

CREDIT OPINION

22 November 2024

Update



Send Your Feedback

RATINGS

OBOS-banken AS

Domicile	Oslo, Norway
Long Term CRR	A2
Type	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	Not Assigned
Long Term Deposit	A3
Type	LT Bank Deposits - Fgn Curr
Outlook	Stable

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.

Contacts

Effie Tsotsani +44.20.7772.1712
VP-Senior Analyst
effie.tsotsani@moodys.com

Juliana Cerenkova +46.8.5179.1254
Ratings Associate
juliana.cerenkova@moodys.com

Nondas Nicolaides +357.25.693.006
VP-Sr Credit Officer
nondas.nicolaides@moodys.com

Simon James Robin +44 207 772 5347
Ainsworth
Associate Managing Director
simon.ainsworth@moodys.com

CLIENT SERVICES

Americas 1-212-553-1653
Asia Pacific 852-3551-3077

OBOS-banken AS

Update following rating affirmation

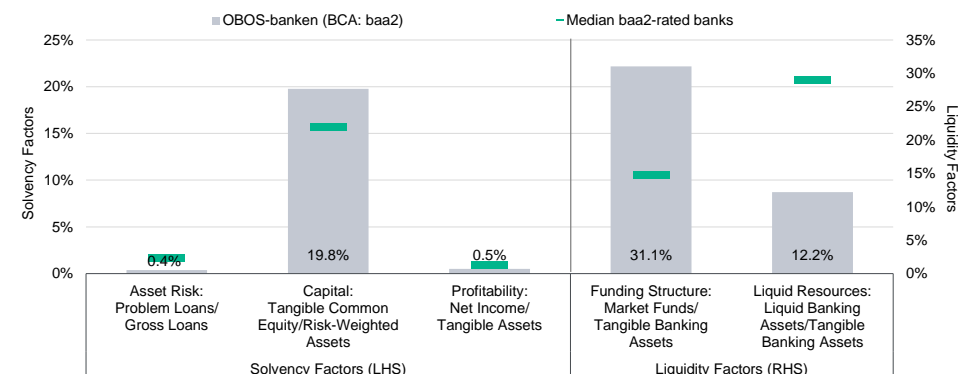
Summary

[OBOS-banken AS](#) (OBOS-banken) A3 long-term deposit and issuer ratings are derived from the bank's standalone creditworthiness, which is reflected in its baa2 Baseline Credit Assessment (BCA); and two notches of rating uplift from our forward-looking Advanced Loss Given Failure (LGF) analysis, which takes into account the risks faced by the different debt and deposit classes across the liability structure should the bank enter resolution.

The baa2 standalone BCA reflects the bank's (1) relatively strong asset quality, aided by its low-risk housing mortgage-lending focus; (2) strong capital metrics, (3) stable profitability, (4) adequate liquidity and (5) a longer track record of operation as a standalone entity combined with reducing operational ties to its owner OBOS Group (not rated). These strengths are balanced against OBOS-banken's (1) high geographical lending concentration in the high growth area of Oslo; (2) monoline business model and (2) high reliance on wholesale funding.

Exhibit 1

Rating Scorecard - Key financial ratios



These are our [Banks Methodology](#) scorecard ratios. Asset risk and profitability reflect the weaker of either the three-year average and latest figure. Capital is the latest reported figure. Funding structure and liquid resources reflect the latest fiscal year-end figures.

Source: Moody's Ratings

Credit strengths

- » Low-risk lending focused on the residential sector
- » Adequate capital metrics and well collateralized portfolio that benefits from low loan to values (LTVs)
- » Resilient and stable profitability
- » Granular deposit base constituting mostly of retail deposits
- » Low loss given failure for deposits and senior unsecured debt

Credit challenges

- » Monoline business model
- » Concentration in the property market of Oslo and Viken, which pose risks in the downside
- » Reliance on wholesale funding, partially mitigated by sound liquidity buffers

Outlook

The stable outlook on the bank's long-term deposit and issuer ratings reflects the agency's expectation that the bank will sustain its strong performance in the next 12-18 months, despite increased competitive pressure and prolonged high interest rates environment, which should have limited impact on the bank's asset quality metrics. The stable outlook also incorporates our expectation that the bank will continue to diversify away from OBOS Group for new business generation.

Factors that could lead to an upgrade

- » OBOS-banken AS' ratings may be upgraded as a result of (1) a sustainable improvement in profitability without an increase in its risk profile; (2) maintaining solid capital metrics combined with a moderate level of credit growth and increasing business generation outside the OBOS Group; and (3) a decrease on market funding reliance with increasing retail deposits.

Factors that could lead to a downgrade

- » Downward pressure would develop on OBOS-banken AS' BCA if (1) there were a significant deterioration in its asset-quality metrics or an increase in its risk appetite leading to lower profitability; (2) a sustained weakening in capital metrics; (3) a decrease in customer deposits leading to a higher use of market funds; (4) a decrease in the liquidity held on the bank's balance sheet; and/or (5) a further weakening in the financial performance of the parent OBOS Group, in light of a more challenging operating environment, which could impair OBOS-banken AS' performance given the strong linkages with the parent company for new business origination and/or increase in its risk profile.
- » The bank's deposit and issuer ratings could also be downgraded in case the bank issues a significantly lower volume than expected of more junior debt, or the amount of outstanding unsecured debt together with junior deposits does not grow in line with asset growth.

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.moody's.com> for the most updated credit rating action information and rating history.

Key indicators

Exhibit 2

OBOS-banken AS (Consolidated Financials) [1]

	09-24 ²	12-23 ²	12-22 ²	12-21 ²	12-20 ²	CAGR/Avg. ³
Total Assets (NOK Billion)	71.7	65.1	58.3	55.7	53.3	8.3 ⁴
Tangible Common Equity (NOK Billion)	4.5	4.2	4.0	3.9	3.4	8.3 ⁴
Problem Loans / Gross Loans (%)	0.4	0.4	0.2	0.3	0.2	0.3 ⁵
Tangible Common Equity / Risk Weighted Assets (%)	19.8	19.4	21.5	19.2	16.6	19.3 ⁶
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	5.0	4.9	2.3	3.7	3.1	3.8 ⁵
Net Interest Margin (%)	1.4	1.3	1.0	0.8	0.8	1.1 ⁵
PPI / Average RWA (%)	2.9	2.4	1.8	1.3	1.5	2.0 ⁶
Net Income / Tangible Assets (%)	0.7	0.6	0.4	0.4	0.4	0.5 ⁵
Cost / Income Ratio (%)	38.9	40.2	38.9	42.4	37.6	39.6 ⁵
Market Funds / Tangible Banking Assets (%)	30.5	31.1	30.1	29.9	33.9	31.1 ⁵
Liquid Banking Assets / Tangible Banking Assets (%)	14.0	12.2	10.3	11.8	12.5	12.2 ⁵
Gross Loans / Due to Customers (%)	217.5	221.3	216.4	227.0	229.5	222.3 ⁵

[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

OBOS-banken is a Norwegian commercial bank mainly focused on retail mortgages and lending to housing companies (or cooperatives) in Norway. The bank reported total assets of NOK71.7 billion (equivalent to around €6.1 billion) as of September 2024.

OBOS-banken is part of the OBOS Group, one of the largest property developers in the Nordics. The bank is fully owned by OBOS BBL. Most of the bank's retail clients are either members or employees of the OBOS Group, while most of the customers in its wholesale business are housing companies managed by the OBOS Group.

The OBOS Group's lending activities date back to 1929; however, OBOS-banken received its full banking license in 2013.

Recent developments

In September 2024, Tore Welding has been appointed CEO of OBOS-Banken, effective from 1 November 2024. Welding takes over from Øistein Gamst Sandlie, who joins OBOS's Corporate Executive Committee as the new Head of the Management and Advisory Division.

In August 2024, the Norwegian Financial Supervisory Authority (NFSA) announced that it aims to expand the circle of banks that receive Minimum requirements for own funds and eligible liabilities (MREL) by around 20 new banks. MREL decisions for the new group of banks will be made in stages. The NFSA aims for the first decisions to be made in early 2025. Banks that receive a decision in 2025 must fulfill the requirement by the end of 2027. Banks that are in a notified merger process are put on hold for the time being. OBOS-banken's MREL requirements were reviewed as a part of this process and NFSA decided to remove subordinated requirement for the bank, maintaining only total MREL requirement.

In May 2023, OBOS Eiendomsmeglere AS formally became a wholly owned subsidiary of OBOS-banken AS from 1 May 2023, and is fully consolidated into the OBOS-banken group's accounts from then on. OBOS-banken AS has bought all shares in OBOS Eiendomsmeglere AS from OBOS BBL for NOK 41.9 million. There has been a collaboration between OBOS-banken and OBOS Eiendomsmeglere for several years. OBOS Eiendomsmeglere is to be the OBOS expert and number one choice in terms of market share in the sale of OBOS homes in the areas where the company is established.

Detailed credit considerations

Low-risk lending focus, partly offset by concentration in the property market of Oslo and Viken

Our assessment of OBOS-banken's asset risk takes into account the bank's relatively low-risk housing mortgage-lending focus within Norway's generally supportive environment, but also its high concentration in the high growth areas of Oslo and Viken and the Norwegian property market, which may expose the bank to greater risk of a property price correction, and its limited track

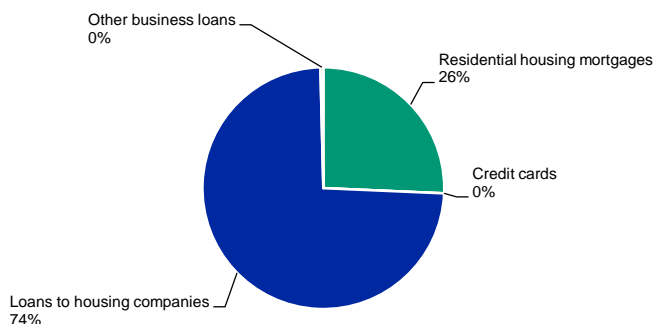
record through a number of economic cycles. The bank is also highly dependent on its parent's activities in terms of the growth and composition of its loan book. However, we do recognize that OBOS-banken's level of problem loans has remained consistently low, despite challenges in Norway's operating environment during both the coronavirus outbreak and the volatile oil prices and the oil crisis during 2015-2016. Furthermore, we view positively the bank's lower credit growth following a change in strategy in 2019. We expect OBOS-banken's asset quality metrics to remain broadly unchanged in the coming quarters despite higher interest rate environment, reflective of the bank's low risk mortgage portfolio.

OBOS-banken focuses on lower-risk secured retail and wholesale (housing companies) mortgages. The majority of the bank's on-balance-sheet lending portfolio was to housing companies, 74%, as of year-end 2023 (see Exhibit 3), while direct residential mortgages made up most of the remaining loans at 26%. The majority of lending is to members or employees of the OBOS Group or to companies managed by the group. Based on the legal framework that governs housing cooperatives in Norway, members contribute a proportionate share of operating expenses, including debt servicing of the housing company, thereby reducing the risk for the bank. However, the bank is exposed to the tail risk of a large property price decrease, a common feature among its local peers. This is because its sizeable mortgage exposure leads to a high concentration in Norway's property market, particularly in the Oslo and Viken areas, where most of the bank's lending originates and where property prices had increased rapidly in previous years.

The bank entered the credit card sector in 2017 by offering its own credit cards to its members, as a way to further leverage its customer base and expand its product offering. Although we consider unsecured consumer lending risky, the relative size of this business remains low for OBOS-banken at just 0.1% of loans as of year-end 2023.

Exhibit 3

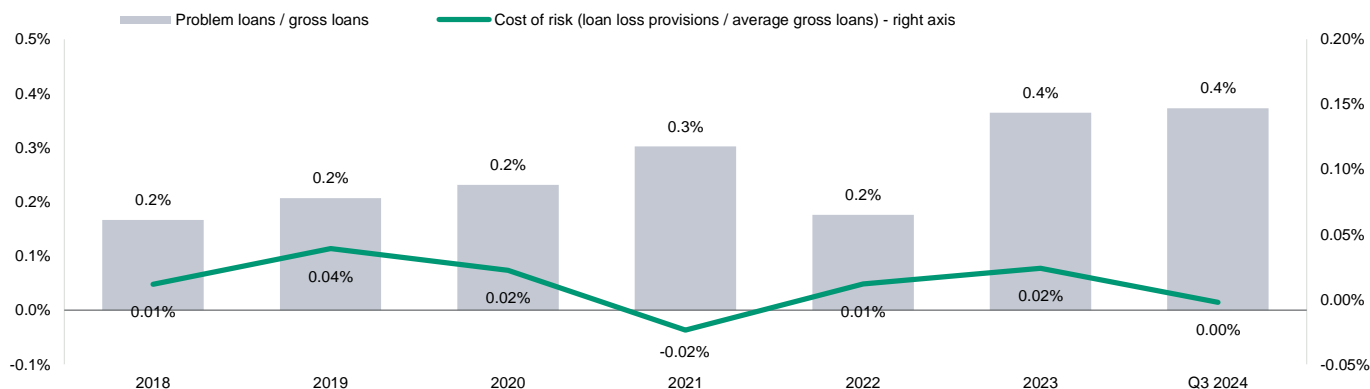
OBOS-banken lends predominantly to housing companies and directly to individuals for residential mortgages
On-balance-sheet loan book breakdown as of the end of 2023



Source: Company reports

The bank's problem loans ratio (IFRS 9 stage 3 loans as a percentage of total loans) remained low at 0.4% as of the end of September 2024 (see Exhibit 4) and loan losses have been particularly low since the bank's inception. Furthermore, the bank's portfolio has seen very limited risk migration as stage 1 loans constitute 99.3% of total loans as of Q3 2024 (99.2% in end-2023 and 99.2% in end-2022). There have been no credit costs in the first nine months of 2024, compared to 0.023% as of year-end 2023.

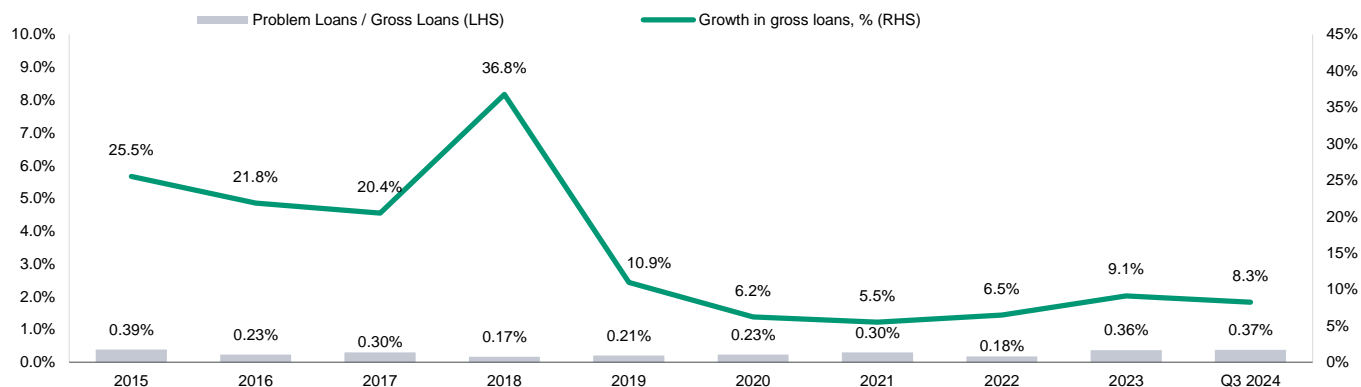
Exhibit 4

OBOS-banken maintains very low credit costs, thanks to a low problem loan ratio**Asset-quality metrics evolution**

Source: Moody's Ratings

Our assessment also takes into account the bank's loan growth moderation, in line with the Norwegian market following a change in strategy during 2019, as well as the longer track record of operation as a standalone entity combined with reducing operational ties to its owner OBOS Group. OBOS-banken grew its loan book by approximately 9.1% during 2023 (6.5% in 2022), and by 8% in the first nine months of 2024 compared to an average annual growth rate of 26% during 2016-2018.

Exhibit 5

OBOS-banken's loan growth and problem loans ratio

Source: Moody's Ratings

Strong capital metrics supported by stable earnings generation and lower credit growth

OBOS-banken's capital position is strong, with the bank maintaining a prudent margin above the regulatory capital requirements, as reflected by a tangible common equity/risk-weighted assets of 19.8% at end-September 2024. The bank reported a Common Equity Tier 1 (CET1) capital ratio of 18.2% (see Exhibit 6) and a total capital ratio of 21.2% as of the end of September 2024, against a 14.7% CET1 and a 18.7% total capital ratio requirement.

OBOS-banken received an updated Pillar 2 requirement from the Norwegian FSA in June 2023 which reduced to 1.2% from 2.4% previously, which is currently the third lowest compared to other Moody's rated Norwegian banks. The reduction in the requirement is reflective of bank having established a strong track record of operation as a standalone entity and has reduced operational ties to their owner.

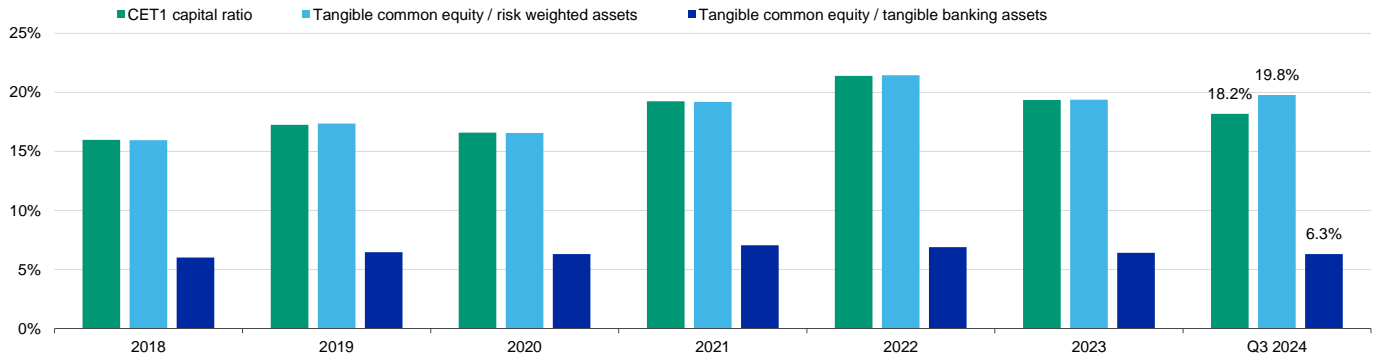
During 2022, OBOS-banken started paying dividends to its parent OBOS Group for the first time, reflective of the bank's resilient profitability and lower growth targets. We consider this to be a positive development, as the bank until few years prior was receiving capital support from its ultimate parent and is reflective of the bank's strategy to operate on a standalone basis. Going forward, we

expect the bank to maintain a stable dividend policy, although it might be slightly increased in the next 1-2 years due to decreased regulatory requirements driven by the reduction in the Pillar 2 requirements. However, we believe the bank will maintain sufficient buffers above minimum requirements.

Exhibit 6

OBOS-banken's capital metrics remain adequate and substantially above its regulatory requirements

Capital metrics evolution



Source: Moody's Ratings

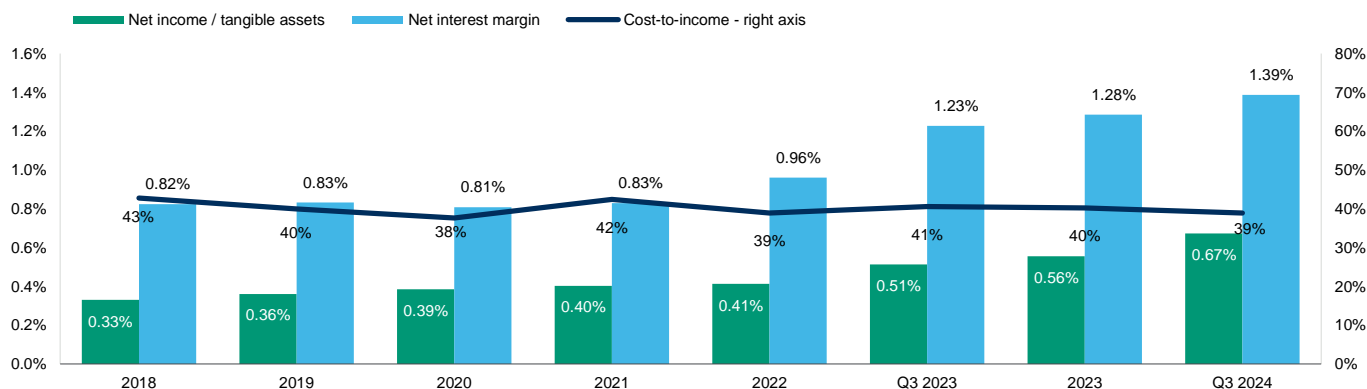
The assigned capital score of a1 reflects our expectation that the bank will optimize its capital structure in-light of improved profitability and lower capital requirements, as well the fact that the bank is fully owned by OBOS Group, which results for fewer options to raise capital externally compared to fully listed peers.

Stable profitability albeit modest due to monoline business model

OBOS-banken's profitability is stable through the economic cycle, but relatively modest compared to other rated peers, reflective of the low risk nature of its lending book. OBOS-banken's net income/tangible assets (including off-balance sheet lending) was 0.67% for the first nine months of 2024, slight increase compared to 0.56% in 2023 (see Exhibit 7), while the net interest margin increased to 1.39% as of September 2024, from 1.28% in 2023, supported by still high interest rates in Norway. The bank continues to benefit from cost-efficient operations, with a cost-to-income ratio of 38.9% in the first nine months of 2024, slightly lower than 40.2% as of end-2023.

Over the next 12-18 months we expect the bank's profitability to stabilize at slightly higher level of approximately 0.5% supported by a higher interest rate environment and better pricing of deposits, but still below latest reported figures. This is driven by our expectation that interest rates will reduce going forward, while construction activity in the OBOS group is expected to ease, while the bank tries to diversify away from OBOS group for new business generation.

Exhibit 7

Profitability is stable through the economic cycle**OBOS-banken's profitability and efficiency metrics**

Source: Moody's Ratings

Similarly to other rated entities that are focused on one activity, we apply a one-notch negative adjustment to OBOS-banken's financial profile for lack of business diversification. This reflects the fact that the bank's revenues are almost exclusively derived from its mortgage lending activities (from both individuals and the interrelated housing companies).

High reliance on wholesale funding, partially mitigated by sound liquidity and granular deposit base

OBOS-banken has relatively high reliance on capital market funding, which would render it vulnerable to fluctuations in investor sentiment. As of the end of September 2024, market funds accounted for 31% of tangible banking assets (including off-balance-sheet covered bonds and assets), stayed broadly unchanged around 30% since year-end 2021 due to the bank's updated strategy of more moderate credit growth (9% during 2023, 6% in 2022 and 5% in 2021 from 26% annual growth during 2016-2018) and strong deposits growth (6.7% in 2023 and 11.7% in 2022 from 12.6% in 2020).

Market funding has been primarily in the form of covered bonds and senior debt. The bank has a well-spread maturity profile, and it has been issuing covered bonds directly through its subsidiary OBOS Boligkreditt since the end of 2016. The bank's deposit base consists mostly of retail customer deposits and almost 70% are covered by the government guarantee scheme.

The bank's assigned funding score of ba1 incorporates our expectation that deposit growth will normalize as consumer spending increases and deposit competition intensifies resulting in somewhat higher levels of market funds.

The high reliance on market funding is mitigated by its sound liquidity, with liquid assets at 12.2% of TBAs at end 2023, which has improved further to 14.0% at end September 2024 as the bank continued to witness strong growth in deposits in the first nine months of the year (10.1% growth in deposits in Q3 2024 and 6.7% in 2023 vs 11.7% in 2022 and 6.6% in 2021). Furthermore, the bank reported a liquidity coverage ratio of 303%, well above the 100% regulatory requirement. The liquidity portfolio was primarily invested in covered bonds and other investment-grade rated bonds. However, the covered bond holdings increase the interconnectedness between local banks and the domestic property market, a common feature among the banks in Norway that we rate.

Source of facts and figures cited in this report's

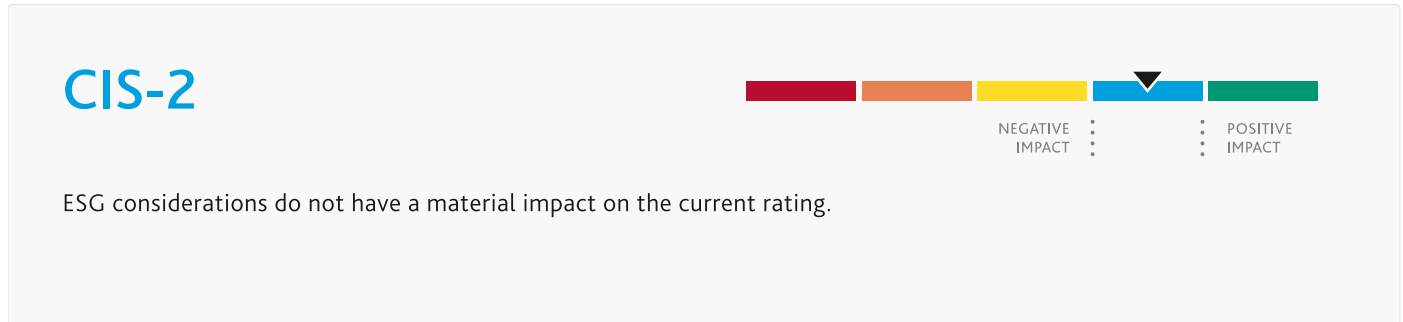
Unless noted otherwise, the bank-specific figures originate from the bank's reports and are based on our own chart of accounts and may be adjusted for analytical purposes. Please refer to the document [Financial Statement Adjustments in the Analysis of Financial Institutions](#), published on 8 April 2024. The bank's figures are also adjusted to include loans transferred to [Eika Boligkreditt AS](#) (issuer rating A3 stable) that are not consolidated in OBOS-banken's financials, similar to our approach for other Norwegian banks that transfer mortgages to jointly owned, but not consolidated specialised companies.

ESG considerations

OBOS-banken AS' ESG credit impact score is CIS-2

Exhibit 8

ESG credit impact score

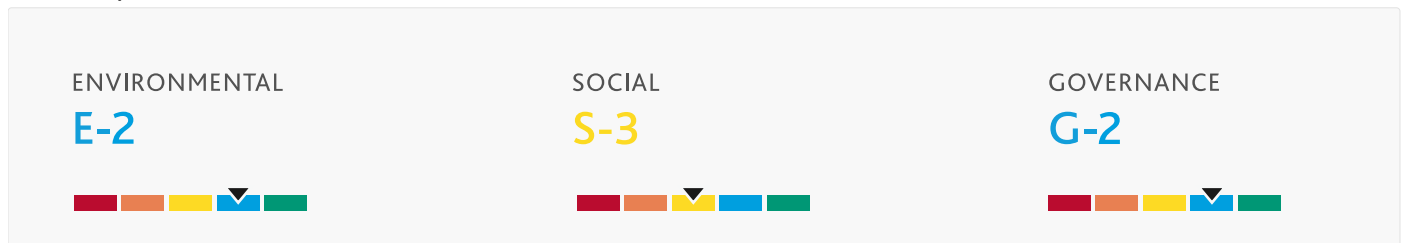


Source: Moody's Ratings

OBOS Banken's **CIS-2** indicates that ESG considerations have no material impact on the current ratings.

Exhibit 9

ESG issuer profile scores



Source: Moody's Ratings

Environmental

OBOS Banken's faces low environmental risks, primarily because of its portfolio exposure to carbon transition. This is because of its loan composition which consists primarily of mortgages and lending to housing companies (or cooperatives) in Norway with a minor exposure to corporate lending, which typically carry higher carbon transition risk.

Social

OBOS Banken faces moderately negative exposure to social risks related to customer relations and associated regulatory and litigation risks, requiring high compliance standards. The exposure to customer relation risks is moderate, given the bank's untarnished customer conduct track record and its role to serve the clients of OBOS Group and its members rather than being seen as a profit center for the owners. OBOS banken benefits from a robust IT infrastructure and strong capabilities to mitigate cyber and personal data risks, supported by its owner OBOS Group.

Governance

OBOS-Banken's governance risks are low. OBOS-Banken has a strong compliance and risk management function with generally conservative financial policies and a favorable track record of financial performance. The bank's board of directors reflects its full ownership by the cooperative group OBOS. However, 4 of the 7 members are external and so the ownership does not result in incremental governance risks. In addition, OBOS group's co-operative structure means that is fully owned by its members, pays no dividend, and its main purpose is to provide housing for the unit owners through housing associations or otherwise to manage housing for the unit owners. As a result, there is no pressure on OBOS-Banken for dividend payments to its parent, which provides strong debt holder protections since the bank can prioritize cash payments to debt holders over payments to its owner.

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

Norway transposed the EU Bank Recovery and Resolution Directive (BRRD) into local legislation in January 2019 and, as such, we consider the country an operational resolution regime. In accordance with our methodology, we therefore apply our Advanced LGF analysis, considering the risks faced by the different debt and deposit classes across the liability structure should the bank enter resolution. Since June 2022, BRRD2 also came formally into force.

In our Advanced LGF analysis for OBOS-banken, we use our standard assumptions and assume residual tangible common equity of 3% and losses post-failure of 8% of tangible banking assets. We also assume a 25% run-off of "junior" wholesale deposits and a 5% run-off in preferred deposits. Moreover, we assign a 25% probability to junior deposits being preferred to senior unsecured debt. We also assume the proportion of deposits considered junior at 10% for OBOS-banken, relative to our standard assumption of 26%, because of the bank's largely retail-oriented deposit base.

Under these assumptions our Advanced LGF analysis indicates that OBOS-banken's junior deposits and senior unsecured debt are likely to face extremely low loss given failure, resulting in a two-notch rating uplift from the bank's BCA for both the deposit and issuer ratings. This reflects our expectation that despite OBOS-banken no longer being subject to subordination requirements, leading to somewhat lower levels of future senior non-preferred debt (junior senior debt), we expect that OBOS-banken AS will continue to issue sufficient volumes of subordinated liabilities that will maintain the very low loss rates for deposits and senior debt in a potential resolution scenario.

Government support

Because of the relatively small size of its operations, there is a low probability of government support for OBOS-banken's deposits and senior unsecured debt, resulting in no rating uplift.

Methodology and scorecard

About Moody's Bank Scorecard

Our scorecard is designed to capture, express and explain in summary form our Rating Committee's judgement. When read in conjunction with our research, a fulsome presentation of our judgement is expressed. As a result, the output of our scorecard may materially differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The scorecard output and the individual scores are discussed in rating committees and may be adjusted up or down to reflect conditions specific to each rated entity.

Rating methodology and scorecard factors

Exhibit 10

Rating Factors

Macro Factors							
Weighted Macro Profile	Very Strong -	100%					
Factor	Historic Ratio	Initial Score	Expected Trend	Assigned Score	Key driver #1	Key driver #2	
Solvency							
Asset Risk							
Problem Loans / Gross Loans	0.4%	aa1	↔	a2	Geographical concentration	Loan growth	
Capital							
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	19.8%	aa1	↓	a1	Access to capital	Expected trend	
Profitability							
Net Income / Tangible Assets	0.5%	baa2	↔	baa3	Earnings quality	Expected trend	
Combined Solvency Score		aa3		a3			
Liquidity							
Funding Structure							
Market Funds / Tangible Banking Assets	31.1%	baa3	↑	ba1	Expected trend	Extent of market funding reliance	
Liquid Resources							
Liquid Banking Assets / Tangible Banking Assets	12.2%	baa3	↔	baa3	Stock of liquid assets		
Combined Liquidity Score		baa3		ba1			
Financial Profile				baa1			
Qualitative Adjustments				Adjustment			
Business Diversification				-1			
Opacity and Complexity				0			
Corporate Behavior				0			
Total Qualitative Adjustments				-1			
Sovereign or Affiliate constraint				Aaa			
BCA Scorecard-indicated Outcome - Range				baa1 - baa3			
Assigned BCA				baa2			
Affiliate Support notching				0			
Adjusted BCA				baa2			
Balance Sheet		in-scope (NOK Million)	% in-scope	at-failure (NOK Million)	% at-failure		
Other liabilities		34 869	48.7%	36 848	51.4%		
Deposits		28 280	39.5%	26 300	36.7%		
Preferred deposits		25 452	35.5%	24 179	33.7%		
Junior deposits		2 828	3.9%	2 121	3.0%		
Senior unsecured bank debt		3 550	5.0%	3 550	5.0%		
Junior senior unsecured bank debt		2 100	2.9%	2 100	2.9%		
Dated subordinated bank debt		400	0.6%	400	0.6%		
Preference shares (bank)		300	0.4%	300	0.4%		
Equity		2 149	3.0%	2 149	3.0%		
Total Tangible Banking Assets		71 648	100.0%	71 648	100.0%		

Debt Class	De Jure waterfall		De Facto waterfall		Notching		LGF	Assigned	Additional	Preliminary
	Instrument volume + subordination	Sub- ordination	Instrument volume + subordination	Sub- ordination	De Jure	De Facto	Notching Guidance vs. Adjusted BCA	LGF notching		
Counterparty Risk Rating	14.8%	14.8%	14.8%	14.8%	3	3	3	3	0	a2
Counterparty Risk Assessment	14.8%	14.8%	14.8%	14.8%	3	3	3	3	0	a2 (cr)
Deposits	14.8%	6.9%	14.8%	11.9%	2	3	2	2	0	a3
Senior unsecured bank debt	14.8%	6.9%	11.9%	6.9%	2	1	2	2	0	a3

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	a2	0	A2	A2
Counterparty Risk Assessment	3	0	a2 (cr)	0	A2(cr)	
Deposits	2	0	a3	0	A3	A3
Senior unsecured bank debt	2	0	a3	0	A3	A3

[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 11

Category	Moody's Rating
OBOS-BANKEN AS	
Outlook	Stable
Counterparty Risk Rating	A2/P-1
Bank Deposits	A3/P-2
Baseline Credit Assessment	baa2
Adjusted Baseline Credit Assessment	baa2
Counterparty Risk Assessment	A2(cr)/P-1(cr)
Issuer Rating	A3
ST Issuer Rating	P-2

Source: Moody's Ratings

© 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 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 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 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 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.moody's.com 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 Clasificadora 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 61 003 399 657 AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail 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 Businesses", 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 regulations. For the purposes of this disclaimer, "PRC" refers to the mainland of the People's Republic of China, excluding Hong Kong, Macau and Taiwan.

CLIENT SERVICES

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