

#### CREDIT OPINION

23 April 2024

# Update



#### RATINGS

#### Credit Europe Bank N.V.

Domicile	Amsterdam, Netherlands
Long Term CRR	Ba1
Туре	LT Counterparty Risk Rating - Fgn Curr
Outlook	Not Assigned
Long Term Debt	Not Assigned
Long Term Deposit	Ba3
Туре	LT Bank Deposits - Fgn Curr
Outlook	Stable

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

#### Contacts

Guillaume Lucien- +33.1.5330.3350 Baugas

VP-Senior Analyst

guillaume.lucien-baugas@moodys.com

Giorgio Violetta
Ratings Associate

+33.1.5330.3410

giorgio.violetta@moodys.com

Olivier Panis +33.1.5330.5987 Senior Vice President

olivier.panis@moodys.com

Alain Laurin +33.1.5330.1059
Associate Managing Director
alain.laurin@moodys.com

# Credit Europe Bank N.V.

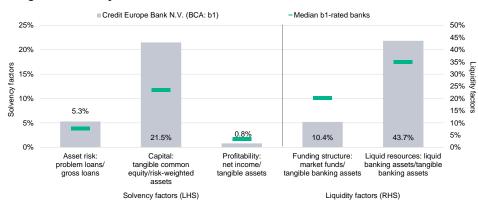
Update following rating action

### **Summary**

<u>Credit Europe Bank N.V.</u>'s (CEB NV) deposit rating of Ba3 reflects (1) the bank's BCA of b1, (2) the application of Moody's Advanced Loss Given Failure (LGF) analysis, resulting in a low loss given failure and a one-notch uplift for the deposit ratings and (3) a low probability of government support, resulting in no uplift.

The b1 BCA reflects (1) the bank's high asset risks including sector, borrower and geographic concentrations, (2) intrinsically volatile profitability, (3) a moderate capitalisation in relation to the risk profile and (4) a lack of funding diversification mitigated by large liquidity buffers. We also negatively adjust CEB NV's financial profile by one notch to reflect its limited business diversification.

Exhibit 1
Rating Scorecard - Key financial ratios



Source: Moody's Financial Metrics

# **Credit strengths**

- » Large liquidity portfolio
- » A moderate capitalisation in relation to the bank's risk profile

# **Credit challenges**

- » High concentrations in cyclical sectors and vulnerable countries
- » High single-name exposures
- » Volatile profitability in view of the bank's lending activities

» Lack of diversification in funding sources

#### **Outlook**

CEB NV's long-term deposit ratings carry a stable outlook. This reflects our view that the bank's increased profitability due to the more favourable interest rate environment should protect its creditworthiness against asset quality deterioration over the next 12-18 months.

# Factors that could lead to an upgrade

- » CEB NV's BCA and long-term ratings could be upgraded if the bank's asset risk profile, capitalisation and profitability improve over time.
- » The long-term ratings could also be upgraded if the buffer of subordinated instruments were to significantly increase.

# Factors that could lead to a downgrade

- » CEB NV's BCA and long-term ratings could be downgraded if a deteriorated macro environment were to result in a further increase in asset risk and capital depletion, or if the bank increased its loan concentrations.
- » The long-term ratings could also be downgraded if the buffer of subordinated instruments were to shrink.

## **Key indicators**

Exhibit 2
Credit Europe Bank N.V. (Consolidated Financials) [1]

	12-23 <sup>2</sup>	12-22 <sup>2</sup>	12-21 <sup>2</sup>	12-20 <sup>2</sup>	12-19 <sup>2</sup>	CAGR/Avg. <sup>3</sup>
Total Assets (EUR Million)	5,518.8	4,788.9	5,066.9	4,649.1	4,802.5	3.5 <sup>4</sup>
Total Assets (USD Million)	6,096.3	5,110.9	5,741.3	5,688.4	5,390.8	3.1 <sup>4</sup>
Tangible Common Equity (EUR Million)	755.4	727.2	735.1	700.1	700.3	1.9 <sup>4</sup>
Tangible Common Equity (USD Million)	834.5	776.1	832.9	856.6	786.0	1.5 <sup>4</sup>
Problem Loans / Gross Loans (%)	2.5	6.4	7.0	9.0	9.2	6.8 <sup>5</sup>
Tangible Common Equity / Risk Weighted Assets (%)	21.5	21.1	19.5	18.6	18.0	19.7 <sup>6</sup>
Problem Loans / (Tangible Common Equity + Loan Loss Reserve) (%)	8.6	20.2	24.7	30.4	33.7	23.5 <sup>5</sup>
Net Interest Margin (%)	4.3	2.7	1.9	2.2	2.6	2.7 <sup>5</sup>
PPI / Average RWA (%)	2.8	1.5	0.8	1.0	1.2	1.4 <sup>6</sup>
Net Income / Tangible Assets (%)	1.1	0.8	0.4	0.1	0.5	0.65
Cost / Income Ratio (%)	61.7	73.0	83.0	77.6	74.7	74.0 <sup>5</sup>
Market Funds / Tangible Banking Assets (%)	10.4	10.6	16.8	14.4	11.1	12.6 <sup>5</sup>
Liquid Banking Assets / Tangible Banking Assets (%)	43.7	39.4	37.9	36.1	34.7	38.3 <sup>5</sup>
Gross Loans / Due to Customers (%)	68.5	74.6	84.5	84.6	82.6	78.9 <sup>5</sup>

[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**

Credit Europe Bank N.V. (CEB NV) is a Netherlands-based, internationally oriented bank that provides international trade and commodity finance, working capital loans to corporate clients and project finance in Western European countries, Romania, Turkiye (largely discontinued) and other emerging countries.

Moreover, the bank provides retail banking services including internet deposits in the Netherlands and Germany. It also provides credit card services, mortgages and deposits through a network of 18 branches and 8,000 sales points in Romania. The Bank was active in corporate and commercial banking in Ukraine prior to the military conflict. As of year-end 2023, the bank's loan book was composed of

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.

retail loans in Romania (11%) and structured trade, commodity finance, and international corporate loans (82%), as well as loans to the public sector (7%).

CEB NV's shares are fully owned by the holding company Credit Europe Group N.V. The ultimate parent company of the bank is the holding company FIBA Holding A.S. (FIBA) in Turkiye.

#### **Detailed credit considerations**

#### High risk concentrations in vulnerable sectors, mostly incurred through short-term trade finance

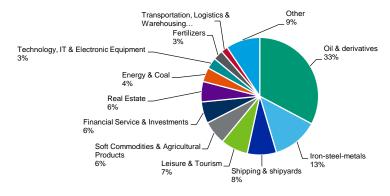
We view CEB NV's asset quality as low. Although domiciled in the Netherlands, CEB NV has material exposures to customers in countries we consider more vulnerable than the Dutch economy, including Romania (17% of gross outstanding loans), Turkiye (13%) and non-investment grade countries (7%) at year-end 2023. Because we believe that the concentrations on these countries and the volatile country risks associated with short-term commodity trades are not adequately captured by an exposure-based weighted average macro profile of "Moderate +", the macro profile for the bank is adjusted down by one notch to "Moderate". Nonetheless, the macro profile improved to "Moderate" from "Moderate -", reflecting reduced exposures to riskier countries.

Large corporate concentrations, defined by the 20 largest corporate exposures as a percentage of total corporate exposures, diminished by about a quarter since 2019. However, despite a reduction in problem loans, a decreasing concentration of large corporate exposures and a partial rebalancing of the loan portfolio from Turkiye, Russia and Ukraine to more creditworthy geographies, the bank still has material exposures to non-investment grade geographies and economic sectors which are particularly volatile and sensitive to economic downturns.

Single-name concentrations are also high, the top 20 exposures accounting for above 160% of Common Equity Tier 1 (CET1) capital, along with significant exposures to some very cyclical sectors. At year-end 2023, the bank's exposure to the oil and gas sectors, accounting for 33% of its corporate loans, represented a pocket of vulnerability, although the risks involved are somewhat mitigated by their limited sensitivity to oil price variations and their short-term and collateralised nature.

Exhibit 3

Breakdown of corporate loans by industrial sector as of year-end 2023



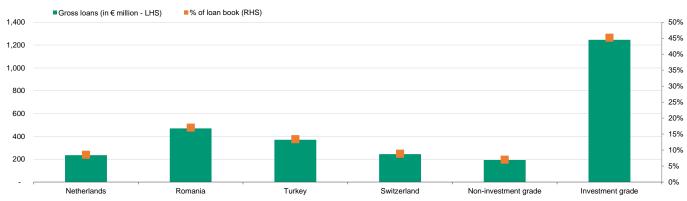
Including on- and off-balance sheet activities Source: Company data and Moody's Ratings

As of year-end 2023, CEB NV's credit risk exposure to Russia and Ukraine represented less than 1% and 5% of the bank's CET1 capital, respectively. Although the exposure to Ukraine was only reduced by 2% in 2023, the exposure to Russia substantially decreased to only €5 million from €35 million in 2022. The bank stated that it will not enter in any new transactions in these two countries.

The problem loan ratio improved to 2.5% of total customer loans as of year-end 2023 from 6.3% at year-end 2022, while Stage 2 loans decreased to 7% at year-end 2023 from 10% at year-end 2022. The decreasing level of problem loans is a reflection of the ongoing de-risking process in place at the bank. Asset risks are still intrinsically high, as the business model entails high concentrations in sectors and geographical areas which we consider vulnerable. Nonetheless, they have been decreasing in recent years, as illustrated

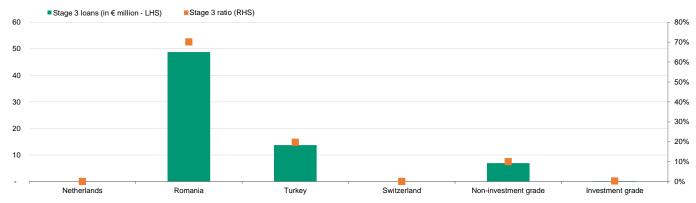
by a cost of risk averaging 21 basis points (bps) of gross loans over the last five years compared to an average of 113 bps over the last ten years. The cost of risk was negative 14 bps in 2023 and was 13 bps in 2022.

Exhibit 4 Loan book by geographical area



Source: Company data

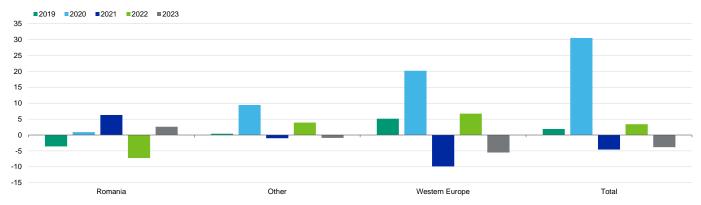
Exhibit 5
Nonperforming loans (NPLs) and NPL ratios by geographical area



Source: Company data

Despite the overall improved credit metrics in 2023, we believe that because of the aforementioned concentrations, asset risk at CEB NV is higher than that reflected by its current problem loan ratio.

Exhibit 6
Loan loss provisions by geographical area in € million



Source: Company data and Moody's Ratings

The assigned Asset Risk score of b3, four notches below the Macro-Adjusted score of ba2, reflects these considerations.

#### Moderate capital base relative to risk profile

We view CEB NV's capitalisation as moderate in relation to the bank's risk profile. The bank's CET1 ratio was 16.5% and its total capital ratio was 19.9% as of year-end 2023. The bank's Tier 1 leverage ratio was 10.9% as of the same date.

There is a good track record of ongoing parental support through conversion of hybrid securities and capital injection, which suggests a high likelihood that FIBA would step in to support CEB NV in case of need. However, after a long period of full profit retention, the bank resumed dividend distribution in 2022 with a pay-out ratio of 100% for 2021 and 53% for 2022. The dividends for 2023 are set at €34 million (55% pay-out ratio), of which €28 million were already paid as interim dividends.

Despite the high capital metrics, our assigned Capital score of baa3 is three notches below the Macro-Adjusted Capital score of a3. This reflects our view that, because of the high concentrations on sectors and borrowers that we consider vulnerable during economic slowdowns, capital could be eroded in the event of a prolonged economic downturn.

#### Moderate and volatile profitability

CEB NV's profitability has historically been low and volatile, despite its activities in trade and commodity finance as well as consumer credit activities typically yielding high returns. However, the bank's profitability has recently improved. Net income increased by 59% to €62.6 million in 2023 from €39.4 million in 2022, representing a return on total assets of 1.1% versus 0.8% in 2022 and an average of 0.6% over the last five years. This improvement mainly stems from higher net interest margins because the bank benefited from (i) the swift repricing of its short-term lending activities, (ii) the revenues from a large amount of excess liquidity deposited at the European Central Bank and (iii) a more moderate increase in cost of funding.

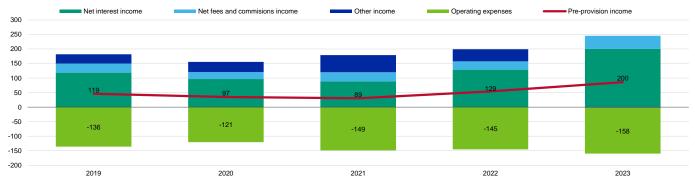
The net banking income increased by 22% to €244 million in 2023, primarily driven by a 56% rise in the net interest income to €200 million. The very short-term nature of the loan book (56% of net loan book was maturing within 3 months as of December 2023) enables the bank to rapidly benefit from rising interest rates. We expect the bank's revenue will slightly be under pressure from deposit repricing in 2024, but the bank's attempt to increase lending could compensate this effect. Overall, we expect the bank to continue to benefit from this more favourable interest rate environment in the next quarters, albeit net interest margins should start softening slightly.

The bank historically had a low cost efficiency and a cost-to-income ratio averaging 75% over the past five years (65% in 2023, down from 73% in 2022, under our calculations). Operating expenses increased in 2023 at €158 million (+8% versus 2022), driven by a 11% increase in personnel expense. The result of operating repossessed assets¹ has had a significant negative impact on CEB NV's profitability over the past few years. In 2019, for instance, these assets generated a loss of €26 million, reducing the bank's profit before tax to €14 million. In 2023, these assets generated only losses of €4.4 million, resulting from the gradual disposal of repossessed assets.

Exhibit 7

Net interest income is the main factor behind rising pre-provision income

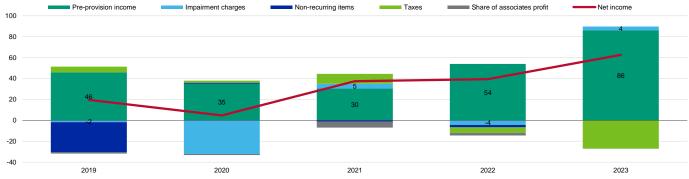
Breakdown of pre-provision income in € million



Sources: Company data and Moody's Ratings

Exhibit 8

Breakdown of net income in € million



Source: Company data and Moody's Ratings

The bank's profitability is moderate relative to its risk profile and intrinsically volatile. This is reflected in the assigned Profitability score of b1, three notches below the Macro-Adjusted Profitability score of ba1.

#### Lack of funding diversification partly mitigated by a large liquidity portfolio

As of year-end 2023, 82% of the bank's financial liabilities consisted of customer deposits, 10% of interbank borrowings and 3% of subordinated loans. Excluding deposits raised in Romania (around 9% of total deposits as of year-end 2023) that are mainly used to finance the local business, the vast majority of the bank's deposits consists of internet deposits collected in the Netherlands and Germany by the Dutch entity (around 90% of total deposits are collected in the Eurozone excluding Romania as of year-end 2023). Most of these products are covered by the Dutch Deposit Guarantee Scheme, which limits their sensitivity to reputational risks to a certain degree. In addition, these deposits have very low average balances and we note that they have been historically sticky.

Nonetheless, we consider the lack of funding diversification a weakness. The bank's overreliance on internet deposits reflects its limited ability to access other sources of funding, including market funding. Additionally, we consider internet deposits where customers have no other relationship with the bank inherently less stable than primary client deposits. These deposits are also price sensitive in a context of high interest rates.

The bank's liquidity portfolio, representing 43% of total assets (or 49% of liabilities excluding equity) as of year-end 2023, comfortably mitigates the risk of deposit outflows. 67% of the liquidity portfolio consisted of cash and deposits at central banks, while investment securities and interbank lending represented 20% and 13% of the portfolio, respectively, as of year-end 2023.

CEB NV's Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) were 578% and 192%, respectively, as of year-end 2023. Cross-border intragroup funding of foreign subsidiaries is reduced to a strict minimum. Their funding autonomy has increased through both a rise in customer deposits and the increased use of interbank funding, both locally.

The Combined Liquidity score of ba2 reflects the bank's reliance on online retail deposits and its limited access to alternative resources, which is mitigated by a high level of liquid assets.

#### **ESG** considerations

Credit Europe Bank N.V.'s ESG credit impact score is CIS-3

Exhibit 9

ESG credit impact score



Source: Moody's Ratings

CEB's **CIS-3** indicates that ESG considerations have a moderate impact on the current rating. This reflects moderate governance risks stemming from its relatively high-risk appetite and concentrated ownership. Environmental and social factors have a limited impact on the ratings to date.

Exhibit 10
ESG issuer profile scores



Source: Moody's Ratings

#### **Environmental**

CEB faces moderate environmental risks mainly because of its portfolio exposure to carbon transition risk as a corporate bank. Like its peers, the bank is exposed to mounting business risks and stakeholders' pressure to meet more demanding carbon transition targets. As a result, CEB is engaging in developing its climate risk framework and updating its sectoral policies and risk appetite regarding carbon-related businesses.

#### Social

CEB faces high industrywide social risks related to regulatory and litigation risks, requiring high compliance standards. Customer relation risks arise inherently from the bank's retail activities in certain geographies, while the risk exposure in other countries is lower given the bank's focus in corporate clients. Exposure to cyber and data risks are also high, although mitigated by a solid IT framework.

#### Governance

CEB faces moderate governance risks, reflecting a track record of relatively high risk appetite shown in some high single name asset concentrations and exposures to highly cyclical sectors. Concentrated ownership, with Fiba Holding AS, a large family-owned Turkish holding company owning the majority of the voting shares, poses additional governance risks, although partly mitigated by the presence of four independent directors out of five as well as Netherlands' developed institutional framework. CEB has a relatively simple legal structure and has not been subject to any significant compliance or reporting issues in recent years.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click <a href="here">here</a> 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

CEB NV is subject to the EU Bank Recovery and Resolution Directive, which we consider an operational resolution regime. We assume a residual tangible common equity of 3% and post-failure losses of 8% of tangible banking assets, a 25% run-off in junior wholesale deposits, a 5% run-off in preferred deposits and assign a 25% probability to deposits being preferred over senior unsecured debt. In addition, we assume a 10% share of wholesale deposits relative to total deposits, which is our central assumption for banks relying mostly on retail deposits.

Following our banks methodology, we also exclude from the resolution perimeter the subsidiaries in Romania and Switzerland.

Our LGF analysis indicates a low loss given failure for CEB NV's junior deposits because of the loss absorption provided by the amount of subordination in the form of AT1 and Tier 2 subordinated debt. This results in a one-notch uplift from the Adjusted BCA.

For the subordinated debt, our LGF analysis indicates a moderate loss given failure, which result in no rating uplift from the bank's Adjusted BCA.

#### **Government support**

Because of its modest size or presence in the Netherlands, we expect a low probability of support from the Government of the Netherlands for CEB NV's deposits, resulting in no uplift for the deposit rating.

#### Counterparty Risk Ratings (CRRs)

#### CEB NV's CRRs are positioned at Ba1/NP

CEB NV's CRRs, before government support, are three notches higher than the Adjusted BCA of b1, based on the level of subordination to CRR liabilities in the bank's balance sheet and assuming a nominal volume of such liabilities.

#### Counterparty Risk (CR) Assessment

#### CEB NV's CR Assessment is positioned at Ba1(cr)/Not Prime(cr)

The CR Assessment, before government support, is positioned three notches above the Adjusted BCA of b1, based on the buffer against default provided to the senior obligations represented by the CR Assessment by subordinated instruments. The main difference in 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.

# Rating methodology and scorecard factors

Exhibit 11

Credit Europe Bank N.V.

Macro Factors				,		
Weighted Macro Profile Modera	te 100%					
Factor	Historic Ratio	Initial Score	Expected Trend	Assigned Score	Key driver #1	Key driver #2
Solvency						
Asset Risk						
Problem Loans / Gross Loans	5.3%	ba2	$\leftrightarrow$	b3	Sector concentration	Geographical concentration
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel III - transitional phase-in)	21.5%	a2	$\leftrightarrow$	baa3	Stress capital resilience	Expected trend
Profitability						
Net Income / Tangible Assets	0.8%	ba1	$\leftrightarrow$	b1	Earnings quality	
Combined Solvency Score		baa2		ba3		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	10.4%	baa2	$\leftrightarrow$	b2	Deposit quality	Market funding quality
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	43.7%	baa1	$\leftrightarrow$	baa2	Expected trend	
Combined Liquidity Score		baa2		ba2		
Financial Profile				ba3		
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				ba3 - b2		
Assigned BCA				b1		
Affiliate Support notching				0		
Adjusted BCA				b1		

Balance Sheet	in-scope	% in-scope	at-failure	% at-failure
	(EUR Million)		(EUR Million)	
Other liabilities	610	14.6%	839	20.1%
Deposits	3,276	78.4%	3,047	72.9%
Preferred deposits	2,948	70.5%	2,801	67.0%
Junior deposits	328	7.8%	246	5.9%
Dated subordinated bank debt	123	2.9%	123	2.9%
Preference shares (bank)	45	1.1%	45	1.1%
Equity	125	3.0%	125	3.0%
Total Tangible Banking Assets	4,180	100.0%	4,180	100.0%

Debt Class	De Jure v	waterfall	ll De Facto waterfall		Notching		LGF	Assigned	Additional Preliminary		
	Instrument volume + subordinatio	ordinatio	Instrument on volume + o subordinatio	ordination	De Jure De Facto Notchi			LGF Notch notching		ing Rating Assessment	
Counterparty Risk Rating	12.9%	12.9%	12.9%	12.9%	3	3	3	3	0	ba1	
Counterparty Risk Assessment	12.9%	12.9%	12.9%	12.9%	3	3	3	3	0	ba1 (cr)	
Deposits	12.9%	7.0%	12.9%	7.0%	1	1	1	1	0	ba3	
Dated subordinated bank debt	7.0%	4.1%	7.0%	4.1%	0	0	0	0	0	b1	

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	ba1	0	Ba1	Ba1
Counterparty Risk Assessment	3	0	ba1 (cr)	0	Ba1(cr)	
Deposits	1	0	ba3	0	Ba3	Ba3
Dated subordinated bank debt	0	0	b1	0		B1

<sup>[1]</sup> 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 12

Category	Moody's Rating
CREDIT EUROPE BANK N.V.	
Outlook	Stable
Counterparty Risk Rating	Ba1/NP
Bank Deposits	Ba3/NP
Baseline Credit Assessment	b1
Adjusted Baseline Credit Assessment	b1
Counterparty Risk Assessment	Ba1(cr)/NP(cr)
Subordinate	B1
Source: Moody's Ratings	

## **Endnotes**

1 CEB NV owned a sizable portfolio amounting to €60 million of repossessed assets from defaulted borrowers as of year-end 2023 (€80 million in 2022).

© 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 MODE!

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 such information, 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 <a href="https://www.moodys.com">www.moodys.com</a> 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.

REPORT NUMBER

1402265

