

## **CREDIT OPINION**

20 December 2024



Send Your Feedback

#### RATINGS

#### Spar Nord Bank A/S

Domicile	Aalborg, Denmark
Long Term CRR	A1 , Possible Upgrade
Туре	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	A1 , Possible Upgrade
Туре	Senior Unsecured - Fgn Curr
Outlook	Rating(s) Under Review
Long Term Deposit	A1, Possible Upgrade
Туре	LT Bank Deposits - Fgn Curr
Outlook	Rating(s) Under Review

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

#### Contacts

Niclas Boheman +46.8.5179.1281 VP-Sr Credit Officer niclas.boheman@moodys.com

Marina Hadjitsangari +357.2569.3034 Lead Ratings Associate marina.hadjitsangari@moodys.com

Edoardo Calandro +44.20.7772.1097 VP-Sr Credit Officer edoardo.calandro@moodys.com

Simon James Robin +44 207 772 5347 Ainsworth

Associate Managing Director simon.ainsworth@moodys.com

# Spar Nord Bank A/S

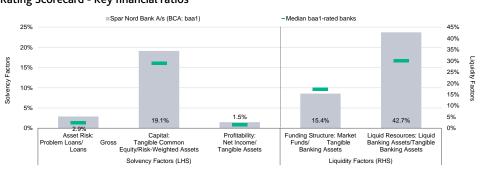
Update following initiation of review for upgrade

## Summary

<u>Spar Nord Bank A/S</u>' (Spar Nord) A1 (on review for upgrade) long-term deposit and senior unsecured ratings reflect the bank's baa1 standalone Baseline Credit Assessment (BCA); and three notches of rating uplift from our Advanced Loss Given Failure (LGF) analysis, which takes into account the loss severity for junior depositors and senior creditors should the bank enter into resolution. The bank's long-term deposit and senior unsecured ratings have a stable outlook. On 12 December 2024, the long-term deposit ratings of Spar Nord Bank were placed on review for upgrade.

Spar Nord's baa1 standalone BCA balances the bank's robust capitalisation, strong recurring profitability, and strong liquidity buffer against the higher levels of nonperforming loans to gross loans compared to peers.

#### Exhibit 1 Rating Scorecard - Key financial ratios



These ratios are calculated based on our <u>Banks Methodology</u> scorecard. The bank's problem loan and profitability ratios are the weaker of the average of the latest three year-end ratios and the latest reported ratio. The bank's capital ratio is the latest reported figure. The bank's funding structure and liquid resources ratios are the latest year-end figures. *Source: Moody's Ratings* 

## **Credit strengths**

- » Robust capitalisation and a strong leverage ratio
- » Strengthened profitability on the back of higher interest rates
- » Low dependence on market funding
- » Strong liquidity buffer

## **Credit challenges**

» Relatively higher problem loans ratio compared to peers

## Outlook

The review for upgrade on Spar Nord's Adjusted BCA and its long-term ratings will assess the affiliate support received by Nykredit post acquisition and its resolution perimeter as part of the Nykredit group.

## Factors that could lead to an upgrade

- » Following a successful acquisition by Nykredit, Spar Nord's Adjusted BCA could be upgraded to reflect the support from the new owner. Spar Nord's long-term ratings and assessments could also be upgraded as a result of the higher Adjusted BCA. An upgrade of the Adjusted BCA would likely align the ratings and assessments of Spar Nord with those of Nykredit Bank should we consider that both banks would be resolved together.
- » On a standalone basis, Spar Nord's ratings could be upgraded following an upgrade of the BCA, which could occur should the improvement in the bank's asset risk metrics, reflecting lower risk lending, be sustained alongside the maintenance of higher profitability.

## Factors that could lead to a downgrade

» In the case of Spar Nord remaining a standalone bank, downward pressure on Spar Nord's long-term deposit and senior unsecured debt ratings would arise if there is a shift in the bank's funding mix, such as lower loss absorbing instrument volumes or a significant reduction in junior deposit amounts, which would result in lower rating uplift than currently assumed under our Advanced LGF framework.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

## **Key indicators**

#### Exhibit 2

Spar Nord Bank A/S (Consolidated Financials) [1]

	09-24 <sup>2</sup>	12-23 <sup>2</sup>	12-22 <sup>2</sup>	12-21 <sup>2</sup>	12-20 <sup>2</sup>	CAGR/Avg. <sup>3</sup>
Total Assets (DKK Million)	139,482.0	134,834.0	123,883.0	116,497.0	101,264.0	8.9 <sup>4</sup>
Total Assets (USD Million)	20,882.1	19,980.3	17,779.2	17,751.1	16,645.7	6.2 <sup>4</sup>
Tangible Common Equity (DKK Million)	12,515.0	12,300.0	10,790.0	10,224.0	9,355.0	8.1 <sup>4</sup>
Tangible Common Equity (USD Million)	1,873.6	1,822.7	1,548.5	1,557.9	1,537.8	5.44
Problem Loans / Gross Loans (%)	2.4	2.5	2.9	3.6	4.2	3.15
Tangible Common Equity / Risk Weighted Assets (%)	19.6	20.4	17.8	16.9	17.1	18.3 <sup>6</sup>
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	10.4	10.4	13.1	15.5	17.0	13.3 <sup>5</sup>
Net Interest Margin (%)	2.6	2.8	1.7	1.5	1.6	2.0 <sup>5</sup>
PPI / Average RWA (%)	4.5	4.9	2.8	2.5	2.1	3.46
Net Income / Tangible Assets (%)	1.7	1.8	1.1	1.2	0.7	1.35
Cost / Income Ratio (%)	48.7	46.3	58.0	59.7	63.6	55.3 <sup>5</sup>
Market Funds / Tangible Banking Assets (%)	14.6	15.4	11.8	11.7	9.9	12.7 <sup>5</sup>
Liquid Banking Assets / Tangible Banking Assets (%)	41.9	42.7	40.2	40.1	41.4	41.3 <sup>5</sup>
Gross Loans / Due to Customers (%)	81.3	79.6	78.8	79.4	76.0	79.0 <sup>5</sup>
the second se						

[-] Further to the publication of our revised methodology in July 2021, only ratios from annual 2020 onwards included in this report reflect the change in analytical treatment of the "hightrigger" Additional Tier 1 instruments. [1] All figures and ratios are adjusted using Moody's standard adjustments. [2] Basel III - fully loaded or transitional phase-in; IFRS. [3] May include rounding differences because of the scale of reported amounts. [4] Compound annual growth rate (%) based on the periods for the latest accounting regime. [5] Simple average of periods for the latest accounting regime. [6] Simple average of Basel III periods.

Sources: Moody's Ratings and company filings

#### Profile

Spar Nord Bank A/S (Spar Nord) is a full-service commercial bank in Denmark that provides retail, corporate and private banking services, with a focus on private individuals and small and medium-sized enterprises. It operates through a network of 62 branches in Denmark. Spar Nord was founded in 1824 and merged with Sparbank A/S, a smaller Danish regional bank, in 2012.

Spar Nord is the sixth-largest banking group in Denmark, with total reported assets of DKK139 billion (around €20.9 billion) as of September 2024. It has a strong presence in the northern Jutland region of Denmark, where it has a significant market share. Its national market share as of 2023 was 1.4% in loans (excluding loans transferred to mortgage credit institutions [MCIs]) and 4.7% in deposits.

#### **Recent developments**

Nykredit announced on 10 December 2024 a recommended voluntary all-cash public tender offer for Spar Nord, valuing the total share capital of the target at DKK25 billion. The acquisition is expected to close in the first half of 2025 subject to approvals from regulatory authorities, including the Danish FSA and Competition and Consumer Authority. Nykredit already owns about 20% of Spar Nord, which is also one of the 41 partner banks distributing mortgage loans from Totalkredit A/S, a wholly owned mortgage institution of Nykredit. As such, mortgages originated by Spar Nord are already consolidated by Nykredit.

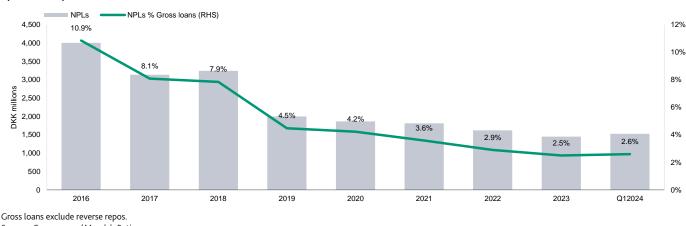
Assuming a successful acquisition, Spar Nord, will be merged with Nykredit Bank, which is wholly owned by Nykredit to create the third largest bank in Denmark, with combined domestic market shares of 13% and 11% in bank lending and deposits, respectively. We view the transaction as supportive to the combined entity's credit profile because of improved scale, business and geographic diversification across Denmark in the banking business.

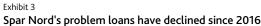
### **Detailed credit considerations**

#### Problem loans ratio higher than peers but gradually improving

Our assessment of Spar Nord's asset risk, reflected in our assigned Asset Risk score of baa3, takes into account the bank's problem loan ratio, which has declined in recent years and the banks loan portfolio mix. Our assigned score also takes into consideration the bank's loan growth, which was slightly higher than the system average over the last five years, and limited concentration in a couple of higher-risk or cyclical sectors.

As of September 2024, Spar Nord's problem loans (defined as IFRS 9 stage 3 loans) stood at 2.4% of gross loans and these were adequately covered by loan loss reserves at 109%. The bank's problem loan ratio remains higher than the system average of 0.9% as of June 2024<sup>1</sup>, which partly reflects the higher quality off-balance sheet mortgages it transfers to its mortgage distributors, but where Spar Nord still holds part of the risk and is contractually committed to cover part of the losses.





Sources: Company and Moody's Ratings

Like other medium-sized Danish banks, Spar Nord does not own or consolidate an MCI but partners with Totalkredit (subsidiary of Nykredit Realkredit A/S [A1 RUR, a2]) and DLR Kredit (not rated) to originate mortgages. The bank covers all losses for mortgages transferred to DLR Kredit, while for mortgages transferred to Totalkredit, no guarantees are needed since 2022. However, the bank carries the first loss on loans issued prior to that date. As of Septmeber 2024, Spar Nord had on-balance sheet loans and advances of DKK59.6 billion, and had transferred mortgages of DKK105.4 billion to MCIs (for which it earns a fee).

Our assessment of Spar Nord's Asset Risk score also takes into consideration the bank's loan growth, which has been higher than the sector average over the last five years. Furthermore, the bank has moderate sector concentration. As of September 2024, real estate loans made up 11.5% of total loans; building and construction 5.3%; and loans to the agriculture sector, which is a historically volatile segment, accounted for 3.2% of the total, albeit down from 10.2% in 2012.

#### Robust capitalisation and a strong leverage ratio

Our assigned aa3 Capital score reflects Spar Nord's solid capital position with tangible common equity to risk weighted assets (TCE/ RWA) remaining at 19.5% at the end of September 2024, a relative strength in our assessment of the bank's standalone profile. We expect capital ratios to remain strong and well above regulatory requirements. Spar Nord uses the standardised approach to calculate risk weights, and this renders the bank less susceptible to a rise in risk exposure amounts from the macroeconomic downturn. When the bank implements the internal rating based (IRB) model, likely to be approved during end of 2024 or beginning of 2025, it is likely that risk weighted capital ratios will improve.

Spar Nord's reported CET1 ratio was 16.8% as of September 2024(December 2023: 17.7%) and its total capital ratio was 21.1% (December 2023: 22.3%). The decline compared with year-end 2023 was mainly driven by capital release to shareholders through dividends and share buybacks. The bank's capital metrics however remain well above its regulatory requirements of 9.5% solvency need as of September 2024 and 16.0% for the total capital ratio, which include the Danish Financial Supervisory Authority's (FSA) Pillar 1 and Pillar 2 components, a 2.5% capital conservation buffer, a 1.0% countercyclical capital buffer (CCyB) and a 1.0% systemically important financial institution (SIFI) requirement<sup>2</sup>

Spar Nord aims to distribute 40-60% of the net profit for the year with due consideration to meeting the Bank's capital targets. The Bank intends to the make distributions in the form of cash dividends and share buybacks, always provided that at least 30% of the net profit will be distributed as cash dividends. As of December 2023 the bank distributed of 69% of net profit in form of ordinary dividend of DKK 10 per share and share buyback of DKK 500 million.

Spar Nord's risk density, measured as RWA/total assets, was 45.2% as of September 2024, reflecting the bank's standardised approach for calculating risk weights. With its designation as a SIFI, in July of 2023 the bank submitted its IRB application to the Danish FSA and expects to obtain the FSA's approval for implementation by the end of 2024. The effect on the bank's RWAs is likely to be significant.

Spar Nord's tangible common equity/tangible banking assets was 9.0% as of September 2024 which compares well with the average of around 5.0%-5.5% for other Nordic and euro area banks. While Spar Nord's move to the IRB model for calculating risk weights will likely reduce this ratio, we expect the bank's leverage ratio to remain higher than that of most of its regional peers.

#### Strengthened profitability on the back of higher interest rates

Our assigned a3 Profitability score reflects our expectation that Spar Nord's profitability will remain strong but decline moderately over the coming 12 to 18 months. The bank's net income/tangible assets improved to 1.9% in the first nine months of 2024 from 1.8% as of year-end 2023. The increase in net income was primarily driven by an increase in net interest margins. While interest rate margins have likely peaked, due to competition and a shift toward higher rate savings accounts by depositors, profitability will remain strong as long as we do not foresee a return to negative policy rates in Denmark.

Spar Nord's profitability is stronger than Danish peers that consolidate MCIs because profitability for low risk mortgages is typically lower than that for bank lending. However, we adjust our profitability score down by one notch to reflect Spar Nord's loss agreements on transferred mortgages.

The bank's guidance for net income for 2025 is in the range of DKK1.6-DKK1.9 billion, indicating a net income to tangible assets ratio ranging from 1.2%-1.4%.

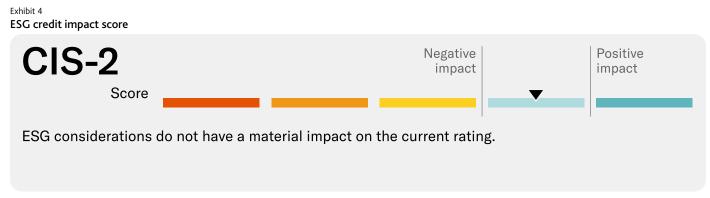
#### Low dependence on market funding and a strong liquidity buffer

Our a3 score for Funding Structure reflects Spar Nord's relatively solid funding profile. Spar Nord's customer deposits (excluding deposits from pooled plans and repo transactions) accounted for the bulk of total assets (54%) as of September 2024. Furthermore, the bank's reliance on confidence sensitive market funding remained low at 14.6% of tangible banking assets as of September 2024. Due to fully phased-in MREL requirements, there is limited need to increase the share of MREL-eligible debt. The outstanding amount of senior non-preferred debt as of December 2023 was DKK6.7 billion and for senior was DKK2.6 billion. As of September 2024, Spar Nord conducted its first euro issuance of MREL capital, under the bank's Green Bond Framework. the bank's issued senior non-preferred bonds of DKK 1.9 billion (€250 million).

As of September 2024, Spar Nord's liquid banking assets (including reverse repos) accounted for 42% of its tangible banking assets. Our assigned a3 Liquidity score takes into consideration asset encumbrance and the bank's the HQLA to tangible banking assets ratio of 24.8%. The bank also reported a strong liquidity coverage ratio of 229% in September 2024 (246% as of year-end 2023). Spar Nord's liquidity coverage ratio is well above the 100% minimum requirement set by the Danish FSA.

### **ESG considerations**

#### Spar Nord Bank A/S' ESG credit impact score is CIS-2



Source: Moody's Ratings

Spar Nord's CIS-2 reflects the limited credit impact of ESG considerations on the ratings.



Source: Moody's Ratings

#### Environmental

Spar Nord faces moderate environmental risks primarily because of its portfolio exposure to carbon transition risk as a diversified bank. In line with its peers, the bank is facing mounting business risks and stakeholder pressure to meet broader carbon transition goals. In response, Spar Nord is developing its climate risk and portfolio management capabilities.

#### **Social**

Spar Nord faces moderate social risks related to regulatory and litigation risks, requiring high compliance standards. These risks are mitigated by the bank's developed policies and procedures. Spar Nord has exposure to customer relations risks, considering high cyber and personal data risks. These risks are mitigated by the bank's strong IT framework.

#### Governance

Spar Nord faces low governance risks, and its risk management, policies and procedures are in line with industry best practices. Spar Nord is a regional bank with a stable track record of good risk management and financial strategy. The bank has a clear and simple organisational structure with no identified concerns regarding ownership and control.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click <u>here</u> to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

## Support and structural considerations

#### Loss Given Failure (LGF) analysis

Spar Nord operates in Denmark, which we consider an operational resolution regime. In accordance with our methodology, we apply our Advanced LGF analysis to Spar Nord's liabilities, taking into account the risks faced by different debt and deposit classes across the liability structure should the bank enter resolution. In our Advanced LGF analysis, we take a forward-looking view on how the bank's balance sheet will evolve over the next 12-18 months.

For the analysis, in line with our standard assumptions, we assume residual tangible common equity of 3%, losses post failure of 8% of tangible banking assets, a 25% runoff in junior wholesale deposits and a 5% runoff in preferred deposits, and we assign a 25% probability to deposits being preferred to senior unsecured debt. We assume that 10% of deposits will be treated as junior. This reflects the bank's more retail-based deposit structure. Our forward-looking LGF analysis takes into account our assessment of MREL and the needed issuances of senior non-preferred debt. The fully phased-in MREL requirement results in around DKK 9 billion MREL eligible debt which Spar Nord has fulfilled.

Spar Nord's A1 deposit and A1 senior unsecured ratings incorporate three notches of rating uplift from the bank's baa1 Adjusted BCA, reflecting an extremely low loss given failure. The bank's A3 junior senior unsecured ratings are positioned one notch above the bank's Adjusted BCA, indicating a low loss given failure. Our LGF analysis indicates a high loss given failure for subordinated debt, leading us to position the rating at (P)Baa1, in line with the adjusted BCA.

#### **Government support considerations**

We do not incorporate any government support uplift on Spar Nord's ratings because we consider the probability of government support, in case of need, to be low.

## Rating methodology and scorecard factors

## Exhibit 6

## **Rating Factors**

Weighted Macro Profile Strong +	100%					
Factor	Historic Ratio	Initial Score	Expected Trend	Assigned Score	Key driver #1	Key driver #2
Solvency						
Asset Risk						
Problem Loans / Gross Loans	2.8%	a2	$\leftrightarrow$	baa3	Quality of assets	Sector concentration
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - fully loaded)	19.6%	aa2	$\leftrightarrow$	aa3	Expected trend	
Profitability						
Net Income / Tangible Assets	1.4%	a2	$\leftrightarrow$	a3	Expected trend	Loan loss charge coverage
Combined Solvency Score		a1		a3		<u> </u>
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	15.4%	a3	$\leftrightarrow$	a3	Expected trend	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	42.7%	aa3	$\leftrightarrow$	a3	Stock of liquid assets	Asset encumbrance
Combined Liquidity Score		a2		a3		
Financial Profile				a3		
Qualitative Adjustments				Adjustment		
Business Diversification				0		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				0		
Sovereign or Affiliate constraint				Aaa		
BCA Scorecard-indicated Outcome - Range				a2 - baa1		
Assigned BCA				baa1		
Affiliate Support notching				0		
Adjusted BCA				baa1		

Balance Sheet	in-scope	% in-scope	at-failure	% at-failure	
	(DKK Million)		(DKK Million)		
Other liabilities	21,163	18.9%	26,434	23.7%	
Deposits	75,294	67.4%	70,023	62.7%	
Preferred deposits	67,765	60.7%	64,376	57.6%	
Junior deposits	7,529	6.7%	5,647	5.1%	
Senior unsecured bank debt	1,864	1.7%	1,864	1.7%	
Junior senior unsecured bank debt	7,247	6.5%	7,247	6.5%	
Dated subordinated bank debt	1,600	1.4%	1,600	1.4%	
Preference shares (bank)	1,180	1.1%	1,180	1.1%	
Equity	3,351	3.0%	3,351	3.0%	
Total Tangible Banking Assets	111,699	100.0%	111,699	100.0%	

Debt Class	De Jure w	/aterfal	l De Facto v	vaterfall	Not	ching	LGF	Assigned	Additiona	l Preliminary
	Instrument volume + c subordination	ordinati	Instrument on volume + o subordinatior	ordination	De Jure	De Facto	Notching Guidance vs. Adjusted		Notching	Rating Assessment
	10 70/	10 70/	10 70/	10 70/	2	2	BCA	2		
Counterparty Risk Rating	18.7%	18.7%	18.7%	18.7%	3	3	3	3	0	a1
Counterparty Risk Assessment	18.7%	18.7%	18.7%	18.7%	3	3	3	3	0	a1 (cr)
Deposits	18.7%	12.0%	18.7%	13.6%	3	3	3	3	0	a1
Senior unsecured bank debt	18.7%	12.0%	13.6%	12.0%	3	2	3	-	-	-
Junior senior unsecured bank debt	12.0%	5.5%	12.0%	5.5%	1	1	1	1	0	a3
Dated subordinated bank debt	5.5%	4.1%	5.5%	4.1%	0	0	0	0	0	baa1

Instrument Class	Loss Given Failure notching	Additional notching	Preliminary Rating Assessment	Government Support notching	Local Currency Rating	Foreign Currency Rating
Counterparty Risk Rating	3	0	al	0	A1 RUR Possible Upgrade	A1 RUR Possible Upgrade
Counterparty Risk Assessment	3	0	a1 (cr)	0	A1(cr) RUR Possible Upgrade	
Deposits	3	0	a1	0	A1 RUR Possible Upgrade	A1 RUR Possible Upgrade
Senior unsecured bank debt	-	-	-	0	A1 RUR Possible Upgrade	A1 RUR Possible Upgrade
Junior senior unsecured bank debt	1	0	аЗ	0	A3 RUR Possible Upgrade	A3 RUR Possible Upgrade
Dated subordinated bank debt	0	0	baa1	0	(P)Baa1 RUR Possible Upgrade	(P)Baa1 RUR Possible Upgrade

[1] Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information. Source: Moody's Ratings

## Ratings

Exhibit 7	
Category	Moody's Rating
SPAR NORD BANK A/S	
Outlook	Rating(s) Under Review
Counterparty Risk Rating	A1/P-1 <sup>1</sup>
Bank Deposits	A1/P-1 <sup>1</sup>
Baseline Credit Assessment	baa1
Adjusted Baseline Credit Assessment	baa1 <sup>2</sup>
Counterparty Risk Assessment	A1(cr)/P-1(cr) <sup>1</sup>
Senior Unsecured	A1 <sup>2</sup>
Junior Senior Unsecured	A3 <sup>2</sup>
Junior Senior Unsecured MTN	(P)A3 <sup>2</sup>
Subordinate MTN	(P)Baa1 <sup>2</sup>

[1] Rating(s) within this class was/were placed on review on December 12 2024 [2] Placed under review for possible upgrade on December 12 2024 Source: Moody's Ratings

### Endnotes

1 According to data from the central bank, Nationalbanken.

2 Spar Nord was designated as a SIFI in January 2019.

© 2024 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 CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. 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 OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS 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, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS 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. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

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 credit rating process or in preparing its Materials. 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 chained 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 CREDIT

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, 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 credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investor Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at <u>www.moodys.com</u> under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V, I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Calificadora de Riesgo S.A. (collectively, the "Moody's Non-NRSRO CRAs") are all indirectly wholly-owned credit rating agency subsidiaries of MCO. None of the Moody's Non-NRSRO CRAs is a Nationally Recognized Statistical Rating Organization.

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.

Additional terms for India only: Moody's credit ratings, Assessments, other opinions and Materials are not intended to be and shall not be relied upon or used by any users located in India in relation to securities listed or proposed to be listed on Indian stock exchanges.

Additional terms with respect to Second Party Opinions (as defined in Moody's Investors Service Rating Symbols and Definitions): Please note that a Second Party Opinion ("SPO") is not a "credit rating". The issuance of SPOs is not a regulated activity in many jurisdictions, including Singapore. JAPAN: In Japan, development and provision of SPOs fall under the category of "Ancillary Businesse", not "Credit Rating Business", and are not subject to the regulations applicable to "Credit Rating Business" under the Financial Instruments and Exchange Act of Japan and its relevant regulation. PRC: Any SPO: (1) does not constitute a PRC Green Bond Assessment as defined under any relevant PRC laws or regulations; (2) cannot be included in any registration statement, offering circular, prospectus or any other documents submitted to the PRC regulatory authorities or otherwise used to satisfy any PRC regulatory disclosure requirement; and (3) cannot be used within the PRC for any regulatory purpose or for any other purpose which is not permitted under relevant PRC laws or regulators. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

REPORT NUMBER 1433284

#### CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454