

## CREDIT OPINION

21 December 2021

Update

✓ Rate this Research

### RATINGS

#### Bluestep Bank AB (publ)

Domicile	Sweden
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

Emma Jonasson +46.8.5179.1283  
Associate Analyst  
emma.jonasson@moodys.com

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

Sean Marion +44.20.7772.1056  
MD-Financial Institutions  
sean.marion@moodys.com

Niclas Boheman +46.8.5179.1281  
VP-Senior Analyst  
niclas.boheman@moodys.com

Louise Lundberg +46.8.5179.1280  
VP-Sr Credit Officer  
louise.lundberg@moodys.com

## Bluestep Bank AB (publ)

### Update to credit analysis

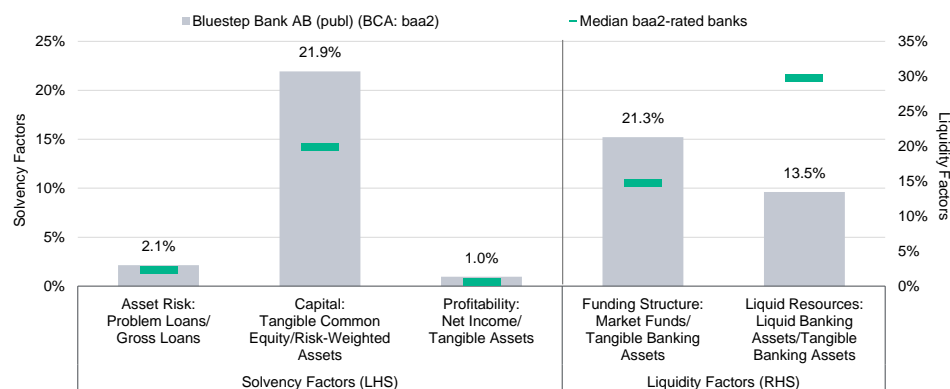
#### Summary

[Bluestep Bank AB \(publ\)](#)'s (Bluestep) A3/P-2 deposit rating incorporates the bank's baa2 Baseline Credit Assessment (BCA) and two notches of uplift as indicated by our Advanced Loss Given Failure (LGF) analysis, capturing the large volumes of loss-absorbing obligations protecting depositors in case of failure.

The baa2 BCA reflects the bank's high capitalisation and strong profitability. While its asset risk is higher than that of other Nordic mortgage lenders, Bluestep benefits from the overall strong performance of Nordic mortgages and historical low losses. These strengths are balanced against its reliance on wholesale funding, although issuance of covered bonds diversifies funding, and weak efficiency due to Bluestep's largely manual underwriting process.

Exhibit 1

#### Rating Scorecard - Key financial ratios



These represent our [Banks Methodology](#) scorecard ratios, whereby asset risk and profitability reflect the weaker of either the latest reported or the average of the last three year-end and latest reported ratios. Capital is the latest reported figure. Funding structure and liquid resources ratios reflect the latest year-end figures.

Source: Moody's Investors Service

## Credit strengths

- » Strong capitalisation
- » High repayment rates supported by generous governmental unemployment benefits and state run collection agencies
- » Strong profitability, with a large market share within the niche non-prime Swedish and Norwegian mortgage markets
- » Strategic focus on mortgages in the Nordic countries

## Credit challenges

- » Elevated asset risk, through lending to non-prime borrowers
- » Reliance on market funding
- » Weak efficiency, which stems from Bluestep's largely manual underwriting process and its frequent personal interactions with customers and applicants

## Outlook

- » The stable outlook on the deposit ratings reflects our expectations that Bluestep's capitalisation will remain strong with limited deterioration in asset risk. The bank will continue to generate internal capital because of its strong core earnings. Profitability will remain strong, supported by low funding costs and continued growth.

## Factors that could lead to an upgrade

- » The BCA could be upgraded if a higher proportion of the bank's lending is focussed on lower risk customers, alongside a sustained reduction in the level of nonperforming loans. An upgrade of its BCA would result in the deposit ratings being upgraded.

## Factors that could lead to a downgrade

- » The BCA could be downgraded if the bank experiences a significant deterioration in asset risk, including the proportion of problem loans to gross loans rising above 4%, or the volume of Stage 2 loans increasing rapidly; or that tangible common equity (TCE) ratio declines and remains below 16% of risk-weighted assets.
- » The deposit ratings could be downgraded in case of a lower BCA or lower volume of loss absorbing liabilities protecting depositors in case of failure.

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

## Key indicators

Exhibit 2

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

	06-21 <sup>2</sup>	12-20 <sup>2</sup>	12-19 <sup>2</sup>	12-18 <sup>2</sup>	12-17 <sup>2</sup>	CAGR/Avg. <sup>3</sup>
Total Assets (SEK Million)	19,943.6	20,281.1	19,253.5	17,496.4	16,600.2	5.4 <sup>4</sup>
Total Assets (USD Million)	2,332.0	2,469.5	2,056.8	1,973.5	2,027.5	4.1 <sup>4</sup>
Tangible Common Equity (SEK Million)	1,766.1	1,621.3	1,497.9	1,399.1	1,048.0	16.1 <sup>4</sup>
Tangible Common Equity (USD Million)	206.5	197.4	160.0	157.8	128.0	14.6 <sup>4</sup>
Problem Loans / Gross Loans (%)	2.1	2.0	1.9	1.6	1.5	1.8 <sup>5</sup>
Tangible Common Equity / Risk Weighted Assets (%)	21.9	19.7	18.2	18.7	14.8	18.7 <sup>6</sup>
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	19.8	19.8	20.1	16.4	18.8	19.0 <sup>5</sup>
Net Interest Margin (%)	4.1	4.1	4.5	4.2	4.2	4.2 <sup>5</sup>
PPI / Average RWA (%)	4.5	3.3	4.2	3.9	4.3	4.0 <sup>6</sup>
Net Income / Tangible Assets (%)	1.4	0.8	0.8	0.9	1.2	1.0 <sup>5</sup>
Cost / Income Ratio (%)	58.8	68.1	60.6	61.9	57.9	61.5 <sup>5</sup>
Market Funds / Tangible Banking Assets (%)	26.8	21.3	31.4	31.4	29.6	28.1 <sup>5</sup>
Liquid Banking Assets / Tangible Banking Assets (%)	11.3	13.5	11.2	11.6	12.6	12.1 <sup>5</sup>
Gross Loans / Due to Customers (%)	151.5	132.1	141.5	140.0	130.9	139.2 <sup>5</sup>

[1] Further to the publication of our revised methodology in July 2021, for issuers that have "high trigger" additional Tier 1 instruments outstanding, not all ratios included in this report reflect the change in treatment of these instruments. [2] All figures and ratios are adjusted using Moody's standard adjustments. [3] Basel III - fully loaded or transitional phase-in; IFRS.

[4] May include rounding differences because of the scale of reported amounts. [5] Compound annual growth rate (%) based on the periods for the latest accounting regime. [6] Simple average of periods for the latest accounting regime. [7] Simple average of Basel III periods.

Sources: Moody's Investors Service and company filings

## Profile

Bluestep Bank AB (publ) (Bluestep) is wholly owned by Bluestep Holding AB and is the parent of the Bluestep Bank Group, which includes five subsidiaries that operate in Sweden, Finland and Norway. As of June 2021 the bank reported total assets of SEK19.9 billion (€2.0 billion). Bluestep Bank is the regulated entity of the group and is under the supervision of the Swedish Financial Supervisory Authority (with a banking license since 2016).

Bluestep was established in 2004 in Sweden and expanded into Norway in 2010, and to Finland in 2020. The bank specialises in mortgages to customers with a limited or more adverse credit history. In November 2020 Bluestep agreed to sell its personal unsecured lending business (5% of gross loans) and the portfolio was transferred on 1 January 2021. Furthermore, Bluestep has been gathering retail deposits in Sweden since 2008 and in Norway since 2010.

Since 2017 Bluestep has been owned by EQT VII, a private equity fund established by the investment firm EQT Group, with €4.0 billion of assets under management and total investments of €15.5 billion as of June 2021.

## Recent developments

### Macroeconomic developments

Our outlooks for the [Swedish](#) and [Norwegian](#) banking system are stable. We expect the operating environment to remain supportive of banks ratings. As public support measures begin to taper we expect a rise in business closures and unemployment. The most affected sectors are leisure and accommodation, while mortgage impairments are likely to rise only marginally, if at all.

### Bank specific developments

On 27 November 2020, Bluestep announced the divestment of its personal loan portfolio to Svea Ekonomi as part of the bank's strategy to fully focus on mortgage lending. The portfolio was transferred on 1 January 2021. We view the sale of Bluestep's personal loan portfolio as [positive](#).

In June 2020, Bluestep started offering mortgages in Finland. Bluestep is gradually substituting maturing residential mortgage-backed securities (RMBS) with covered bonds and senior unsecured debt. Since December 2018, Bluestep has issued SEK denominated 2.75 billion of senior unsecured debt and in April 2021 the bank issued its first senior unsecured bond in NOK (with the outstanding amount of NOK550 million as of June 2021). Furthermore, Bluestep issued its first covered bond in April 2020 and had SEK5.1 billion outstanding covered bonds as of the end of November 2021.

## Detailed credit considerations

### Bluestep's asset quality to remain broadly stable as the economy recovers

While the pandemic-led disruption has led to a deterioration in the Swedish and Norwegian economies and higher levels of unemployment, the large government support packages to households and businesses have so far mitigated the risk of an important deterioration in asset quality. Although authorities support measures are phased out, we expect Bluestep's asset quality remain broadly stable; meaning we expect the non-performing loan ratio on Bluestep's largely non-prime mortgages to increase only moderately from 2.0% as of year-end 2020.

The assigned Asset Risk score of baa2 reflects Bluestep's residential mortgage lending with a focus on non-prime mortgages and historically high growth.

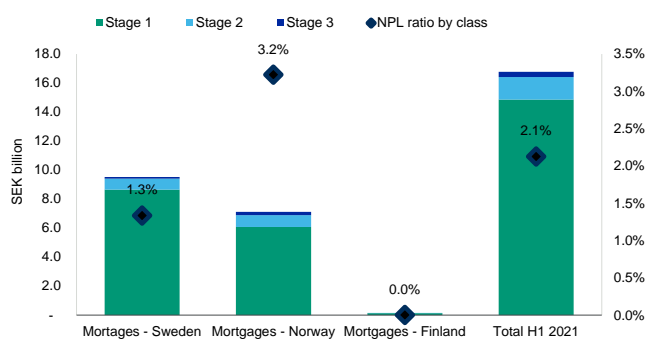
Swedish and Norwegian mortgages accounted for 57% and 42% of gross loans, respectively as of June 2021. Bluestep launched mortgage lending in Finland, accounting for 1% of gross loans as of the same date. Bluestep has stopped offering private unsecured loans since February 2020, pursuing its strategy to completely focus on residential mortgages. The Swedish unsecured personal loans accounted for 4% at year-end 2020 and the portfolio was sold on 1 January 2021. As the unsecured loan portfolio has been sold, we expect the asset-risk profile of the bank to improve, diminishing the amount of unsecured lending in the portfolio.

Asset quality deterioration has been muted so far as Bluestep decided to tighten its underwriting standards during 2020. Bluestep's problem loans/gross loans ratio was 2.1% as of June 2021 marginally higher compared to 2.0% as of year-end 2020 (which is higher than that of its Nordic peers, but remains low by international standards). We regard Bluestep's coverage (loan-loss reserves/problem loans) of 10.2% as of June 2021 to be low (see Exhibit 4). However, the bank's problem loans/TCE and loan-loss reserves ratio was a relatively strong 19.8% as of June 2021. The weighted average LTV ratio is 72% in Sweden and 65% in Norway as of June 2021, which is higher than that of many of the company's Nordic peers because of the quicker turnover in its portfolio. On the other hand, Bluestep's average loan size is relatively small in the Nordic context. This helps maintain loan affordability even if unemployment increases.

Although the bank's loan growth has been high for many years, regulatory reforms (including amortisation requirements) have moderated the pace of expansion in recent years. Gross loans increased by 0.7% in the first half of 2021, with the volumes affected by a weaker Norwegian krona, the divestment of the bank's personal loan portfolio. Bluestep follows the current regulations that stipulate that a mortgage cannot exceed an 85% LTV ratio at origination.

Exhibit 3

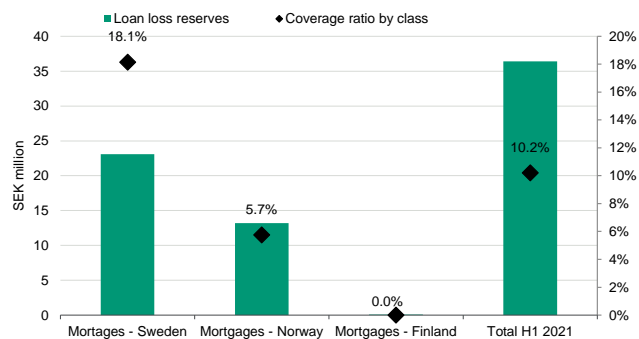
Level of problem loans, illustrated by Stage 3 exposures, are higher than that of its Nordic peers, but low in an international context



Source: Company reports

Exhibit 4

Loan-loss reserves and coverage ratio are adequate, given the large amount of collateral



Source: Company reports

### Capitalisation remains intact despite the pandemic

We view Bluestep's capitalisation as strong, although we apply a negative adjustment to Bluestep's assigned capital score of aa3, given the limited transparency regarding the access to capital in case of need.

Bluestep's capitalisation will remain strong despite the deteriorating environment, with TCE/risk-weighted assets of 21.9% as of June 2021 (2020: 19.7%) and TCE/total assets ratio of 8.9% as of June 2021 (2020: 8.0%). The sale of the personal loan portfolio (finalised

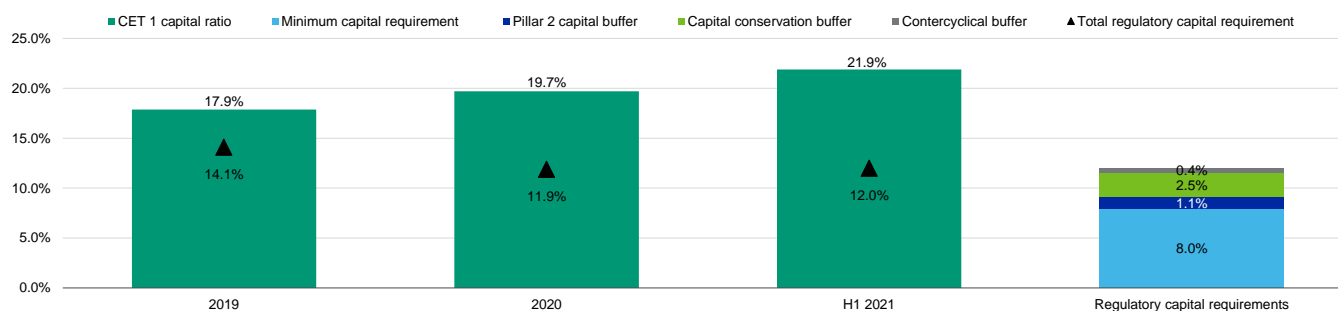
on 1 January 2021), contributed to the strengthened capital situation. Bluestep uses the standardised approach in its models, which means that capital is less likely to deteriorate significantly if borrowers with repayment difficulties increase. In 2020 Bluestep cancelled the dividend following recommendations from the Swedish Financial Supervisory Authority (FSA). However, in the second half of the year the board proposed a dividend amounting to SEK205 million after the Swedish Financial Supervisory Authority (FSA) ended its recommendation regarding dividend distribution on 30 September 2021 and excluding the dividend we expect the bank's capitalisation to normalise to pre-pandemic levels with TCE/RWAs around 19.4% (equivalent to an initial score of aa2).

[The Swedish FSA will raise the countercyclical buffer to 1% in the third quarter of 2021](#), while it was lowered to 0% from 2.5% in March 2020 as a response to the coronavirus outbreak. In our view, Bluestep's total capital ratio is well above the increased requirement and this does not cause a restriction on Bluestep's ability to extend further lending.

Bluestep's board has set a Common Equity Tier 1 (CET1) capital ratio target of 16%, supported by the bank's owner, represented by EQT Group, which is comfortably above the regulatory requirement of 10.9% as of June 2021 (see Exhibit 5). However, there is limited transparency regarding access to additional capital in case of need. Bluestep's shares are held as one investment of many within one of the funding vehicles of EQT Group.

Exhibit 5

### Capitalisation has strengthened, with a good buffer over regulatory requirements



Source: Company reports

### Profitability to decline due to expansion costs and lower risk in portfolio

The assigned Profitability score of baa1 reflects Bluestep's strong margins, high cost base, and the expected level of profitability during the outlook period of 12-18 months.

Bluestep's recurring profitability is strong, with net income/tangible assets ratio increased to 1.4% for the first half of 2021, compared to 0.7% in the year-earlier period. The bank's profitability for the first half of 2021 has been supported by its stable net interest income, lower operating expenses and significantly lower loan loss provisions due to the absence of the private unsecured borrowers. Because of the uncertainty related to COVID-19, Bluestep retains management overlay of SEK4.9 million as of June 2021.

Bluestep's underlying profitability is driven by the relatively high interest rates on its mortgages, ranging from around 3% to above 10%, compared with an average of around 1.7% for traditional banks. This resulted in a very strong net interest rate margin of 4.1% for the first half of 2021 (H1 2020: 4.3%). Net interest income is Bluestep's main source of income, accounting for 93% of revenue in the first half of 2021 and it remained stable for the first half of 2021 due to loan growth combined with lowered interest expenses following the diversification of funding sources (which offset the decrease of higher interest rate margins previously generated by the divested unsecured personal loan portfolio).

While most Nordic peers cost-to-income ratio is around 50% or lower, Bluestep's efficiency is relatively weak, with a cost-to-income ratio of 59% for the first half of 2021. The ratio improved significantly from 66% in the year earlier period, which was affected by the investments in the launch of their Finnish operations and equity release product "60plusbanken". Furthermore, lower operating expenses in the first half of 2021 and more efficient processes contributed to the improvement. However, Bluestep's relatively high cost-to-income ratio is due to the bank's largely manual underwriting process. Furthermore, Bluestep suffers from higher early

repayment levels as customers leave, on average, after three years, following improvements in their credit scores. This compares with the average seven-year duration of mortgage loans at traditional banks.

Bluestep continues its investments in digital processes including IT and product development. This together with the centralisation of back-office functions is leading to meaningful cost reductions.

### Improved funding profile, while reliance on market funding remains

Bluestep's assigned funding score of baa2 reflects the high reliance on market funding and in our view, positive changes in the funding profile of the bank, shifting away from RMBS and a larger share of new funding provided from covered bonds and senior unsecured funding.

The bank issued its first covered bond in April 2020 and had SEK5.1 billion outstanding covered bonds by the end of November 2021 while RMBS funding is being unwound and limited volumes remain. Bluestep continues to be active in the senior unsecured market with issuances of SEK750 million and NOK550 million in the first six months of 2021, after making its first issuance in December 2018.

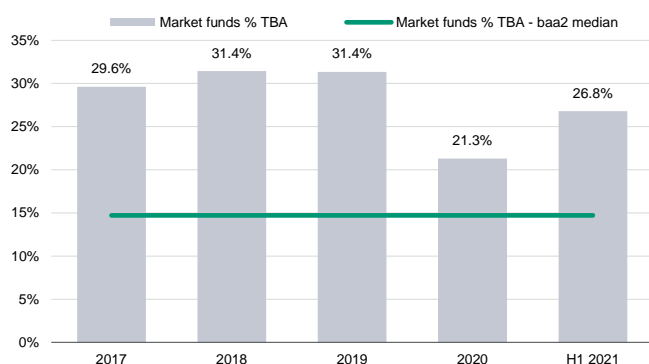
Bluestep's Moody's adjusted market funds to TBA ratio was 26.8% at the end of June 2021 (2020: 21.3%) (see Exhibit 6), including the 50% deduction of all covered bonds as per our Banks Methodology. Bluestep's issuances of covered bonds has helped the bank attract more domestic investors, who we consider less likely to sell in a stressed market scenario compared with foreign investors. Bluestep is the first covered bond issuer within the non-prime segment, and the liquidity of these instruments is yet to be tested, but overall demand has been strong. The most recent covered bond had a 5 year maturity. The senior bonds have shorter maturities, normally of three years, and are therefore associated with more frequent refinancing. As the bank continues to tap the covered bond market, we expect that the term structure will be managed to avoid larger refinancing hurdles.

Deposits account for 61% of non-equity funding, down from 68% at year-end 2020 as a result of the large decrease in deposits in the first half of 2021. The loans to deposit ratio increased to 152% at the end of June 2021 compared to 132% at the end of 2020.

Bluestep holds adequate liquid reserves of high-quality assets and cash at banks, with a target of 19% of deposits. The bank's liquid assets decreased by 17% to SEK2.2 billion as of June 2021 from SEK2.7 billion as of year-end 2020, corresponding to the Moody's adjusted liquid assets to tangible banking assets ratio of 11.3%.

Exhibit 6

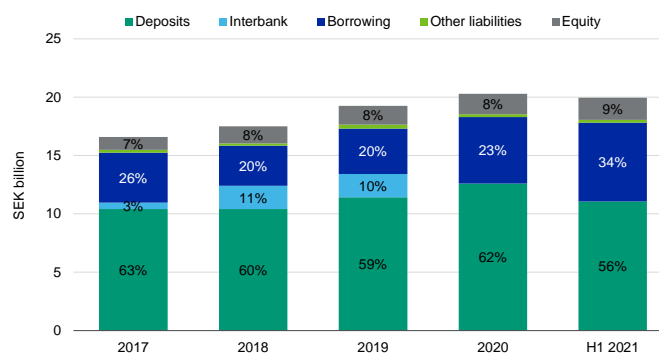
#### High reliance on market funding



Source: Company reports and Moody's Investors Service

Exhibit 7

#### Issued securities will gradually grow as the bank issues covered bonds when the RMBS mature



Source: Company reports

### Monoline business increases reliance on a single source of revenue

Because Bluestep derives most of its income from its mortgage customers, primarily in the form of net interest income, the BCA includes a one-notch negative adjustment to reflect its monoline business model, similar to other mortgage banks.

### ESG considerations

In line with our general view on the banking sector, Bluestep has low exposure to environmental risks (see our [environmental risks heat map](#) for further information).

The most relevant social risks for banks arise from the way they interact with their customers. Social risks are particularly high in the area of data security and customer privacy, which are mitigated by sizeable technology investments and banks' long track record of handling sensitive client data. Fines and reputational damage because of product mis-selling or other types of misconduct are a further social risk. Societal trends are also relevant in a number of areas, such as shifting customer preferences towards digital banking services; increasing information technology costs; ageing population concerns in several countries, including the Nordic countries, affecting the demand for financial services; or socially driven policy agendas that may translate into regulations that affect banks' revenue base. Overall, we expect banks, including Bluestep, to face moderate social risks. Furthermore, we regard the coronavirus pandemic as a social risk under our environment, social and governance (ESG) framework, given the substantial implications for public health and safety. See our [social risks heat map](#) for further information.

Governance is highly relevant for Bluestep, as it is to all participants in the banking industry. Corporate governance weaknesses can lead to a deterioration in a bank's credit quality, while governance strengths can benefit its credit profile. Governance risks are largely internal rather than externally driven. We consider the probability of governance-related failures for Bluestep low. However, corporate governance remains a key credit consideration and requires ongoing monitoring.

## Support and structural considerations

### Loss Given Failure (LGF) analysis

We apply our Advanced LGF analysis to Bluestep because the bank is subject to the European Union Bank Recovery and Resolution Directive, which we consider an operational resolution regime. For this analysis, we assume that the equity and losses are 3% and 8%, respectively, of tangible banking assets in a failure scenario. We also assume a 25% runoff in junior wholesale deposits and a 5% runoff in preferred deposits. Moreover, we assign a 25% probability to junior deposits being preferred to senior unsecured debt. These are in line with our standard assumptions. Given the bank's focus on retail deposits, we assume that the bank's junior deposits account for 10% of total deposits, in line with those of other retail mortgage banks in Sweden.

Our LGF assessment is forward looking and incorporates the continued issuance of senior unsecured debt and expected balance-sheet growth. The deposit ratings of A3 incorporate a two-notch positive adjustment to the baa2 BCA because of the LGF analysis. The uplift reflects the large buffer of loss-absorbing liabilities protecting junior depositors in case of failure.

### Counterparty Risk Ratings (CRRs)

#### **Bluestep's CRRs are A2/Prime-1, incorporating three notches of uplift from the LGF analysis**

There is a considerable volume of loss-absorbing liabilities junior to the CRR obligations. In this case, we assume a nominal volume at failure because we are not able to accurately assess the volume of CRR liabilities at failure or the inherently more volatile nature of such liabilities as the bank approaches failure. The ratings incorporate three notches of uplift for the CRRs from the bank's Adjusted BCA of baa2.

### Counterparty Risk (CR) Assessment

#### **Bluestep's CR Assessment is A2(cr)/Prime-1(cr), incorporating three notches of uplift from the LGF analysis**

The main difference with our Advanced LGF approach used to determine instrument ratings is that the CR Assessment captures the probability of default on certain senior obligations rather than the expected loss. Therefore, we focus purely on subordination and take no account of the volume of the instrument class.

### Government support considerations

Because of the small size of Bluestep's retail operations, we assume a low probability of government support for the bank, resulting in no uplift to any of its ratings or assessments.

## 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 8

### Bluestep Bank AB (publ)

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	2.1%	a2	↔	baa2	Quality of assets	Collateral and provisioning coverage	
Capital							
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	21.9%	aa1	↔	aa3	Expected trend	Access to capital	
Profitability							
Net Income / Tangible Assets	1.0%	baa1	↔	baa1	Expected trend		
Combined Solvency Score		a1		a3			
Liquidity							
Funding Structure							
Market Funds / Tangible Banking Assets	21.3%	baa1	↔	baa2	Expected trend	Market funding quality	
Liquid Resources							
Liquid Banking Assets / Tangible Banking Assets	13.5%	ba1	↔	ba1			
Combined Liquidity Score		baa2		baa3			
Financial Profile							
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			
<b>Balance Sheet</b>							
		<b>in-scope (SEK Million)</b>	<b>% in-scope</b>	<b>at-failure (SEK Million)</b>	<b>% at-failure</b>		
Other liabilities		4,988	25.2%	5,764	29.1%		
Deposits		11,074	55.9%	10,298	52.0%		
Preferred deposits		9,966	50.3%	9,468	47.8%		
Junior deposits		1,107	5.6%	831	4.2%		
Senior unsecured bank debt		3,167	16.0%	3,167	16.0%		
Equity		595	3.0%	595	3.0%		
Total Tangible Banking Assets		19,823	100.0%	19,823	100.0%		



Debt Class	De Jure waterfall		De Facto waterfall		Notching		LGF Notching Guidance vs. Adjusted BCA	Assigned LGF notching	Additional Notching	Preliminary Rating Assessment
	Instrument volume + subordination	Sub-ordination	Instrument volume + subordination	Sub-ordination	De Jure	De Facto				
Counterparty Risk Rating	23.2%	23.2%	23.2%	23.2%	3	3	3	3	0	a2
Counterparty Risk Assessment	23.2%	23.2%	23.2%	23.2%	3	3	3	3	0	a2 (cr)
Deposits	23.2%	3.0%	23.2%	19.0%	2	3	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 Assessment	3	0	a2 (cr)	0	A2(cr)	
Deposits	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 Investors Service

## Ratings

Exhibit 9

Category	Moody's Rating
<b>BLUESTEP BANK AB (PUBL)</b>	
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)

Source: Moody's Investors Service

© 2021 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 PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS 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 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 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 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 and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at [www.moody.com](http://www.moody.com) under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657 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 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 JPY125,000 to approximately JPY550,000,000.

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

## CLIENT SERVICES

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