

The Swedish Covered Bond Corporation (SCBC) - Mortgage Covered Bonds

Covered Bonds / Sweden



Contacts	Patrick Widmayer - +49 (697) 073-0715 - Patrick.Widmayer@moody.com Puneeth Rimmalapudi - +91 (806) 885-8134 - Puneeth.Rimmalapudi@moody.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.com
Monitoring Client Service Desk	Monitor.CB@moody.com London: +44 20 7772-5454, csdlondon@moody.com	

Reporting as of: 30/09/2023 All amounts in SEK (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)

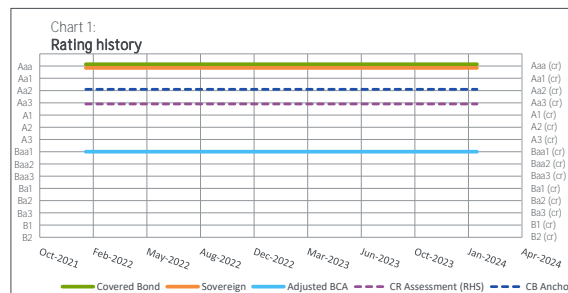
I. Programme Overview

Overview

Year of initial rating assignment:	2006
Total outstanding liabilities:	SEK 334,581,558,232
Total assets in the Cover Pool:	SEK 454,408,000,980
Issuer name / CR Assessment:	The Swedish Covered Bond Corporation / n/a
Group or parent name / CR Assessment:	SBAB Bank AB (publ) / Aa3(cr)
Main collateral type:	Residential

Ratings

Covered bonds rating:	Aaa
Entity used in Moody's EL & TPI analysis:	SBAB Bank AB (publ)
CB anchor:	Aa2
CR Assessment:	Aa3(cr)
Adjusted BCA / SUR:	baa1 / A1
Unsecured claim used for Moody's EL analysis:	No



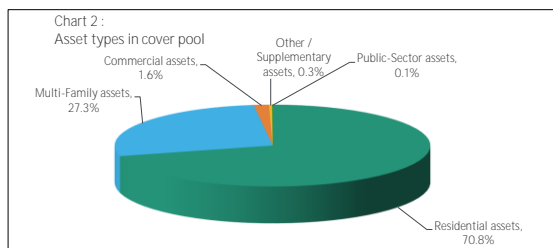
II. Value of the Cover Pool

Collateral quality

Collateral Score:	4.5%
Collateral Score excl. systemic risk:	n/a

Cover Pool losses

Collateral Risk (Collateral Score post-haircut):	3.0%	26%
Market Risk:	8.4%	74%
	11.4%	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):	2.0%
Current OC:	35.8%
OC consistent with current rating (note 4)	1.0%

Sensitivity scenario CB anchor

	OC consistent with current rating	
Scenario 1: CB anchor is lowered by	1 notch	6.0%

IV. Timely Payment Indicator & TPI Leeway

Timely Payment Indicator (TPI):	Probable-High
TPI Leeway:	4

Extract from TPI table

CB Anchor	Probable-High
Aaa	Aaa
Aa1	Aaa
Aa2	Aaa
Aa3	Aaa
A1	Aaa
A2	Aaa
A3	Aaa
Baa1	Aa1

Legal framework

Does a specific covered bond law apply for this programme:	Yes, Sweden
Main country in which collateral is based:	Sweden
Country in which issuer is based:	Sweden

Timely principal payments

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

(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 Baa1(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 any time 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.

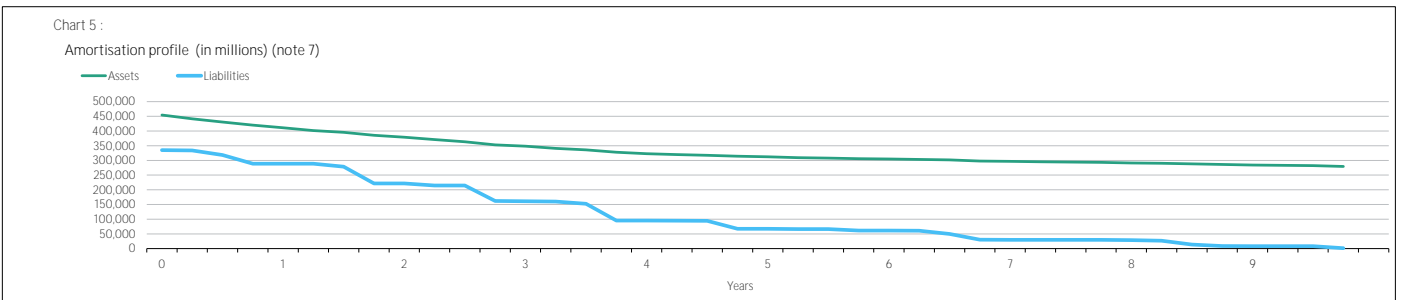
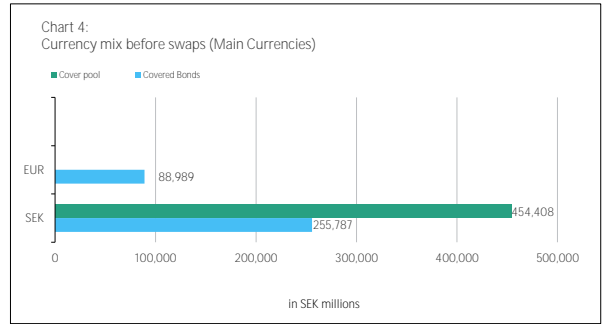
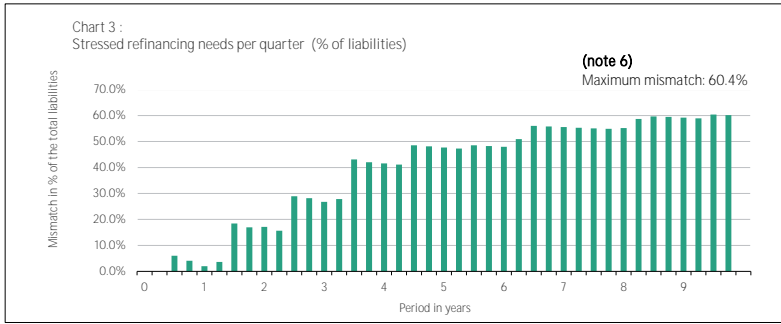
V. Asset Liability Profile

Interest Rate & Duration Mismatch (note 5)

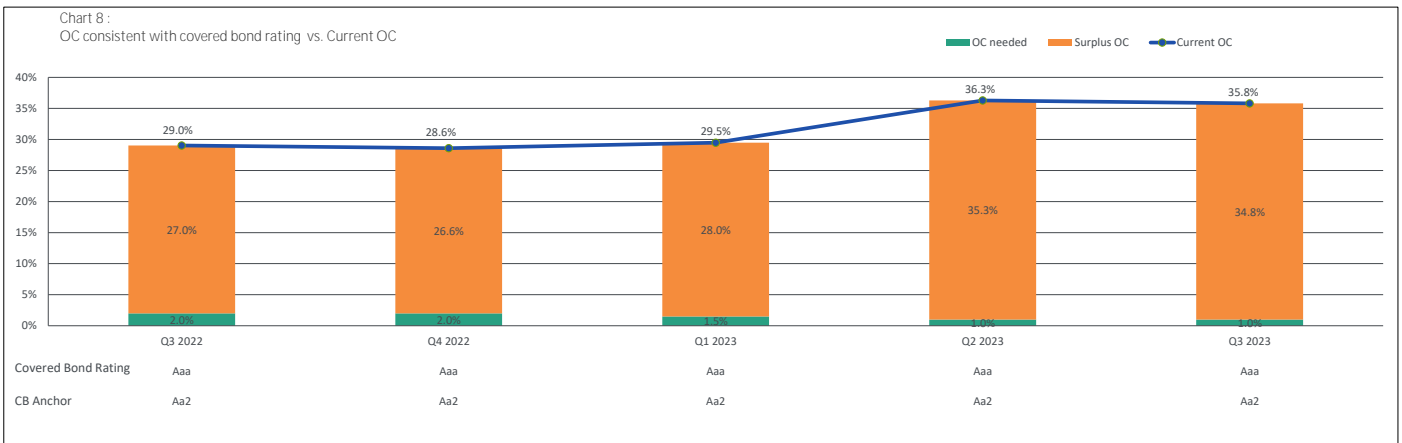
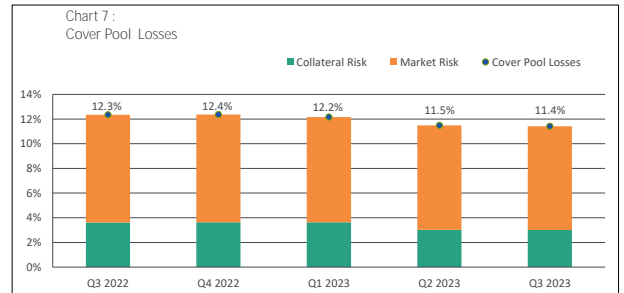
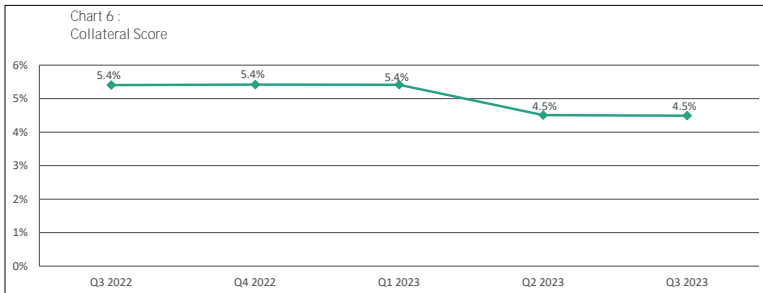
Fixed rate assets in the cover pool:	39.9%
Fixed rate covered bonds outstanding:	98.4%
WAL of outstanding covered bonds:	3.7 years
WAL of the cover pool:	24.3 years

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



VI. Performance Evolution



This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the Issuer/deal page on <https://ratings.moody's.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 - Single Family Housing

Overview

Asset type:	Residential
Asset balance:	165,733,916,647
Average loan balance:	649,832
Number of loans:	255,041
Number of borrowers:	87,836
Number of properties:	85,118
WA remaining term (in months):	390
WA seasoning (in months):	72

Details on LTV

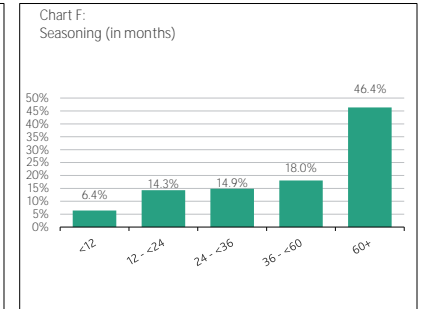
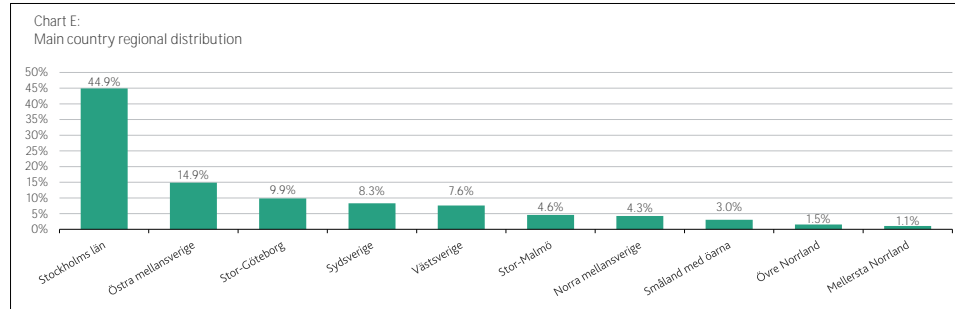
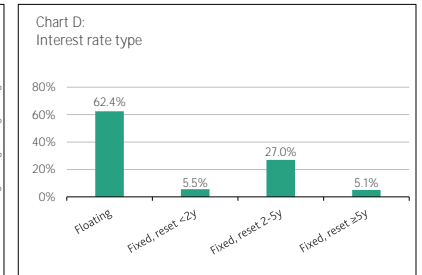
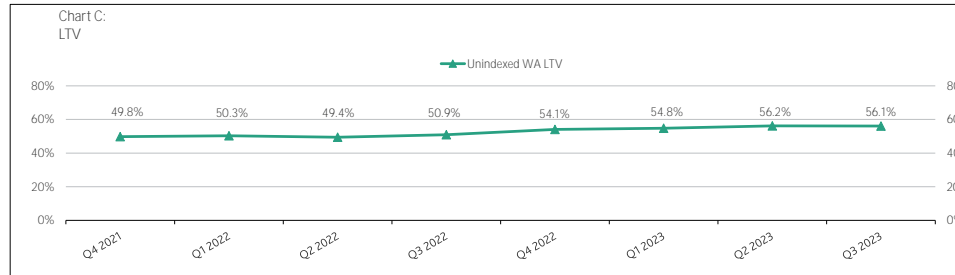
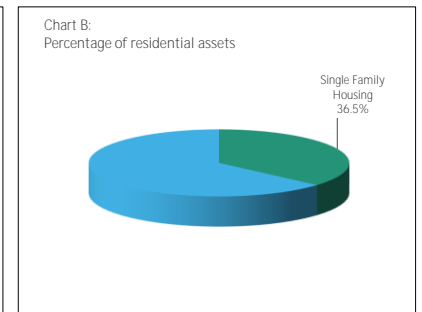
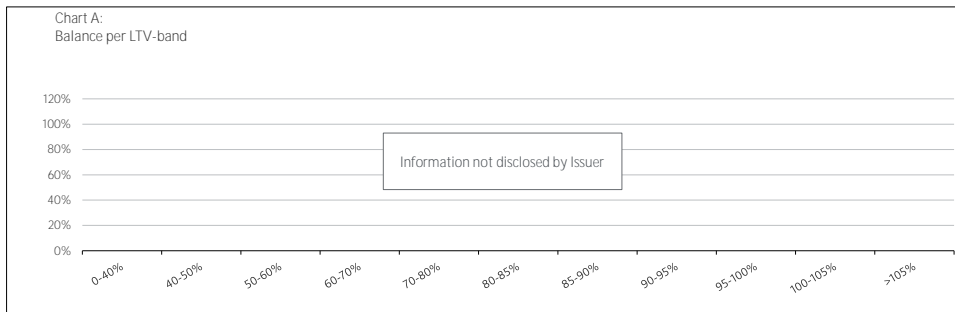
WA unindexed LTV (*)	56.1%
WA Indexed LTV:	n/d
Valuation type:	Market Value
LTV threshold:	80.0%
Junior ranks:	n/d
Loans with Prior Ranks:	1.1%

Specific Loan and Borrower characteristics

Loans with an external guarantee in addition to a mortgage:	0.0%
Interest only Loans	52.9%
Loans for second homes / Vacation:	n/d
Buy to let loans / Non owner occupied properties:	n/d
Limited income verified:	n/d
Adverse credit characteristics (**)	n/d

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%



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

(note **) Typically borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at time of origination.

(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 - Tenant Owner Rights

Overview

Asset type:	Residential
Asset balance:	156,018,289,962
Average loan balance:	729,637
Number of loans:	213,830
Number of borrowers:	90,930
Number of properties:	90,219
WA remaining term (in months):	410
WA seasoning (in months):	55

Details on LTV

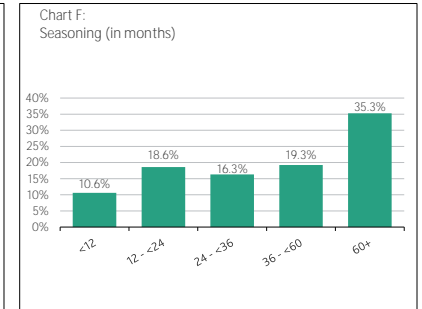
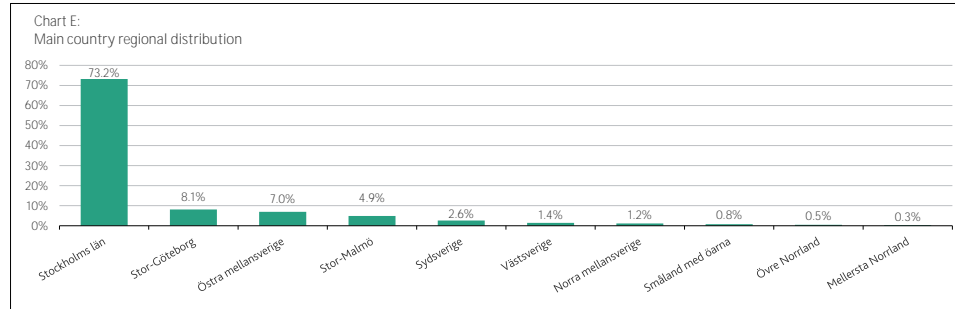
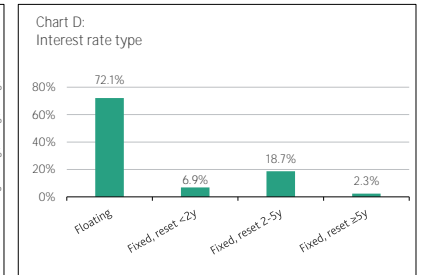
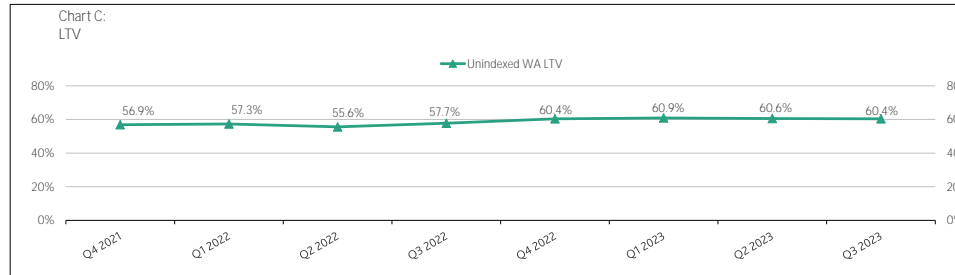
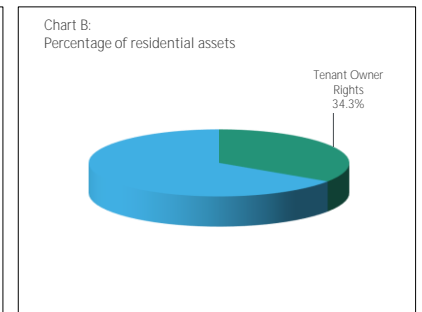
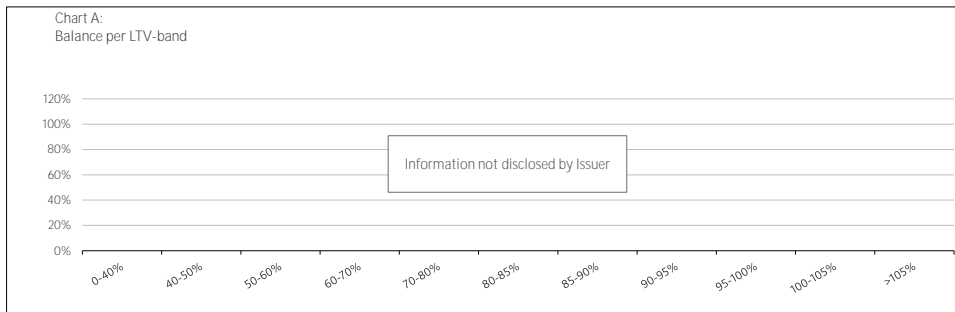
WA unindexed LTV (*)	60.4%
WA Indexed LTV:	n/d
Valuation type:	Market Value
LTV threshold:	80.0%
Junior ranks:	n/d
Loans with Prior Ranks:	0.0%

Specific Loan and Borrower characteristics

Loans with an external guarantee in addition to a mortgage:	0.0%
Interest only Loans	43.1%
Loans for second homes / Vacation:	n/d
Buy to let loans / Non owner occupied properties:	n/d
Limited income verified:	n/d
Adverse credit characteristics (**)	n/d

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%



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

(note **) Typically borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at time of origination.

(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. Cover Pool Information - Co-Operative Assets

Overview

Asset type:	Residential
Asset balance:	56,711,594,698
Average loan balance:	8,832,206
Number of loans:	6,421
Number of borrowers:	2,162
Number of properties:	2,672
WA remaining term (in months):	21
WA seasoning (in months):	88

Details on LTV

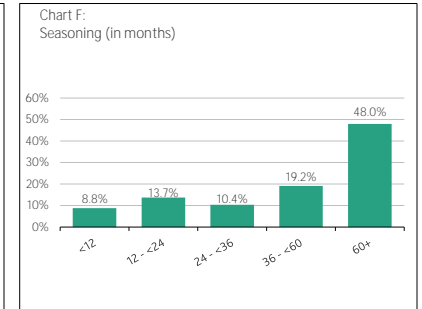
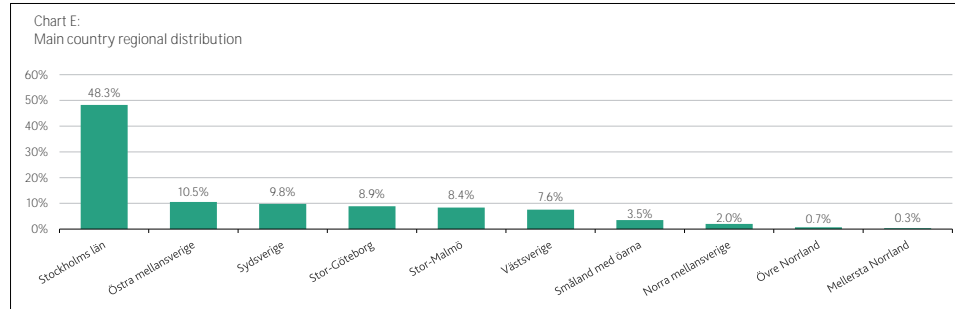
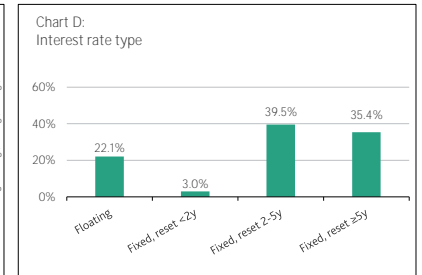
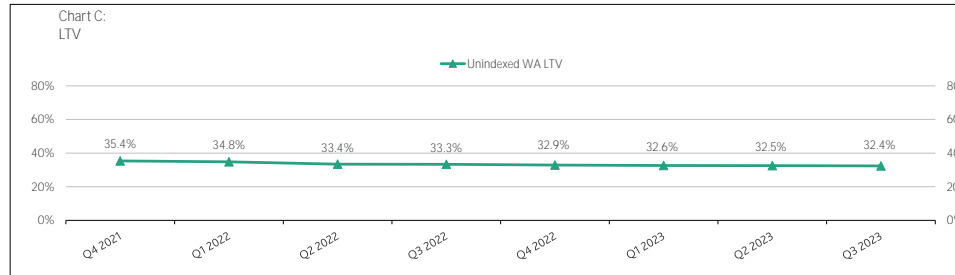
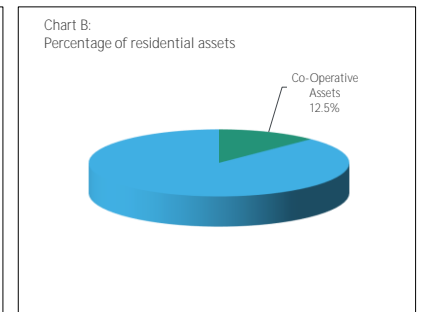
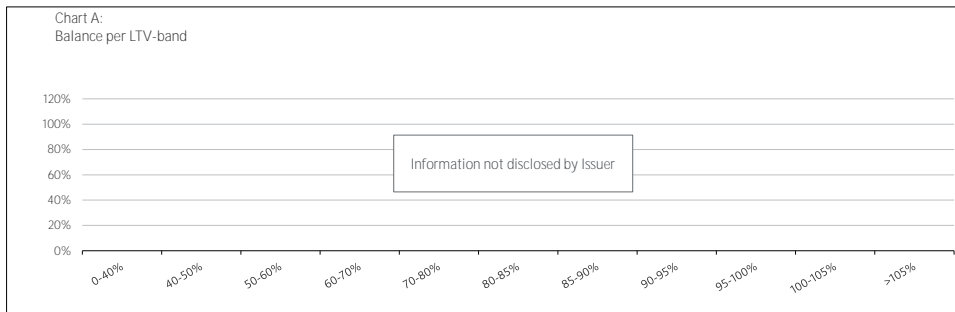
WA unindexed LTV (*)	32.4%
WA Indexed LTV:	n/d
Valuation type:	Market Value
LTV threshold:	80.0%
Junior ranks:	n/d
Loans with Prior Ranks:	20.3%

Specific Loan and Borrower characteristics

Loans with an external guarantee in addition to a mortgage:	0.5%
Interest only Loans	32.1%
Loans for second homes / Vacation:	n/d
Buy to let loans / Non owner occupied properties:	n/d
Limited income verified:	n/d
Adverse credit characteristics (**)	n/d

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%



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

(note **) Typically borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at time of origination.

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

X. Cover Pool Information - Multi Family Assets

Overview

Asset type:	Residential
Asset balance:	67,210,301,208
Average loan balance:	95,333,761
Number of loans:	705
Number of borrowers:	469
Number of properties:	1,020
WA remaining term (in months):	37
WA seasoning (in months):	35

Details on LTV

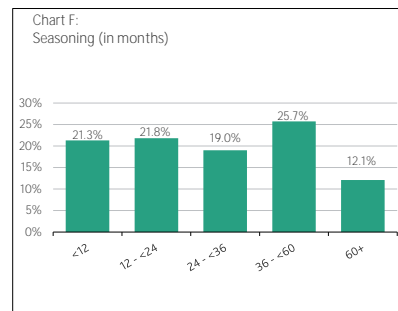
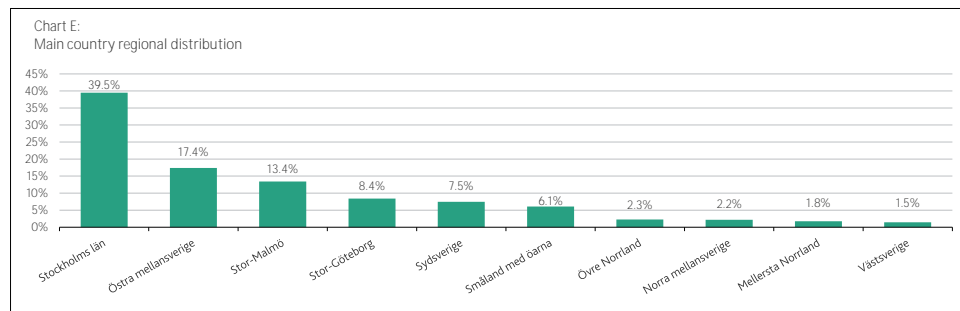
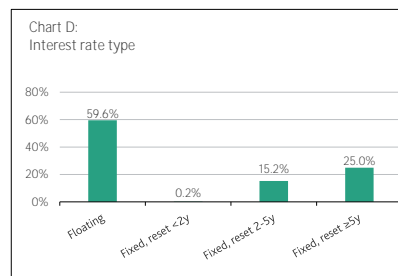
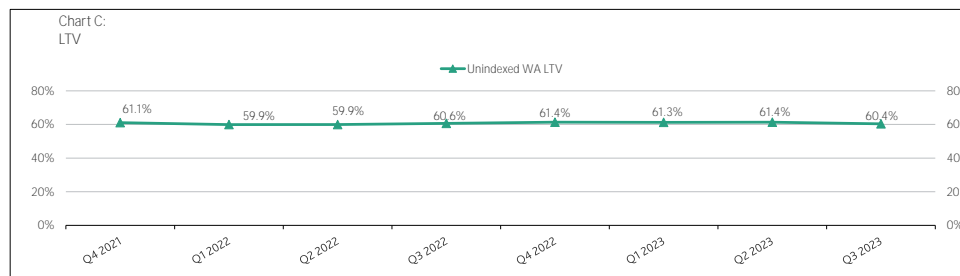
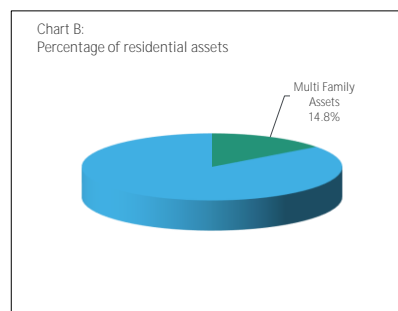
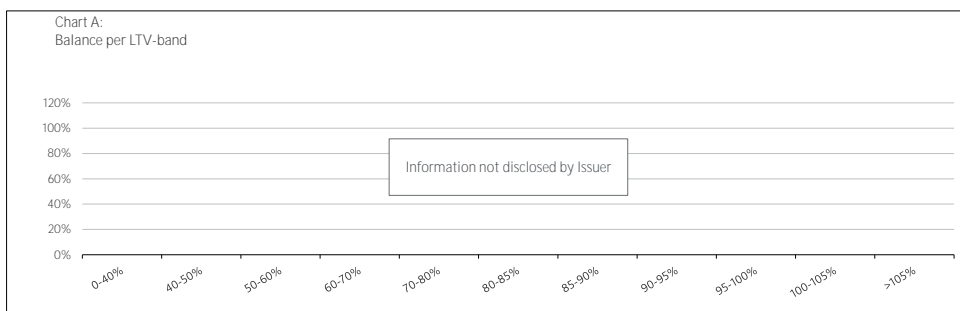
WA unindexed LTV (*)	60.4%
WA Indexed LTV:	n/d
Valuation type:	Market Value
LTV threshold:	80.0%
Junior ranks:	n/d
Loans with Prior Ranks:	0.1%

Specific Loan and Borrower characteristics

Loans with an external guarantee in addition to a mortgage:	0.1%
Interest only Loans	56.4%
Loans for second homes / Vacation:	n/d
Buy to let loans / Non owner occupied properties:	n/d
Limited income verified:	n/d
Adverse credit characteristics (**)	n/d

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%



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

(note **) Typically borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at time of origination.

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

XI. Swap Information

Counterparty	Type	Notional Amount	Collateral trigger	Replacement Trigger
Information not disclosed by Issuer				

XII. Liabilities Information: Last 50 Issuances

ISIN	Serles Number	Currency	Outstanding Amount	Issuance Date	Expected Maturity	Extended Maturity	Interest Rate Type	Coupon	Principal Payment
XS2617508481	3129	EUR	1,000,000,000	03/05/2023	03/05/2028	03/05/2029	Fixed rate	3.250%	Soft Bullet
SE0019072042	SCBC-149	SEK	15,902,000,000	22/11/2022	14/06/2028	14/06/2029	Fixed rate	3.500%	Soft Bullet
XS2485806314	3128	SEK	300,000,000	27/05/2022	27/04/2027	27/04/2027	Floating rate	STIB3M + 100 bps	Hard Bullet
XS2478272938	3127	EUR	1,250,000,000	10/05/2022	10/02/2032	10/02/2033	Fixed rate	1.750%	Soft Bullet
XS2468129346	3126	SEK	300,000,000	12/04/2022	12/04/2038	12/04/2038	Fixed rate	2.285%	Hard Bullet
XS2467649054	3125	SEK	1,000,000,000	08/04/2022	25/05/2027	25/05/2027	Floating rate	STIB3M + 100 bps	Hard Bullet
XS2363987814	3124	SEK	400,000,000	13/07/2021	13/07/2046	13/07/2046	Fixed rate	1.378%	Hard Bullet
XS2353010593	3123	EUR	1,000,000,000	14/06/2021	14/03/2030	14/03/2031	Fixed rate	0.010%	Soft Bullet
XS2351322818	3122	SEK	600,000,000	11/06/2021	11/05/2026	11/05/2026	Floating rate	STIB3M + 100 bps	Hard Bullet
SE0015243415	SCBC-148	SEK	55,582,000,000	09/12/2020	09/06/2027	09/06/2027	Fixed rate	0.250%	Hard Bullet
SE0015243423	SCBC-153	SEK	4,902,000,000	09/12/2020	09/06/2032	09/06/2032	Fixed rate	0.750%	Hard Bullet
XS2232086491	3121	SEK	600,000,000	18/09/2020	18/09/2032	18/09/2032	Fixed rate	0.649%	Hard Bullet
XS2138591453	3120	SEK	2,600,000,000	18/03/2020	18/02/2025	18/02/2025	Floating rate	STIB3M + 100 bps	Hard Bullet
SE0013486156	SCBC-151	SEK	19,470,000,000	04/12/2019	12/06/2030	12/06/2030	Fixed rate	1.000%	Hard Bullet
SE0013381571	SCBC-146	SEK	56,152,000,000	25/11/2019	11/06/2025	11/06/2025	Fixed rate	0.500%	Hard Bullet
XS2077738081	3119	SEK	300,000,000	07/11/2019	07/11/2034	07/11/2034	Fixed rate	0.928%	Hard Bullet
XS2063426253	3118	SEK	400,000,000	08/10/2019	08/07/2024	08/07/2024	Floating rate	STIB3M + 100 bps	Hard Bullet
XS2007244614	3117	EUR	500,000,000	05/06/2019	05/06/2029	05/06/2030	Fixed rate	0.375%	Soft Bullet
SE0012481349	SCBC-145	SEK	28,874,000,000	30/04/2019	12/06/2024	12/06/2024	Fixed rate	1.000%	Hard Bullet
XS1943443769	2116	SEK	6,000,000,000	30/01/2019	28/03/2024	28/03/2024	Fixed rate	0.750%	Hard Bullet
XS1900804045	3115	EUR	650,000,000	30/10/2018	30/10/2025	30/10/2026	Fixed rate	0.625%	Soft Bullet
XS1895680376	3114	SEK	150,000,000	22/10/2018	22/10/2030	22/10/2030	Fixed rate	1.850%	Hard Bullet
XS1895579909	3113	EUR	25,000,000	19/10/2018	19/10/2038	19/10/2038	Fixed rate	1.600%	Hard Bullet
XS1892584969	3112	SEK	150,000,000	17/10/2018	17/10/2033	17/10/2033	Fixed rate	2.000%	Hard Bullet
XS1846731773	3111	SEK	300,000,000	03/07/2018	03/07/2030	03/07/2030	Fixed rate	1.704%	Hard Bullet
XS1815437527	3110	SEK	250,000,000	03/05/2018	03/05/2030	03/05/2030	Fixed rate	1.868%	Hard Bullet
XST808480534	3109	EUR	675,000,000	19/04/2018	19/04/2033	19/04/2034	Fixed rate	1.250%	Soft Bullet
XS1807436008	3107	SEK	292,000,000	16/04/2018	25/01/2030	25/01/2030	Fixed rate	1.980%	Hard Bullet
XS1791586040	3106	SEK	250,000,000	14/03/2018	14/03/2028	14/03/2028	Fixed rate	1.758%	Hard Bullet
XS1759602953	3105	EUR	750,000,000	29/01/2018	29/01/2025	29/01/2026	Fixed rate	0.500%	Soft Bullet
XS1758629783	3104	SEK	819,000,000	25/01/2018	25/01/2030	25/01/2030	Fixed rate	1.980%	Hard Bullet
XS1703059730	3103	SEK	100,000,000	19/10/2017	19/10/2029	19/10/2029	Fixed rate	1.960%	Hard Bullet
XS1696419354	3102	SEK	800,000,000	09/10/2017	08/10/2027	08/10/2027	Fixed rate	1.800%	Hard Bullet
XS1608398563	3101	SEK	500,000,000	08/05/2017	08/05/2024	08/05/2024	Floating rate	STIB3M + 75 bps	Hard Bullet
XS1586702679	3100	EUR	750,000,000	29/03/2017	29/03/2027	29/03/2028	Fixed rate	0.875%	Soft Bullet
XS1580340187	3099	SEK	300,000,000	16/03/2017	16/03/2027	16/03/2027	Fixed rate	1.840%	Hard Bullet
XS1579409290	3098	SEK	900,000,000	15/03/2017	15/12/2028	15/12/2028	Fixed rate	2.035%	Hard Bullet
XS1550143421	3095	EUR	1,000,000,000	16/01/2017	16/02/2024	16/02/2025	Fixed rate	0.375%	Soft Bullet
SE0009383664	SCBC-147	SEK	51,978,000,000	11/01/2017	17/06/2026	17/06/2026	Fixed rate	2.000%	Hard Bullet
XS1538664902	3094	SEK	800,000,000	21/12/2016	21/12/2026	21/12/2026	Fixed rate	1.625%	Hard Bullet
XS1537559574	3093	SEK	1,100,000,000	19/12/2016	19/12/2031	19/12/2031	Fixed rate	2.250%	Hard Bullet
XS1384914716	3090	SEK	390,000,000	22/03/2016	23/03/2026	23/03/2026	Fixed rate	2.000%	Hard Bullet
XS1293570021	3082	EUR	33,000,000	22/09/2015	22/09/2031	22/09/2032	Fixed rate	1.459%	Soft Bullet
XS1251915416	3079	SEK	200,000,000	25/06/2015	28/06/2027	28/06/2027	Fixed rate	2.250%	Hard Bullet
XS1244085715	3077	EUR	75,000,000	10/06/2015	10/06/2025	10/06/2026	Fixed rate	0.929%	Soft Bullet
XS1238248816	3076	SEK	200,000,000	27/05/2015	27/05/2025	27/05/2025	Fixed rate	1.655%	Hard Bullet
XS1104585333	3072	SEK	900,000,000	01/09/2014	01/09/2026	01/09/2026	Fixed rate	2.300%	Hard Bullet
XS1028253901	3070	SEK	1,000,000,000	05/02/2014	13/11/2023	13/11/2023	Fixed rate	3.200%	Hard Bullet
XSO696594380	3053	SEK	1,000,000,000	27/10/2011	27/10/2031	27/10/2031	Fixed rate	3.150%	Hard Bullet

© 2024 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED OR OTHERWISE MADE AVAILABLE BY MOODY'S (COLLECTIVELY, "MATERIALS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S MATERIALS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S MATERIALS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES OR OTHERWISE MAKES AVAILABLE ITS MATERIALS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND MATERIALS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR MATERIALS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. FOR CLARITY, NO INFORMATION CONTAINED HEREIN MAY BE USED TO DEVELOP, IMPROVE, TRAIN OR RETRAIN ANY SOFTWARE PROGRAM OR DATABASE, INCLUDING, BUT NOT LIMITED TO, FOR ANY ARTIFICIAL INTELLIGENCE, MACHINE LEARNING OR NATURAL LANGUAGE PROCESSING SOFTWARE, ALGORITHM, METHODOLOGY AND/OR MODEL.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND MATERIALS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Materials.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody's.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Moody's SF Japan K.K., Moody's Local AR Agente de Calificación de Riesgo S.A., Moody's Local BR Agência de Classificação de Risco LTDA, Moody's Local MX S.A. de C.V., I.C.V., Moody's Local PE Clasificadora de Riesgo S.A., and Moody's Local PA Clasificadora 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.