medium-term, and to benefit from a more positive outlook for growth in European GDP. That notwithstanding, the relatively benign level of losses for European credit insurance will keep prices under pressure for the foreseeable future. Consistent with peers, our view of Atradius' profitability is tempered by the intrinsic volatility of credit insurance through the cycle.

The group's reported net combined ratio has improved consistently over recent years to a very strong reported net combined ratio of 77.4% for 2016 (YE2015: 77.9%), driven by the significant improvement in Spanish exposures following the positive impact of the risk mitigating actions and gradual improvement in the economy. The net reported combined ratio in Spain has consistently improved in the years since 2012.

We expect the loss ratios of the Spanish business to remain strong in line with Spain's economic recovery, even though we expect some deterioration from the exceptionally low levels reached over recent years. Nevertheless, we note that loss ratios in Spain are still potentially more volatile than some other large Eurozone countries. In addition, we note that rates in continental Europe have remained under pressure at a time of tepid growth, which we believe will likely weigh on underwriting profitability in the next 12 months.

Reserve Adequacy: A - SHORT-TAIL BUSINESS AND CONSISTENT FAVOURABLE RESERVE RUN-OFF MODERATE RESERVE RISK

Atradius has reported reserve releases in the last six years, demonstrating meaningful improvement compared to the period after the 2008 financial crisis when the company had to strengthen reserves. While the group's Spanish exposures were a large contributor to the adverse development, reserve development on the Spanish book has been on an improving trend since 2012. The group's reserves on its bonding business have been somewhat volatile, although the exposure to bonding remains modest relative to the group's overall exposures.

The group has made significant progress in aligning reserving policies and practices on its Spanish book, with Atradius more broadly, which represents a materially more conservative approach to reserving than had been in place during the Spanish sovereign crisis. These enhancements, together with strong performance of the Spanish book, in the current benign economic environment, have contributed to favourable reserve development. Recent developments in the global economic environment point to an elevated potential for deterioration of the operating environment and headwinds for credit insurers - possibly increasing pressure on the group's reserves and testing the enhancements made to its reserving and risk management framework in recent years. That notwithstanding, we believe the more conservative reserving stance reduces the risk of material reserve increases.

Financial Flexibility: Baa - VERY STRONG STAND-ALONE FINANCIAL FLEXIBILITY CONSTRAINED BY INCREASED LINKAGE TO SPAIN

Atradius' standalone financial flexibility metrics are very strong, with Moody's adjusted financial leverage of 21.3% at YE2016 and earnings coverage of debt service at 13x (5YR average: 13.4x). The group's capital structure consists of Tier I equity capital, along with EUR 250 million in subordinated notes, guaranteed by Atradius N.V., which qualify as Tier II capital.

Notwithstanding our view that Atradius remains partially insulated from potential credit pressures at its parent we believe that its ownership by GCO creates a link between the credit profile of Atradius and its parent, GCO, which could create potential headwinds for Atradius' access to capital markets in times of stress. The recent merger of ACI into CyC to form ACyC, to be domiciled in Spain, increases the linkage between Atradius and GCO. Therefore, because of the stronger link to GCO and domicile of its most material operating company, ACyC, in Spain, Atradius' financial flexibility is constrained at the rating of the Spanish sovereign (Baa2, stable), notwithstanding its very strong financial flexibility on a standalone basis.

Rating Methodology and Scorecard Factors

Atradius' A3 IFS rating reflects the group's standalone credit fundamentals, and our view that Atradius is partially insulated from the GCO group and the impact of potential stresses at GCO, or at the Spanish sovereign level. Further, we believe that GCO remains committed to maintaining strong capitalization at Atradius, with little incentive to reduce capital and solvency levels given the confidence-sensitive nature of the credit insurance industry. This has been demonstrated, to some extent, by Atradius' conservative dividend policy as it rebuilt capital post-2008 financial crisis. Furthermore, GCO is currently well capitalized (consolidated Solvency II ratio: 200% at YE2016 (~185% excluding transitional measures and) and its traditional businesses have a low-risk business profile, a strong track record of profitability (combined ratio consistently below 90%) and very modest financial leverage.

GCO's link to, and constraint by, the Spanish sovereign is primarily driven by its fixed income portfolio that has significant exposure to domestic assets, in the extent of 54% of the total portfolio at YE2016. Similar to other domestic, Spanish insurers, GCO maintains significant domestic assets to match its domestic life insurance technical liabilities.

Exhibit 4

Financial Strength Rating Scorecard	Aaa	Aa	A	Baa	Ba	B	Caa	Score	Adjusted Score
Business Profile								A	A
Market Position and Brand (10%)								A	A
- Relative Market Share Ratio			X						
- Distribution and Access to New Markets			X						
Product Focus and Diversification (20%)								A	A
- Business Diversification				X					
- Flexibility of Underwriting			X						
- Risk Diversification		X							
Financial Profile								Aa	A
Asset Quality (15%)								Aaa	Aa
- High Risk Assets % Shareholders' Equity	21.6%								
- Reinsurance Recoverable % Shareholders' Equity		38.9%							
- Goodwill & Intangibles % Shareholders' Equity	17.7%								
Capital Adequacy (20%)								Aa	A
- Net Total Exposure % Shareholders' Equity			213.2x						
- Net Underwriting Leverage (Credit Insurers)	0.9x								
Profitability (20%)								Aa	A
- Combined Ratio (5 yr. avg)			78.8%						
- Sharpe Ratio of ROC (5 yr. avg)	934.8%								
Reserve Adequacy (5%)								B	A
- Worst Reserve Development for the Last 10 Years % Beg. Reserves						X			
Financial Flexibility (10%)								Aa	Baa
- Financial Leverage		21.3%							
- Earnings Coverage (5 yr. avg)		13.4x							
Operating Environment								Aaa - A	Aaa - A
Aggregate Profile								Aa3	A3

[1] Information based on IFRS financial statements as of Fiscal YE December 31

[2] The Scorecard rating is an important component of the company's published rating, reflecting the stand-alone financial strength before other considerations (discussed above) are incorporated into the analysis

Source: Company reports and Moody's Investors Service

Ratings

Exhibit 5

Category	Moody's Rating
ATRADIUS REINSURANCE DAC	
Rating Outlook	STA
Insurance Financial Strength	A3
ATRADIUS TRADE CREDIT INSURANCE INC.	
Rating Outlook	STA
Insurance Financial Strength	A3
ATRADIUS CREDITO Y CAUCION S.A.	
Rating Outlook	STA
Insurance Financial Strength	A3
ST Insurance Financial Strength	P-2

Source: Moody's Investors Service

© 2017 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 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 AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S 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.

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.com under the heading "Investor Relations — Corporate Governance — 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. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

Additional terms for Japan only: Moody's Japan K.K. ("MJJK") 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 MJJK. 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. MJJK 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.

MJJK 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 MJJK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJJK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

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

REPORT NUMBER

1077694