

Global Credit Research - 18 Aug 2014

Amsterdam, Netherlands

Ratings

Category	Moody's Rating
Outlook	Negative
Bank Deposits	A2/P-1
Bank Financial Strength	C-
Baseline Credit Assessment	baa1
Adjusted Baseline Credit Assessment	baa1
Senior Unsecured -Fgn Curr	(P)A2
Senior Unsecured -Dom Curr	A2
Subordinate	Baa2
Commercial Paper	P-1
Other Short Term -Fgn Curr	(P)P-1
Other Short Term -Dom Curr	(P)P-1
ING Bank A.S. (Turkey)	
Outlook	Negative(m)
Bank Deposits	Baa3/P-3
NSR Bank Deposits -Dom Curr	A1.tr/TR-1
Bank Financial Strength	D-
Baseline Credit Assessment	ba3
Adjusted Baseline Credit Assessment	baa3
ING Bank N.V. - Sao Paulo	
Outlook	Negative(m)
Bank Deposits -Fgn Curr	Baa2/P-2
Bank Deposits -Dom Curr	A2/P-1
NSR Bank Deposits -Dom Curr	Aaa.br/BR-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

ING Bank N.V. (Consolidated Financials)[1]

	[2]12-13	[2]12-12	[2]12-11	[2]12-10	[2]12-09	Avg.
Total Assets (EUR million)	787,644.0	831,959.0	961,572.0	931,836.0	880,977.0	[3]-2.8
Total Assets (USD million)	1,085,327.7	1,096,847.7	1,248,259.8	1,250,098.6	1,263,973.7	[3]-3.7
Tangible Common Equity (EUR million)	31,873.3	31,973.5	34,644.3	33,175.9	27,177.3	[3]4.1
Tangible Common Equity (USD million)	43,919.6	42,153.6	44,973.3	44,506.9	38,992.4	[3]3.0
Net Interest Margin (%)	1.5	1.5	1.5	1.6	1.4	[4]1.5
PPI / Average RWA (%)	2.5	1.9	2.1	2.4	1.8	[5]2.1
Net Income / Average RWA (%)	1.0	1.5	1.5	1.6	0.3	[5]1.2
(Market Funds - Liquid Assets) / Total Assets (%)	1.0	5.7	8.0	6.2	8.1	[4]5.8
Core Deposits / Average Gross Loans (%)	89.2	81.5	81.6	90.4	82.6	[4]85.1
Tier 1 Ratio (%)	13.5	14.4	11.7	12.2	10.2	[5]12.4
Tangible Common Equity / RWA (%)	11.3	11.5	10.5	10.3	8.2	[5]10.4

Cost / Income Ratio (%)	55.4	62.6	59.5	55.2	61.6[4]58.9
Problem Loans / Gross Loans (%)	3.1	2.7	2.3	2.3	2.2 [4]2.5
Problem Loans / (Equity + Loan Loss Reserves) (%)	38.8	36.0	32.0	32.8	33.1[4]34.5

Source: Moody's

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

Opinion

SUMMARY RATING RATIONALE

ING Bank N.V.'s (ING Bank) A2 long-term debt and deposit ratings, which carry a negative outlook, incorporate two notches of systemic support uplift, reflecting that the bank (1) is systemically important in the two main European markets in which it operates (the Netherlands and Belgium); and (2) maintains significant retail presence in the rest of Europe and in some non European countries, via its ING Direct franchise.

ING Bank is the second-largest bank in the Netherlands by total assets and one of the largest financial institutions in Europe and globally. The current standalone C- bank financial strength rating (BFSR), which is equivalent to a baseline credit assessment (BCA) of baa1, reflects the bank's (1) strong franchise in the Benelux region, which is rooted in a robust retail presence; (2) good degree of geographical diversification provided by its ING Direct franchise; (3) sound profitability, despite increased credit costs; (4) adequate capital position; and (5) sound liquidity. These strengths are partly offset by the downside asset quality risk caused by the challenging operating environment in the Netherlands, which is ING Bank's home market.

Rating Drivers

- ING Bank has a leading franchise in the Netherlands and in some other key markets
- Profitability has remained sound despite increased credit costs in recent years
- High reliance on wholesale funding mitigated by management's ongoing efforts to lengthen debt maturities and to implement a group-wide asset-liability management strategy
- Capital is adequate to the bank's risk profile and provides satisfactory loss absorption capacity
- Deteriorating operating environment in the Netherlands weighs on the ING Bank's asset quality

Rating Outlook

Both the standalone BFSR of C- (BCA baa1), and the long-term debt and deposit ratings of A2 have a negative outlook. The negative outlook of the BFSR reflects our view that the operating environment in the Netherlands remains challenging, which implies greater downside asset quality risk for ING Bank and its domestic competitors.

The negative outlook of the long-term ratings is driven by (1) the outlook of the BFSR; and (2) the recent adoption of the Bank Recovery and Resolution Directive (BRRD) and the Single Resolution Mechanism (SRM) regulation in the EU. In particular, the adoption of the BRRD/SRM package reflects that, with the legislation underlying the new resolution framework now in place and the explicit inclusion of burden-sharing with unsecured creditors as a means of reducing the public cost of bank resolutions, the balance of risk for banks' senior unsecured creditors has shifted to the downside. Although our support assumptions are unchanged for now, there is an increased probability that our assumptions will be revised downwards to reflect the new framework. For further details, please refer to our Special Comment: "Reassessing Systemic Support for EU Banks", published on 29 May 2014.

What Could Change the Rating - Up

The negative outlook on the BFSR and all ratings of ING Bank indicates that upgrades are unlikely over the next 12 months. In the medium term (18-24 months), upward pressure on the BFSR could arise as a combined effect of (1) a material improvement in the operating environment in the Netherlands and indeed in the rest of Europe, to which ING Bank is mostly exposed; and (2) the completion of the planned restructuring measures for the whole

group (ING Groep N.V., A3 negative) including the full repayment of state aid and the full disposal of the insurance operations.

A strengthening of ING Bank's standalone credit profile is unlikely to result in upwards rating pressure on its long-term debt and deposit ratings, given the high support assumptions factored into the current ratings and against the backdrop of a declining support environment for European banks.

What Could Change the Rating - Down

The main factors that would lead us to downgrade ING Bank's standalone BFSR are (1) a significant deterioration in the operating conditions in the Netherlands (and the rest of Europe), which would lead to heavier credit losses; (2) further pressure on profit margins in the current low interest rate environment; (3) a reappraisal of ING Bank's reliance on wholesale funding in the context of an increasingly fragile funding environment; and (4) weaker-than-expected franchise value or capital resulting from the current restructuring of the ING Group.

The bank's senior ratings could be downgraded following a downgrade of its standalone BFSR and/or a reduction of systemic support assumptions that are currently factored into the ratings.

DETAILED RATING CONSIDERATIONS

ING BANK HAS A LEADING FRANCHISE IN THE NETHERLANDS AND IN SOME OTHER KEY MARKETS

ING Bank has a robust franchise in the core retail and corporate banking of the regions in which it operates. The bank has preserved good pricing power and steady earnings generation capacity both in the markets where it is a leading player (i.e., retail Benelux) and in those where it is a second-league player with strong expertise in niche areas (i.e., ING Direct, commercial banking).

The Netherlands is ING Bank's home market, where it holds a strong position in both commercial banking (with a 20%-30% share in the SME and mid-size corporate market segments) and retail banking (20% market share).

ING Bank also has a solid universal banking franchise in Belgium through ING Belgium (deposits A2 negative, BFSR C-/BCA baa1 negative), which ranks fourth in the local market with market shares in excess of 15%. ING Belgium also consolidates the activities of ING Luxembourg (unrated), which is a wholly owned subsidiary involved in the local retail, corporate and private banking businesses.

ING Bank's retail banking operations contribute to around 55% of the bank's results and display a good degree of geographical diversification. ING Bank has significant presence in Australia, France, Germany, Italy and Spain through its ING Direct franchise, where its market share is smaller in comparison with its two home markets but in which the bank is, nevertheless, a lead provider of internet banking services. ING Bank's position is particularly strong in Germany where it operates through ING DiBa (deposits A2 negative, BFSR C-/BCA a3 negative), which accounts for more than half of total deposits gathered through ING Direct. ING Bank has also significant presence in Poland, Turkey and Romania, which management consider as growth markets.

ING Bank's commercial banking business accounts for around 45% of the bank's earnings. Activities undertaken within this business line include financial markets, structured finance (i.e., corporate credit including energy, transport and infrastructure, specialised financing, trade and export finance), general lending, payment and cash management, leasing and factoring, and real estate. ING Bank has maintained a leadership position in these business segments in both Benelux and Central & Eastern Europe.

PROFITABILITY HAS REMAINED SOUND DESPITE INCREASED CREDIT COSTS IN RECENT YEARS

ING Bank's recurring profitability has remained robust since mid-2011, despite deterioration in its asset quality profile which has, in turn, given rise to higher credit costs. The bank's recurring earnings base has proven resilient and operating efficiency is good, as indicated by a cost-to-income ratio of around 57% in 2013 and 56.2% in the first half of 2014 (71.2% when including certain non-recurring items, mainly associated with making financially independent its closed 'defined benefit' pension plan and the introduction of defined contribution pension plans in the Netherlands). Whilst credit costs have trended down in recent quarters, we expect that challenging operating conditions (particularly in the Netherlands) will continue to weigh on earnings in the coming quarters.

Recurring earnings have remained relatively steady over the past three years. Interest income, which accounts for 75%-80% of the bank's total underlying income, has remained fairly stable despite margin pressure on savings, higher funding costs (as a result of lengthening of the duration of wholesale funding), and lower returns from the investment portfolio (following de-risking operations in 2012). In addition, the protracted low interest rate

environment exerts sustained negative pressure on interest margins, which ING Bank mitigates by deposit re-pricing (where possible) and originating new lending at higher margins.

The higher level of credit costs observed since mid-2011, caused by uncertain economic conditions in the Netherlands, continues to weigh on the bank's recurring profit. The main contributors to the increased credit costs are the commercial banking book (including the real estate finance portfolio), the Dutch SME and business portfolio, and - to a lesser extent - the Dutch mortgage portfolio. Loan loss provisions represented 43 basis points (bps) of average customer lending in 2013, and 35 bps in H1-2014, accounting for approximately one third of ING Bank's pre-provision profit, which leaves room to generate profit. We expect credit costs, particularly from its domestic book, to remain high over the coming quarters.

HIGH RELIANCE ON WHOLESALE FUNDING MITIGATED BY ONGOING EFFORTS TO LENGTHEN DEBT MATURITIES AND TO IMPLEMENT A GROUP-WIDE ASSET-LIABILITY MANAGEMENT STRATEGY

Despite large a sizeable deposit book, ING Bank's reliance on wholesale funding remains high, reflecting the structural features of the Dutch banking system. However, we consider that the ongoing efforts deployed by the bank over the past few years to mitigate this weakness have proven successful. These measures included (1) the lengthening of the maturity profile of its wholesale funding to reduce refinancing risk; (2) the use of the excess funding available in those foreign cash-rich subsidiaries to fund financially constrained entities through an active group-wide asset-liability management strategy; and (3) the increase in the volume of deposits in the Netherlands. Please see our Credit Focus report "ING Bank: Lengthening of debt maturities and balance sheet integration mitigate high reliance on wholesale funding" published on 9 August 2013, for further details.

Combined with the effects of sluggish loan growth, the bank's improved funding profile has contributed to an improved liquidity profile. At year-end 2013, the Basel III liquidity coverage ratio (LCR) was above 100% (based on the LCR rules prevailing as of that time; figures for end-June 2014 were undisclosed). We also note positively that the bank significantly improved the liquidity at ING Bank N.V., the Dutch parent company, which, on a standalone basis, used to have the largest customer funding gap within the group. Another positive feature of the bank's balance sheet is the relatively low asset encumbrance, which leaves sufficient amount of loans available to be packaged into central bank eligible securitisations, if required.

CAPITAL IS ADEQUATE TO THE BANK'S RISK PROFILE AND PROVIDES SATISFACTORY LOSS ABSORPTION CAPACITY

ING Bank reported a fully loaded Common Equity Tier 1 ratio of 10.5% at end-June 2014, from 10.0% at end-2013. This increase was mainly driven by earnings retention but was partly offset by the negative impact from the introduction of Basel III through CRD IV in Europe, the payment of the dividend to the group and the effect of the discontinuation of the staff defined benefits pensions plan. Overall, we consider that the bank's capital base, together with its earnings power, provides it with a satisfactory loss absorption capacity.

The bank management has recently indicated that it is considering repaying the residual state aid of EUR1.025 billion ahead of the final deadline of May 2015, which indicates it is comfortable with the current earnings generation capacity and its capitalisation levels. However, a decision in this respect will be taken after the publication of the results from the ECB's comprehensive assessments later this year; we regard this approach as prudent. We note that the ING Groep had a net pro-forma capital surplus of around EUR5.7 billion at end-June 2014, which could be used to repay the remaining state aid and absorb any potential adverse capital impact in the context of the ECB's comprehensive assessment. More generally, we believe that ING Bank is well positioned to perform under the ECB's assessment.

DETERIORATING OPERATING ENVIRONMENT IN THE NETHERLANDS WEIGHS ON ING BANK'S ASSET QUALITY

Similar to its large domestic peers, ING Bank has experienced deterioration in its asset quality since mid-2011, driven by the uncertain operating environment in the Netherlands, which was reflected in the higher non-performing loan (NPL) ratio of 2.9% at end-June 2014 up from 2.0% at year-end 2011. The main contributors of this increase were the (commercial) Real Estate Finance, the domestic business/corporate and mortgage portfolios. Despite the gradual reduction in credit costs since mid-2013, we expect the overall cost of risk to remain elevated in the coming quarters because of the ongoing economic uncertainty in the Netherlands.

The Real Estate Finance portfolio represented around 65% of the bank's Tier 1 capital at end-2013, with the largest concentration in the Netherlands (59%), Spain (9%) and Italy (6%). Credit costs for this portfolio were around 135 bps in 2013 versus 125 bps for full-year 2012 (figures undisclosed for H1-2014) while the NPL ratio

increased to 11.1% at end-June 2014 from 10.7% at year-end 2013 and 7.5% at year-end 2012 (partly due to the decrease in the outstanding balance following disposals of EUR1 billion of assets in 2013). Despite reduction in credit costs in recent quarters, we believe that exposures to this sector, which is cyclical by nature, could give rise to additional credit costs in the future, particularly as long as pressures on the Dutch commercial real estate sector have not visibly abated. Further comments on the Dutch banks' exposures to the commercial real estate sector can be found in Moody's Credit Focus: "ABN AMRO Bank, NIBC Bank, Rabobank Nederland, ING Bank: Answers to Frequently Asked Questions", published 13 March 2013.

Credit costs related to ING Bank's Dutch residential mortgage book increased to 21 bps in the first half of 2014, from 11 bps in full-year 2012. Starting from very low historical levels, the current credit costs are still low compared to those observed in some other European mortgage markets. However, some specificities of the Dutch market, including very high loan-to-value ratios and the high proportion of bullet loans (a historically tax-driven feature) render ING Bank vulnerable in a scenario of a strong deterioration in the macroeconomic environment. This risk is common to all Dutch retail banks.

The bank's aggregate exposure to euro area periphery countries was EUR57 billion at year-end 2013 (figures at end-June 2014 are undisclosed), or 148% of its Tier 1 capital, including EUR21 billion to Italy and EUR30 billion to Spain. The latter currently represents 79% of ING Bank's Tier 1 capital. This elevated exposure is mitigated by the fact that the vast majority of the exposure consists of self-originated mortgages (that continue to perform well) and corporate lending. This exposure also includes EUR9 billion covered bonds. Among the exposures to sovereign debt in euro area periphery countries, the bank reported exposures of EUR0.5 billion to Portuguese government bonds, EUR0.3 billion to Spanish government bonds and EUR1.3 billion to Italian government bonds.

Global Local Currency Deposit Rating (Joint Default Analysis)

ING Bank's GLC deposit rating is supported by the bank's standalone BCA of baa1 and our assessment of a high probability of systemic support from the Netherlands (Aaam stable) given its large domestic market shares. In accordance with our joint default analysis (JDA) methodology, ING Bank's ratings receive a two-notch uplift from its standalone BCA, bringing the GLC rating to A2, with a negative outlook.

Notching Considerations

ING Bank's dated subordinated debt is rated Baa2, i.e., one notch below the bank's BCA.

Foreign Currency Deposit Rating

ING Bank's foreign-currency deposit ratings are A2 /Prime-1 with a negative outlook.

Foreign Currency Debt Rating

ING Bank's foreign-currency debt ratings are A2 /Prime-1 with a negative outlook.

ABOUT MOODY'S BANK RATINGS

Bank Financial Strength Rating

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 honor 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 Rating Scale

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 specific to each rated entity.

Rating Factors

ING Bank N.V.

Rating Factors [1]	A	B	C	D	E	Total Score	Trend
Qualitative Factors (50%)						B-	
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]							
- Ownership and Organizational Complexity							
- 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)			2.17%				
Net Income % Average RWA (Basel II)			1.35%				
Factor: Liquidity						D+	Improving
(Market Funds - Liquid Assets) % Total Assets			4.91%				
Liquidity Management				x			
Factor: Capital Adequacy						A	Neutral
Tier 1 Ratio (%) (Basel II)	13.21%						
Tangible Common Equity % RWA (Basel II)	11.08%						
Factor: Efficiency						C	Neutral
Cost / Income Ratio			59.16%				
Factor: Asset Quality						D+	Weakening
Problem Loans % Gross Loans			2.71%				
Problem Loans % (Equity + LLR)				35.59%			
Lowest Combined Financial Factor Score (15%)						D+	
Economic Insolvency Override						Neutral	
Aggregate BFSR Score						C+	
Aggregate BCA Score						a2	
Assigned BFSR						C-	
Assigned BCA						baa1	

[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.

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



© 2014 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. ("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 PUBLICATION") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS FOR RETAIL INVESTORS TO CONSIDER MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS IN MAKING ANY INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN

WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

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

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

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.moodyys.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 61 003 399 657 AFSL 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.