Moody's
INVESTORS SERVICE

Credit Opinion: ABN AMRO Bank N.V.

Global Credit Research - 18 Jun 2013

Amsterdam, Netherlands

Ratings

Category	Moody's Rating
Outlook	Negative(m)
Bank Deposits	A2/P-1
Bank Financial Strength	C-
Baseline Credit Assessment	(baa2)
Adjusted Baseline Credit Assessment	(baa2)
Issuer Rating	A2
Senior Unsecured	A2
Subordinate	Baa3
Jr Subordinate	Ba2 (hyb)
Commercial Paper -Dom Curr	P-1
Other Short Term	(P)P-1

Contacts

Analyst	Phone
Andrea Usai/London	44.20.7772.5454
Stephane Herndl/Paris	33.1.53.30.10.20
Carola Schuler/Frankfurt am Main	49.69.707.30.700

Key Indicators

ABN AMRO Bank N.V. (Consolidated Financials)[1]

	[2]12-12	[2]12-11	[2]12-10	[3]12-09	Avg.
Total Assets (EUR million)	393,425.0	407,015.0	379,398.0	386,517.0	[4]0.6
Total Assets (USD million)	518,688.2	528,364.5	508,979.0	554,551.7	[4]-2.2
Tangible Common Equity (EUR million)	14,667.9	15,333.1	12,988.4	9,435.0	[4]15.8
Tangible Common Equity (USD million)	19,338.1	19,904.6	17,424.5	13,536.8	[4]12.6
Net Interest Margin (%)	1.3	1.3	1.3	1.1	[5]1.2
PPI / Average RWA (%)	2.1	2.0	1.2	--	[6]1.8
Net Income / Average RWA (%)	1.8	1.7	0.0	--	[6]1.2
(Market Funds - Liquid Assets) / Total Assets (%)	12.6	11.7	13.9	15.6	[5]13.4
Core Deposits / Average Gross Loans (%)	76.0	76.0	74.7	74.0	[5]75.2
Tier 1 Ratio (%)	12.9	13.0	12.8	--	[6]12.9
Tangible Common Equity / RWA (%)	12.1	13.0	11.2	--	[6]12.1
Cost / Income Ratio (%)	65.1	69.2	81.4	77.0	[5]73.2
Problem Loans / Gross Loans (%)	3.0	3.1	3.1	2.9	[5]3.0
Problem Loans / (Equity + Loan Loss Reserves) (%)	46.1	44.5	51.3	62.8	[5]51.2

Source: Moody's

[1] All figures and ratios are adjusted using Moody's standard adjustments [2] Basel II; IFRS [3] Basel I; IFRS [4] Compound Annual Growth Rate based on IFRS reporting periods [5] IFRS reporting periods have been used for average calculation [6] Basel II & IFRS reporting periods have been used for average calculation

Opinion

SUMMARY RATING RATIONALE

We assign long-term global local-currency ratings of A2 to ABN AMRO N.V. (ABN AMRO), which incorporate a three-notch uplift for systemic support from the bank's baa2 baseline credit assessment (BCA), under our joint-default analysis (JDA) methodology. The ratings' uplift is based on (1) our assessment of a very high probability of systemic support from the Dutch government, due to ABN AMRO's size and importance in the domestic banking sector; and (2) the Dutch state's full ownership of ABN AMRO.

We assign a C- bank financial strength rating (BFSR) to ABN AMRO, which is equivalent to a baa2 BCA, reflecting the bank's overall good financial fundamentals including solid capitalisation and comfortable liquidity position. It further captures the bank's strong franchise in the Dutch market, its balanced business mix - between retail and commercial banking - and the full operational integration of the two former banks, ABN AMRO Bank N.V. and Fortis Bank Nederland N.V. (merged in July 2010).

Nevertheless, the standalone BFSR is constrained by (1) modest financial performance, largely reflecting the multi-year endeavour of integrating the two former banks, which management stated to have completed at the end of 2012; and (2) ABN AMRO's structural reliance on wholesale funding, which we view as a credit weakness in the current funding environment. Furthermore we anticipate that a challenging business environment on ABN AMRO's credit fundamentals will result in lower asset quality and weaker profitability throughout 2013 and possibly beyond.

Rating Drivers

- ABN AMRO has a strong franchise in the Dutch retail/commercial banking markets and a strong presence in private banking in the Netherlands and in other selected European countries

- The bank has a modest risk profile owed to its retail and commercial banking business focus

- The bank's liquidity is sound and its capital base is strong, relative to its rated peers

- Asset quality is deteriorating and earnings remain under pressure because of worsening economic conditions in the Netherlands

- ABN AMRO's profitability has thus far constrained by separation and restructuring costs, but difficult operating conditions will continue to pose challenges

Rating Outlook

The negative outlook on both the BFSR and the long-term ratings reflects our view that the further deterioration in the operating environment in the Netherlands will likely affect the bank's overall asset-quality profile and earnings potential over the next 12-18 months.

What Could Change the Rating - Up

The ratings for ABN AMRO carry a negative outlook and, as such, are unlikely to be upgraded in the foreseeable future. However, upwards pressure on the BFSR could develop if the bank were to (1) improve its asset-quality profile despite the weakening operating environment; (2) improve its profitability; and/or (3) further reduce its reliance on wholesale funding. A strengthening of the bank's standalone credit profile is unlikely to result in upwards rating pressure on ABN AMRO's long-term debt and deposit ratings, given (1) the very high support assumptions that we currently factor into the ratings; and (2) more generally, the prospect of a less supportive environment for European banks underpinned by the upcoming EU framework on recovery and resolution.

What Could Change the Rating - Down

We might downgrade the bank's BFSR if the weakening macroeconomic environment were to (1) lead to further significant deterioration of the bank's asset quality; or (2) have a negative impact on its liquidity, profitability and/or capital.

The BFSR could also be downgraded if the bank (1) failed, in our view, to reach the expected operational efficiencies resulting from the integration process with former Fortis Bank Nederland N.V. (merged in July 2010); however we note that management has recently indicated that the relevant costs have now been fully accounted for and progress in achieving operational efficiencies has been made; and/or (2) materially increased its risk

profile, for example as a result of expanding its riskier activities or materially increases its market risk appetite. A downgrade of the debt and deposit ratings would be triggered by a downgrade of the BFSR, or by a change in our assessment of the currently very high probability of systemic support from the Dutch state for this state-owned bank.

DETAILED RATING CONSIDERATIONS

A STRONG POSITION IN THE DOMESTIC MARKET AND IN SELECTED COUNTRIES GENERATING STABLE RETAIL AND COMMERCIAL BANKING EARNINGS

ABN AMRO has a strong franchise in the highly concentrated Dutch market, where it is the third largest player in retail banking, serving around 6.8 million customers. We consider that outside the Netherlands, its franchise is more limited, although it benefits from good brand recognition in selected countries and for certain activities, such as private banking in France, Germany and merchant banking in the main global financial centres. In 2012, 82% of the bank's operating income came from domestic operations.

In private banking, ABN AMRO is ranked first in its home market and has significant activities in the rest of Europe. During 2012, assets under management increased by 11% to EUR163.1 billion, although we note that around 80% of this increase was due to market performance. The bank has maintained a strong position in corporate banking, despite the sale of part of this business to Deutsche Bank in 2010, as a result of the action plan imposed by the European Commission. ABN AMRO is an important player in some global specialist markets such as Energy, Commodities and Transportation (ECT), as well as Clearing.

Pre-provision income from retail and commercial banking activities have proven relatively stable. However, we expect ABN AMRO's underlying earnings to remain under pressure in the coming quarters, due to downward pressures on profits from the protracted difficult business environment, with credit-negative effects on the bank's franchise value. This has resulted in lowered transaction volumes and caused asset-quality deterioration.

THE BANK HAS A MODEST RISK PROFILE OWED TO ITS RETAIL AND COMMERCIAL BANKING BUSINESS FOCUS

We consider ABN AMRO's risk profile as modest overall, reflecting its operations that are primarily retail and commercial banking. In 2012, higher operational-risk and market-risk capital requirements prompted a 3% increase in risk-weighted assets (RWAs) to EUR121.5 billion and a further 4% increase during Q1 2013 to EUR126.1 billion. However, we understand that this did not reflect an actual increase in risk, but rather the result of the pending transition from the standardised to the advanced approach, as part of the process to integrate the Basel II models of the two former banks. Credit risk is the largest risk, representing 82% of total RWAs at end-March 2013. The bank has limited market-risk exposure accounting for around 5% of total RWAs at the same reporting date, with an average value-at-risk of EUR3 million in 2012, down 12% from the previous year (figures for Q1 2013 are undisclosed). We believe that this primarily reflects lower market volatility in 2012 compared to the previous year and is therefore not indicative of a real decrease in the market risk activities carried on the firm's balance sheet.

ABN AMRO has discontinued its proprietary trading activities. However, market making, which is relatively small, is essentially driven by corporate clients. This is reflected in the relatively low level of market risk.

THE BANK'S LIQUIDITY IS SOUND AND ITS CAPITAL BASE IS STRONG RELATIVE TO RATED PEERS

We view ABN AMRO's liquidity position as sound, and we expect that it will remain as such, over 2013. At end-March 2013, the bank had a customer deposit base of EUR204.5 billion (excluding securities financing transactions) and a combined retail and corporate loan book of EUR261.8 billion. This results in a relatively high loan-to-deposit ratio of 128% (as per our calculations). However, we note a declining trend since 2010, indicating the bank's reduced reliance on confidence sensitive wholesale funding, which, however, remains sizeable in our view.

To mitigate liquidity risk, the bank had a substantial liquidity buffer of EUR65.2 billion at end-March 2013, down from EUR68 billion at end-2012. We consider the liquidity buffer, which covers all of the bank's short-term liabilities, as more than adequate to cover liquidity risk under our central scenario. This comprised 39% of cash and quasi-cash instruments at end-March 2013 and about half of RMBS, most of which were assets originated by the bank itself. Although Dutch RMBS have had a good track record because of good underwriting standards, we believe that there is a very limited secondary market for these securities in times of stress; we therefore consider these securities as being of lower quality than other assets, such as government bonds. However, we recognise

that Dutch RMBS can be used as repo-collateral with central banks.

At end-2012, the bank reported a pro-forma Basel III Liquidity Coverage ratio of 89% (figures for end-March 2013 are undisclosed), compared to 57% at the end of the previous year (these figures do not take into account the revisions announced by the Basel Committee in January 2013, which would have a positive effect on the ratios, according to ABN AMRO) and a NFSR of 108%, up from 100% at the end of 2011. These figures confirm the improvement in ABN AMRO's already sound liquidity and funding positions, achieved during 2012. The bank has an adequate liquidity management framework and exhibits a well diversified funding mix. We also note that around one third of its medium-long term debt matures by 2015, which is a relatively low portion compared to many of its European peers. ABN AMRO is making significant efforts to diversify its wholesale funding by currency, which will in turn further reduce the scope for refinancing risk. In addition, the average maturity of the outstanding debt stock was 4.4 years at end-March 2013, up from 4.1 years in the same period in 2012.

ABN AMRO reported a Basel 2.5 Core Tier 1 ratio of 11.6% and a Tier 1 ratio of 12.4% at end-March 2013 (with no transitional Basel I capital floors) from 12.1% and 12.9%, respectively. The bank also disclosed that this ratio corresponds to a Common Equity Tier 1 ratio of 10.2% (fully loaded Basel III), which we view as relatively strong in comparison to many of its European peers and against its risk profile. Nevertheless, owing primarily to relatively low risk weightings of its largely collateralised retail loan book (average risk weighting of 9.4% for 2012 excluding portfolios that are securitised - according to our calculations), ABN AMRO displays a relatively high leverage at 3.2% as of FYE 2012 (simple leverage measured as total assets / Tier 1 capital). Sector concentration is particularly relevant in relation to commercial real estate (CRE) which accounts for 77% of Tier 1 capital as of the same reporting date; despite the weakening trend of the portfolio, this is a manageable exposure in our view also given its composition.

We also note that the Dutch central bank identified ABN AMRO as one of the local systemically important financial institutions, which will be subject to an additional capital surcharge ranging between 1% and 3%, although the exact amount still to be determined. The transition to the new capital rules will increase the bank's regulatory capital in the years to come. Considering ABN AMRO's only modest internal capital generation capacity, we expect that prudent and proactive capital management will remain a key area of focus for the group.

ASSET QUALITY IS DETERIORATING AND EARNINGS REMAIN UNDER PRESSURE BECAUSE OF WORSENING ECONOMIC CONDITIONS IN THE NETHERLANDS

ABN AMRO's customer loan book of EUR261.8 billion (excluding securities financing transactions) as at end-March 2013 comprised 58% of residential mortgages, 10% of other consumer loans and 32% of commercial loans. Similar to its peers in the Dutch market, the bank's overall asset quality began to show signs of deterioration in 2012: total non-performing loans represented 2.9% of total loans at end-March 2013 (as per our calculations). However, this ratio masks significant differences across the different loan portfolios.

In Q1 2013, ABN AMRO reported positive credit costs of EUR38 million, resulting from the reversal of impairment charges on Greek-rated exposure in previous years, following a partial sale of the portfolio. However, credit costs were 39% to higher than in the same period a year earlier to EUR259 million, when excluding the effect of Greek-related impairments.

During 2012 and the first quarter of 2013, ABN AMRO's (commercial) real estate (CRE), construction, retail sector exposures and mortgages drove weakening asset quality. As at end-March 2013, ABN AMRO had CRE sector exposures totalling EUR12 billion, which represent around 4% of the bank's total loan book, as at the same reporting date. Additionally, we note that the riskier CRE sub-sectors represented a small portion of its portfolio and we note that the portion of social housing loans within the bank's CRE book are largely government-guaranteed. The bank's key business focus on the Netherlands, particularly its sizeable retail mortgage and SME portfolios, renders it vulnerable to the deteriorating economic environment in the Dutch market. This is also reflected by the rapid increase in loan impairment charges since mid- 2012. With a Tier 1 capital ratio of 12.4% at end-March 2013, ABN AMRO has a significant loss-absorption buffer under our central scenario. For its current BCA, we believe that the bank is vulnerable to potential shocks from a further deterioration in the operating environment and to rising risks under our assumptions.

Positively, we note that the bank's exposures to weak, periphery euro area sovereigns were largely reduced since 2011 and its residual exposures are minimal.

PROFITABILITY HAS BEEN THUS FAR CONSTRAINED BY SEPARATION AND RESTRUCTURING COSTS, BUT DIFFICULT OPERATING CONDITIONS WILL CONTINUE TO POSE CHALLENGES

We believe that the bank's profitability will remain under pressure in 2013, because of the difficult operating environment in the Netherlands. In particular, we expect revenues to continue to remain under pressure and asset quality to continue to deteriorate, because of the prolonged difficult operating environment.

We consider ABN AMRO's profitability as modest, as its underlying business performance was constrained by separation and restructuring costs until end-2012, as indicated by a relatively low pre-provision income over (average) RWAs of 1.98% for 2012. We expect the operational integration process to generate long-term benefits in terms of both cost synergies and earnings.

Global Local Currency Deposit Rating (Joint Default Analysis)

ABN AMRO's GLC deposit rating is supported by the bank's C- BFSR and the Netherlands' Aaa local-currency deposit ceiling. In accordance with our joint default analysis (JDA) methodology, ABN AMRO receives a three-notch uplift from its baa2 BCA, reflecting our assumptions of a very high likelihood of support from the Dutch government, in case of need, bringing the GLC rating to A2.

Notching Considerations

In line with our current guidelines for rating bank hybrid securities and subordinated debt published in November 2009, ABN AMRO's dated subordinated debt is rated Baa3, i.e., one notch below the bank's baa2 BCA.

ABN AMRO Bank N.V.'s two outstanding hybrid securities - the remaining GBP150 million perpetual subordinated upper tier 2 notes (ISIN: XS0244754254) and EUR1,000 million perpetual Tier 1 capital securities (ISIN : XS0246487457) - are rated Ba2(hyb), with a stable outlook, reflecting our view that the securities continue to carry a probability of coupon deferral, in light of the bank's receipt of substantial state aid.

ABOUT MOODY'S BANK RATINGS

Bank Financial Strength

Moody's Bank Financial Strength Ratings (BFSRs) represent Moody's opinion of a bank's intrinsic safety and soundness and, as such, exclude certain external credit risks and credit support elements that are addressed by Moody's Bank Deposit Ratings. Bank Financial Strength Ratings do not take into account the probability that the bank will receive such external support, nor do they address risks arising from sovereign actions that may interfere with a bank's ability to honour its domestic or foreign currency obligations. Factors considered in the assignment of Bank Financial Strength Ratings include bank-specific elements such as financial fundamentals, franchise value, and business and asset diversification. Although Bank Financial Strength Ratings exclude the external factors specified above, they do take into account other risk factors in the bank's operating environment, including the strength and prospective performance of the economy, as well as the structure and relative fragility of the financial system, and the quality of banking regulation and supervision.

Moody's uses the Baseline Credit Assessment (BCA) to map BFSRs onto the 21-point Aaa-C rating scale and like the BFSR, it reflects a bank stand- alone default risk. Each point on the Aaa-C scale represents a specific probability of default and therefore allows Moody's to use the BCA as an input to Moody's Joint Default Analysis (JDA), described below. The baseline credit assessment reflects what the local currency deposit rating of the bank with the given BFSR would be without any assumed external support from a government or third party

Global Local Currency Deposit Rating

A deposit rating, as an opinion of relative credit risk, incorporates the Bank Financial Strength Rating as well as Moody's opinion of any external support. Specifically, Moody's Bank Deposit Ratings are opinions of a bank's ability to repay punctually its deposit obligations. As such, Moody's Bank Deposit Ratings are intended to incorporate those aspects of credit risk relevant to the prospective payment performance of rated banks with respect to deposit obligations, and includes: intrinsic financial strength, sovereign transfer risk (in the case of foreign currency deposit ratings), and both implicit and explicit external support elements. Moody's Bank Deposit Ratings do not take into account the benefit of deposit insurance schemes which make payments to depositors, but they do recognize the potential support from schemes that may provide assistance to banks directly.

According to Moody's joint default analysis (JDA) methodology, the global local currency deposit rating of a bank is determined by the incorporation of any external elements of support into the bank's Baseline Credit Assessment. In assigning the local currency deposit rating to a bank, the JDA methodology also factors in the rating of the various potential support providers (parent company, cooperative group, regional or national governments), as well as the degree of dependence that may exist between each one of them and the bank.

Moody's assessment of the probability of systemic support (by a national government) is derived from the analysis of the capacity of a government and its central bank to provide support on a system-wide basis. The systemic support indicator is determined for a particular country and serves as an input for all bank ratings in that country. The support indicator can be set at, above or, in rare cases, below the government's local currency bond rating for that country.

National Scale Rating

National scale ratings are intended primarily for use by domestic investors and are not comparable to Moody's globally applicable ratings; rather they address relative credit risk within a given country. A Aaa rating on Moody's National Scale indicates an issuer or issue with the strongest creditworthiness and the lowest likelihood of credit loss relative to other domestic issuers. National Scale Ratings, therefore, rank domestic issuers relative to each other and not relative to absolute default risks. National ratings isolate systemic risks; they do not address loss expectation associated with systemic events that could affect all issuers, even those that receive the highest ratings on the National Scale.

Foreign Currency Deposit Rating

Moody's ratings on foreign currency bank obligations derive from the bank's local currency rating for the same class of obligation. The implementation of JDA for banks can lead to high local currency ratings for certain banks, which could also produce high foreign currency ratings. Nevertheless, it should be noted that foreign currency deposit ratings are in all cases constrained by the country ceiling for foreign currency bank deposits. This may result in the assignment of a different, and typically lower, rating for the foreign currency deposits relative to the bank's rating for local currency obligations.

Foreign Currency Debt Rating

Foreign currency debt ratings are derived from the bank's local currency debt rating. In a similar way to foreign currency deposit ratings, foreign currency debt ratings may also be constrained by the country ceiling for foreign currency bonds and notes; however, in some cases the ratings on foreign currency debt obligations may be allowed to pierce the foreign currency ceiling. A particular mix of rating factors are taken into consideration in order to assess whether a foreign currency bond rating pierces the country ceiling. They include the issuer's global local currency rating, the foreign currency government bond rating, the country ceiling for bonds and the debt's eligibility to pierce that ceiling.

About Moody's bank financial strength scorecard

Moody's bank financial strength model (see scorecard below) is a strategic input in the assessment of the financial strength of a bank, used as a key tool by Moody's analysts to ensure consistency of approach across banks and regions. The model output and the individual scores are discussed in rating committees and may be adjusted up or down to reflect conditions

Rating Factors

ABN AMRO Bank N.V.

Rating Factors [1]	**A**	**B**	**C**	**D**	**E**	**Total Score**	**Trend**
Qualitative Factors (50%)						**C+**	
Factor: Franchise Value						**C**	**Neutral**
Market share and sustainability			**x**				
Geographical diversification			**x**				
Earnings stability			**x**				
Earnings Diversification [2]							
Factor: Risk Positioning						**C-**	**Neutral**
Corporate Governance [2]				**x**			
- Ownership and Organizational Complexity				x			
- Key Man Risk							
- Insider and Related-Party Risks							

Controls and Risk Management			x				
- Risk Management			x				
- Controls			x				
Financial Reporting Transparency		x					
- Global Comparability	x						
- Frequency and Timeliness		x					
- Quality of Financial Information			x				
Credit Risk Concentration				x			
- Borrower Concentration				x			
- Industry Concentration			x				
Liquidity Management			x				
Market Risk Appetite	x						
Factor: Operating Environment						B+	Weakening
Economic Stability			x				
Integrity and Corruption	x						
Legal System	x						
Financial Factors (50%)						C	
Factor: Profitability						C	Weakening
PPI % Average RWA (Basel II)			1.77%				
Net Income % Average RWA (Basel II)			1.16%				
Factor: Liquidity						C-	Neutral
(Market Funds - Liquid Assets) % Total Assets				12.72%			
Liquidity Management			x				
Factor: Capital Adequacy						A	Neutral
Tier 1 Ratio (%) (Basel II)	12.90%						
Tangible Common Equity % RWA (Basel II)	12.07%						
Factor: Efficiency						D	Weakening
Cost / Income Ratio				71.89%			
Factor: Asset Quality						D+	Weakening
Problem Loans % Gross Loans			3.07%				
Problem Loans % (Equity + LLR)				47.32%			
Lowest Combined Financial Factor Score (15%)						D+	
Economic Insolvency Override						Neutral	
Aggregate BFSR Score						C	
Aggregate BCA Score						a3	
Assigned BFSR						C-	
Assigned BCA						baa2	

[1] - Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information.
[2] - A blank score under Earnings Diversification or Corporate Governance indicates the risk is neutral.

MOODY'S
INVESTORS SERVICE

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

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. ("MIS") AND ITS AFFILIATES ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT

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

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources Moody's considers to be reliable, including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process. Under no circumstances shall MOODY'S have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of MOODY'S or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if MOODY'S is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities. Each user of the information contained herein must make its own study and evaluation of each security it may consider purchasing, holding or selling. NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

MIS, a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from $1,500 to approximately $2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Shareholder Relations — Corporate Governance — Director and

Shareholder Affiliation Policy."

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