

Realkredit Danmark's Capital Centres S & T Covered Bond Programmes – Peer Review

Three-Notch Downgrade Buffers: The 'AAA'/Stable ratings of Realkredit Danmark A/S's (A/Stable/F1) mortgage covered bonds issued from Capital Centres (CC) S and T are based on the Long-Term Issuer Default Rating (LT IDR) of 'A' and eight notches of various uplifts above the IDRs granted to the programmes. This provides buffers of three notches against an IDR downgrade to maintain the ratings. The 'AAA' ratings are also based on the overcollateralisation (OC) supporting the associated level of stresses. For these programmes, Fitch relies on the lowest OC observed over the past 12 months, which provide a buffer over the respective 'AAA' break-even OC.

Low Fitch 'AAA' Break-Even OC: Fitch Ratings' 'AAA' break-even OC has remained stable at 3% for CC S while increasing to 3.5% from 3% for CC T. The increase in Fitch's 'AAA' break-even OC for CC T is driven by a lower administrative margin modelled on the assets, with a lower excess spread in the analysis. This led to an increased ALM loss component from minus 1.3% to minus 0.8%.

Credit Loss Drives Break-Even OC: The credit loss is the main component of Fitch's 'AAA' break-even OC for both capital centres. It represents 3.3% for CC S, which is the portfolio loss floor under Fitch's criteria, applied to address the idiosyncratic risks of low-risk portfolios, and 4.4% for CC T. The higher credit loss for CC T is due to the larger share of variable rate and commercial loans.

Capital Centres Differ by Interest Rate Type: A key difference between the capital centres is the interest-rate type distribution of the collateral loans. CC S contains predominantly fixed rate assets for the life of the loan, while variable rate assets are refinanced through CC T. As rates increased in 2022, more borrowers opted for variable rates, and CCT increased in size while CC S decreased.

Balance Principle Mitigates Mismatches: The balance principle of Danish mortgage covered bonds ensures a close connection between the cash flows received from the borrowers and the cash flows due to the bondholders, minimising interest rate, FX and refinancing risks. This is achieved by issuing a bond, or a portfolio of bonds, with terms matching the characteristics of the loans.

Strong Liquidity Protection: The six-notch payment continuity uplift (PCU) for both programmes reflects the liquidity protection in place for at least 12 months. The outstanding bonds in CC S have a pass-through amortisation profile and more than 99% of the CC T bonds have 12-month renewable extendible maturities. The remaining CC T bonds are hard-bullet and their redemptions are covered by liquid assets. The six notches also reflect interest payment protection of at least three months in both programmes. The PCU is capped at six notches (instead of eight) as the liquid assets are made up of highly rated bonds and therefore subject to market value risk.

Key Rating Drivers

Programme	Realkredit Danmark A/S – SDRO Capital Centre S (CC S)	Realkredit Danmark A/S – SDRO Capital Centre T (CC T)
LT IDR	A	A
Resolution uplift (notches)	0	0
PCU (notches)	6	6
Timely payment rating level	AA+	AA+
Recovery uplift (notches)	2	2
CVB rating	AAA	AAA
CVB Outlook	Stable	Stable
Buffer against IDR downgrade	3	3
Break-even OC for rating (%)	3	3.5
OC Fitch relies upon (%)	5.7	6.4

Source: Fitch Ratings

Note: For abbreviations please see the Definitions table at the end of this report

Break-Even OC for Covered Bonds Rating



Source: Fitch Ratings



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Cover Pool – Peer Analysis

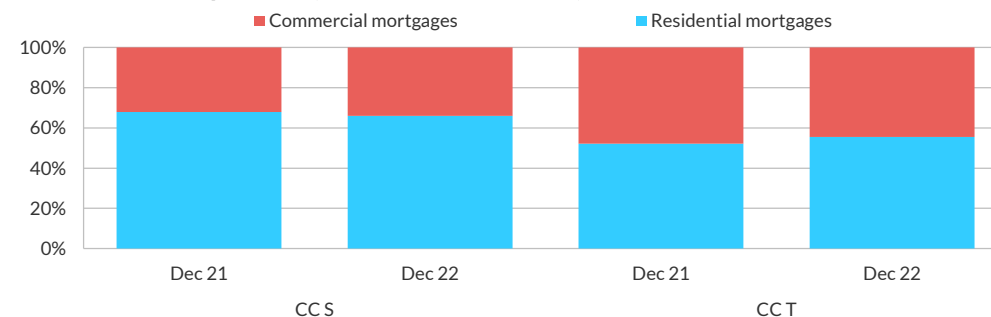
Cover Assets Credit Analysis

	CCS	CCT
Covered bonds rating	AAA	AAA
Rating default rate (RDR) for rating (%)	11.3	17.3
Rating recovery rate (RRR) for rating (%)	64.5	69.4
Rating loss rate (RDR*(1-RRR) for rating (%)	4.0	5.3
'B' case loss rate (%)	0.4	0.4

Source: Fitch Ratings

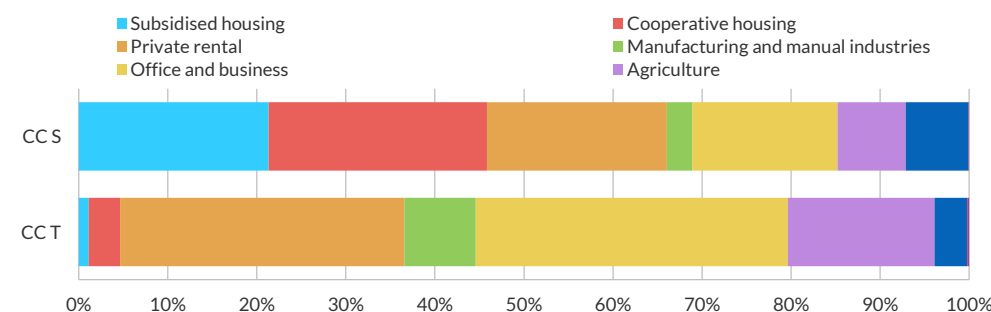
- Mixed Residential and Commercial Cover Pools: CCS is 66% composed of residential assets and 34% of commercial assets, while the respective exposures for CCT are 55% and 45%. Commercial loans within Realkredit cover pools are SME loans mainly in the retail, real estate and agriculture sectors.
- For the residential assets, Fitch has derived foreclosure frequency (FF) assumptions based on the analysis of vintage cumulative default data. The expected FF is 1% for the residential assets in CCS and 1.51% for CCT, to which Fitch has applied high rating scenario multiples to derive FF in each rating scenarios. This is due to the low cumulative defaults in the mild economic environment in Denmark. On recovery prospects, we give full credit to the automated valuation model used for regulatory purposes.
- Fitch differentiates between the social and cooperative housing segments and other commercial segments, given their very good historical performance. The expected annual average default rate for the performing commercial mortgage portfolio was set at 1.0% whereas that for the social and cooperative housing segment was set at 0.5%.
- The share of residential and commercial assets in the portfolios has remained stable. The main differentiating factors between the two pools are the loan interest rate type, the share of interest-only loans, as well as the share of commercial properties and of social and cooperative housing. This drives the difference in the credit results: the credit loss is lower for CCS, which is made of fixed rate loans and has a higher proportion of residential as well as amortising loans and loans to social and cooperative housing.

Cover Pool Composition (% of Total Cover Pool)



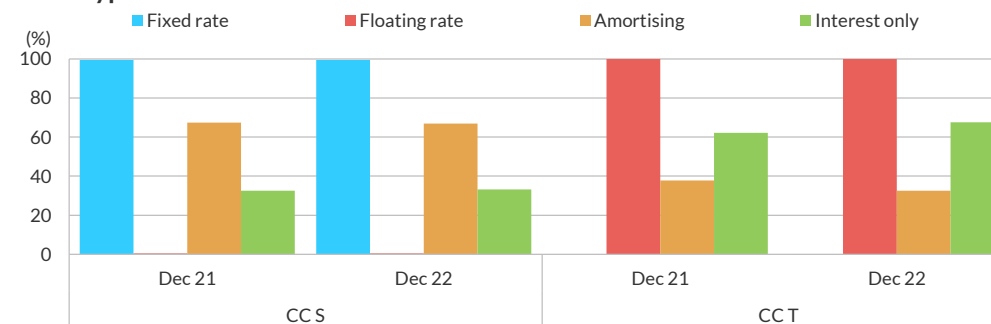
Source: Fitch Ratings, Realkredit

Industry Distribution (% Commercial Pool, 4Q22)



Source: Fitch Ratings, Realkredit

Loan Type



Source: Fitch Ratings, Realkredit

Break-Even Overcollateralisation – Peer Analysis

AAA Break-Even OC Components

Programme	ALM loss (%)	Credit loss (%)
CC S	-0.3	3.3
CC T	-0.8	4.4

Source: Fitch Ratings

Credit Loss

The credit loss component reflects the stressed credit loss derived by Fitch under its analysis of each cover pool in the 'AA+' timely payment rating level, which is the driving scenario for the 'AAA' break-even OC for both programmes. The floating rate characteristics of CC T's assets, along with its higher share of commercial assets and lower share of social and cooperative housing, results in a higher credit loss of 4.4% compared to 3.3% for CC S. The latter is the portfolio loss floor under Fitch's criteria, which is applied to address the idiosyncratic risks of low-risk portfolios.

ALM Loss

The balance principle of Danish mortgage bonds minimises interest rate, FX and liquidity risks. Notably, bonds issued out of CC T can be extended one year at a time, in case an interest rate or refinancing trigger is hit. Bonds in CC S have maturities that match that of the underlying assets. Fitch does not model a sale of assets in its cash flow analysis, but models the pass-through or maturity extension of bonds with these features in the event the bond refinancing post insolvency is not achieved. This results in low asset and liability management (ALM) losses for CC S and CC T, at minus 0.3% and minus 0.8% respectively.

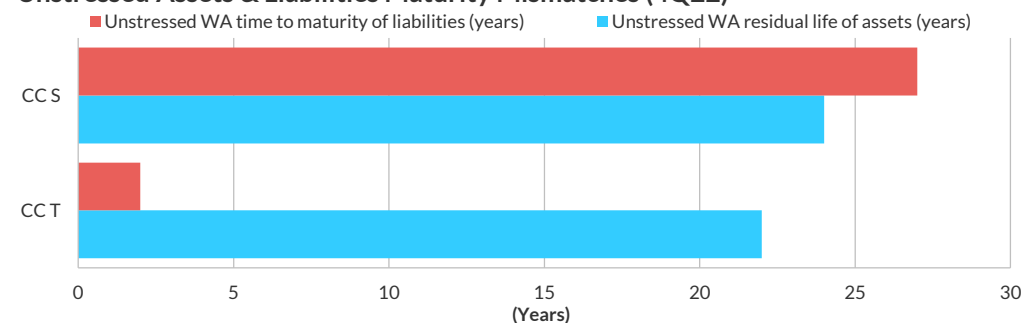
Loans in CC T have variable or interest-reset rates. These loans are funded by the issuance of bonds with shorter maturities than the loan terms, creating a refinancing need when they mature. The Weighted Average (WA) time to maturity of the bonds is therefore low in CC T at two years, compared to the WA time to maturity of the assets of 22 years.

Cash Flow Analysis Driving Scenarios

Programme	Driving prepayment scenario	Driving interest-rate scenario	Driving default timing scenario
CC S	High	Increasing	Quarter 1
CC T	High	Increasing	Quarter 1

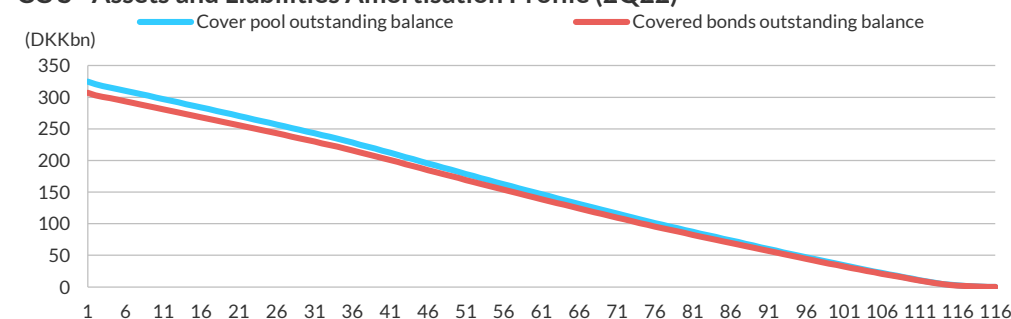
Source: Fitch Ratings

Unstressed Assets & Liabilities Maturity Mismatches (4Q22)



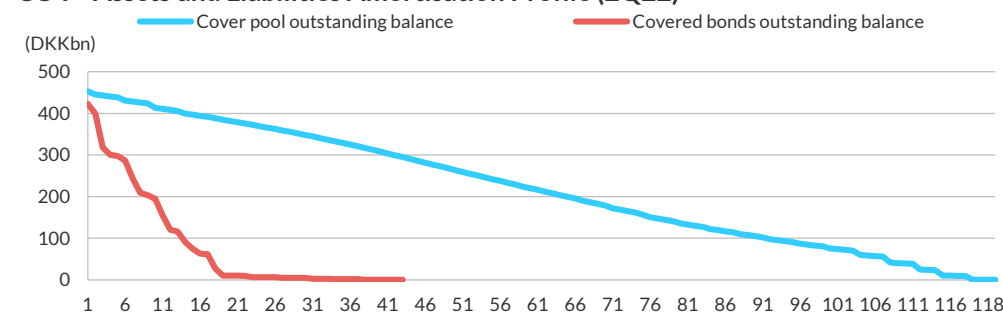
Source: Fitch Ratings, Realkredit

CC S - Assets and Liabilities Amortisation Profile (2Q22)



Source: Fitch Ratings

CC T - Assets and Liabilities Amortisation Profile (2Q22)



Source: Fitch Ratings

Resolution Uplift, PCU and Recovery Uplift – Peer Analysis

Continuity Uplift Assessment

Programme	Resolution uplift (notches)	PCU (notches)
CC S	0	6
CC T	0	6

Source: Fitch Ratings

Resolution Uplift

- Realkredit CC S and CC T programmes have been granted zero-notch resolution uplifts. This is because Realkredit is a specialised mortgage lender not operationally integrated into a parent bank and the bail-in tool is not applicable to specialised mortgage banks in Denmark.
- According to Fitch’s interpretation of the EU’s Bank Recovery and Resolution Directive (BRRD), specialised mortgage institutions that cannot receive deposits are not subject to the minimum requirement for own funds and eligible liabilities (MREL). Covered bonds issued by such institutions will be resolved in line with specific winding-down procedures under which they could bear losses. The Danish legislation specifies that the bail-in tool is not applicable to specialised mortgage institutions.
- The resolution uplift applies to programmes issued from jurisdictions with an advanced bank resolution regime that includes a bail-in tool for senior liabilities and from which fully collateralised covered bonds or secured debt are exempt. In addition, resolution must not result in the direct enforcement of the recourse against the cover pool.

PCU

- The six-notch PCU for both programmes reflects the liquidity protection in place for at least 12 months. The outstanding bonds in CC S have pass-through amortisation profiles, and more than 99% of the CC T bonds have an extendible maturity (12 month renewable). The remaining CC T bonds are hard-bullet and their redemptions are covered by liquid assets.
- The specific balance principle applied to these programmes allows for matching between the interest payments received from the mortgage borrowers and the interests due on the bonds. Another protection is the government bonds held for OC purposes (Danish government bonds rated ‘AAA’) which may be used to face short-term liquidity shortfalls in times of stress. They cover more than three months of interest due on the bonds for both programmes. The CC also includes other liquid assets in the form of Danish covered bonds, but for the purpose of the PCU assessment they are not given credit for the coverage of short-term payment interruption risk on a three-month horizon.

Recovery Uplift Assessment

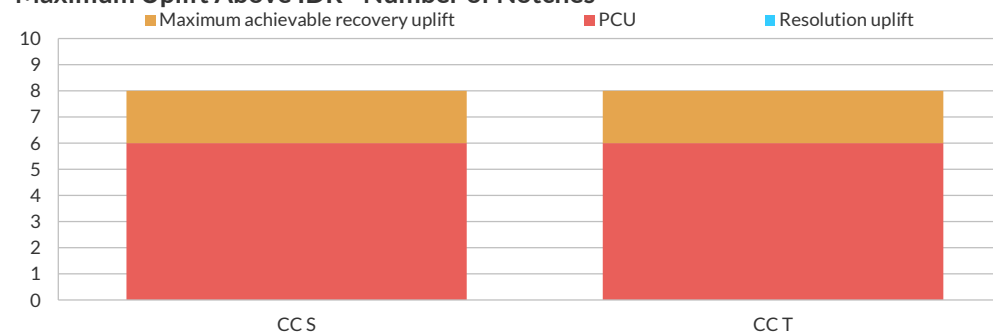
Programme	CVB rating	Credit loss (%) in CVB rating stress scenario	OC (%) Fitch relies upon in its analysis	Maximum achievable recovery uplift (notches)
CC S	AAA	3.3	5.7	2
CC T	AAA	4.4	6.4	2

Source: Fitch Ratings

Recovery Uplift

- The recovery uplift granted for both programmes is two notches as we expect the covered bonds to benefit from outstanding recoveries in the event of default. This is because no material risks to these recovery expectations were identified and the timely payment rating level is in the investment-grade range.
- In addition, both programmes contain standard assets in the form of residential and commercial mortgages, allowing for the maximum recovery uplift under Fitch criteria.

Maximum Uplift Above IDR - Number of Notches



Source: Fitch Ratings

ESG Considerations

ESG Relevance Scores Recap

		CCS	CCT
Environmental (E)	GHG emissions & air quality	2	2
	Energy management	1	1
	Water & wastewater management	1	1
	Waste & hazardous materials management; ecological impacts	2	2
	Exposure to environmental impacts	2	2
Social (S)	Human rights, community relations, access & affordability	2	2
	Customer welfare – fair messaging, privacy & data security	3	3
	Labour relations & practices	1	1
	Employee wellbeing	1	1
	Exposure to social impacts	3	3
Governance (G)	Rule of Law, institutional and regulatory quality	3	3
	Transaction & collateral structure	3	3
	Transaction parties & operational risk	3	3
	Data transparency & privacy	3	3

Source: Fitch Ratings

Credit-Relevant ESG Scale - Definitions

How relevant are E, S and G issues to the overall credit rating?

5	Highly relevant; a key transaction or programme rating driver that has a significant impact on an individual basis
4	Relevant to transaction or programme ratings; not a key rating driver but has an impact on the ratings in combination with other factors
3	Minimally relevant to ratings; either very low impact or actively mitigated in a way that results in no impact on the transaction or programme ratings
2	Irrelevant to the transaction or programme ratings; relevant to the sector
1	Irrelevant to the transaction or programme ratings; irrelevant to the sector

Source: Fitch Ratings

ESG Considerations

The highest level of ESG credit relevance is typically a score of 3 - ESG issues are credit neutral or have only a minimal credit impact on the programme, either due to their nature or the way in which they are being managed by the issuer. For CC S and CC T, Fitch assigned a maximum ESG relevance score of 3.

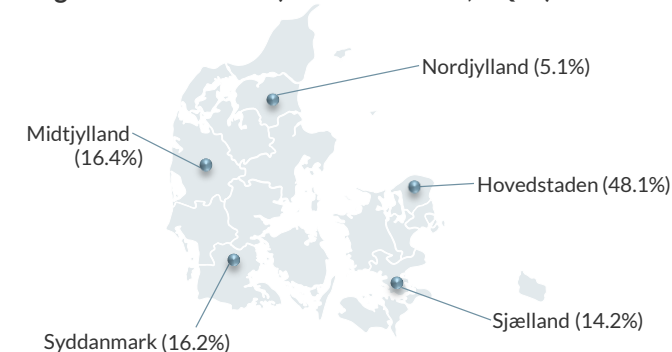
For more information on our ESG Relevance Scores, visit www.fitchratings.com/esg.

Appendix 1A – Focus on CC S

Programme Structure

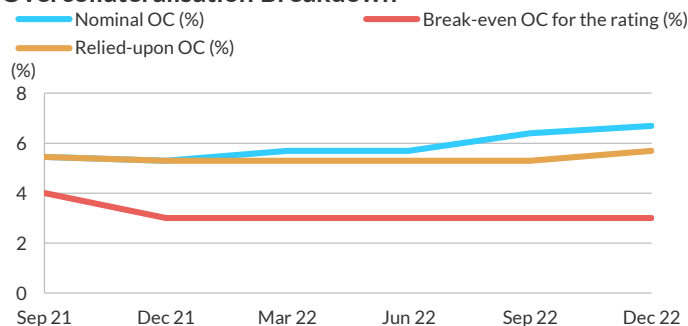
- Key Rating Drivers:** The 'AAA' rating of the covered bonds is based on Realkredit Danmark A/S's IDR of 'A', a PCU of six notches, a two-notch recovery uplift and the OC Fitch relies upon of 5.7%, which provides more protection than the 'AAA' break-even OC of 3%. The Stable Outlook on the rating reflects the Outlook on Realkredit's IDR and the three-notch buffer against an IDR downgrade due to the different uplift factors above the bank's IDR.
- Cover Pool Composition:** The covered bonds are secured by mostly fixed rate Danish residential and commercial loans that are geographically diversified within Denmark. At end-December 2022, total cover assets stood at DKK299.6 billion (including substitute assets) with a weighted average (WA) seasoning of 13.2 years.
- Rating Sensitivities:** The 'AAA' rating of Realkredit's CC S mortgage covered bonds would be vulnerable to a downgrade if Realkredit's Long-Term IDR was downgraded by four notches to 'BBB-' or below, or the level of OC Fitch gives credit to in its analysis falls below the 'AAA' break-even OC of 3%. If the relied-upon OC decreased to the legal minimum of 8% (of risk-weighted assets), we would downgrade the covered bonds to 'A+', one notch above the bank's IDR.

Regional Distribution (% of total assets, 4Q22)



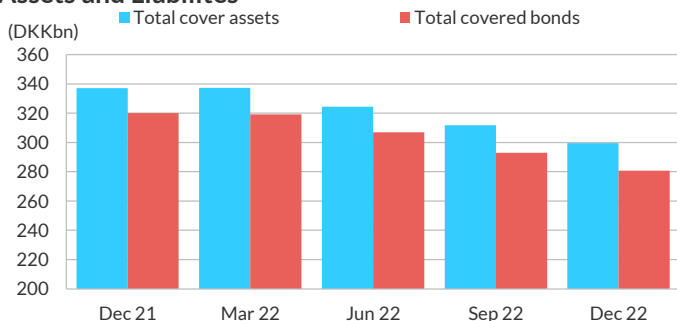
Source: Fitch Ratings, Realkredit

Overcollateralisation Breakdown



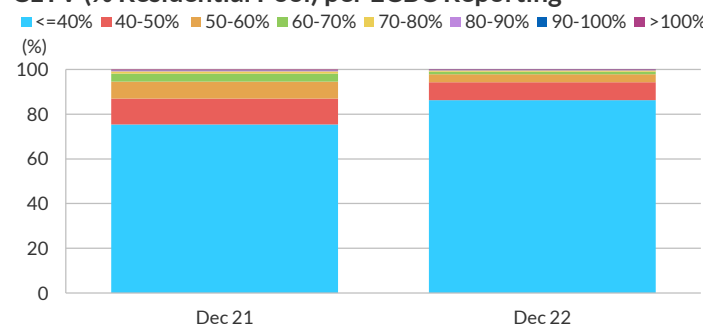
Source: Fitch Ratings, Realkredit

Assets and Liabilities



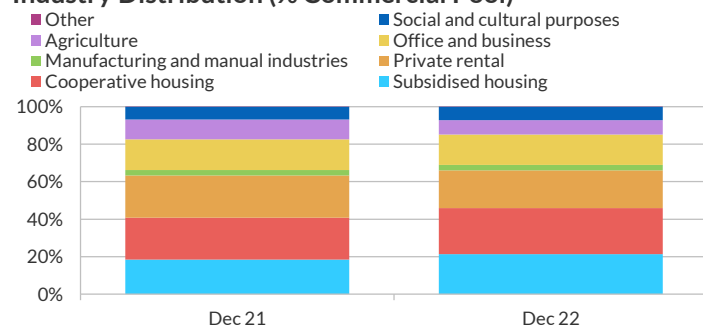
Source: Fitch Ratings, Realkredit

CLTV (% Residential Pool) per ECBC Reporting



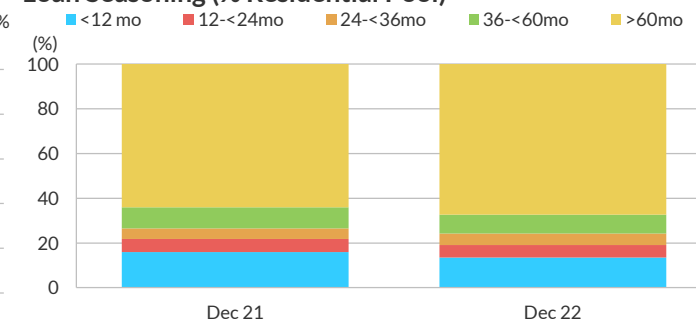
Source: Fitch Ratings, Realkredit

Industry Distribution (% Commercial Pool)



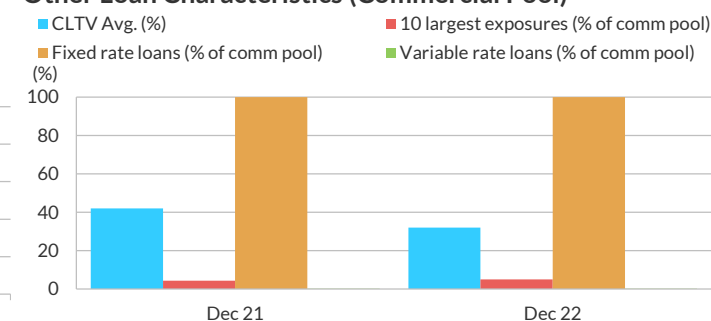
Source: Fitch Ratings, Realkredit

Loan Seasoning (% Residential Pool)



Source: Fitch Ratings, Realkredit

Other Loan Characteristics (Commercial Pool)



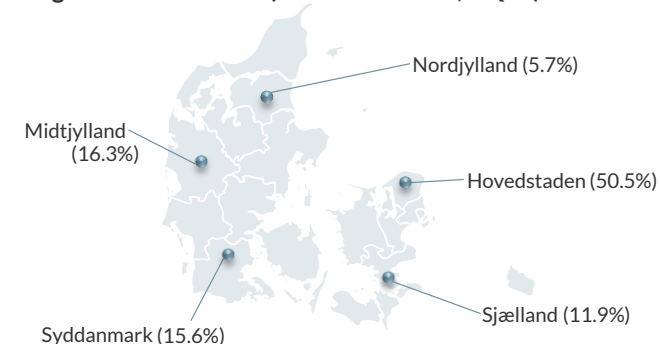
Source: Fitch Ratings, Realkredit

Appendix 1B – Focus on CC T

Programme Structure

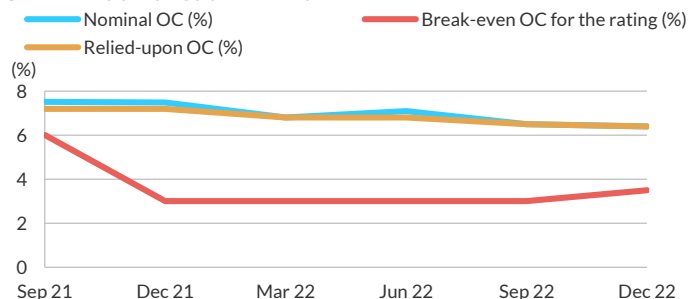
- Key Rating Drivers:** The 'AAA' rating of the covered bonds is based on Realkredit Danmark A/S's IDR of 'A', a PCU of six notches, a two-notch recovery uplift and the OC Fitch relies on of 6.4%, which provides more protection than the 'AAA' break-even OC of 3.5%. The Stable Outlook on the rating reflects the Outlook on Realkredit's IDR and the three-notch buffer against an IDR downgrade due to the different uplift factors above the bank's IDR.
- Cover Pool Composition:** The covered bonds are secured by mostly variable rate or interest-reset Danish residential and commercial loans that are geographically diversified within Denmark. At end-December 2022, total cover assets stood at DKK471.7 billion (including substitute assets) with a weighted average (WA) seasoning of 12.1 years.
- Rating Sensitivities:** The 'AAA' rating of Realkredit's CC T mortgage covered bonds would be vulnerable to a downgrade if Realkredit's Long-Term IDR was downgraded by four notches to 'BBB-' or below, or the level of OC Fitch gives credit to in its analysis falls below the 'AAA' break-even OC of 3.5%. If the relied-upon OC decreased to the legal minimum of 8% (of risk-weighted assets), we would downgrade the covered bonds to 'A+', one notch above the bank's IDR.

Regional Distribution (% of total assets, 4Q22)



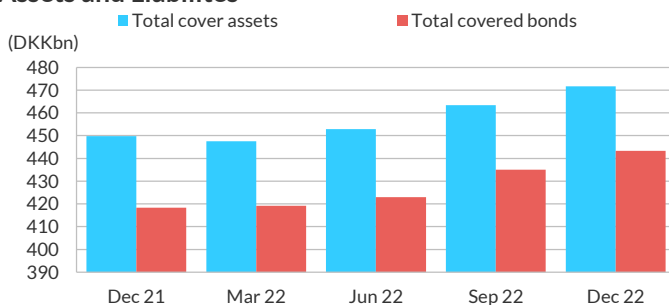
Source: Fitch Ratings, Realkredit

Overcollateralisation Breakdown



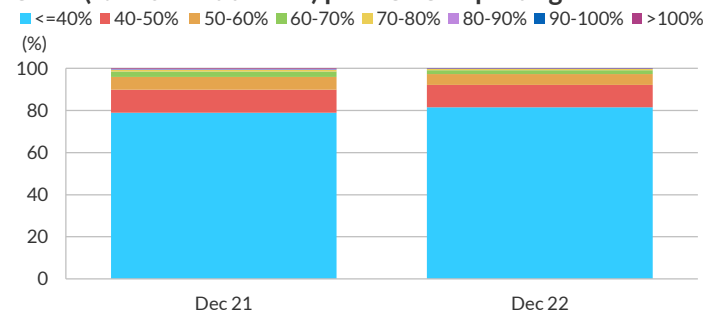
Source: Fitch Ratings, Realkredit

Assets and Liabilities



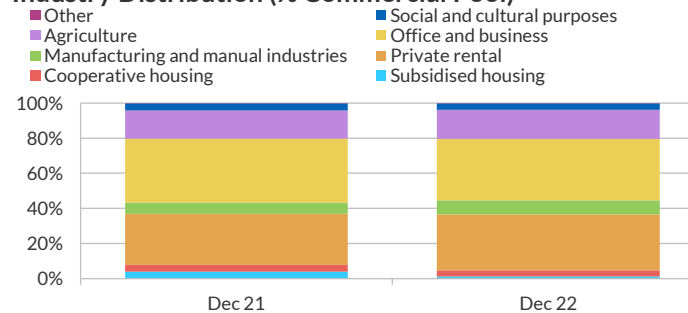
Source: Fitch Ratings, Realkredit

CLTV (% Residential Pool) per ECBC Reporting



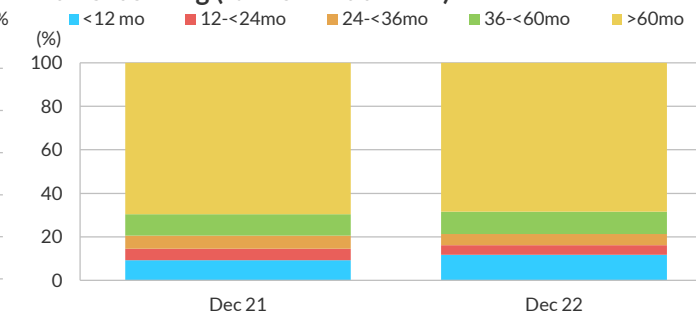
Source: Fitch Ratings, Realkredit

Industry Distribution (% Commercial Pool)



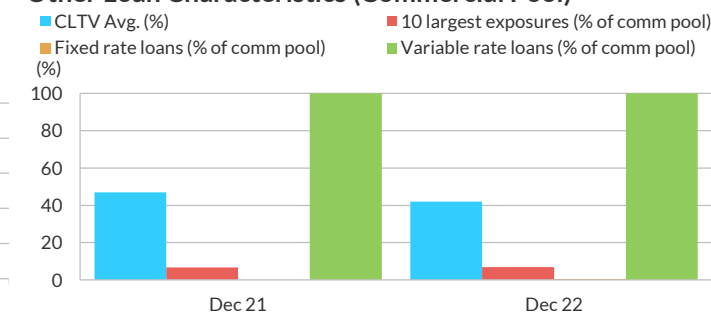
Source: Fitch Ratings, Realkredit

Loan Seasoning (% Residential Pool)



Source: Fitch Ratings, Realkredit

Other Loan Characteristics (Commercial Pool)



Source: Fitch Ratings, Realkredit

Appendix 2 – Summary of Applicable Covered Bonds Legislation

Items	Description
Basis of the framework	Danish covered bond legislation, 2007.
Issuer type	There are three types of Danish covered bonds: <ul style="list-style-type: none"> • Realkreditobligationer (RO): oldest type of bond, issued by mortgage banks only, UCITS-compliant, but not Capital Requirements Regulation (CRR)-compliant if issued after 31 December 2007 • Særligt Dækkede Realkreditobligationer (SDRO): issued by mortgage banks only, both UCITS- and CRR-compliant, a minimum OC of 8% of risk-weighted assets applies. • Særligt Dækkede Obligationer (SDO): implemented in 2007 following changes in legislation, can be issued by both commercial banks and mortgage banks, both UCITS- and CRR-compliant; a minimum OC of 8% of risk-weighted assets applies (only to mortgage bank issuers).
Dual recourse	To the assets of the capital centre (including OC) in the case of mortgage banks. To the issuer and, post-insolvency, to the insolvency estate of the issuer, before other creditors for specialised mortgage banks or pari passu with other senior creditors for commercial banks.
Segregation	Assets used to cover the bonds have to be segregated into independent cover pools referred to as capital centres for mortgage banks and cover registers for commercial banks.
Minimum overcollateralisation	Through the transposition of the harmonisation of the covered bond directive, Danish legislation now specifies an OC requirement of 2%. In addition, capital requirements have to be fulfilled at the capital centre level and at the institution level, and translate into a mandatory OC level of at least 8% of risk-weighted assets. The OC can be funded by equity and senior debt. In practice, it is mostly invested in securities.
Cover assets	<ul style="list-style-type: none"> • Loans granted against mortgages on real property; • Exposure to public authorities: <ul style="list-style-type: none"> – bonds and debt issued by or guaranteed by central government, central banks, public entities, and regional and local authorities in the EU/EEA; – bonds and debt issued by or guaranteed by multilateral development banks or international organisations if risk-weighted 0% (or risk-weighted 20%, provided they do not exceed 15% of the outstanding covered bonds). • Bonds and debt issued by credit institutions if risk-weighted 20%, provided they do not exceed 15% of the outstanding covered bonds; • Mortgages on ships (only for commercial banks; a register may not include assets secured on both real estate and ships); • Other assets eligible for covered bonds financing according to the Capital Requirements Directive if allowed by the Danish Financial Services Authority (FSA); • In practice, the majority of supplementary collateral is made of exposure to public authorities and covered bonds.
Maximum LTV limits for the cover test	<ul style="list-style-type: none"> • ≤ 80% for residential real-estate loans with up to 30 years' maturity and 10 years' interest-only period; • ≤ 75% for residential real-estate loans with up to 30-year interest-only period and for holiday real-estate loans; • ≤ 60% for commercial, agricultural and real-estate loans for commercial use. In some cases, the LTV requirement can be increased to 70% if the bank adds additional collateral.
Eligibility of loans with LTVs higher than the maximum thresholds	Eligible, but the part of mortgage loan above the limit is excluded from the calculation of the over-collateralisation (for SDROs and SDOs only).
Balance principle or matched funding	Intended to ensure a close connection between the cash flow received from the borrowers and the cash flow due to the bondholders.
Treatment of swap counterparties	Derivative counterparties rank pari passu with covered bondholders when derivative contracts are concluded with the purpose of hedging cash flows between assets and liabilities.
Supervision	The Danish FSA
Cover pool administrator	An administrator (trustee) will be appointed by the Danish FSA upon or prior to insolvency of the mortgage lender. The administrator has the power to sell cover pool assets, take out loans and enter into repo agreements on behalf of the cover pool in order to make timely payment on covered bond obligations. This would facilitate actions the alternative manager may seek to take in meeting obligations.

Source: Fitch Ratings

Appendix 3 – Related Research & Definitions of Terms Used

Related Research

Details of the latest rating action for the programmes and the applicable criteria can be found in the following publications:

[Fitch Affirms Realkredit Danmark's CC S and CC T Covered Bonds at 'AAA' \(November 2022\)](#)

[Covered Bonds Rating Criteria \(November 2022\)](#)

[Originator-Specific Residential Mortgage Analysis Rating Criteria \(October 2022\)](#)

[European RMBS Rating Criteria \(February 2023\)](#)

[SME Balance Sheet Securitisation Rating Criteria \(October 2021\)](#)

Related Covered-Bonds Specific Research

[Covered Bonds Surveillance Snapshot - 4Q22 \(January 2023\)](#)

[Covered Bonds 2023 Sector Outlook Neutral Despite Asset Deterioration \(December 2022\)](#)

[Global Housing and Mortgage Outlook - 2023 \(December 2022\)](#)

[Covered Bonds Protection Dashboard \(December 2022\)](#)

Definitions of Terms Used

CVB	Covered Bonds
LT IDR	Long Term Issuer Default Rating
RRP	Resolution Reference Point
PCU	Payment Continuity Uplift
WA	Weighted Average
WAL	Weighted Average Life
OC	Overcollateralisation
LTV	Loan-to-value
DTI	Debt-to-Income
RO	Realkreditobligationer
SDRO	Særligt Dækkede Realkreditobligationer
SDO	Særligt Dækkede Obligationer
FSA	Danish Financial Services Authority
CRR	Capital Requirements Regulation
CC S	Realkredit Danmark A/S - SDRO Capital Centre S
CC T	Realkredit Danmark A/S - SDRO Capital Centre T
ECBC	The European Covered Bonds Council

Source: Fitch Ratings

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