

CREDIT OPINION

16 May 2024

New Issue

Send Your Feedback

RATINGS

Arbejdernes Landsbank A/S

| | |
|-------------------|--|
| Domicile | Copenhagen, Denmark |
| Long Term CRR | A2 |
| Type | LT Counterparty Risk Rating - Fgn Curr |
| Outlook | Not Assigned |
| Long Term Debt | A2 |
| Type | Senior Unsecured - Dom Curr |
| Outlook | Stable |
| Long Term Deposit | A2 |
| 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

Marina Hadjitsangari +357.2569.3034
Associate Analyst
marina.hadjitsangari@moody's.com

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

Arbejdernes Landsbank A/S

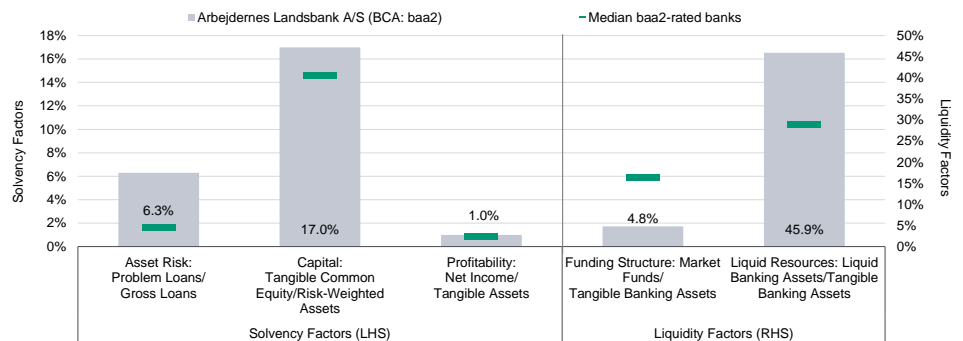
Update to credit analysis following affirmation

Summary

The A2 deposit ratings and and (P)A2 senior unsecured MTN program ratings assigned to [Arbejdernes Landsbank A/S](#) (AL Bank) incorporate the bank's Adjusted Baseline Credit Assessment (Adjusted BCA) of baa2, and Moody's forward-looking view of the bank's bail-inable debt issuance, which indicates an extremely low loss given failure as per Moody's Advanced Loss Given Failure (LGF) analysis. The Baa1 junior senior unsecured ratings reflect the BCA and one positive adjustment in accordance with LGF. The outlook on the long-term deposit ratings is stable.

AL Bank's baa2 BCA captures the bank's very strong capitalization, along with a stable deposit base, improving profitability and high liquidity buffers, balanced against elevated asset risks, stemming primarily from the majority stake in Vestjysk Bank A/S (Vestjysk Bank). The complexity in risk management and organisational control are captured in a negative qualitative adjustment.

Exhibit 1
Rating scorecard - Key financial ratios



The metrics presented in the exhibit are our [Banks Methodology](#) scorecard ratios. Asset risk and profitability reflect the weaker of either the three-year average or the latest annual 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

- » Popular retail franchise across Denmark
- » Strong capitalization
- » Very strong funding and liquidity profile
- » Improving profitability

Credit challenges

- » Increased asset risk and complexity in group risk management due to the consolidation of Vestjysk Bank
- » Historic volatility in net income

Rating outlook

The stable outlook reflects Moody's expectations that AL Bank will demonstrate a stable capitalisation and liquidity position, while working on gradually reducing the volumes of non-performing loans in Vestjysk Bank A/S. Profitability will remain strong during 2024 and thereafter decline gradually as interest rate margins decline.

Factors that could lead to an upgrade

- » The ratings could be upgraded due to an upgrade of the BCA. Factors that could lead to an upgrade of the BCA include: 1) evidence of strong governance control of Vestjysk Bank A/S by AL Bank, with an integrated risk management of the banks; or 2) meaningfully reduced asset risk combined with higher capitalization.

Factors that could lead to a downgrade

- » The ratings could be downgraded if the BCA was downgraded or if the LGF uplift was lowered. The BCA could be downgraded if: (i) problem loans increase rapidly; or (ii) tangible common equity to risk-weighted assets falls below 13%; or (iii) recurring profitability declines or if there is large volatility in profitability; or (iv) the liquidity position significantly deteriorates.
- » The LGF uplift could decline if the bank issues significantly lower volumes of senior non-preferred debt than currently incorporated into the analysis.

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

Key Indicators

Exhibit 3

Arbejdernes Landsbank A/S (Consolidated Financials) [1]

| | 12-23 ² | 12-22 ² | 12-21 ² | 12-20 ² | 12-19 ² | CAGR/Avg. ³ |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------|
| Total Assets (DKK Million) | 116,927.0 | 107,859.0 | 107,365.8 | 62,842.6 | 58,957.3 | 18.7 ⁴ |
| Total Assets (USD Million) | 17,326.8 | 15,479.5 | 16,359.8 | 10,330.0 | 8,856.4 | 18.3 ⁴ |
| Tangible Common Equity (DKK Million) | 10,530.0 | 9,230.6 | 9,080.8 | 6,328.6 | 6,071.2 | 14.8 ⁴ |
| Tangible Common Equity (USD Million) | 1,560.4 | 1,324.7 | 1,383.7 | 1,040.3 | 912.0 | 14.4 ⁴ |
| Problem Loans / Gross Loans (%) | 5.8 | 6.4 | 6.6 | 4.9 | 5.4 | 5.8 ⁵ |
| Tangible Common Equity / Risk Weighted Assets (%) | 17.0 | 15.4 | 14.6 | 17.6 | 17.1 | 16.3 ⁶ |
| Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%) | 23.8 | 27.6 | 28.1 | 17.0 | 18.4 | 23.0 ⁵ |
| Net Interest Margin (%) | 3.0 | 2.1 | 1.8 | 1.8 | 1.9 | 2.1 ⁵ |
| PPI / Average RWA (%) | 4.0 | 1.3 | 1.4 | 0.9 | 1.4 | 1.8 ⁶ |
| Net Income / Tangible Assets (%) | 1.5 | 0.7 | 0.9 | 0.5 | 0.8 | 0.9 ⁵ |
| Cost / Income Ratio (%) | 55.3 | 78.5 | 76.4 | 84.7 | 78.3 | 74.7 ⁵ |
| Market Funds / Tangible Banking Assets (%) | 4.8 | 3.4 | 1.1 | 2.9 | 3.9 | 3.2 ⁵ |
| Liquid Banking Assets / Tangible Banking Assets (%) | 45.9 | 45.1 | 46.2 | 49.5 | 49.0 | 47.2 ⁵ |
| Gross Loans / Due to Customers (%) | 63.7 | 62.3 | 59.9 | 54.7 | 55.8 | 59.3 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

Arbejdernes Landsbank A/S (AL Bank) is a commercial bank established in 1919 by Danish Unions as a workers' bank. Headquartered in Copenhagen, it offers banking services through 61 branches across Denmark as of December 2023, targeting retail and corporate clients. It also offers vehicle financing through its subsidiary AL Finans A/S. AL Bank increased its ownership of Vestjysk Bank to 72.7% in 2021, as part of its expansion strategy for 2025, with the decision to maintain the two banks' franchises separate.

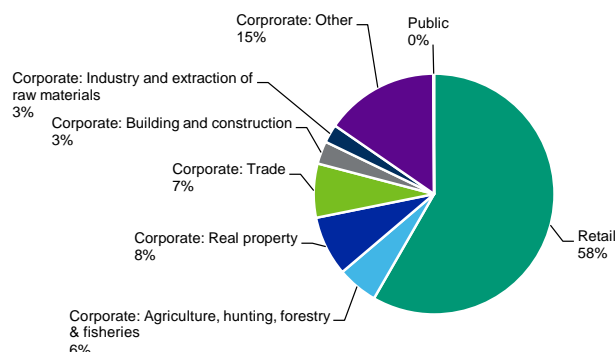
The bank held total assets of DKK117 million as of December 2023 and, with market shares of 2.4% of loans and 4% of deposits in Denmark as of end-December 2022, is recognized as a systemically important institution in Denmark since June 2021. The bank is majority owned and controlled by five large Danish trade-unions, with smaller unions, and around 22,000 individual shareholders owning the remainder of the bank's equity.

Detailed credit considerations

High asset risk, considering consolidation of Vestjysk Bank

Our assigned ba3 Asset Risk score reflects Arbejdernes Bank's good track record, but also heightened asset risk following the consolidation of Vestjysk Bank in the first half of 2021, which has historically had a higher risk appetite. Our score also takes into account the loan portfolio's concentration with 8% to real estate and 6% to agriculture, forestry and fisheries of the total credit exposures as of year-end 2023 (Exhibit 4) and moderately high single name concentration with 17% of gross loans extended to the 20 largest borrowers.

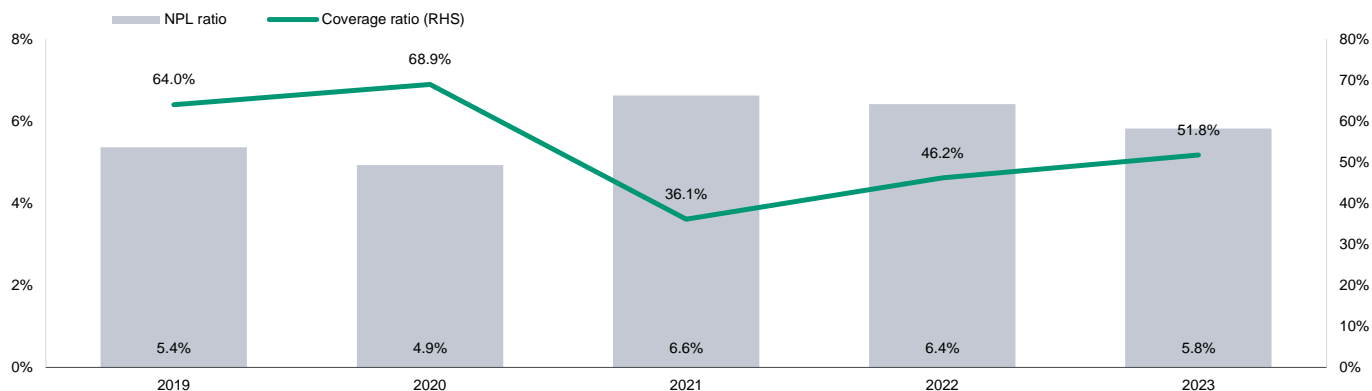
Exhibit 4
The loan portfolio is more diversified since the acquisition of Vestjysk Bank
 Loans and guarantees by sectors as of end-December 2023



Source: AL Bank's 2023 annual report

AL Bank has a comparatively high share of problem loans to gross loans at 5.8% of gross loans as of year-end 2023, a slight decrease from 6.4% at year-end 2022. The bank's problem loan ratio has been historically higher than its rated Danish peers' aggregate average of 1.6% (Exhibit 5). This relatively high share of problem loans to gross loans is driven by Vestjysk Bank, with a problem loan ratio of 10.7% as of year-end 2023, largely due to legacy loans within the agriculture sector.

Exhibit 5
Problem loans increased and loan loss coverage decreased after consolidation of Vestjysk Bank



Sources: AL Bank's financial statements, Moody's Ratings

Provisioning coverage for the Group stood at 52% as of year-end 2023, an increase from 46% a year earlier. We expect that the share of problem loans will gradually decline both due to both banks actively unwinding problem loans, as well as higher valuations of agricultural land, allowing for legacy mortgages to be repaid.

Strong capitalization

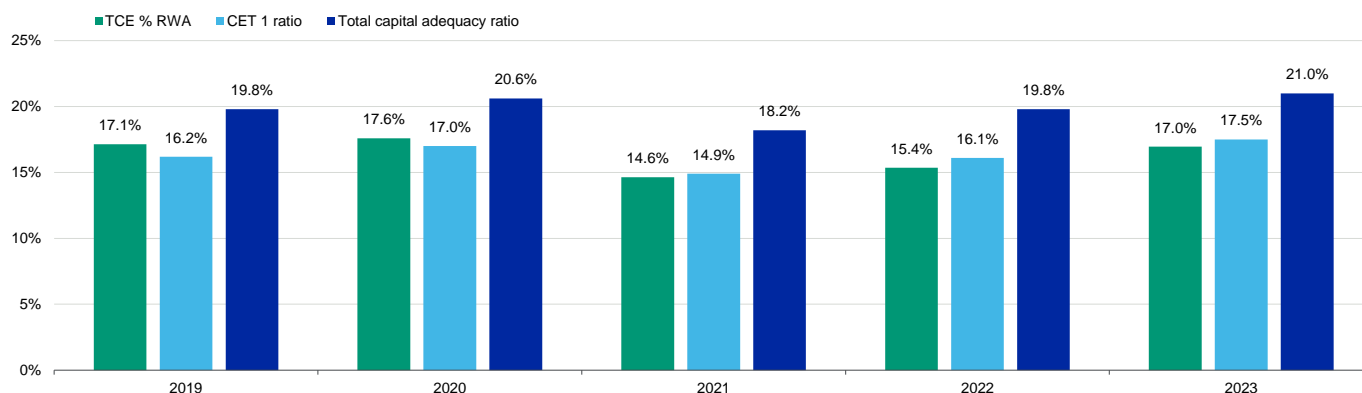
Arbejdernes Landsbank's capitalization is strong, reflected in the a1 assigned score. Our assigned score also reflects the increase in risk-weighted assets over time and future dividends, which are expected to be in the range of 20%-40% of net income. The bank's tangible common equity (TCE)-to-RWA ratio increased to 17.0% at year-end 2023, from 15.4% a year earlier. The bank's TCE-to-RWA ratio is slightly higher than the 14.3% of global peers with a baa2 BCA and below the aggregate average of 19.5% for rated Danish peers.

The bank's Common Equity Tier 1 (CET1) capital ratio was 17.5% and the total capital ratio was 21.0% as of end of December 2023, a strengthening compared to end of 2022 (Exhibit 6), and comfortably above the regulatory requirements of 11.6% and 15.9%, respectively. The bank has been recognized as a systemically important financial institution since June 2021, following the consolidation of Vestjysk Bank, thereby requiring the bank to hold an additional buffer requirement of 1% from year-end 2022 onwards. The

Ministry of Industry, Business and Financial Affairs has also decided to increase the countercyclical buffer, as per the Danish FSA's recommendation, to 2.5% by March 2023. At the end of 2023, the Systemic Risk Council recommended the activation of the systemic buffer, specifically related to a 7% additional risk weight assigned to commercial property exposures. The recommendation is still under consideration, but is included in the Group's capital planning as part of the Group's long-term capital management and can be handled within the Group's current excess capital adequacy.

Exhibit 6

Capitalisation is strong, underpinned by stronger internal capital generation



Sources: AL Bank's financial statements, Moody's Ratings

AL Banken profitability to remain strong

We assess AL Bank's recurring profitability is improving but has historically experienced volatility. The assigned baa1 profitability score also reflecting the targets of return on equity between 10%-15%. AL Bank's profitability has historically been volatile, mainly due to higher provisions taken amid the pandemic and merger costs.

AL Bank updated their profitability targets and are now more comparable to other commercial banks. In 2023, Moody's preferred metric, net income to tangible assets ratio, increased to 1.5%, from 0.7% in 2022. The increase was mainly due to positive value adjustments, higher interest rate margins and reversed impairments. We expect that the profitability ratio will remain above 0.9% over the next 12-18 months. However, we see a risk that additional loan loss provisions are necessary to unwind legacy problem loans and that further IT investments are needed over the coming years. We also expect that interest rate margins will narrow as large depositors will require a better return on their assets.

Very strong funding and liquidity profile

Arbejdernes Landbank's operations are primarily funded through deposits, accounting for 73% of total liabilities as of year-end 2023, while the market funding is expected to increase with the bank issuing a considerable amount of senior debt in order to meet its 2026 minimum requirement for own funds and eligible liabilities (MREL) of 30% of REA including a counter cyclical buffer (CBR) of 2.5%. Market funds accounted for 4.8% of the bank's consolidated tangible banking assets as of year-end 2023. By the end of 2025, we expect that market funds ratio will be approximately 10% as MREL will require the bank to issue about DKK10 billion in senior debt. During the phase-in period, the market funds ratio will gradually increase.

As with other medium-sized Danish banks, Arbejdernes Landbank can secure mortgage financing through specialised mortgage lenders, for example, Totalkredit A/S or DLR Kredit A/S. Loans funded by these specialised lenders are transferred to these institutions and do not appear on the bank's balance sheet.

As part of the strategy set by its owners, consisting of Danish labour unions, AL Bank's liquidity buffers are very strong, with its liquid banking assets at 46% of tangible banking assets as of December 2023, and is likely to continue strengthening in the coming years as debt is issued. Liquid assets comprised of cash and equivalents (at 10% of total assets), interbank (0.3%) and trading securities (29%). Arbejdernes Landsbank's liquidity coverage ratio is comfortably above the 100% minimum requirement, set by the Danish FSA.

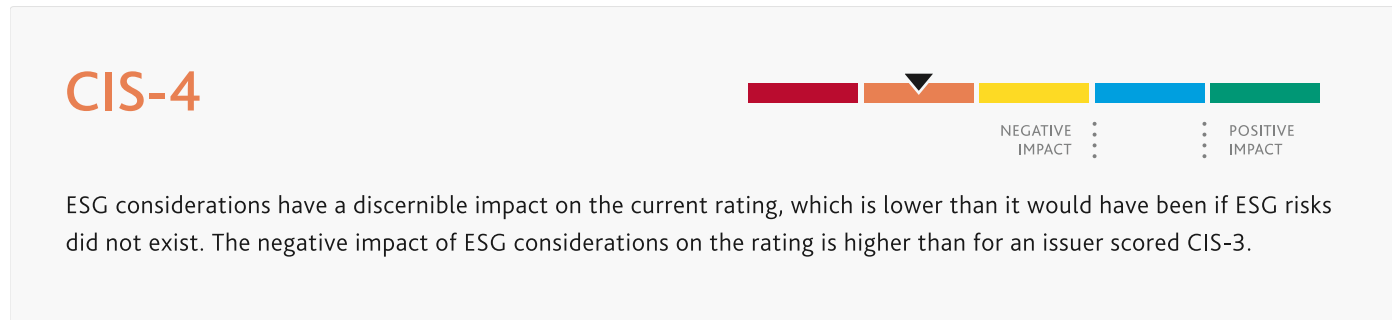
The bank's net loan-to-deposit ratio was 62% as of December 2023.

ESG considerations

Arbejdernes Landsbank A/S' ESG credit impact score is CIS-4

Exhibit 7

ESG credit impact score

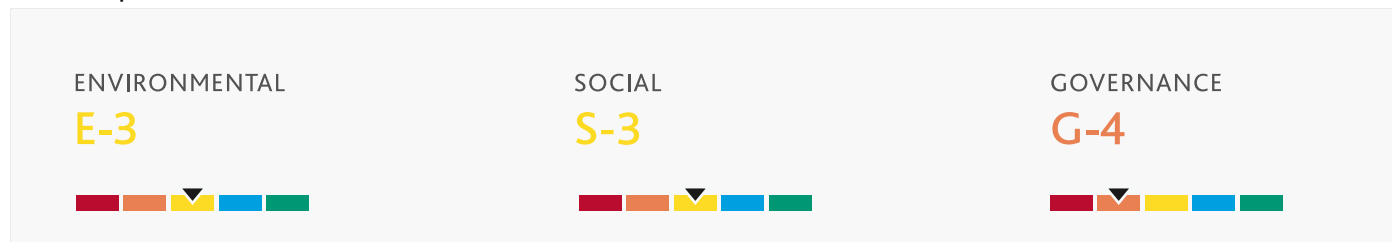


Source: Moody's Ratings

Arbejdernes Landsbank's **CIS-4** reflects that ESG considerations have a discernible impact on the credit ratings due to group risk management. More specifically, the consolidation of Vestjysk bank adds complexity and weaknesses in group risk management control. Environmental and social risk factors have a limited credit impact on the ratings to date.

Exhibit 8

ESG issuer profile scores



Source: Moody's Ratings

Environmental

Arbejdernes Landsbank faces moderately negative 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, Arbejdernes Landsbank is developing its climate risk and portfolio management capabilities.

Social

Arbejdernes Landsbank faces moderate 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. Arbejdernes Landsbank A/S has moderate exposure to customer relations risks.

Governance

Arbejdernes Landsbank faces risks of governance failures in terms of group risk management. Arbejdernes Landsbank's BCA incorporates a one notch negative adjustment reflecting the increased governance and group risk management risks due to the acquisition of the majority stake in Vestjysk Bank. While Moody's does not have concerns regarding governance at either banks individually, the consolidation increases Arbejdernes Landsbank's governance and control risks due to its limited formal ability to impose its own risk appetite on Vestjysk Bank, given its limited presence on the Board of Directors. Vestjysk bank has historically demonstrated a higher risk appetite than its parent with a focus on SME lending in western Denmark. Arbejdernes Landsbank has partly mitigated these risks by appointing a group risk manager for both risk management and compliance, and in practice all group policies have been adopted by Vestjysk Bank's Board of Directors.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.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

Arbejdernes Bank is subject to the EU's Bank Recovery and Resolution Directive (BRRD), which we consider an operational resolution regime. Therefore, in accordance with our methodology, we apply our Advanced LGF analysis to the bank's liabilities, considering the risk exposures of the different debt and deposit classes across its liability structure if the group enters resolution.

Our Advanced LGF analysis is applied to the bank's consolidated group in line with the Danish FSA's single-point-of-entry resolution strategy. In our Advanced LGF analysis, 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 in "junior" wholesale deposits and a 5% runoff in preferred deposits, and assign a 25% probability to deposits being preferred to senior unsecured debt.

Under these assumptions and using a forward-looking horizon, for Arbejdernes Landsbank's A2 deposit rating, our LGF analysis indicates an extremely low loss given failure, leading to three notches of rating uplift from the entity's baa2 Adjusted BCA. The (P)Baa1 junior senior unsecured ratings receive one notch uplift as indicated by LGF, reflecting a low loss given failure.

The forward looking LGF takes into account Moody's estimate of upcoming issuances of senior debt of about of DKK10 billion up until end of 2025, based on a fully phased in MREL of 29.4%, including a countercyclical capital buffer of 2.5%, and assumptions that own funds will trend toward 19%. Total risk exposure amount was DKK60 billion at end of 2022, and Moody's expects that the amount will expand by as much as 25% up until the end of 2025.

Government support considerations

We consider a low probability of support from the Government of Denmark for Arbejdernes Landsbank, resulting in no uplift incorporated in its A2 long-term Deposit and Senior Unsecured ratings. This reflects that, although the bank is of systemic importance, with a market share of 4% in deposits as of year-end 2021, the bank is small in the context of the Danish banking system.

Counterparty Risk Ratings (CRRs)

Arbejdernes Landbank's CRR is A2/P-1

The CRR, before government support, is three notches above the Adjusted BCA of baa2, reflecting a moderate loss given failure from the volume of instruments that will be subordinated to CRR liabilities. Further, the bank's CRR does not benefit from any rating uplift based on government support, in line with our support assumptions on senior debt.

Counterparty Risk (CR) Assessment

Arbejdernes Landbank's CR Assessment is A2(cr)/P-1(cr)

The preliminary CR Assessment is three notches above the entity's baa2 Adjusted BCA, reflecting the buffer against default provided to more junior obligations represented by the CR Assessment. To determine the CR Assessment, we focus purely on subordination, taking no account of the volume of the instrument class. Finally, the bank's CR Assessment does not benefit from any government support uplift.

Rating methodology and scorecard factors

Exhibit 9

Arbejdernes Landsbank 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 | 6.3% | ba1 | ↔ | ba3 | Quality of assets | Expected trend | | | | |
| Capital | | | | | | | | | | |
| Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in) | 17.0% | aa2 | ↓ | a1 | Expected trend | | | | | |
| Profitability | | | | | | | | | | |
| Net Income / Tangible Assets | 1.0% | a3 | ↓ | baa1 | Earnings quality | Expected trend | | | | |
| Combined Solvency Score | | a3 | | baa2 | | | | | | |
| Liquidity | | | | | | | | | | |
| Funding Structure | | | | | | | | | | |
| Market Funds / Tangible Banking Assets | 4.8% | aa2 | ↓↓ | a2 | Expected trend | | | | | |
| Liquid Resources | | | | | | | | | | |
| Liquid Banking Assets / Tangible Banking Assets | 45.9% | aa3 | ↔ | aa3 | Expected trend | | | | | |
| Combined Liquidity Score | | aa2 | | a1 | | | | | | |
| Financial Profile | | | | baa1 | | | | | | |
| Qualitative Adjustments | | | | Adjustment | | | | | | |
| Business Diversification | | | | 0 | | | | | | |
| Opacity and Complexity | | | | 0 | | | | | | |
| Corporate Behavior | | | | -1 | | | | | | |
| 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 (DKK Million) | % in-scope | at-failure (DKK Million) | % at-failure | | | | | |
| Other liabilities | | 13,745 | 13.7% | 21,598 | 21.6% | | | | | |
| Deposits | | 76,996 | 76.9% | 69,142 | 69.1% | | | | | |
| Preferred deposits | | 56,977 | 56.9% | 54,128 | 54.1% | | | | | |
| Junior deposits | | 20,019 | 20.0% | 15,014 | 15.0% | | | | | |
| Senior unsecured bank debt | | 1,000 | 1.0% | 1,000 | 1.0% | | | | | |
| Junior senior unsecured bank debt | | 3,141 | 3.1% | 3,141 | 3.1% | | | | | |
| Dated subordinated bank debt | | 1,275 | 1.3% | 1,275 | 1.3% | | | | | |
| Preference shares (bank) | | 955 | 1.0% | 955 | 1.0% | | | | | |
| Equity | | 3,003 | 3.0% | 3,003 | 3.0% | | | | | |
| Total Tangible Banking Assets | | 100,115 | 100.0% | 100,115 | 100.0% | | | | | |
| Debt Class | | | | | | | | | | |
| | De Jure waterfall | De Facto waterfall | | Notching | | LGF | Assigned | Additional | Preliminary | |
| | Instrument | Sub- | Instrument | Sub- | De Jure | De Facto | Notching | LGF | Notching | Rating |
| | volume + | ordination | volume + | ordination | | | Guidance | notching | Assessment | |
| | subordination | subordination | subordination | subordination | | | vs. | | | |
| | | | | | | | Adjusted | | | |
| | | | | | | | BCA | | | |
| Counterparty Risk Rating | 24.4% | 24.4% | 24.4% | 24.4% | 3 | 3 | 3 | 3 | 0 | a2 |
| Counterparty Risk Assessment | 24.4% | 24.4% | 24.4% | 24.4% | 3 | 3 | 3 | 3 | 0 | a2 (cr) |
| Deposits | 24.4% | 8.4% | 24.4% | 9.4% | 3 | 3 | 3 | 3 | 0 | a2 |
| Senior unsecured bank debt | 24.4% | 8.4% | 9.4% | 8.4% | 3 | 1 | 2 | - | - | - |
| Junior senior unsecured bank debt | 8.4% | 5.2% | 8.4% | 5.2% | 0 | 0 | 0 | 1 | 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 | a2 | 0 | A2 | A2 |
| Counterparty Risk Assessment | 3 | 0 | a2 (cr) | 0 | A2(cr) | |
| Deposits | 3 | 0 | a2 | 0 | A2 | A2 |
| Senior unsecured bank debt | - | - | - | 0 | A2 | (P)A2 |
| Junior senior unsecured bank debt | 1 | 0 | baa1 | 0 | Baa1 | Baa1 |

[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 10

| Category | Moody's Rating |
|-------------------------------------|----------------|
| ARBEJDERNES LANDSBANK A/S | |
| Outlook | Stable |
| Counterparty Risk Rating | A2/P-1 |
| Bank Deposits | A2/P-1 |
| Baseline Credit Assessment | baa2 |
| Adjusted Baseline Credit Assessment | baa2 |
| Counterparty Risk Assessment | A2(cr)/P-1(cr) |
| Senior Unsecured -Dom Curr | A2 |
| Junior Senior Unsecured | Baa1 |
| Junior Senior Unsecured MTN | (P)Baa1 |

Source: Moody's Investors Service

© 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 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.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 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 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.