

MOODY'S

INVESTORS SERVICE

Credit Opinion: Denizbank A.S.

Global Credit Research - 24 Mar 2014

Istanbul, Turkey

Ratings

Category	Moody's Rating
Outlook	Rating(s) Under Review
Bank Deposits	*Baa3/Baa3/*P-3/P-3
Bank Financial Strength	**D+/D+
Baseline Credit Assessment	ba1
Adjusted Baseline Credit Assessment	ba1
Parent: Sberbank	
Outlook	Stable
Bank Deposits	Baa1/P-2
NSR Bank Deposits -Dom Curr	Aaa.ru/--
Bank Financial Strength	D+
Baseline Credit Assessment	baa3
Adjusted Baseline Credit Assessment	baa3
Senior Unsecured	Baa1
Bkd Subordinate	Baa3
Bkd Other Short Term	(P)P-2

* Rating(s) within this class was/were placed on review on March 20, 2014

** Placed under review for possible downgrade on March 20, 2014

Contacts

Analyst	Phone
Arif Bekiroglu/London	44.20.7772.5454
Nondas Nicolaides/Limassol	357.25.586.586
Yves Lemay/London	44.20.7772.5454
Na Luo/Frankfurt am Main	49.69.707.30.700

Key Indicators

DENIZBANK A.S. (Consolidated Financials)[1]

	[2]12-13	[2]12-12	[3]12-11	[3]12-10	[3]12-09	Avg.
Total Assets (TRY million)	79,667.8	56,494.6	44,756.3	33,853.2	25,942.9	[4]32.4
Total Assets (USD million)	37,080.7	31,654.9	23,698.1	21,996.9	17,307.4	[4]21.0
Tangible Common Equity (TRY million)	6,356.6	5,101.5	4,736.8	3,632.8	3,020.7	[4]20.4
Tangible Common Equity (USD million)	2,958.6	2,858.4	2,508.1	2,360.5	2,015.2	[4]10.1
Net Interest Margin (%)	4.5	5.1	4.8	6.2	7.5	[5]5.6
PPI / Average RWA (%)	5.9	3.4	3.8	4.9	6.8	[6]4.6
Net Income / Average RWA (%)	2.6	1.5	3.0	2.4	2.8	[6]2.0
(Market Funds - Liquid Assets) / Total Assets (%)	15.1	7.2	9.0	10.3	14.5	[5]11.2
Core Deposits / Average Gross Loans (%)	73.1	77.4	72.3	72.7	62.4	[5]71.6

Tier 1 Ratio (%)	9.0	10.6	11.8	12.5	13.3	[6]9.8
Tangible Common Equity / RWA (%)	108.8	10.0	11.8	12.3	13.1	[6]59.4
Cost / Income Ratio (%)	47.5	47.1	49.4	45.5	38.8	[5]45.6
Problem Loans / Gross Loans (%)	2.8	3.5	2.8	4.4	5.5	[5]3.8
Problem Loans / (Equity + Loan Loss Reserves) (%)	22.3	21.5	17.1	24.6	29.0	[5]22.9

Source: Moody's

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

Opinion

SUMMARY RATING RATIONALE

The Baa3/Prime-3 global local-currency (GLC) deposit ratings assigned to Denizbank A.S. (Denizbank) are based on the bank's ba1 baseline credit assessment (BCA), and our assumption of high probability of systemic support from Turkey (Baa3, stable), taking into account Denizbank's market share in loans and deposits of around 3-4%. Our imputed high probability of parental support from Russia's Sberbank (deposits Baa1 stable, BFSR D+, stable/BCA baa3)) does not result in any rating uplift for Denizbank's ratings because Sberbank's unsupported BCA of ba1 is at the same level as Denizbank's BCA.

Denizbank's standalone bank financial strength rating (BFSR) of D+ is equivalent to a BCA of ba1. The BFSR reflects Denizbank's (1) medium-sized market position with an emphasis on corporate and SME lending and some specialisation in agricultural and project finance with a long brand history; (2) adequate financial performance underpinned by adequate recurring earnings capacity and net profits, and capital levels.

The BFSR is constrained by (1) the bank's moderate asset-quality; and (2) comparatively tighter liquidity indicators; and limited diversification of liquidity and funding. Other factors included in the ratings include the challenging operating environment, strong growth in a relatively unseasoned credit environment and an evolving risk culture - particularly in retail credits.

Rating Drivers

- The bank's profitability ratios compares favourably to those of the system and its closest peers
- Loan growth outpacing deposit collections re-distancing recently aligned bank's liquidity indicator from that of the system
- Banks leaner core capitalisation could constrain Denizbank to keep pace with the strong growth in the system
- Potential for greater asset-quality volatility due to the unseasoned loan portfolio
- Established commercial banking franchise with mid-size market share

Rating Outlook

The deposit ratings and BFSR are on review for downgrade. The review for downgrade of the deposit ratings, and BFSR reflects (1) the likelihood that the bank's standalone BCA may be lowered due to the possibility of a downgrade of the BFSR, because of the operating environment pressures in the Turkish market; and (2) Moody's evolving view on systemic support.

What Could Change the Rating - Up

Currently there is no upward pressure on Denizbank's ratings, as reflected by the review for downgrade. Over time, the rating outlook could be changed to stable following evidence of improvement both in the domestic operating environment and in external liquidity conditions towards emerging markets that will, in turn, contribute to a stronger performance of the banking system and Denizbank. An upgrade of Sberbank's or Turkey's ratings could translate into higher degree of support to be incorporated in Denizbank's ratings, though, given the stable outlook on these ratings, Moody's views this occurrence as unlikely in the near-term rating horizon.

What Could Change the Rating - Down

Downwards pressure on the BFSR could result from (1) any evidence that Turkey's operating environment will face further significant deterioration in profitability or asset quality, thus negatively affecting the risk-return profile of bank's business; (2) prolonged restrictions to access to capital markets (3) significant changes in Denizbank's strategy or management results in an increase in its risk appetite; (4) material increase intergroup funding elevating dependence parent; or (5) existing competitive pressures lead to a material reduction in profitability from current levels or further constrain franchise development. The long-term ratings could be downgraded as a result of a lowering of the BFSR and/or the revision of systemic support considerations or rating pressures on the sovereign rating. However, our parental support assumption from Sberbank should dampen any downward pressure on the (GLC) deposit ratings if the BFSR is lowered.

DETAILED RATING CONSIDERATIONS

THE BANK'S PROFITABILITY RATIOS COMPARES FAVOURABLY TO THOSE OF THE SYSTEM AND ITS CLOSEST PEERS

As of H1-2013, Denizbank's consolidated net profits (BRSA) increased by 90% year-over-year to TRY635 million (US\$350 million) - versus 18% growth reported by banking system. Stronger earnings were supported by a similar growth in pre-provisioning income to TRY1.384 million driven by a 32% increase in net interest income to TRY1.6 billion (compared to system's 20%) on the back of high loan book growth of 38% (compared to system's 25%) and reduction in cost of deposits, despite a 32% growth in deposits due to the cuts in interest rates in H1 2013.

Furthermore, we attribute strong net-interest income to its higher share of local currency and unsecured consumer loans, as well as a further shift to loans from lower-yielding government securities, leading to an improvement in the net interest margin (NIM) to 5.4% in H1 2013 from 5.2% in H1 2012 (over the same period, the system's NIM was 4.1%, which was in line with 2012).

Given its business mix, Denizbank generates moderate shares of fees and commission income at 13% of total revenues. However, against the background of subdued economic growth and the seasoning of the loan portfolio, and high growth of its loan book Denizbank reported more than a doubling of loan loss provisions, now amounting to one-third of pre-provisioning income, which was at the higher-range of its peers.

On a risk-adjusted basis, the bank's profitability ratios recovered and suppressed those of the system and its peers. The annualized pre-provision income- and net income to average risk-weighted assets stood at 5.0% and 2.3% as of H1 2013, up from 3.4% and 1.5% in 2012, respectively (2012: system reported 3.6% and 2.1%, down from 3.7% and 2.3%, respectively).

We expect Denizbank's profitability to decline in 2014 in line with the system because of: (1) projected moderate economic growth and further seasoning of the loan book that could entail higher provisioning; (2) higher cost of funds due to rising competition for deposits in the system as the overall loan to deposit ratio rises further, and the upward interest rate environment; and (3) rising consumer-protection pressures which could affect pricing power. The main challenges for Denizbank will to (1) maintain its risk discipline despite intense competition and profitability pressures; (2) control operating expenses; and (3) leverage the network - all of which will be crucial to maintaining profitability ratios and supporting longer-term internal capital and franchise growth.

LOAN GROWTH OUTPACING DEPOSIT COLLECTIONS RE-DISTANCING THE RECENTLY ALIGNED BANK'S LIQUIDITY INDICATOR FROM THAT OF THE SYSTEM

We regard Denizbank's liquidity profile as adequate. As of H1 2012, Denizbank's solo gross loan-to-deposit ratio is 118% (consolidated 113%) weaker than the system average of 109% for deposit taking banks, (recent acquisition of Citi's consumer loan book provides limited improvement by 2% only) and in particularly unfavorably in local currency 131% (2012: 121%) with the system average at 113% (2012:106%). In our opinion, this elevates the bank's susceptibility to depositors behavior and the pricing dynamics of peers. The increase in wholesale funding reliance on the bank is reversal of the previous trend whereby Denizbank successfully realigned its loan-to-deposit ratio to be in line with system average of 109% - and a significant improvement at the time from the 125% reported in 2009 (whilst under Dexia ownership). We find comfort that the increase in wholesale funding reliance is primarily by the TRY550 million with 5 year funds (equating 68 bps of Denizbank's balance sheet) provided by Sberbank on the back of the parent's TRY Eurobond issuance in 2013.

Furthermore, Denizbank is mainly short-term funded with the bulk of deposits in the up-to-three-months bucket,

versus 25% of loan book matures within three months and the remainder being medium to long-term lending activities. The bank mitigates these risks by holding an adequate portfolio of liquid assets that account for around 29% of its total balance sheet, half of which comprises Turkish government securities. The maturity mismatch exposes Denizbank additionally to interest-rate risk, stemming from the current upwards changes in interest rates. The bank has recently tapped capital markets with a covered bond that should contribute to maturity extension and diversification of its funding source.

LEANER CAPITALISATION COULD CONSTRAIN BANK TO KEEP PACE WITH THE STRONG GROWTH IN THE SYSTEM

Denizbank's consolidated Basel II total capital adequacy ratio (CAR) further declined to 12.6% and Core Tier 1 10.1% as of H1 2013 (2012: 13.1%) versus the minimum target regulatory CAR of 12% (i.e. for those banks targeting expansion via new branch openings) and the system average CAR of 16% and Tier 1 of 13.7%. Declining trend is underpinned by (1) growth in loan book outpacing internal capital generation; and (2) increased regulatory risk weights in unsecured consumer loans. Bank's lower capital quality and level will likely affect its capacity to retain earnings for future capital growth due to the comparatively higher cost of capital for its mixed capital which consists of equity and subordinated debt components. The aforementioned conditions place the bank at a disadvantage to most of its peers that have more leeway for future growth and market share expansion.

Denizbank's capital growth - which was required in order to keep pace with strong growth in the Turkish banking system - benefitted, to a large extent, from the provision of subordinated capital instruments and supplemented earnings retention that excluded any dividend payouts over the past few years. Denizbank has subordinated debt from Belfius Bank SA/NV (Baa1/Prime-2, stable; D-/ba3, positive (formerly named Dexia Bank Belgium SA and Dexia Credit Local (Baa2/Prime-2, negative; E/ca, stable) - that amounts to around TRY1029 million (US\$380 million and EUR 90 million) and from Sberbank that amounts to around TRY1222 million (US\$600 million) equating to 3% of its consolidated balance sheet - with maturities in 2016, 2017, 2018 and 2023. Exercising the early redemption option in 2013 and 2014 (subject to agreement of the parties involved and BRSA approval) is not currently anticipated.

POTENTIAL FOR GREATER ASSET-QUALITY VOLATILITY DUE TO THE UNSEASONED LOAN PORTFOLIO

Denizbank's credit risk profile (although improving) remains constrained by its asset mix which comprises primarily from high single-party exposures to local corporations, including - albeit to a lesser extent - its above system-average exposure to the construction sector (accounting for 9% of the loan book).

As of H1 2013, the NPL ratio was a moderate 3.3% (2011: 2.8%), which is weaker than the system average of 2.8%. In addition, about 4% of bank's loans (in line with the average for Moody's rated banks) were fewer than 90 days delinquent and/or whose payment terms had been modified and were not captured by the NPL ratios, indicating the potential for further asset-quality deterioration as they season. On the back of the moderate GDP growth forecast continuing in 2014, as the high growth loan book seasons we can expect that the loan loss provisioning will gradually increase but remain within bank's provisioning capacity and its capital should provide for sufficient loan loss-absorption.

ESTABLISHED COMMERCIAL BANKING FRANCHISE WITH MID-SIZED MARKET SHARE

As of H1 2013, Denizbank ranks eighth amongst the commercial banks in Turkey, with total consolidated assets of TRY65billion (\$34 billion), offering a full universal banking service with a network of 666 domestic branches. Denizbank's market shares are around 3%-4% in terms of loans and customer deposits. It is a recognised specialised lender to corporates (54% of the loan book) and SMEs (including agriculture loan)(21%), with an evolving franchise in retail banking (25%) and leader amongst the private banks in agricultural loans, with a market share of 9%.

The overall group (Denizbank Financial Services Group) includes leasing, factoring, IT and credit-card services, brokerage, investment management (all within Turkey), as well as banking subsidiaries in Austria and Russia (Moscow). However, cross-border revenue diversification is a modest 17%.

Following the change of ownership in 2012 to Sberbank as long-term strategic investor (formerly owned by Dexia Group), we believe that Denizbank will benefit from a successful collaboration over the medium term. This includes supporting the development of the domestic franchise as well as synergies, in light of trade activities between Turkey and Russia that could reflect positively on Denizbank's franchise in Turkey.

Besides intense competition, especially in retail banking, there are rising regulatory pressures for consumer protection; these can potentially affect banks' product distribution and pricing power capabilities, which will require stricter risk selection and risk discipline. These pressures are evidenced by the recent fines levied on 13 Turkish banks, including Denizbank, for violating competition rules. The banks were accused of colluding on maximum deposit rates, interest-rate increases on credit cards, and commissions and fees for card services.

As of July 2013 Denizbank transfer of Citibank A.S. (Citi Turkey)'s domestic consumer banking business including consumer banking portfolio with TRY1.2 billion receivables (2.7% of gross loans) and TRY1.6 billion deposits (4.3% of total deposits); staff and branches were finalized; which should strengthen bank's position in retail banking segment increasing granularity of the bank's loan book and deposit base.

Global Local Currency Deposit Rating (Joint Default Analysis)

The Baa3/Prime-3 local-currency deposit ratings are supported by Denizbank's ba1 BCA and our assessment of a high probability of systemic (government) support from Turkey.

We also believe that there is a high probability of parental support from Sberbank. As a result, during the review Moody's will assess the level of parental support that should be incorporated in Denizbank's ratings from its Russian parent Sberbank which holds a 99.85% stake in Denizbank. Moody's says that potential parental support assumptions could dampen any downward pressure on Denizbank's senior ratings in the event of downgrade of the bank's BFSR.

Our assessment of a high probability of systemic support is based on Denizbank's importance to the domestic financial system, given its domestic loan and deposit market shares of approximately 3-4%. Our assessment is also based on the government's strong track record of support, and the fact that we consider Turkey to be a high support country. Based on these assumptions, Denizbank's Baa3 long-term local-currency deposit rating receives one notch of systemic support uplift.

Our assessment of a high probability of parental support is based on Denizbank's importance to Sberbank, underpinned, amongst other things, by (1) Sberbank's 99.85% ownership of Denizbank; (2) Sberbank's dedicated focus to increase its cross-border expansion, whereby Denizbank provides some diversification benefits; (3) both banks having commercial consumer-oriented banking franchises; and (4) Sberbank's supportive track record towards its subsidiaries.

Foreign-Currency Deposit Rating

Denizbank's foreign-currency deposit ratings are Baa3/Prime-3 and are in line with bank's GLC deposit ratings.

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 recognise 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 specific to each rated entity.

Rating Factors

DENIZBANK A.S.

Rating Factors [1]	A	B	C	D	E	Total Score	Trend
Qualitative Factors (70%)						D	
Factor: Franchise Value						D+	Neutral
Market share and sustainability			x				
Geographical diversification				x			
Earnings stability				x			
Earnings Diversification [2]							
Factor: Risk Positioning						D	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						D	Neutral
Economic Stability					x		
Integrity and Corruption				x			
Legal System			x				
Financial Factors (30%)						C+	
Factor: Profitability						B+	Weakening
PPI % Average RWA (Basel II)	3.82%						
Net Income % Average RWA (Basel II)		2.08%					
Factor: Liquidity						D+	Weakening
(Market Funds - Liquid Assets) % Total Assets			8.87%				
Liquidity Management				x			
Factor: Capital Adequacy						B+	Weakening
Tier 1 Ratio (%) (Basel II)		9.75%					
Tangible Common Equity % RWA (Basel II)	9.40%						
Factor: Efficiency						B	Weakening
Cost / Income Ratio		47.31%					
Factor: Asset Quality						C	Weakening
Problem Loans % Gross Loans			3.59%				
Problem Loans % (Equity + LLR)			21.06%				
Lowest Combined Financial Factor Score (9%)						D+	
Economic Insolvency Override						Neutral	
Aggregate BFSR Score						D+	
Aggregate BCA Score						baa3/ba1	
Assigned BFSR						D+	
Assigned BCA						ba1	

[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.

© 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.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 61 003 399 657 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.