

## CREDIT OPINION

22 May 2017

Update

Rate this Research >>

### RATINGS

#### SBAB Bank AB (publ)

Domicile	Sweden
Long Term Debt	A2
Type	Senior Unsecured - Fgn Curr
Outlook	Positive
Long Term Deposit	A2
Type	LT Bank Deposits - Fgn Curr
Outlook	Positive

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

### Analyst Contacts

Niclas Boheman 44-20-7772-1643  
AVP-Analyst  
niclas.boheman@moodys.com

Maria Asensio 44-20-7772-1078  
Associate Analyst  
maria.asensio@moodys.com

Jean-Francois Tremblay 44-20-7772-5653  
Associate Managing Director  
jean-francois.tremblay@moodys.com

Sean Marion 44-20-7772-1056  
MD-Financial Institutions  
sean.marion@moodys.com

## SBAB Bank AB (publ)

### Semiannual Update

#### Summary Rating Rationale

We assign a baa2 baseline credit assessment (BCA) and A2 long-term deposit and senior unsecured debt ratings to SBAB Bank AB (publ) (SBAB). We also assign a long-term issuer rating of A2, subordinated debt rating of (P)Baa3, and a long-term Counterparty Risk Assessment (CR Assessment) at A1(cr)/Prime-1(cr).

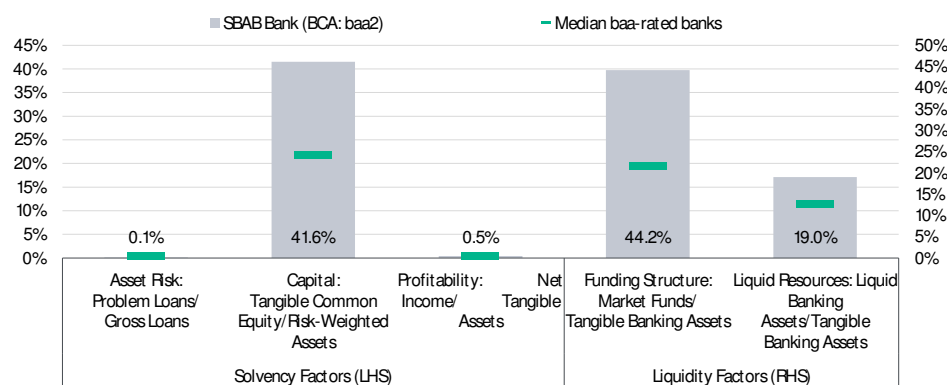
SBAB's baa2 BCA reflects the bank's predominantly retail focus, operating in the strong Swedish economic environment, and very strong asset quality metrics. The standalone assessment takes into account SBAB's historically limited profitability and high market funding reliance, which renders the bank more vulnerable to investor sentiment. Nevertheless we acknowledge that the bank has increased its deposit funding and improved its maturity profile in recent years, and view SBAB's low profitability and limited capital generating ability in the context of its limited credit risk as a mortgage lender.

The positive outlook on SBAB's long term deposit and senior unsecured ratings reflects our expectations that the bank's historically volatile earnings will stabilise at current levels or even increase slightly, while its funding profile will continue to improve, which would bring SBAB's credit profile more in line with rated peers.

Exhibit 1

#### Rating Scorecard- Key Financial Ratios

SBAB Bank's Scorecard ratios compared to the median peers



Source: Moody's Financial Metrics

## Credit Strengths

- » An efficient mortgage lender
- » Low loan losses
- » Good risk-based capitalisation
- » Large volume of deposits and senior unsecured debt resulting in deposits and senior unsecured ratings benefiting from a very low expected loss-given-failure
- » SBAB's BCA is supported by Sweden's Very Strong- Macro Profile

## Credit Challenges

- » Historically volatile earnings
- » High leverage
- » High reliance on market funding mitigated by increased funding duration

## Rating Outlook

The positive outlook on SBAB's long-term ratings primarily reflects our expectation that SBAB will be able to maintain its current profitability level, which has increased in recent years, underpinned by resilience in net interest margins (NIM) despite the prolonged low interest rate environment. SBAB recorded net income over tangible assets of 0.45% in Q1 2017 (annualised) and NIM of 0.84% (annualised).

Moreover, we expect that SBAB will continue to reduce reliance on market funding through further diversification into deposits, thereby reducing its gross loans to deposits ratio of 305% at end-March 2017, as well as extending the bank's average maturity profile of its market debt.

## Factors that Could Lead to an Upgrade

- » As implied by the rationale supporting the positive outlook on SBAB's ratings, the ratings could be upgraded if (1) the recent improvement in SBAB's funding profile proves sustainable and deposits exhibit stability if their price level reduces; and/or (2) profitability is sustained without a corresponding increase in risk profile.

## Factors that Could Lead to a Downgrade

- » Although a low-probability scenario given the positive outlook currently assigned to SBAB's ratings, SBAB's senior unsecured ratings could be downgraded if its cushion of bail-in eligible liabilities shrinks considerably. Moody's would also consider downgrading SBAB Bank's long-term and subordinated ratings if (1) the bank's profitability significantly deteriorates, and/ or (2) the bank's risk profile increases due to increased exposure to more volatile sectors (e.g. unsecured lending).

## Key Indicators

Exhibit 2

### SBAB Bank AB (publ) (Consolidated Financials) [1]

	3-17 <sup>2</sup>	12-16 <sup>2</sup>	12-15 <sup>2</sup>	12-14 <sup>2</sup>	12-13 <sup>3</sup>	CAGR/Avg. <sup>4</sup>
Total Assets (SEK million)	400,684	373,638	371,437	334,592	330,589	6.1 <sup>5</sup>
Total Assets (EUR million)	41,960	38,994	40,558	35,322	37,355	3.6 <sup>5</sup>
Total Assets (USD million)	44,878	41,129	44,058	42,742	51,473	-4.1 <sup>5</sup>
Tangible Common Equity (SEK million)	16,774	15,949	13,065	10,853	9,539	19.0 <sup>5</sup>

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

Tangible Common Equity (EUR million)	1,757	1,664	1,427	1,146	1,078	16.2 <sup>5</sup>
Tangible Common Equity (USD million)	1,879	1,756	1,550	1,386	1,485	7.5 <sup>5</sup>
Problem Loans / Gross Loans (%)	0.1	0.1	0.1	0.1	0.1	0.1 <sup>6</sup>
Tangible Common Equity / Risk Weighted Assets (%)	41.0	41.5	34.2	31.7	23.2	37.1 <sup>7</sup>
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	1.3	1.6	2.2	2.4	2.1	1.9 <sup>6</sup>
Net Interest Margin (%)	0.8	0.8	0.7	0.6	0.6	0.7 <sup>6</sup>
PPI / Average RWA (%)	5.8	5.3	4.2	4.5	1.1	4.9 <sup>7</sup>
Net Income / Tangible Assets (%)	0.5	0.4	0.3	0.4	0.3	0.4 <sup>6</sup>
Cost / Income Ratio (%)	28.8	29.2	33.7	33.7	40.9	33.3 <sup>6</sup>
Market Funds / Tangible Banking Assets (%)	44.9	44.2	47.9	49.6	57.1	48.7 <sup>6</sup>
Liquid Banking Assets / Tangible Banking Assets (%)	22.3	19.0	18.2	19.6	19.7	19.8 <sup>6</sup>
Gross Loans / Due to Customers (%)	305.4	306.1	387.8	431.8	564.7	399.2 <sup>6</sup>

[1] All figures and ratios are adjusted using Moody's standard adjustments [2] Basel III - fully-loaded or transitional phase-in; IFRS [3] Basel II; IFRS [4] May include rounding differences due to scale of reported amounts [5] Compound Annual Growth Rate (%) based on time period presented for the latest accounting regime [6] Simple average of periods presented for the latest accounting regime. [7] Simple average of Basel III periods presented

Source: Moody's Financial Metrics

## Detailed Rating Considerations

The financial data in this report are sourced from SBAB's financial statements or Moody's Financial Metrics, unless otherwise stated.

### An efficient mortgage lender with improving profitability despite the low interest environment

SBAB is a government-owned Swedish bank that provides residential mortgages, loans and savings services to individuals, corporates and tenant-owner associations; its mortgage market share at end-March 2017 was 7.35%. Our assigned Profitability score of ba1 reflects the bank's historically low and volatile earnings but also acknowledges the bank's improvement in profitability in recent years and its low cost to income ratio.

SBAB's reported pre-tax income in 1Q17 was SEK 549 million compared with SEK 439 million during the same quarter last year, driven by higher volume (lending to the public increased by around 2% year on year) and reduced interest expenses, equating a reported annualised return on equity of 12.6%. After a number of strategic changes in the last years, management announced in the third quarter of 2014 that the bank would focus on its mortgage lending business. Furthermore, in 2015, the strategy included growing its business under its own brand and decreasing its partnerships with other loan originators. The bank has an overarching target to achieve a return on equity of at least 10% while keeping the CET1 ratio at least 1.5% above the 24.7% estimated requirement as calculated by the bank in the first quarter of 2017 (based on Finansinspektionen's criteria). To enhance growth in market share, in January 2016 SBAB purchased a 71% stake in Booli - one of Sweden's largest housing sites and search engines for homes - which is included in SBAB's retail operations. SBAB has also an option to acquire the remaining shares at a later date.

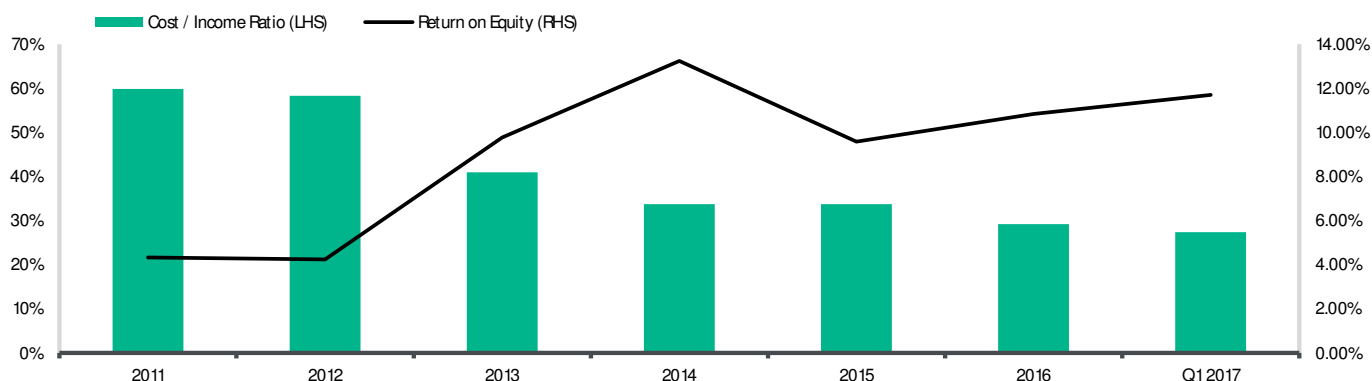
SBAB is already an efficient bank - reported cost-income ratio was 29.9% in the first quarter of 2017 and 30.6% in the fourth quarter of 2016 - because it operates without retail branches and originates loans through the internet, by telephone, or via other distribution channels, including agreements with independent savings banks, domestic financial institutions and real estate brokers. With the strategy change to focus on the SBAB brand, the partnership agreements are expected to decrease. Although the loss of the additional business from those partnerships will affect growth rates, margins are expected to be higher as SBAB focuses on direct customer lending.

Whilst efficiency is a strength, SBAB's profitability has historically been weak and volatile (see Exhibit 3), with its reported return on equity fluctuating between 4% and 13% in the last decade. Going forward we expect earnings to remain stable because fair valuation volatility, previously caused by their portfolio of liquid securities, will be contained through more efficient use of hedge accounting. The low profitability reflects the bank's mortgage focus, its lack of scale, and the government ownership.

Exhibit 3

**SBAB's Cost to Income Ratio and Return on Equity**

Efficient bank with volatile profitability



Source: Moody's Financial Metrics

We consider SBAB's business model to be less diversified than that of a full-service bank and we reflect this in a negative adjustment for business diversification, an adjustment shared with other mortgage lenders in Sweden.

**SBAB will continue showing very low loan loss provisions but tail risks exist.**

SBAB's reported problem loans ratio at end-March 2017 was very low at 0.07%. In line with other Swedish mortgage lenders, SBAB's asset quality has remained stable for decades. The high quality of assets is reflected in our aa2 asset risk score.

SBAB's SEK305 billion lending book comprises almost only mortgages: single-family dwellings (37% of the lending book at end-March 2017), tenant-owner rights (35%), tenant-owner associations (17%), and private multi-family dwellings (10%). The remaining part is marginal and includes exposure to commercial properties and unsecured lending. The large majority of the loans is concentrated in the Stockholm and Öresund region (around 80% of the lending book). We note that SBAB has extended residential mortgages with a high LTV above 70%, although, in line with the legislation, loans are capped at 85% LTV and require amortisation down to 50%. At end-March 2017 the average LTV in SBAB's mortgage portfolio was 61%.

Although SBAB's loan book decreased during the fourth quarter of 2016, largely due to the transfer of Sparbanken Öresund's loan portfolio to Swedbank, the loan book increased to SEK 305bn at end-March 2017 from SEK 299bn at end-March 2016 (SEK 296 billion at end-2016). While we view this as a positive development for credit quality compared to the 2015 growth, when SBAB's retail mortgage lending grew at almost twice the speed as the mortgage market (16.7% and 8.4% respectively), we still note some residual risk from the unseasoned parts of the loan book. We do not expect to see a significant increase in problem loans over the outlook period, but note potential tail-risk related to increased interest rates or falls in property prices, because loan growth has been high during a period of very low interest rates and strong property price appreciation. Like most other banks, the percentage of variable rate mortgages in the portfolio are high, at 72% by year-end 2016. These borrowers are more exposed to interest rate changes. A mitigating factor is that the bank, as is usual in Sweden, conducts interest rate stress tests on borrowers during the application process. Additionally, we expect the full recourse on mortgages and the values of collateral to limit losses in the loan portfolio, even in an economic downturn.

**Good capitalisation but weak leverage ratio**

We view SBAB's capital position as adequate given its risk profile, resulting in an assigned capital score of a1 - a relative strength for the rating.

SBAB uses the internal ratings based approach to calculate its risk-weighted assets. At end-March 2017, SBAB reported a Common Equity Tier 1 (CET1) ratio of 29.9% (2016: 32.2%) and a Tangible Common Equity on risk-weighted assets under Moody's definition of 41.03%, which includes SBAB's SEK3 billion additional Tier 1 (AT1) capital instruments.

Due to the government ownership, SBAB is not a listed company, hence it does not have direct access to the equity capital markets, this is a weakness as it limits the bank's ability to raise capital.

At end-March 2017, SBAB's Tangible Common Equity on Tangible Assets ratio was 4.19%, which includes the AT1 securities issued in 2015 and 2016. The difference between the risk-based ratio and the leverage is due to the use of the internal ratings based approach for calculating its capital requirements where household mortgages receive very low risk weighted averages. The regulatory risk weight floor of 25% is applied in Pillar II and does not affect the risk based ratio calculations.

### **High reliance on market funding mitigated by increased funding duration**

We view SBAB's significant reliance on market funding as a weakness - albeit mitigated by the fact that most of the funding is secured (covered bonds denominated in local currency) and by recent efforts to increase funding duration - and its liquidity position is adequate. Our baa3 combined liquidity score reflects this view.

SBAB's high reliance on confidence sensitive wholesale funding – debt securities in issue and liabilities to credit institution represented 69% of the balance sheet at end-March 2017 – is a structural weakness. Additionally, a significant proportion of its market funding is short term (15% of total securities in issue had a maturity less than 12 months at end-2016), whilst we note that foreign currency funding accounted for 34% of the total securities in issue at same date.

However, a number of factors mitigate this weakness. Firstly, SBAB's Aaa rated covered bonds account for more than half of its long term funding; these securities benefit from a deep local market and we reflect this feature by treating covered bonds denominated in local currency as retail funding, an adjustment shared with other Swedish banks. Secondly, SBAB's funding profile has improved over the last year following the strategic aim to extend the maturity, with successful benchmark issues in the first quarter of 2017, and reducing foreign currency exposures. In January, a EUR 1 billion seven-year covered bond was issued, in February a SEK 5 billion nine-year covered bond was issued and in March a EUR 750 million ten-year covered bond was issued. Finally, SBAB has successfully increased its deposit base over the last years. Customer deposits were 25% of total balance sheet at end-March 2017 compared with 14% at end-2013; this increase is credit positive, although we note that it has been achieved by offering competitive internet deposit rates and that we consider internet-sourced deposit as less sticky than branch-sourced.

SBAB's liquidity position is adequate, as captured by our baa2 assigned liquid resources score. Liquid banking assets, consisting of highly rated securities, totalled SEK89 billion at end-March 2017. SBAB's reported LCR was 295% and its liquid banking assets were 22.3% of its tangible banking assets at same date.

### **SBAB's BCA is supported by Sweden's Very Strong- macro profile**

Sweden's (Aaa stable) Macro Profile benefits from a competitive and diverse economy, robust public institutions and a stable political environment that supports consensus orientated policy making. However, we view Swedish households' debt levels (around 80% of which consist of mortgages) and the multi-year growth in household debt as key vulnerabilities to the financial system.

Although the banking system is concentrated around four banks, we believe that competition in the Swedish banking industry is healthy. On a negative note, Swedish banks are structurally reliant on market funding and that exposes them to swings in investor sentiment; this risk is partially mitigated because: (i) Sweden has its own currency and, (ii) domestic investors hold almost three quarters of the country's bonds.

## **Notching Considerations**

### **Loss Given Failure**

We apply our advance loss-given-failure analysis to SBAB as it is subject to the EU Bank Recovery and Resolution Directive (BRRD), which we consider to be an Operational Resolution Regime. We assume residual tangible common equity of 3% and losses post-failure of 8% of tangible banking assets, a 25% run-off in "junior" wholesale deposits, a 5% run-off in preferred deposits, and assign a 25% probability to deposits being preferred to senior unsecured debt, in line with our standard assumptions. Particular to SBAB and other Swedish pure mortgage lenders, we assume the proportion of deposits considered junior at 10%, relative to our standard assumption of 26%, due to their largely retail oriented depositor base.

Based on SBAB's balance sheet structure at end-March 2017, our Advanced LGF Analysis indicates that deposits are likely to face a very low loss given failure, due to the loss absorption provided by subordinated debt and preference shares and, potentially, by senior

unsecured debt should deposits be treated preferentially in a resolution, as well as the volume of deposits assumed as junior. This suggests a preliminary rating assessment (PRA) of a3, two notches above the BCA.

Similarly, senior long term debt is likely to face a very low loss given failure, which leads to a PRA of a3.

Junior securities are likely to face a high loss given failure due to the loss absorption provided by its own very modest volume and the amount of debt subordinated to it, resulting in a rating of Baa3.

SBAB's deposit and senior unsecured debt ratings are positioned at A2/Prime-1, and take into account the bank's baa2 BCA, our view of a very low loss given failure on these instruments, resulting in two notches of LGF uplift, and a moderate assessment of government support from Sweden, in case of need, providing one further notch of rating uplift.

### **Government Support**

SBAB is fully owned by the Swedish government and has a meaningful market share in the Swedish residential mortgage market (7.35%). This guides our expectation of a moderate probability of government support from Sweden (Aaa stable) for SBAB's deposit and senior unsecured debt results in a one notch rating uplift for each of the debt classes.

## Rating Methodology and Scorecard Factors

Exhibit 4

### SBAB Bank AB (publ)

#### Macro Factors

**Weighted Macro Profile**                      **Very Strong -**                      **100%**

Factor	Historic Ratio	Macro Adjusted Score	Credit Trend	Assigned Score	Key driver #1	Key driver #2
Solvency						
Asset Risk						
Problem Loans / Gross Loans	0.1%	aa1	← →	aa2	Quality of assets	
Capital						
TCE / RWA	41.0%	aa1	← →	a1	Nominal leverage	
Profitability						
Net Income / Tangible Assets	0.4%	baa3	← →	ba1	Return on assets	
Combined Solvency Score		aa3		a2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	44.2%	b1	← →	baa3	Market funding quality	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	19.0%	baa2	← →	baa2	Stock of liquid assets	
Combined Liquidity Score		ba2		baa3		
Financial Profile						
Business Diversification				-1		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				-1		
Sovereign or Affiliate constraint:				Aaa		
Scorecard Calculated BCA range				a3-baa2		
Assigned BCA				baa2		
Affiliate Support notching				0		
Adjusted BCA				baa2		

Balance Sheet	in-scope (SEK million)	% in-scope	at-failure (SEK million)	% at-failure
Other liabilities	221,384	55.3%	228,383	57.0%
Deposits	99,974	25.0%	92,976	23.2%
Preferred deposits	89,977	22.5%	85,478	21.3%
Junior Deposits	9,997	2.5%	7,498	1.9%
Senior unsecured bank debt	62,700	15.7%	62,700	15.7%
Dated subordinated bank debt	4,449	1.1%	4,449	1.1%
Equity	12,016	3.0%	12,016	3.0%
Total Tangible Banking Assets	400,523	100%	400,523	100%

Debt class	De jure waterfall		De facto waterfall		Notching		LGF notching guidance versus BCA	Assigned LGF notching	Additional notching	Preliminary Rating Assessment
	Instrument volume + Subordination	Sub-ordination	Instrument volume + Subordination	Sub-ordination	De jure	De facto				
Counterparty Risk Assessment	21.6%	21.6%	21.6%	21.6%	3	3	3	3	0	a2 (cr)
Deposits	21.6%	4.1%	21.6%	19.8%	2	3	2	2	0	a3
Senior unsecured bank debt	21.6%	4.1%	19.8%	4.1%	2	2	2	2	0	a3
Dated subordinated bank debt	4.1%	3.0%	4.1%	3.0%	-1	-1	-1	-1	0	baa3
Non-cumulative bank preference shares	3.0%	3.0%	3.0%	3.0%	-1	-1	-1	-1	-2	ba2 (hyb)

Instrument class	Loss Given Failure notching	Additional Notching	Preliminary Rating Assessment	Government Support notching	Local Currency Rating	Foreign Currency Rating
Counterparty Risk Assessment	3	0	a2 (cr)	1	A1 (cr)	--
Deposits	2	0	a3	1	A2	A2
Senior unsecured bank debt	2	0	a3	1	A2	A2
Dated subordinated bank debt	-1	0	baa3	0	Baa3	Baa3
Non-cumulative bank preference shares	-1	-2	ba2 (hyb)	0	Ba2 (hyb)	--

Source: Moody's Financial Metrics

## Ratings

Exhibit 5

Category	Moody's Rating
<b>SBAB BANK AB (PUBL)</b>	
Outlook	Positive
Bank Deposits	A2/P-1
Baseline Credit Assessment	baa2
Adjusted Baseline Credit Assessment	baa2
Counterparty Risk Assessment	A1(cr)/P-1(cr)
Issuer Rating	A2
Senior Unsecured	A2
Subordinate -Dom Curr	Baa3
Pref. Stock Non-cumulative -Dom Curr	Ba2 (hyb)
Commercial Paper	P-1
Other Short Term	(P)P-1

Source: Moody's Investors Service



© 2017 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

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

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER. ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

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

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

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

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

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

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

Additional terms for Japan only: Moody's Japan K.K. ("MJJK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJJK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJJK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJJK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJJK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJJK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

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

REPORT NUMBER

1073111