

CREDIT OPINION

20 January 2023

Update



RATINGS

Spar Nord Bank A/S

Domicile	Aalborg, Denmark
Long Term CRR	A1
Туре	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	A1
Туре	Senior Unsecured - Dom Curr
Outlook	Stable
Long Term Deposit	A1
Туре	LT Bank Deposits - Fgn Curr
Outlook	Stable

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-Senior Analyst niclas.boheman@moodys.com

Robert Dinic +46.85.179.1282
Associate Analyst
robert.dinic@moodys.com

Louise Welin +46.8.5179.1280 VP-Sr Credit Officer louise.welin@moodys.com

Simon James Robin +44.20.7772.5347 Ainsworth

Associate Managing Director simon.ainsworth@moodys.com

Spar Nord Bank A/S

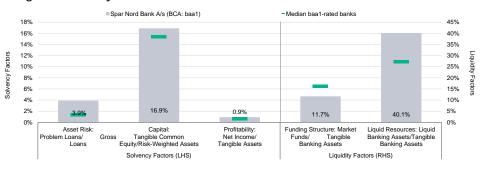
Update to credit analysis

Summary

<u>Spar Nord Bank A/S'</u> (Spar Nord) A1 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.

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 Financial Metrics*™

Credit strengths

- » Robust capitalisation and a strong leverage ratio
- » Low dependence on market funding
- » Strong liquidity buffer

Credit challenges

- » Relatively higher problem loans ratio compared to peers
- » High cost to income ratio compared to peers

Outlook

The stable outlook on the long-term deposit and ratings reflects Moody's view that Spar Nord has sufficient buffers in term of strong capital and improving profit margins to manage a deterioration in borrowers' repayment capacity during the next 12 to 18 months.

Factors that could lead to an upgrade

- » Spar Nord's ratings could be upgraded following an upgrade of the BCA, which could occur if we observe a sustained improvement in the bank's asset risk metrics, including lower problem loans, potentially along with reduced concentrations; and a sustained improvement in the bank's profitability without a deterioration in its risk profile.
- » Spar Nord's long-term deposit and senior unsecured debt ratings, Counterparty Risk (CR) Assessment and Counterparty Risk Ratings (CRRs) already have the maximum uplift in our loss given failure and would, therefore, not receive further uplift from increased subordination or increased issuance volumes

Factors that could lead to a downgrade

- » Factors that could lead to a downgrade of Spar Nord's ratings include a lower BCA or reduced uplift in the LGF analysis. A downgrade of the BCA could occur if we observe a significant deterioration in asset quality or if concentrations and exposures to more volatile segments increase; there is a persistent weakening in the bank's recurring earnings power and operating efficiency; its market funding reliance increases substantially beyond our current expectations; or its capital ratios remain below the bank's current capital targets of a Common Equity Tier 1 (CET1) capital ratio of at least 13.5% and an own funds ratio of 17.5%.
- » Downward pressure on Spar Nord's long-term deposit and senior unsecured debt ratings would also 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]

	09-22 ²	12-21 ²	12-20 ²	12-19 ²	12-18 ²	CAGR/Avg. ³
Total Assets (DKK Million)	121,147.0	116,497.0	101,264.0	92,534.0	82,252.0	10.9 ⁴
Total Assets (USD Million)	15,961.6	17,751.1	16,645.7	13,900.3	12,600.0	6.5 ⁴
Tangible Common Equity (DKK Million)	10,285.0	10,224.0	9,355.0	8,663.0	8,128.0	6.5 ⁴
Tangible Common Equity (USD Million)	1,355.1	1,557.9	1,537.8	1,301.3	1,245.1	2.3 ⁴
Problem Loans / Gross Loans (%)	3.2	3.6	4.2	4.5	7.8	4.75
Tangible Common Equity / Risk Weighted Assets (%)	16.9	16.9	17.1	15.5	15.1	16.3 ⁶
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	14.8	15.5	17.0	19.8	32.7	19.9 ⁵
Net Interest Margin (%)	1.5	1.5	1.6	1.7	1.9	1.7 ⁵
PPI / Average RWA (%)	2.2	2.5	2.1	2.1	2.0	2.2 ⁶
Net Income / Tangible Assets (%)	0.9	1.2	0.7	1.1	0.9	1.0 ⁵
Cost / Income Ratio (%)	63.5	59.7	63.6	63.3	65.3	63.1 ⁵
Market Funds / Tangible Banking Assets (%)	11.6	11.7	9.9	10.3	5.3	9.7 ⁵
Liquid Banking Assets / Tangible Banking Assets (%)	41.1	40.1	41.4	36.7	34.9	38.9 ⁵
Gross Loans / Due to Customers (%)	77.0	79.4	76.0	83.7	81.4	79.5 ⁵

^[-] 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 "high-trigger" 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 Investors Service 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 60 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 DKK121 billion (around €16.3 billion) as of September 2022. 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 October 2022 was 1.4% in loans (excluding loans transferred to mortgage credit institutions [MCIs]) and 4.7% in deposits.

Recent developments

Macroeconomic developments

The global economy is on the <u>verge</u> of a downturn because of the extraordinarily high level of uncertainty amid persistent inflation, monetary policy tightening, fiscal challenges, geopolitical risks and financial market volatility. Global growth will slow in 2023 and remain sluggish in 2024. Still, a period of relative stability could emerge by 2024 if governments and central banks manage to navigate their economies through the current difficulties.

BankNordik

In February 2021, Spar Nord completed the acquisition of the Danish retail business from <u>P/F BankNordik</u> (A2/A2 positive, baa1¹) that was announced in December 2020.

Detailed credit considerations

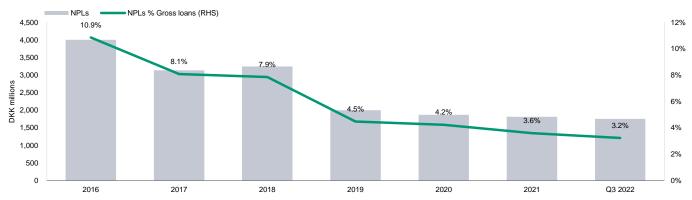
Asset risk will remain strong despite risks in the operating environment

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 our expectation that its loan book quality will deteriorate moderately in the coming year as borrowers are constrained by higher inflation and subdued economic growth. 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.

In the first nine months of 2022, the bank's loan loss provisions amounted to a low DKK21 million due to increasing macroeconomic risks following Russia's invasion of Ukraine. During 2021, the bank released significant loan loss reserves of DKK120 million as a result of decreased expected impacts of the Covid-19 pandemic, following DKK309 million build-up of loan loss provisions in 2020.

As of September 2022, Spar Nord's problem loans (defined as IFRS 9 stage 3 loans) stood at 3.2% of gross loans and these were adequately covered by loan loss reserves at 89.2%. The bank's problem loan ratio remains higher than the system average of 1.4% as of June 2022², 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.

Exhibit 3
Spar Nord's problem loans have declined since 2016



Gross loans exclude reverse repos.

Sources: Company and Moody's Investors Service

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 stable, 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 September 2022, Spar Nord had on-balance sheet loans and advances of DKK52.9 billion, and had transferred mortgages of DKK113.8 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 2022, real estate loans made up 11.2% of total loans; construction and engineering 4.5%; and loans to the agriculture sector, which is a historically volatile segment, accounted for 4.5% of the total, albeit down from 10.2% in 2012.

Robust capitalisation and a strong leverage ratio

Our assigned a1 Capital score reflects Spar Nord's solid capital position with tangible common equity to risk weighted assets (TCE/RWA) remaining at 16.9% at the end of September 2022, a relative strength in our assessment of the bank's standalone profile. We expect capital ratios to decrease moderately because of growth, share buybacks and dividends, but to remain strong and well above regulatory requirements. Furthermore, 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, it is likely that risk weighted capital ratios will improve.

Spar Nord's reported CET1 ratio was 15.7% as of September 2022 (December 2021: 16.3%) and its total capital ratio was 20.2% (December 2021: 20.8%). The decline compared with year-end 2021 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 9.6% solvency need as of September 2022 and 14.1% 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) requirement³.

Spar Nord resumed capital distributions in 2022, paying out 45% of the 2021 profit, within its dividend policy of 30%-50%. This follows suspended dividends in 2019 to comply with Danish FSA recommendations.

Our assessment also takes into consideration Spar Nord's capital targets, which the bank increased because of its SIFI designation, with the bank's CET1 ratio target currently at 13.5%. Taking into account the bank's current capitalisation and targets, we expect Spar Nord to maintain strong capital ratios in the next 12-18 months.

Spar Nord's risk density, measured as RWA/total assets, was 50.3% as of September 2022, reflecting the bank's standardised approach for calculating risk weights. With its designation as a SIFI, the bank has launched a project to move to the IRB approach to optimise its RWAs. The effect on the bank's RWAs is likely to be significant, and the change is projected to be completed within the next 12-18 months.

Spar Nord's tangible common equity/tangible banking assets was 8.5% as of September 2022 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.

Profitability rebounded because of mitigating actions and lower loan loss provisions

Our assigned baa2 Profitability score reflects our expectation that Spar Nord's profitability will continue to improve as the Danish central bank continues to hike the policy rate, allowing for increased net interest margins.

The bank's net income/tangible assets decreased to 0.9% in the nine months that ended September 2022 (Q1-Q3 2021: 1.2%). The decrease in net income compared with a year earlier was primarily because of a gain of DKK58 million in market value adjustments and dividends during the first nine months of 2022, down from DKK297 million in the first nine months of 2021. The decrease in value adjustments was largely driven by negative adjustments of DKK179 million on the bank's share and bond portfolio, reflecting the turbulence in financial markets since Russia's invasion of Ukraine and rising interest rates. The bank's Moody's adjusted cost to income ratio was 63.5% during the first nine months of 2022, slightly higher than that of its Nordic peers.

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 guarantees on taking the first loss on transferred mortgages, which could result in the bank taking the first loss in case of a deterioration in asset quality. The bank has a DKK113bn (end of September 2022) portfolio of mortgages with Totalkredit and DLR Kredit.

Following the central bank's 75 basis points (bps) key policy <u>rate hike</u> on 8 September 2022, and the 60 bps hike on 28 October 2022, higher interest margins are supporting improving profitability.

The bank's guidance for net income for 2022 is in the range of DKK1,350-DKK1,450 million, compared with DKK1,368 million in 2021, indicating a net income to tangible assets ratio of around 1.0%.

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 (53%) as of September 2022. Furthermore, the bank's reliance on confidence sensitive market funding remained low at 11.7% of tangible banking assets as of September 2022.

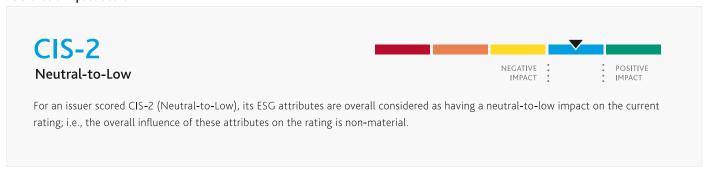
We expect Spar Nord's market funding to increase moderately as the bank issues eligible debt to meet its minimum requirements for own funds and eligible liabilities (MREL). The bank expects MREL, when fully phased-in, to lead to a need to issue MREL-eligible debt of around DKK8 billion. The outstanding amount of senior non-preferred debt as of September 2022 was DKK5.5 billion.

As of September 2022, Spar Nord's liquid banking assets (including reverse repos) accounted for 40% of its tangible banking assets. Our assigned a2 Liquidity score takes into consideration some asset encumbrance. The bank also reported a strong liquidity coverage ratio of 217% in September 2022 (248% as of year-end 2021). 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 Neutral-to-Low CIS-2

Exhibit 4
ESG Credit Impact Score



Source: Moody's Investors Service

Spar Nord's ESG Credit Impact Score is neutral-to-low (CIS-2). This reflects the limited credit impact of environmental and social risk factors on the rating to date, and the neutral-to-low governance risks.

Exhibit 5
ESG Issuer Profile Scores



Source: Moody's Investors Service

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 high industry-wide social risks related to regulatory and litigation risks, requiring high compliance standards. These risks are mitigated by the bank's developed policies and procedures. High cyber and personal data risks are mitigated by the bank's strong IT framework.

Governance

Spar Nord has neutral-to-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 here 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 and is subject to the European Union Bank Recovery and Resolution Directive, 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. Our assessments include our view that with an average growth in the balance sheet of more than 4% annually, Spar Nord will need to maintain DKK6 billion-DKK7 billion in eligible liabilities outstanding as of year-end 2022. We expect Spar Nord to fulfil the requirement by issuing senior preferred and senior non-preferred debt.

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.

Counterparty Risk Ratings (CRRs)

Spar Nord's CRRs are A1/P-1

The CRRs are three notches above the Adjusted BCA of baa1, reflecting the extremely low loss given failure from the high volume of instruments that are subordinated to CRR liabilities.

Counterparty Risk (CR) Assessment

Spar Nord's CR Assessment is A1(cr)/P-1(cr)

For Spar Nord, our Advanced LGF analysis indicates an extremely low loss given failure for the CR Assessment, leading to three notches of rating uplift from the bank's baa1 Adjusted BCA.

Rating methodology and scorecard factors

Exhibit 6

Spar Nord Bank A/S

Macro 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	3.9%	a3	\downarrow	baa3	Quality of assets	
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	16.9%	aa2	\	a1	Expected trend	
Profitability						
Net Income / Tangible Assets	0.9%	baa1	\downarrow	baa2	Expected trend	
Combined Solvency Score		a2		baa1		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	11.7%	a2	\leftrightarrow	a3	Expected trend	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	40.1%	aa3	\leftrightarrow	a2	Stock of liquid assets	
Combined Liquidity Score		a1		a3		
Financial Profile				baa1		
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				a3 - baa2		
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	16,875	17.0%	21,822	22.0%
Deposits	70,677	71.2%	65,730	66.3%
Preferred deposits	63,609	64.1%	60,429	60.9%
Junior deposits	7,068	7.1%	5,301	5.3%
Junior senior unsecured bank debt	5,481	5.5%	5,481	5.5%
Dated subordinated bank debt	2,010	2.0%	2,010	2.0%
Preference shares (bank)	1,180	1.2%	1,180	1.2%
Equity	2,976	3.0%	2,976	3.0%
Total Tangible Banking Assets	99,199	100.0%	99,199	100.0%

Debt Class	De Jure v	waterfal	De Facto waterfall		Notching		LGF	Assigned	Additional Preliminary	
	Instrument volume + subordinatio	ordinati	Instrument on volume + subordinatio	ordination	De Jure	De Facto	Notching Guidance vs. Adjusted BCA		Notching	Rating Assessment
Counterparty Risk Rating	17.1%	17.1%	17.1%	17.1%	3	3	3	3	0	a1
Counterparty Risk Assessment	17.1%	17.1%	17.1%	17.1%	3	3	3	3	0	a1 (cr)
Deposits	17.1%	11.7%	17.1%	11.7%	3	3	3	3	0	a1
Senior unsecured bank debt	17.1%	11.7%	11.7%	11.7%	3	2	3	3	0	a1
Junior senior unsecured bank debt	11.7%	6.2%	11.7%	6.2%	1	1	1	1	0	a3
Dated subordinated bank debt	6.2%	4.2%	6.2%	4.2%	0	0	0	0	0	baa1

Instrument Class	Loss Given	Additional Preliminary Rating		Government	Local Currency	Foreign
	Failure notching	notching	Assessment	Support notching	Rating	Currency Rating
Counterparty Risk Rating	3	0	a1	0	A1	A1
Counterparty Risk Assessment	3	0	a1 (cr)	0	A1(cr)	
Deposits	3	0	a1	0	A1	A1
Senior unsecured bank debt	3	0	a1	0	A1	(P)A1
Junior senior unsecured bank debt	1	0	a3	0	A3	A3
Dated subordinated bank debt	0	0	baa1	0	(P)Baa1	(P)Baa1

^[1] Where dashes are shown for a particular factor (or sub-factor), the score is based on non-public information.

Source: Moody's Investors Service

Ratings

Exhibit 7

Category	Moody's Rating
SPAR NORD BANK A/S	
Outlook	Stable
Counterparty Risk Rating	A1/P-1
Bank Deposits	A1/P-1
Baseline Credit Assessment	baa1
Adjusted Baseline Credit Assessment	baa1
Counterparty Risk Assessment	A1(cr)/P-1(cr)
Senior Unsecured -Dom Curr	A1
Junior Senior Unsecured	A3
Junior Senior Unsecured MTN	(P)A3
Subordinate MTN	(P)Baa1
Source: Moody's Investors Service	

Endnotes

- 1 The bank ratings shown in this report are the bank's deposit rating, senior unsecured debt rating (where available) and Baseline Credit Assessment.
- 2 According to data from the central bank, Nationalbanken.
- 3 Spar Nord was designated as a SIFI in January 2019. The CCyB will increase to 1.5% effective 31 December 2022 and to a further 2.5% effective 31 March 2023.

© 2023 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 OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") 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 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. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 ITS 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, ASSESSMENTS, OTHER OPINIONS, AND 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, ASSESSMENTS, OTHER OPINIONS OR 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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 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 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

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 fees ranging from \$1,000 to approximately \$5,000,000. 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 Investors Service, Inc. 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 "Investor Relations — Corporate Governance — Charter Documents - 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.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") 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 MJKK. 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. MJKK 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.

MJKK 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 MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

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

REPORT NUMBER 1348234

CLIENT SERVICES

 Americas
 1-212-553-1653

 Asia Pacific
 852-3551-3077

 Japan
 81-3-5408-4100

 EMEA
 44-20-7772-5454

