

## DNB Boligkreditt AS - Mortgage Covered Bonds

### Covered Bonds / Norway

#### Contacts

Paul Millon - +44 (207) 772-1379 - Paul.Millon@moody's.com  
 Shruti Jindal - +91 (806) 885-8038 - Shruti.Jindal@moody's.com



#### Monitoring Client Service Desk

Monitor.CB@moody's.com  
 London: +44 20 7772-5454, csdlondon@moody's.com

Click on the icon to download data into Excel & to see Glossary of terms used  
 Click [here](#) to access the covered bond programme webpage on moody's.com

#### Reporting as of:

30/09/2025

All amounts in NOK (unless otherwise specified)

For information on how to read this report, see the latest  
 Moody's Covered Bonds Sector Update

#### Data as provided to Moody's Investors Service (note 1)

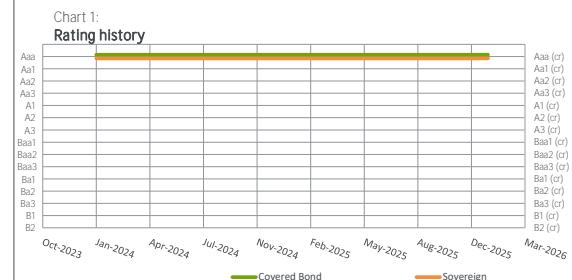
### I. Programme Overview

#### Overview

Total outstanding liabilities:	NOK	501,191,735.000
Total assets in the Cover Pool:	NOK	735,376,844.821
Issuer name / CR Assessment:		DNB Boligkreditt / Unpublished
Group or parent name / CR Assessment:		DNB Bank ASA / Aa1(cr)

#### Ratings

Covered bonds rating:	Aaa
Entity used in Moody's EL & TPI analysis:	DNB Boligkreditt AS
CB anchor:	CR Assessment + 1 notch
CR Assessment:	Unpublished
Adjusted BCA / SUR:	n/a / n/a
Unsecured claim used for Moody's EL analysis:	Yes



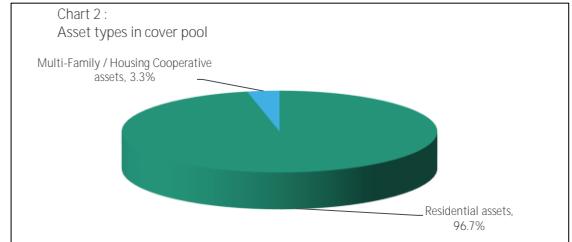
### II. Value of the Cover Pool

#### Collateral quality

Collateral Score:	4.0%
Collateral Score excl. systemic risk:	3.6%

#### Cover Pool losses

Collateral Risk (Collateral Score post-haircut):	2.7%	25%
Market Risk:	8.2%	75%
	10.9%	100%



### III. Over-Collateralisation Levels

#### (notes 2 & 3)

Over-Collateralisation (OC) figures presented below can include Eligible and Non-Eligible collateral.  
 Over-Collateralisation levels are provided on nominal basis

#### Current situation

Committed OC (Nominal):	5.0%
Current OC:	46.7%
OC consistent with current rating (note 4)	0.0%

#### Sensitivity scenario CB anchor

OC consistent with current rating
Scenario 1: CB anchor is lowered by 1 notch n/a

### IV. Timely Payment Indicator & TPI Leeway

Timely Payment Indicator (TPI):	Probable-High
TPI Leeway:	6

Legal framework	Yes
Does a specific covered bond law apply for this programme:	
Main country in which collateral is based / issuer is based:	Norway / Norway
Programme setup / structure:	Specialist credit institution issuer
<b>Timely principal payments</b>	
Maturity type:	Hard Bullet and Soft Bullet
Committed liquidity reserve for principal amount of all hard bullet bonds to be funded at least 180 days before maturity:	No
Committed liquidity reserve for principal amount of all soft bullet bonds to be funded at least 180 days before initial maturity:	No
Maximum length of maturity extension:	> 6 months but ≤ 12 months
Trigger for maturity extension ('Y' means applicable, 'N' means not applicable):	
(Y) Issuer insolvency-type event(s)	(N) Cover pool insolvency-type event(s)
(N) Issuer resolution / early intervention measure(s)	(Y) Other(s)
(N) Breach of liquidity requirements (actual/potential)	
Final decision on trigger:	Regulator

(note 1) The data reported in this PO is based on information provided by the issuer and may include certain assumptions made by Moody's. Moody's accepts no responsibility for the information provided to it and, whilst it believes the assumptions it has made are reasonable, cannot guarantee that they are or will remain accurate. Although Moody's encourages all issuers to provide reporting data in a consistent manner, there may be differences in the way that certain data is categorised by issuers. The data reporting template (which issuers are requested to use) is available on request. Credit ratings, TPI and TPI Leeway shown in this PO are as of publication date.

(note 2) This assumes the Covered Bonds rating is not constrained by the TPI. Also to the extent rating assumptions change following a downgrade or an upgrade of the issuer, the necessary OC stated here may also change. This is especially significant in the case of CR assessments of A3(cr) or Baal(cr), as the necessary OC following a 1 notch downgrade may then be substantially higher than the amount suggested here as market risks are considered more critically by Moody's at this time. In any event, the necessary OC amounts stated here are subject to change at anytime at Moody's discretion.

(note 3) This is the minimum OC calculated to be consistent with the current rating under Moody's expected loss model. However, the level of OC consistent with a given rating level may differ from this amount where ratings are capped under the TPI framework and, for example, where committee discretion is applied.

(note 4) The OC consistent with the current rating is the minimum level of over-collateralisation which is necessary to support the covered bond rating at its current level on the basis of the pool as per the cut-off date. The sensitivity run is based on certain assumptions, including that the Covered Bonds rating is not constrained by the TPI. Further, this sensitivity run is a model output only and therefore a simplification as it does not take into account certain assumptions that may change as an issuer is downgraded, and as a result the actual OC number consistent with the current rating may be higher than shown. The OC required may also differ from the model output in situations when committee discretion is applied. In any event, the OC amounts stated here are subject to change at any time at Moody's discretion.

## V. Asset Liability Profile

### Interest Rate & Duration Mismatch (note 5)

Fixed rate assets in the cover pool:	5.1%
Fixed rate covered bonds outstanding:	50.7%
WAL of outstanding covered bonds:	3.1 years
floating / fixed rate	1.5 y / 4.7 y
WAL of the cover pool:	14.1 years
floating / fixed rate / time to reset	14.2 y / 12.6 y / 2.9 y

### Swap Arrangements

Interest rate swap(s) in the Cover Pool:	Yes
Intra-group interest rate swap(s) provider(s):	Yes
Currency swap(s) in the Cover Pool:	Yes
Intra-group currency swap(s) provider(s):	Yes

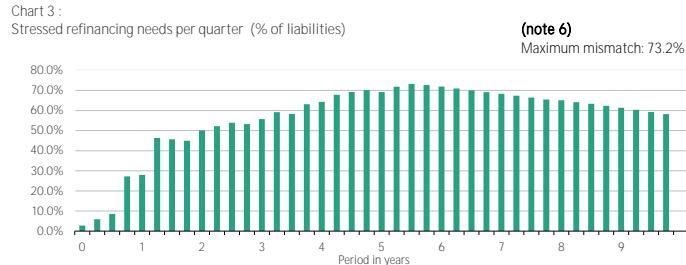


Chart 4:  
Currency mix before swaps (Main Currencies)

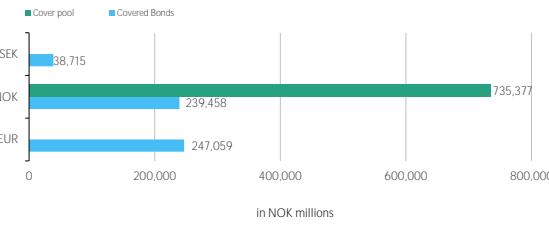
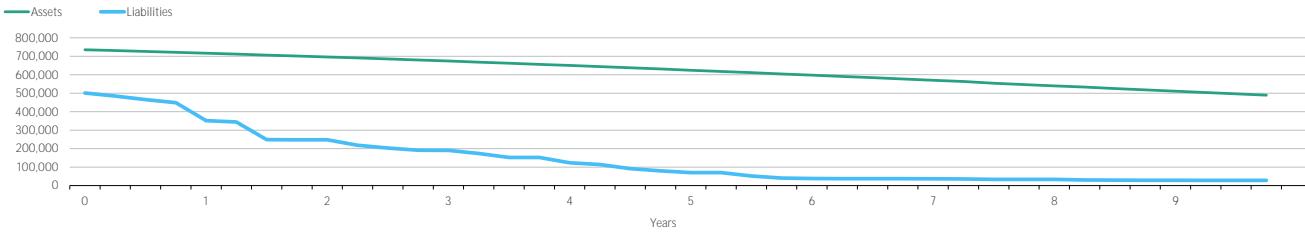


Chart 5 :  
Amortisation profile (in millions) (note 7)



## VI. Performance Evolution

Chart 6 :  
Collateral Score

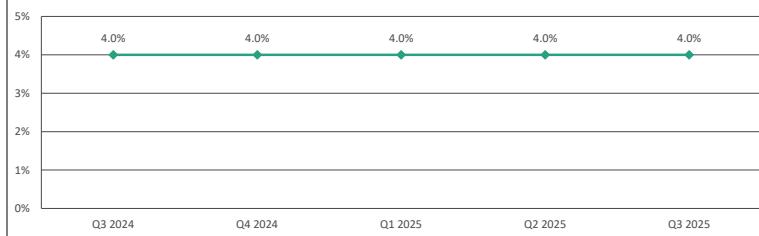


Chart 7 :  
Cover Pool Losses

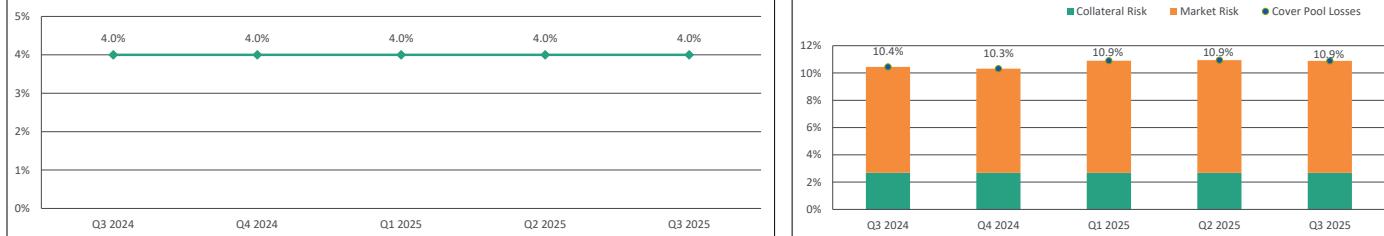
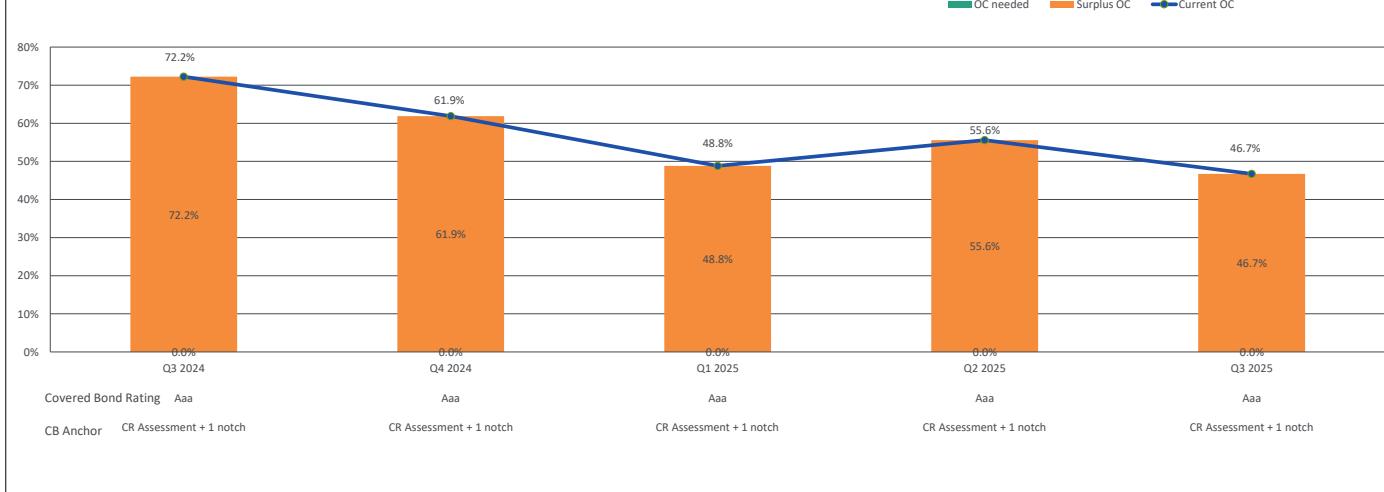


Chart 8 :  
OC consistent with covered bond rating vs. Current OC



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.

(note 5) This assumes no prepayment.

(note 6) Based on principal flows only. Assumptions include no prepayments, principal collections limited to the portion of assets that make up the amount of the liabilities plus committed OC, no further CB issuance and no further assets added to the cover pool.

(note 7) Assumptions include swaps in place in Cover Pool, no prepayment and no further CB issuance.

## VII. Cover Pool Information - Residential Assets

## Overview

Asset type:	Residential
Asset balance:	711,062,490.664
Average loan balance:	2,004,998
Number of loans:	354,645
Number of borrowers:	305,803
Number of properties:	315,274
WA remaining term (in months):	273
WA seasoning (in months):	65

## Details on LTV

WA unindexed LTV (*)	60.7%
WA Indexed LTV:	52.3%
Valuation type:	Market Value
LTV threshold:	75.0%
Junior ranks:	4.7%
Loans with Prior Ranks:	2.0%

Junior ranks are equal to the delta between unindexed whole loan WA LTV (including internal junior ranks) and unindexed senior loan WA LTV (excluding internal junior ranks).  
Unindexed LTV (whole loan basis) distribution displayed in Chart A incorporates Moody's assumptions on junior ranks at parent bank level.

The issuer is currently unable to provide Whole Loan LTV including Junior Ranks.

## Specific Loan and Borrower characteristics

Loans with an external guarantee in addition to a mortgage:	0.0%
Interest only Loans / Flex Loans	8.4% / 31.8%
Loans for second homes / Vacation:	0.1%
Buy to let loans / Non owner occupied properties:	0.1%
Limited income verified:	0.0%
Adverse credit characteristics	0.0%

Interest only loans includes loans which currently are in an initial interest only period before they start amortising.

Flex loans have an amortisation profile and can be re-drawn by the customer up to a certain limit.

## Performance

Loans in arrears (≥ 2months - < 6months):	0.1%
Loans in arrears (≥ 6months - < 12months):	0.0%
Loans in arrears (≥ 12months):	0.0%
Loans in a foreclosure procedure:	0.0%

## Multi-Family Properties

Loans to tenants of tenant-owned Housing Cooperatives:	14.0%
Other type of Multi-Family loans (**):	3.3%

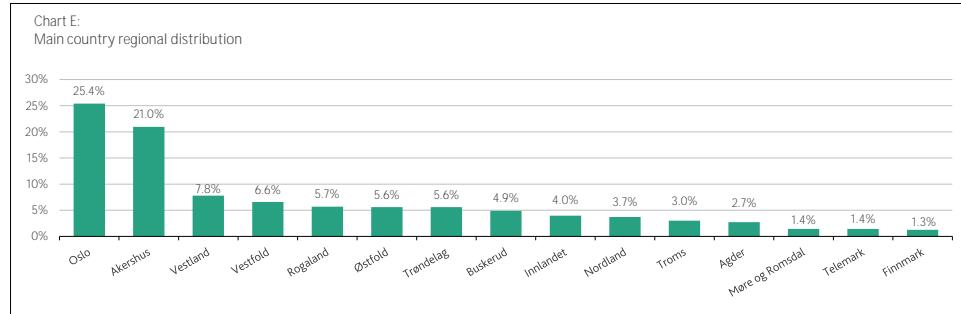
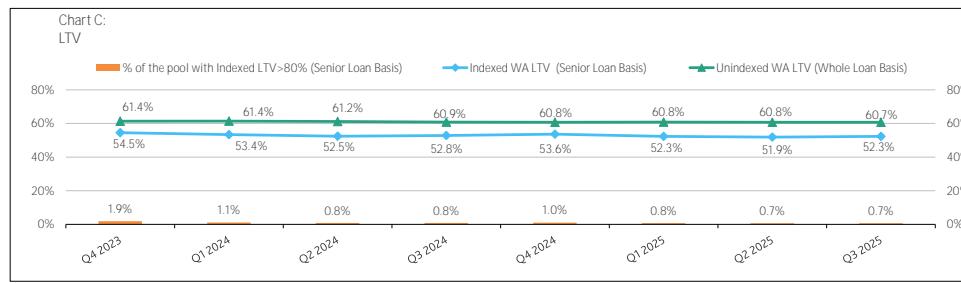
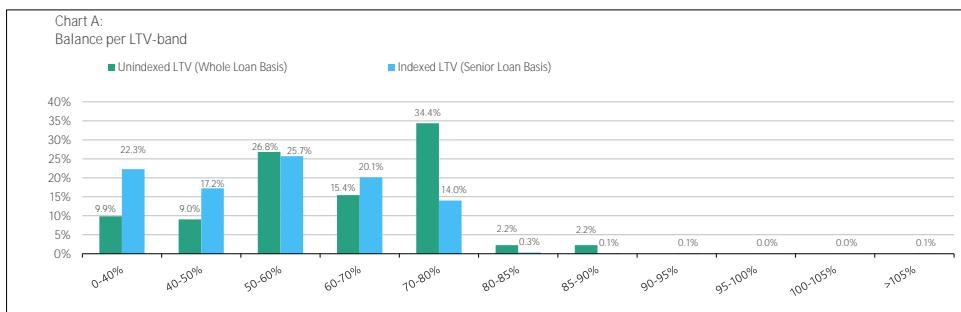


Chart B: Percentage of residential assets

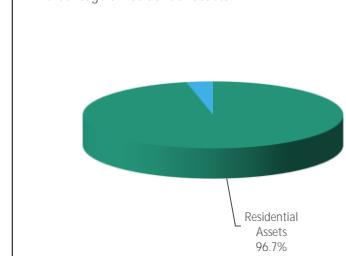


Chart D: Interest rate type

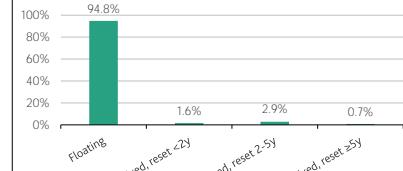
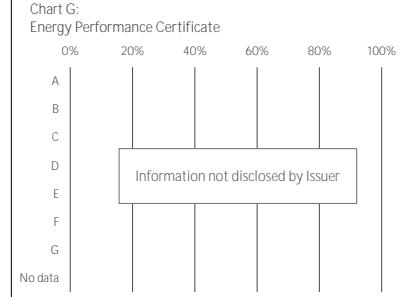


Chart E: Energy Performance Certificate



(note \*) may be based on property value at time of origination or further advance or borrower refinancing.

(note \*\*): This "other" type refers to loans directly to Housing Cooperatives and to Landlords of Multi-Family properties (not included in Buy to Let).

## VIII. Cover Pool Information - Loans to Housing Co-operatives

### Overview

Asset type:	Residential
Asset balance:	24,314,354,157
Average loan balance:	10,315,806
Number of loans:	2,357
Number of borrowers:	1,703
Number of properties:	1,764
WA remaining term (in months):	350
WA seasoning (in months):	107

### Details on LTV

WA unindexed LTV (*)	36.9%
WA indexed LTV:	30.3%
Valuation type:	Market Value
LTV threshold:	60.0%
Junior ranks:	6.5%
Loans with Prior Ranks:	77.8%

Junior ranks are equal to the delta between unindexed whole loan WA LTV (including internal junior ranks) and unindexed senior loan WA LTV (excluding internal junior ranks).  
Unindexed LTV (whole loan basis) distribution displayed in Chart A incorporates Moody's assumptions on junior ranks at parent bank level.

The issuer is currently unable to provide Whole Loan LTV including Junior Ranks.

### Specific Loan and Borrower characteristics

Loans with an external guarantee in addition to a mortgage:	0.0%
Interest only Loans / Flex Loans	43.8% / 0.0%
Loans for second homes / Vacation:	0.0%
Buy to let loans / Non owner occupied properties:	0.0%
Limited income verified:	0.0%
Adverse credit characteristics	0.0%

Interest only loans includes loans which currently are in an initial interest only period before they start amortising.

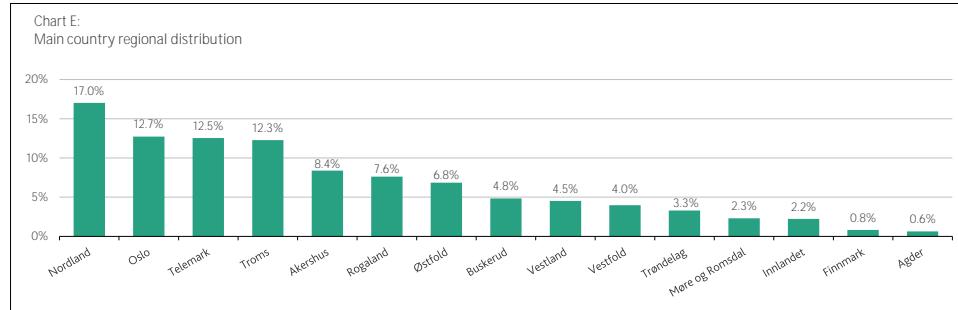
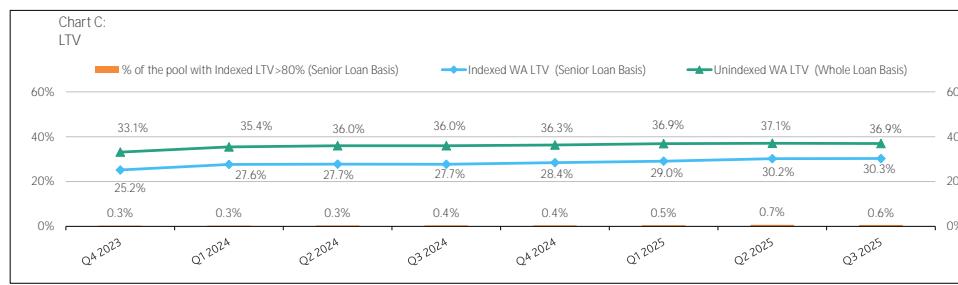
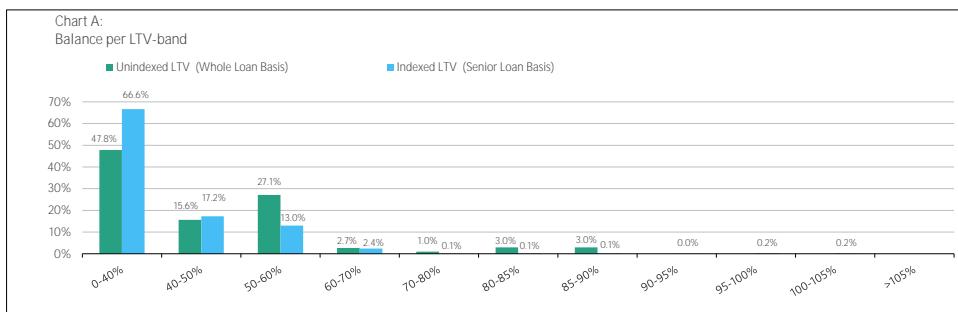
Flex loans have an amortisation profile and can be re-drawn by the customer up to a certain limit.

### Performance

Loans in arrears (≥ 2months - < 6months):	0.0%
Loans in arrears (≥ 6months - < 12months):	0.0%
Loans in arrears (≥ 12months):	0.0%
Loans in a foreclosure procedure:	0.0%

### Multi-Family Properties

Loans to tenants of tenant-owned Housing Cooperatives:	n/a
Other type of Multi-Family loans (**):	n/a



(note \*) may be based on property value at time of origination or further advance or borrower refinancing.

(note \*\*). This "other" type refers to loans directly to Housing Cooperatives and to Landlords of Multi-Family properties (not included in Buy to Let).

## IX. Swap Information

#### X. Liabilities Information: Last 50 Issuances as reported by the Issuer

ISIN	Series Number	ESG bond type, If applicable	Outstanding Amount	Issuance Date	Expected Maturity	Extended Maturity	Interest Rate Type	Coupon	Principal Payment
NO0013642579	C 455		NOK 80,000,000,000	28/08/2025	26/02/2027	26/02/2028	Floating rate	NOK NIBOR 3M + 12 bps	Soft Bullet
XS3167367427	C 454	Green bond	SEK 2,200,000,000	26/08/2025	26/08/2030	26/08/2031	Fixed rate	2.630%	Soft Bullet
XS3167365728	C 453	Green bond	SEK 6,000,000,000	26/08/2025	26/08/2030	26/08/2031	Floating rate	SEK STIBOR 3M + 36 bps	Soft Bullet
XS3101584070	C 451		SEK 1,300,000,000	19/06/2025	19/06/2028	19/06/2029	Floating rate	SEK STIBOR 3M + 26 bps	Soft Bullet
XS3101380619	C 452		EUR 20,000,000	18/06/2025	18/08/2028	18/08/2029	Floating rate	EUR EURIBOR 3M + 27.5 bps	Soft Bullet
XS3091698244	C 450		EUR 1,000,000,000	10/06/2025	11/06/2030	10/06/2031	Fixed rate	2.375%	Soft Bullet
XS3078507616	C 449		EUR 25,000,000	22/05/2025	22/05/2030	22/05/2031	Floating rate	EUR EURIBOR 3M + 32 bps	Soft Bullet
XS3035906844	C 448		EUR 1,500,000,000	27/03/2025	27/09/2029	27/09/2030	Fixed rate	2.625%	Soft Bullet
NO0013485490	C 447		NOK 80,000,000,000	25/02/2025	14/08/2026	14/08/2027	Floating rate	NOK NIBOR 3M + 17 bps	Soft Bullet
XS3005213809	C 446		EUR 50,000,000	18/02/2025	18/02/2028	18/02/2029	Floating rate	EUR EURIBOR 3M + 28 bps	Soft Bullet
XS3004571421	C 445		EUR 50,000,000	17/02/2025	17/02/2028	17/02/2029	Fixed rate	2.371%	Soft Bullet
XS2986727316	C 444		EUR 1,500,000,000	28/01/2025	28/01/2030	28/01/2031	Fixed rate	2.625%	Soft Bullet
NO0013462069	C 443		NOK 2,000,000,000	21/01/2025	21/01/2031	21/01/2032	Fixed rate	4.450%	Soft Bullet
XS2982081999	C 442		SEK 3,450,000,000	21/01/2025	21/01/2030	21/01/2031	Floating rate	SEK STIBOR 3M + 40 bps	Soft Bullet
NO0013354613	C 441		NOK 10,000,000,000	01/10/2024	01/10/2029	01/10/2030	Floating rate	NOK NIBOR 3M + 37 bps	Soft Bullet
XS2894089759	C 439	Green bond	SEK 4,300,000,000	03/09/2024	03/09/2029	03/09/2030	Floating rate	SEK STIBOR 3M + 36 bps	Soft Bullet
XS2894145254	C 440	Green bond	SEK 6,400,000,000	28/08/2024	03/09/2029	03/09/2030	Fixed rate	2.474%	Soft Bullet
XS2834475704	C 438		EUR 1,000,000,000	05/06/2024	05/06/2031	05/06/2032	Fixed rate	3.125%	Soft Bullet
XS2782809938	C 437		EUR 1,250,000,000	12/03/2024	12/03/2029	12/03/2030	Fixed rate	2.875%	Soft Bullet
NO0013145631	C 436		NOK 13,000,000,000	08/02/2024	08/02/2028	08/02/2029	Floating rate	NOK NIBOR 3M + 45 bps	Soft Bullet
XS2748852113	C 433	Green bond	SEK 3,250,000,000	18/01/2024	18/01/2027	18/01/2028	Floating rate	SEK STIBOR 3M + 27 bps	Soft Bullet
XS2748852469	C 434	Green bond	SEK 3,900,000,000	18/01/2024	18/01/2027	18/01/2028	Fixed rate	3.038%	Soft Bullet
XS2748851735	C 435	Green bond	SEK 5,750,000,000	18/01/2024	18/01/2029	18/01/2030	Floating rate	SEK STIBOR 3M + 48 bps	Soft Bullet
XS2717426220	C 432		EUR 1,250,000,000	14/11/2023	14/11/2028	14/11/2029	Fixed rate	3.375%	Soft Bullet
NO0013030940	C 430		NOK 11,000,000,000	05/10/2023	05/10/2028	05/10/2028	Floating rate	NOK NIBOR 3M + 45 bps	Soft Bullet
NO00129171519	C 429		NOK 13,000,000,000	15/05/2023	15/05/2026	14/05/2027	Floating rate	NOK NIBOR 3M + 33 bps	Soft Bullet
NO0012483835	NO0012483835		NOK 8,500,000,000	29/03/2022	29/03/2027	29/03/2028	Floating rate	NOK NIBOR 3M + 35 bps	Soft Bullet
XS2341719503	C 427		EUR 1,000,000,000	12/05/2021	12/05/2028	12/05/2029	Fixed rate	0.010%	Soft Bullet
NO0010958093	NO0010958093		NOK 7,000,000,000	23/03/2021	20/11/2026	20/11/2027	Floating rate	NOK NIBOR 3M + 60 bps	Soft Bullet
NO0010947344	C 426		NOK 1,100,000,000	09/03/2021	09/03/2033	09/03/2034	Fixed rate	2.050%	Soft Bullet
XS22895953670	C 425	Green bond	EUR 1,500,000,000	21/01/2021	21/01/2031	21/01/2032	Fixed rate	0.010%	Soft Bullet
NO0010907181	C 424		NOK 9,858,000,000	24/11/2020	24/11/2025	24/11/2026	Floating rate	NOK NIBOR 3M + 21 bps	Soft Bullet
XS2238292010	C 423		EUR 1,500,000,000	08/10/2020	08/10/2027	08/10/2028	Fixed rate	0.010%	Soft Bullet
XS2015295491	C 419		EUR 250,000,000	20/06/2019	20/06/2044	20/06/2045	Fixed rate	0.980%	Soft Bullet
NO0010853229	C 418		NOK 2,500,000,000	28/05/2019	28/05/2026	28/05/2027	Fixed rate	2.125%	Soft Bullet
XS1996420904	C 417		EUR 50,000,000	16/05/2019	16/05/2039	16/05/2040	Fixed rate	1.080%	Soft Bullet
XS1940987313	C 415		EUR 25,000,000	25/01/2019	25/01/2039	25/01/2040	Fixed rate	1.530%	Soft Bullet
XS1934743656	C 414		EUR 1,500,000,000	14/01/2019	14/01/2026	14/01/2027	Fixed rate	0.625%	Soft Bullet
XS1924983502	C 412		EUR 30,000,000	21/12/2018	21/12/2043	21/12/2044	Fixed rate	1.530%	Soft Bullet
XS1922177172	C 411		EUR 25,000,000	14/12/2018	14/12/2038	14/12/2039	Fixed rate	1.488%	Soft Bullet
XS1905520471	C 409		EUR 50,000,000	02/11/2018	02/11/2038	02/11/2039	Fixed rate	1.536%	Soft Bullet
XS1891327436	C 405		EUR 25,000,000	02/11/2018	02/11/2038	02/11/2039	Fixed rate	1.573%	Soft Bullet
XS1894619847	C 408		EUR 19,000,000	18/10/2018	18/10/2028	18/10/2028	Fixed rate	1.120%	Hard Bullet
Gedekte Namensschuldv.	C 403		EUR 10,000,000	12/10/2018	12/10/2034	12/10/2034	Fixed rate	1.470%	Hard Bullet
Gedekte Namensschuldv.	C 404		EUR 15,000,000	12/10/2018	13/10/2042	13/10/2042	Fixed rate	1.660%	Hard Bullet
Gedekte Namensschuldv.	C 406		EUR 20,000,000	10/10/2018	10/10/2039	10/10/2039	Fixed rate	1.630%	Hard Bullet
XS1884807485	C 402		EUR 10,000,000	28/09/2018	28/09/2043	28/09/2044	Fixed rate	1.640%	Soft Bullet
XS1885607256	C 401		EUR 30,000,000	27/09/2018	27/09/2038	27/09/2039	Fixed rate	1.570%	Soft Bullet
Gedekte Namensschuldv.	C 398		EUR 10,000,000	18/05/2018	16/02/2026	16/02/2026	Fixed rate	0.737%	Hard Bullet
XS1819980670	C 394		EUR 25,000,000	18/05/2018	18/05/2038	18/05/2039	Fixed rate	1.538%	Soft Bullet

© 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 Agéncia de Clasificación 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 Calificadora de Riesgo S.A., Moody's Local CR Calificadora de Riesgo S.A., Moody's Local ES S.A. de CV Clasificadora de Riesgo, Moody's Local RD Sociedad Calificadora 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.