

CREDIT OPINION

30 January 2026

Update



Send Your Feedback

Contacts

Maria Vinuela	+34.91.768.8237
VP-Senior Analyst	
maria.vinuela@moodys.com	
Pablo Alvarado	+33.1.5330.3448
Andonegui	
Sr Ratings Associate	
pablo.alvaradoandonegui@moodys.com	
Edoardo Calandro	+44.20.7772.1097
VP-Sr Credit Officer	
edoardo.calandro@moodys.com	

CLIENT SERVICES

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

JSC Development Finance Institution Altum

Update to credit analysis

Summary

[JSC Development Finance Institution Altum](#)'s (Altum) Baa1/Prime-2 issuer ratings reflect the company's standalone assessment of baa3 and a two-notch uplift based on our expectation of a very high level of support from and a very high level of dependence on the [Government of Latvia](#) (A3 stable). The support assumption is based on Altum's importance to the economic growth strategies of the Latvian government, as well as the government's strong track record of providing support to strategic companies.

Altum is considered to be an important tool for the government in its policy work, and is governed by an institution-specific law, which is unique for financial institutions in Latvia. Its mandate, which was originally issued in 2015 for 7 years, was prolonged in November 2022 until 31 December 2029 by the European Commission. We expect a very high probability that the government would inject additional capital into the company in case of need. However, without explicit government guarantees to Altum, or to its creditors, the government support does not lead to a rating at par with the sovereign rating of Latvia.

Altum's baa3 standalone assessment reflects its sound financial profile, with very strong capitalisation, high risk coverage and low refinancing risk. Such strengths are balanced against high problem loan levels and modest profitability. The standalone assessment is also supported by the unique standing of Altum in Latvia, reflecting its policy mandate to provide a distribution channel for state and European Union (EU) programme funds to both end-customers and other financial institutions.

Credit strengths

- » Very high probability of government support
- » Strong capitalisation, supported by substantial risk-coverage reserves
- » Strong liquidity

Credit challenges

- » Still high asset risk indicators, in line with the entity's business model
- » Moderate profitability, resulting from its mandate as a development institution
- » Limited independent funding franchise

Outlook

The stable outlook reflects our expectation that the company's standalone credit profile, and the support from and dependence on the government of Latvia will remain broadly in line with the current levels over the next 12-18 months. It is also based on the stable outlook on the rating of Latvia.

Factors that could lead to an upgrade

Altum's rating could be upgraded if the firm improves its standalone credit fundamentals significantly, including reducing its volume of problem loans, while continuing to manage EU and state funding prudently. An upgrade could also result from an upgrade of the Latvian government's ratings or if explicit government guarantees protecting creditors in case of failure were provided.

Factors that could lead to a downgrade

A downgrade of Altum's rating could result from a combination of the company significantly changing its funding structure, and a significant deterioration in its risk-coverage reserves and capitalisation. A downgrade of Altum's ratings could also follow a downgrade of the Latvian government's ratings or if the probability of government support decreases.

Key indicators

Exhibit 1

JS C Development Finance Institution Altum (Consolidated Financials) [1]

	06-25 ²	12-24 ²	12-23 ²	12-22 ²	12-21 ²	CAGR/Avg. ³
Total managed assets (EUR Thousands)	1,703,185.0	1,455,350.0	1,316,086.0	1,099,588.0	976,204.0	17.2 ⁴
Total managed assets (USD Thousands)	1,999,278.1	1,507,010.3	1,453,821.0	1,173,532.3	1,106,142.6	18.4 ⁴
Net Income / Average Managed Assets (%)	1.1	2.1	1.5	1.1	1.5	1.5 ⁵
Tangible Common Equity (Finance) / Tangible Managed Assets (%)	24.6	28.4	29.6	36.0	45.0	32.7 ⁵
Problem Loans / Gross Loans (Finance) (%)	7.9	7.8	8.2	9.3	7.1	8.1 ⁵
Net Charge-offs / Average Gross Loans and Leases (%)	0.2	0.3	1.2	0.3	0.3	0.5 ⁵
Debt Maturities Coverage (%)	1418.7	573.5	528.5	705.5	4538.1	1552.9 ⁵

[1] All figures and ratios are adjusted using Moody's standard adjustments. [2] 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.

Further to the publication of our revised methodology in November 2025, only ratios from annual 2024 onwards included in this report apply reported risk weights for all exposures, discontinuing our previously applied standard adjustment for certain government securities. Sources: Moody's Ratings and company filings

Profile

JS C Development Finance Institution Altum (Altum) has a strong mandate by law to promote the advancement of the Latvian economy through the development, approval, implementation and monitoring of aid programmes. These programmes, consisting of credit lines and guarantees, are funded through the state budget, EU structural funding and a listed bond programme. Although not a systemically important institution in terms of size, Altum is the main development institution in Latvia and is of considerable importance for the delivery of the government's economic policy. Altum's shareholders comprise the Ministry of Finance (40%), the Ministry of Economy (30%) and the Ministry of Agriculture (30%).

Altum's main areas of activity relate to providing loans and guarantees. It also offers nonfinancial support in the form of consultations, education and mentoring. Altum's activity is mainly restricted to programmes (financial instruments or grants) that are developed and then monitored at the ministry level.

Altum's activities are regulated by a special law, the Development Finance Institution Law, passed by the Latvian Parliament in October 2014 and in force since March 2015. Altum's mandate, which was originally issued for 7 years, was prolonged in November 2022 until 31 December 2029 by the European Commission (EC). Altum's creation was supported by the EC's decision "Latvia MLB development segment and creation of the Latvian Single Development Institution". The other laws applicable to the institution are the Law on Governance of Capital Shares of a Public Person and Capital Companies, the Commercial Law and other binding regulatory enactments. Altum was established in December 2013 following the merger of the following three enterprises:

- » Latvian Development Finance Institution Altum SJSC (previously the Mortgage and Land Bank of Latvia), specialised in credit activities
- » Latvian Guarantee Agency LLC (LGA), specialised in guarantees and investments in venture capital
- » Rural Development Fund SJSC (RDF), specialised in credit activities for farmers

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

Altum is not a deposit-taking institution and does not have a banking licence. While it is obliged to prepare annual audited accounts in accordance with IFRS, the entity is not required to comply with minimum capital requirements. As of the end of September 2025, Altum reported a total consolidated asset base of €1,722 million.

Detailed credit considerations

Moderate profitability, resulting from its mandate as a development institution

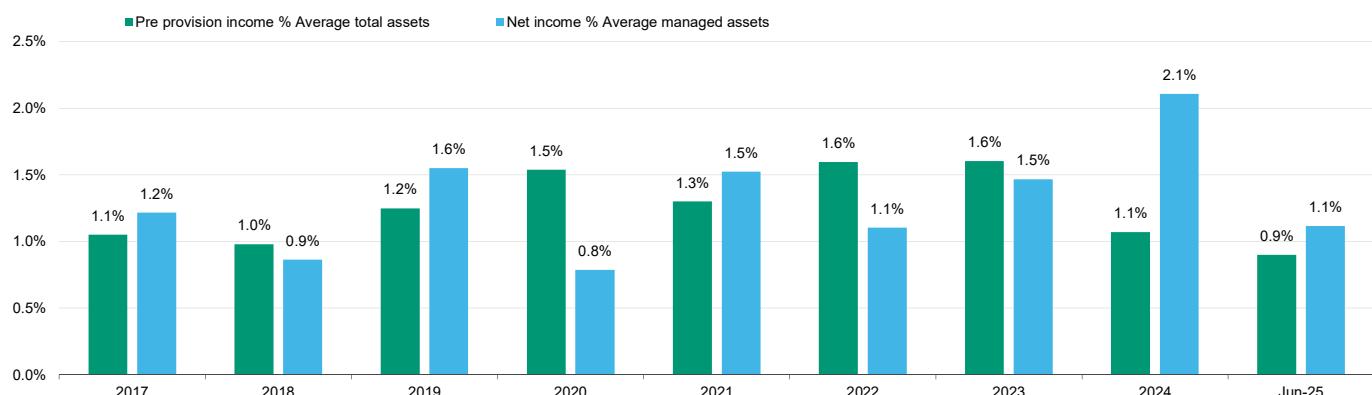
At end-June 2025, Altum's net income to average managed assets ratio stood at 1.12%. We assign a Profitability score of Baa3 to reflect our expectation of a decline in the company's recurring profitability levels on the back of lower net interest income and higher impairment levels.

Altum reported moderate core profitability levels throughout the past years, thereby meeting its obligation under the law to remain profitable over the long term and preserving the capital invested by the state (a positive return on equity is, therefore, incorporated into the business strategy). However, because of its public mandate and the lack of profit maximisation incentives, we expect the company's internal capital generation to remain constrained.

Altum's earnings declined in the first nine months of 2025, driven by reduced interest income from guarantees and loans due to a lower average interest rate, combined with higher interest expenses. Bottom-line profitability was further pressured by higher administrative expenses and fewer reversals on loans and guarantees compared to 9M 2024.

Exhibit 2

Moderate profitability levels



Source: Altum's financial statements and Moody's Ratings

Strong capitalisation, supported by substantial risk-coverage reserves

We assign a Capital score of A2, in line with the initial score, to reflect our expectation that Altum's capital levels will decline, although they will remain high. The assigned score also reflects the company's substantial risk-coverage reserves, that complement its already high capital levels.

Altum has large capital buffers to withstand the volatility in earnings and to support future growth. Its Moody's-adjusted tangible common equity-to-tangible managed assets ratio stood at 25% as of end-June 2025. Altum's profit is not paid out in dividends. Instead, the company accumulates reserves to ensure financial stability and sustainable operations, as well as to mitigate programme risks. We expect Altum's capital levels to decrease as the volume of portfolios with capital rebate increase, although capital will remain at very high levels.

In addition to the company's high capital levels, Altum's credit risk is largely mitigated by sizeable government- and EU-backed asset-risk protection. According to the Law on Development Finance Institutions, prior to the approval of the programmes by the Cabinet of Ministers, Altum estimates the associated expected loss. Under this credit risk cover scheme, the sponsor (the Latvian state or the EU) takes the first losses within the portfolios of loans, venture fund investments or guarantees, providing significant protection against asset risk (the percentage varies from one programme to another). For that purpose, the corresponding portion of public funding is assigned to the "portfolio loss reserve", which is part of specific reserve capital or alternatively accounted as provisions for risk coverage

as part of the liabilities. At end-September 2025, the company's risk coverage reserve amounted to €317 million and the portfolio loss reserve to €85 million.

Furthermore, there is also an additional back-up guarantee via State budget, that covers the losses associated to a guarantee portfolio up to a maximum of €260 million (covering a portfolio of €238 million as of end-September 2025).

Still-high asset risk indicators in line with the entity's business model

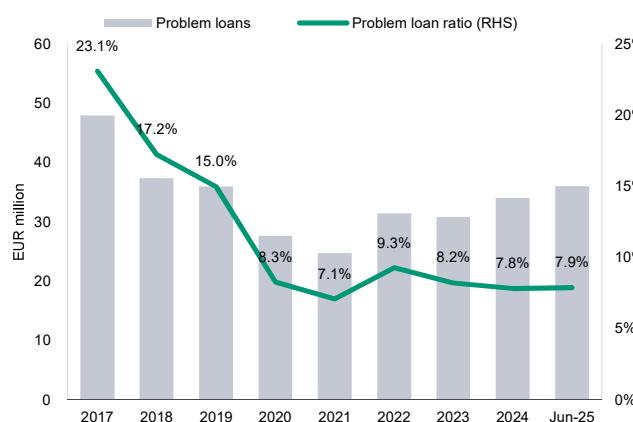
We assign a Weighted Average Asset Risk score of Ba2, two notches below the initial score.

Altum's problem loan ratio has been historically high, although it has declined progressively since its creation (30.6% as of December 2014). Because of the nature of its mandate and the risk cover, Altum has a larger risk appetite than a commercial bank, as it targets customers that would not usually have access to the Latvian banking industry due to limited financial history or limited financial resources. However, credit risk is largely mitigated by sizeable government- and EU-backed asset-risk protection (see above section).

Altum's nonperforming loans (NPLs)-to-gross loans ratio¹ remained broadly stable at a still high 7.9% as of June 2025 (7.8% at end-December 2024) (Exhibit 3). The loan loss reserves-to-problem loans ratio decreased to 50% at end-June 2025 from 56% at year-end 2024. However, this coverage jumps to 710% if we include the programmes' total credit risk coverage of loans and guarantees.

Exhibit 3

Problem loan ratio

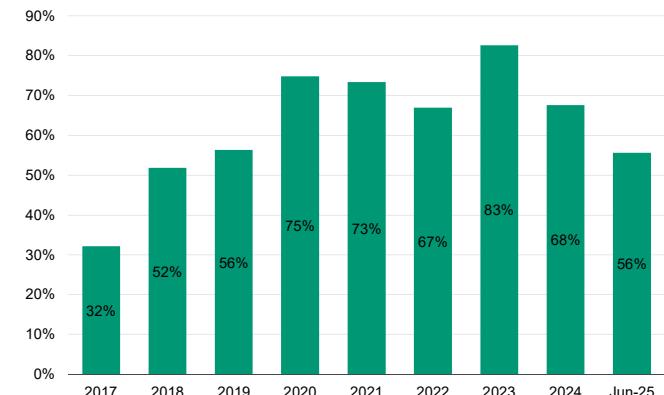


Source: Altum's financial reports and Moody's Ratings

Exhibit 4

Provisioning coverage

Loan loss reserves as a percentage of nonperforming loans



Sources: Altum's financial reports and Moody's Ratings

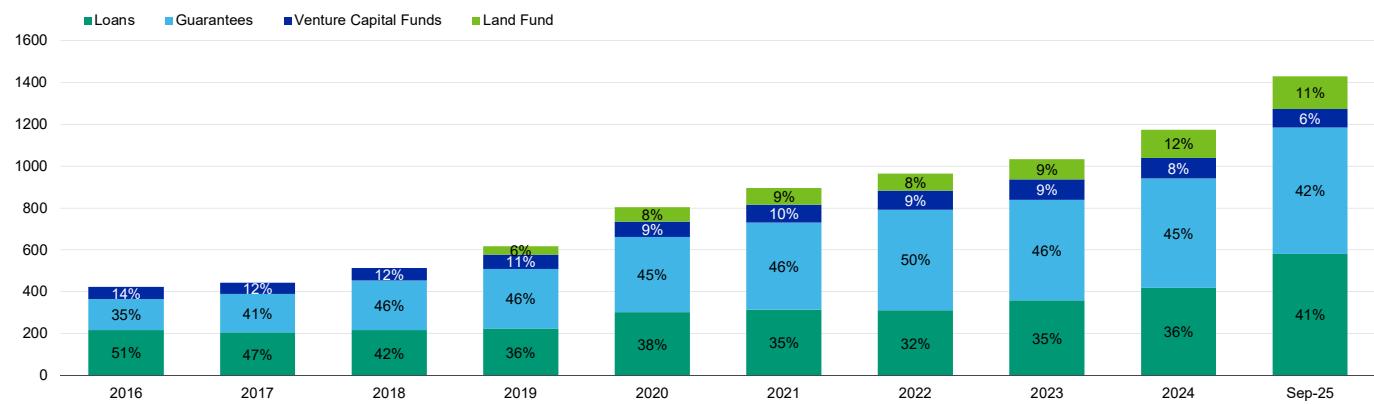
Altum's portfolio is diversified in terms of financial instruments (Exhibit 5), with a portfolio of financial instruments granted within the state aid programmes of €1,428 million as of September 2025 (December 2024: €1,175 million), made up of 42,046 projects (December 2024: 38,730) and consisting of the following:

- » a guarantee portfolio of €604 million (2024: €524 million),
- » a loan portfolio of €581 million (2024: €418 million),
- » investments in venture capital funds of €90 million (2024: €98 million), and
- » investments under the Latvian Land Fund of €154 million (2024: €135 million).

Since the start of the coronavirus pandemic and the subsequent military invasion of Russia in Ukraine, the loans and guarantees portfolio has consistently increased as Altum set up measures and facilities in place to counter the economic impact. The volume of guarantees grew by 45% between December 2021 and September 2025 and the volume of loans by 84%.

Exhibit 5

Financial instruments outstanding



Percentages show the share of total financial instruments outstanding. Because of the growing size of the Land Fund, this is reported as a separate segment since 2019.

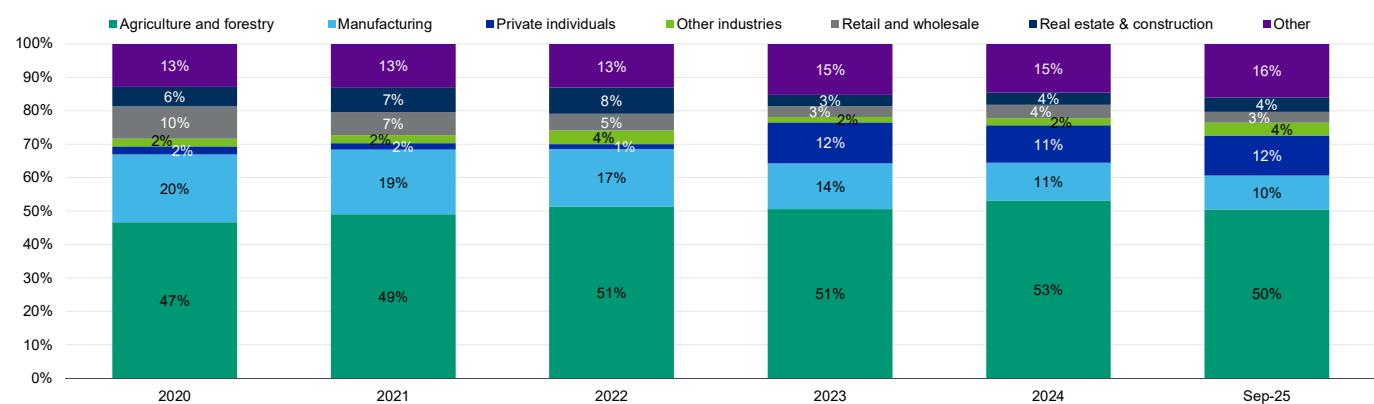
Source: Altum's financial reports

Altum expects a certain amount of loss on all its investments, depending on the programme structure and terms. The expected losses are estimated in advance and are covered by the credit risk cover, which is a percentage of a programme's funding.

- » Loans are given directly to companies and, to a lesser extent, to private individuals. The largest portion of loans are investment loans, aimed at helping smaller companies grow their businesses. Agriculture, including also the activities of the Land Fund, has traditionally been a large segment and constituted 50% of the loan portfolio as of September 2025. At the same time, loans extended to the manufacturing industry and private individuals accounted for 10% and 12%, respectively, of total loans (Exhibit 6).
- » Funds aimed at venture capital/equity investments are managed by external funds, with partnership agreements and consultation committees in place to ensure that the programmes are followed. Fund managers typically also invest their own money in these funds. The programmes aimed at equity investments typically have larger expected loss and associated risk-coverage reserves.
- » Guarantees are given to banks to stimulate lending to borrowers who have viable business strategies but might lack enough own funds or collateral. Such products are extended as part of the state support package to the Latvian economy.

Exhibit 6

Loan book breakdown by industry



Percentages show the share of gross loans for each period.

Source: Altum's financial reports and Moody's Ratings

Strong liquidity but limited independent funding franchise

The Weighted Average Cash Flow and Liquidity score of Ba1, four notches below the initial score, reflects the fact that most programmes that are used to fund the institution have limited refinancing risks for Altum. This is balanced against its low funds from operations, which are used to repay market funding, and the limited independent funding franchise, constraining the Liquidity score.

Altum is funded by borrowings from the Latvian state, European institutions and bond issuances. As of September 2025, 66% of Altum's liabilities came from support programme funding and state programmes. The remaining liabilities include bond issuances (at 7% of total liabilities), funding from general governments (at 19%) and from other credit institutions (at 3%). Altum has a comfortable maturity profile, with 93% of liabilities having a maturity of more than one year as of September 2025.

Altum has adequate liquid resources, consisting mainly of demand deposits in other credit institutions and the Latvian Treasury (€884 million), as well as Latvian government bonds (around €97 million) at end-September 2025.

Operating environment

A key component of our analysis is the extent to which external conditions can have a significant influence on Altum's credit profile. The Operating Environment score for Altum (Baa2) takes into account two factors: a Macro-Level Indicator (A3) and an Industry Risk score (Baa). The score for the Operating Environment is combined with the Financial Profile score to determine the Adjusted Financial Profile score.

As the Macro-Level Indicator is higher than the Industry Risk indicator, it receives 0% weight in calculating the Operating Environment score, which instead fully reflects the Industry Risk.

Macro-level indicator

The Macro-Level Indicator of A3 for Latvia reflects the intrinsic strength of its economy, the capacity of the government to implement sound economic policies, as well as political risk, government liquidity risk, financial sector risk and external vulnerability risk.

The Economic Strength score of baa2 reflects the country's solid trend growth and income levels that are high in a global comparison, but lower than many regional peers. Latvia's small and open economy is vulnerable to external shocks, but this is balanced by the economy's demonstrated flexibility and adaptability.

The a2 Institutions and Governance Strength score reflects the country's demonstrated capacity to tackle major policy challenges, as exemplified by the very significant macroeconomic adjustment during the twin pandemic and energy crisis shocks.

Susceptibility to Event Risk is assessed at ba, based on our assessment of political risk, in particular geopolitical risks related to Latvia's tense relations with Russia.

Industry risk score

In assessing Industry Risk, we take into account the competitive position, exposure to cyclical economic forces and the track record of the product offering of a finance company's business line(s).

The Industry Risk score for Altum is Baa, which reflects its stable position in the industry as a development institution, with limited exposure to competition from commercial banks and a specific government mandate regulated by law, and, within that scope, its ability to channel EU and state funding into the real economy. Therefore, economic cycles are less important for Altum than for other private finance companies. The company's missions depend not only on the Latvian state but also on future allocations of EU structural funds to Latvia.

Support and structural considerations

The issuer ratings of Altum incorporate both the standalone assessment of baa3 and support considerations. The very high dependence on and the very high probability of support from the government lead to a two-notch uplift to a Baa1 rating. However, without explicit government guarantees to Altum, or to its creditors, the government support does not lead to a rating at par with the A3 sovereign rating.

Very high probability of government support

The Latvian government has a track record of providing support to strategic companies, including the electricity, postal services, airlines, railways and telecom sectors, as well as development institutions. The Latvian government has previously supported its development institutions by means of recapitalisation, liquidity support and guarantees. Because of the importance of Altum for planning and implementing growth strategies in the national economy, we assess that the probability of government support is very high.

Altum has very high dependence on the Latvian state

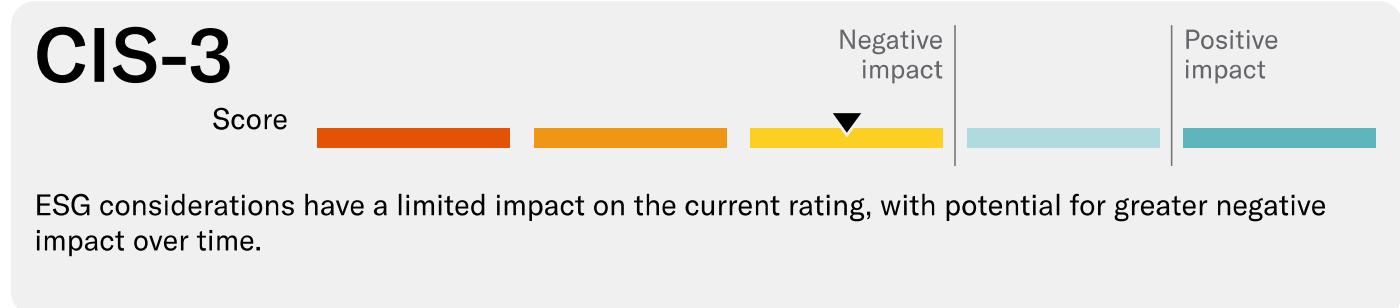
The very high default dependence reflects the strong probability that, in the event of a sovereign credit default, the risk of a potential financial crisis affecting Altum would be quite high, given the clear operational links with the government, whereby Altum has an explicit and well-recognised mandate to implement specific government policies; the geographical focus of Altum's activities in Latvia; and its high dependence on state funding.

ESG considerations

JSC Development Finance Institution Altum's ESG credit impact score is CIS-3

Exhibit 7

ESG credit impact score

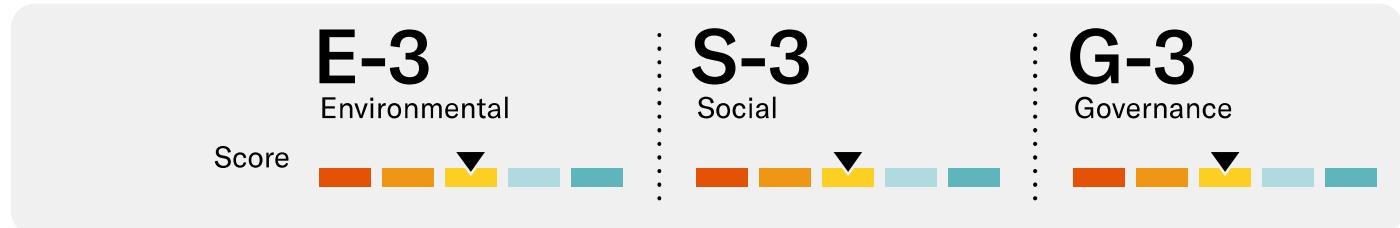


Source: Moody's Ratings

Altum's **CIS-3** indicates that ESG considerations have a limited impact on the current rating, with potential for greater negative impact over time, stemming from moderate governance risks as a result of high asset risks and despite the mitigating impact of sizeable capital buffers and our current government support assumptions.

Exhibit 8

ESG issuer profile scores



Source: Moody's Ratings

Environmental

Altum faces moderate environmental risks primarily because of its portfolio exposure to carbon transition risk. Altum is exposed to mounting business risks and stakeholder pressure to meet more demanding carbon transition targets. Altum is actively engaged in further developing its climate risk management and reporting frameworks, and optimizing its loan portfolio toward less carbon-intensive assets.

Social

Altum faces moderate social risks, partly reflecting its developmental and policy mandate, which entails regulated and mandated lending, and is linked to the company's public ownership. Altum's role as the main development institution in Latvia makes it susceptible to politically and socially motivated decisions that could affect its financial profile.

Governance

Altum's governance risks are moderate, reflecting its public ownership and the government's influence over its business and financial strategy. The company operates under a public policy mandate which entails comparatively high asset risk - albeit mitigated by the credit risk cover scheme and high capitalization.

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.

Rating methodology and scorecard factors

Exhibit 9

JSC Development Finance Institution Altum

JSC Development Finance Institution Altum		Factor Weights	Historic Ratio	Initial Score	Assigned Score	Key driver #1	Key driver #2
Financial Profile							
Profitability							
Net Income / Average Managed Assets (%)	10%	1.56%	Baa2	Baa3	Expected trend		
Capital Adequacy and Leverage							
Tangible Common Equity / Tangible Managed Assets (%)	25%	24.61%	A2	A2	Expected trend		
Asset Quality							
Problem Loans / Gross Loans (%)	10%	8.44%	Caa2	Caa1	Portfolio composition		
Net Charge-Offs / Average Gross Loans (%)	10%	0.59%	Aa1	A3	Portfolio composition		
Weighted Average Asset Risk Score			Baa3	Ba2			
Cash Flow and Liquidity							
Debt Maturities Coverage (%)	10%	573.53%	Aaa	Baa3	Other adjustments		
FFO / Total Debt (%)	15%	2.49%	Caa2	Ba1	Other adjustments		
Secured Debt / Gross Tangible Assets (%)	20%	0.00%	Aaa	Ba1	Other adjustments		
Weighted Average Cash Flow and Liquidity Score			A3	Ba1			
Financial Profile Score	100%			A3	Baa3		
Operating Environment							
Home Country	Factor Weights	Sub-factor Score	Score				
Macro Level Indicator	0%		A3				
Economic Strength	25%	baa2					
Institutions and Governance Strength	50%	a2					
Susceptibility to Event Risk	25%	ba					
Industry Risk	100%		Baa				
Home Country Operating Environment Score			Baa2				
Operating Environment Score	Factor Weights		Score		Comment		
	0%		Baa2				
ADJUSTED FINANCIAL PROFILE			Score				
Adjusted Financial Profile Score			Baa3				
Financial Profile Weight	100%						
Operating Environment Weight	0%						
Business Profile and Financial Policy			Adjustment		Comment		
Business Diversification, Concentration and Franchise Positioning			0				
Opacity and Complexity			0				
Corporate Behavior / Risk Management			0				

Liquidity Management	0
Total Business Profile and Financial Policy Adjustments	Baa3
Sovereign or parent constraint	A3
Standalone Assessment Scorecard-indicated Range	baa2 - ba1
Assigned Standalone Assessment	baa3

Source: Moody's Ratings

Methodology and scorecard

The principal methodologies we use in rating Altum are our [Finance Companies](#) rating methodology, published in July 2024.

Exhibit 10

JSC Development Finance Institution Altum

Instrument Class	Assigned Standalone Assessment	Affiliate Notching	Support Notching	Government Support Notching	Individual Debt Class Notching	Assigned Rating
Issuer Rating	baa3	0	2			Baa1

Source: Moody's Ratings

Ratings

Exhibit 11

Category	Moody's Rating
JSC DEVELOPMENT FINANCE INSTITUTION ALTUM	
Outlook	Stable
Issuer Rating -Dom Curr	Baa1
ST Issuer Rating -Dom Curr	P-2

Source: Moody's Ratings

Endnotes

¹ NPLs for 2018 onwards consist of Stage 3 loans as per the IFRS9 reporting standards, while for previous periods, NPLs consist of the reported impaired loans and past due but not impaired loans.

© 2026 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 LEGAL, COMPLIANCE, INVESTMENT, FINANCIAL OR OTHER PROFESSIONAL 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 or assessment 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 or assessment 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 or assessment 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 Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and all MCO entities that issue ratings under the "Moody's Ratings" brand name ("Moody's Ratings"), also maintain policies and procedures to address the independence of Moody's Ratings' 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 ir.moody's.com under the heading "Investor Relations — Corporate Governance — Charter and Governance 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., Moody's Local PA Clasificadora de Riesgo S.A., Moody's Local CR Clasificadora de Riesgo S.A., Moody's Local ES S.A. de CV Clasificadora de Riesgo, Moody's Local RD Sociedad Clasificadora de Riesgo S.R.L. and Moody's Local GT 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 and Net Zero Assessments (as defined in Moody's Ratings Rating Symbols and Definitions): Please note that neither a Second Party Opinion ("SPO") nor a Net Zero Assessment ("NZA") is a "credit rating". The issuance of SPOs and NZAs is not a regulated activity in many jurisdictions, including Singapore.

EU: In the European Union, each of Moody's Deutschland GmbH and Moody's France SAS provide services as an external reviewer in accordance with the applicable requirements

of the EU Green Bond Regulation. JAPAN: In Japan, development and provision of SPOs and NZAs 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.

REPORT NUMBER

1470210

CLIENT SERVICES

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