

# Danske Bank AS's Mortgage Pools D and I Covered Bond Programmes – Peer Review

**Four-Notch Downgrade Buffers:** The 'AAA'/Stable ratings of Danske Bank A/S's (A/Stable/F1) mortgage covered bonds issued out of cover pool D (Danske D) and cover pool I (Danske I) are based on Danske's Long-Term Issuer Default Rating (LT IDR) of 'A', the overcollateralisation maintained by the issuer (for these programmes Fitch gives credit to the lowest level of the last 12 months), and the various uplifts above the IDR granted to the programmes. These provide a four-notch buffer against an IDR downgrade to maintain the covered bonds' ratings.

**Credit Loss Driven by Minimum Loss Assumption:** The Danish (D pool) and Norwegian (I pool) residential mortgage loans granted by Danske historically have very good performance in terms of defaults. The cover assets also have low loan-to-value ratios, such that the modelled credit loss is driven by the minimum loss floor (3.2% at AA+) in Fitch Ratings' criteria. The minimum loss is applied to address idiosyncratic risks of portfolios with strong credit profiles.

**ALM Loss Driven by Asset Margin:** The asset and liability mismatch (ALM) loss component, which represents the non-credit loss component of the break-even OC for the ratings and reflects the programmes' interest and maturity mismatches, is modelled at 3.2% for Danske I and 0.6% for Danske D. The higher ALM loss for Danske I is due to the lower asset margin on Norwegian assets, as well as the slightly larger maturity mismatches for this programme.

**Danske I's PCU Increased to Six Notches:** The covered bonds benefit from a 12-month principal maturity extension and three-month protection for interest payment. The PCU for Danske I was increased to six notches from five following changes to Denmark's covered bonds law that implemented the Covered Bonds Directive, effective from July 2022. The changes clarify the conditions for maturity extension, giving comfort that the full extension period will be used to find a refinancing solution. The changes are only applicable after a new bond is issued out of the programme. A similar PCU increase will apply to Danske D when a new bond issuance takes place.

**Higher Recovery Uplift for Danske D:** The recovery uplift for cover pool D is two notches. This is because Fitch considers the Danish krone's peg to the euro a mitigating factor to the significant pre-swap foreign-exchange (FX) mismatches between krone-denominated cover assets and euro-denominated liabilities.

The recovery uplift for cover pool I remains capped at one notch due to significant pre-swap FX mismatches between cover assets and liabilities. The FX covered bonds are fully hedged until maturity (including the extension period). However, on a covered bond default, recoveries from the Norwegian krone-denominated assets, which have a longer weighted average life than the covered bonds, could expose holders of non-Norwegian krone-denominated bonds to FX risk.

## Key Rating Drivers

Programme	Danske Bank A/S, Mortgage SDO - Cover Pool D (Danske D)	Danske Bank A/S, Mortgage SDO - Cover Pool I (Danske I)
LT IDR	A	A
Resolution Uplift (notches)	2	2
PCU (notches)	5	6
Timely payment rating level	AA	AA+
Recovery uplift (notches)	2	1
Covered bond (CVB) rating	AAA	AAA
CVB Outlook	Stable	Stable
Buffer against IDR downgrade	4	4
Break-even OC for rating (%)	4	6.5
OC Fitch relies upon (%)	6.7	12.1

Source: Fitch Ratings

## Break-Even OC for Covered Bonds Rating



Source: Fitch Ratings



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## Cover Pool – Peer Analysis

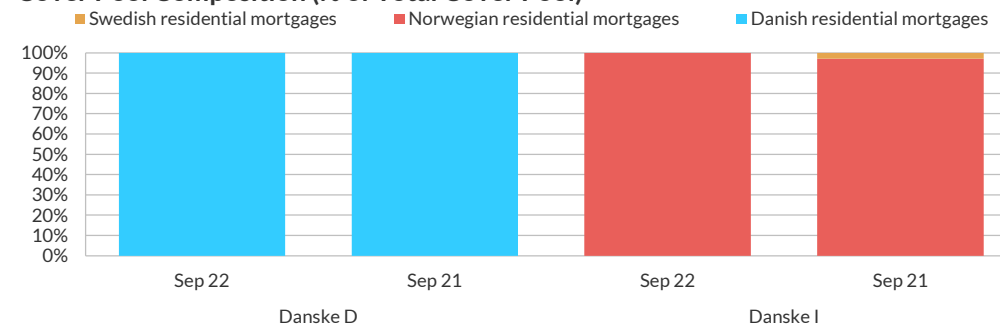
### Cover Assets Credit Analysis

	Danske D	Danske I
Covered bonds rating	AAA	AAA
Rating default rate (RDR) for rating (%)	8.5	8.5
Rating recovery rate (RRR) for rating (%)	52.7	53.1
Rating loss rate (RDR*(1-RRR) for rating (%)	4.0	4.0
'B' case loss rate (%)	0.4	0.4

Source: Fitch Ratings

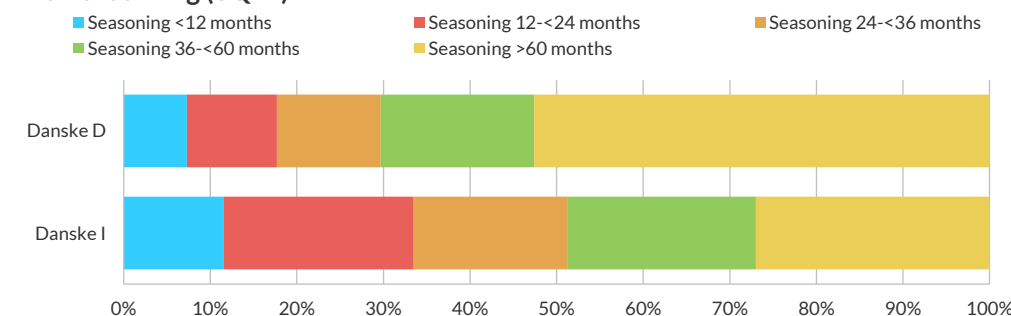
- The Danske D cover pool comprised 100% Danish residential assets, while Danske I now contains 100% Norwegian residential assets. Since 2016, Danske's strategy has been to steadily turn Danske I into a pool consisting of Norwegian assets only. Swedish loans, which were originally included, were gradually transferred out of the cover pool, with all bonds issued out of Cover Pool I now hedged to Norwegian krone.
- Fitch determines an expected-case foreclosure frequency (FF) for each programme based on the historical performance data provided by Danske. Due to low default volumes and the mild economic environments in Denmark and Norway, Fitch applies an FF floor of 1% to the two countries and high rating scenario multipliers. This leads to a 'AAA' WA FF of 8.5% for both programmes.
- The recovery expectations of the cover pools are based on the automated valuation model for property values used by the issuer for regulatory purposes. Due to low weighted average loan-to-values (WA LTV) in the pools, the credit loss is driven by the minimum loss floor in line with Fitch's criteria, which is applied to address the idiosyncratic risks of low-risk portfolios. The driving 'AA+' minimum loss assumption of 3.2% for both programmes translates into the 'AA+' break-even OC credit loss component of 3.3%.
- Danske D is made up of Danish variable rate and short-term fixed rate mortgage loans. The cover assets are well seasoned (8.3 years) with a low WA LTV of 44%.
- The Norwegian assets of Danske I consist of floating-rate mortgages and loans with short-term fixing (between three and five years) that revert to floating unless they are re-fixed.

### Cover Pool Composition (% of Total Cover Pool)



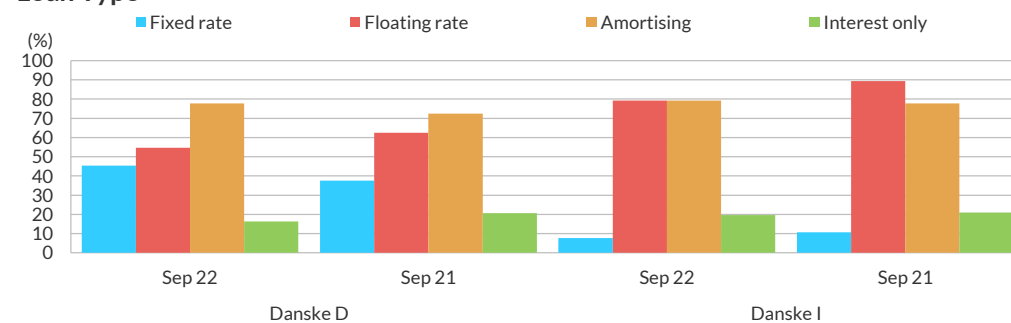
Source: Fitch Ratings, Danske Bank

### Loan Seasoning (3Q22)



Source: Fitch Ratings, Danske Bank

### Loan Type



Source: Fitch Ratings, Danske Bank

## Break-Even Overcollateralisation – Peer Analysis

### AAA Break-Even OC Components

Programme	ALM loss (%)	Credit loss (%)
Danske D	0.6	3.3
Danske I	3.2	3.3

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 levels, which are the driving scenarios for the 'AAA' break-even OC.

### ALM Loss

The Danske I programme has a higher ALM loss component than Danske D (3.2% versus 0.6% respectively). This can be attributed to the following factors:

- The WA residual life of assets for Danske I (22.3 years) is higher than that of Danske D (20.6 years). At the same time, the WA time to maturity of liabilities is lower for Danske I (2.7 years) than for Danske D (3.1 years)
- WA loan margins are lower for Norwegian assets in Danske I than for the Danish assets in Danske D. The ALM loss component is highly sensitive to changes in asset margins, which are the main source of excess spread for the programmes.

In Fitch's cash flow modelling, the lowest weighted-average asset margin observed in the pool over the last 12 months is subject to a haircut of 40bp for the first 12 months and a haircut of 15bp thereafter, and to a floor and cap of 100bp and 200bp, respectively.

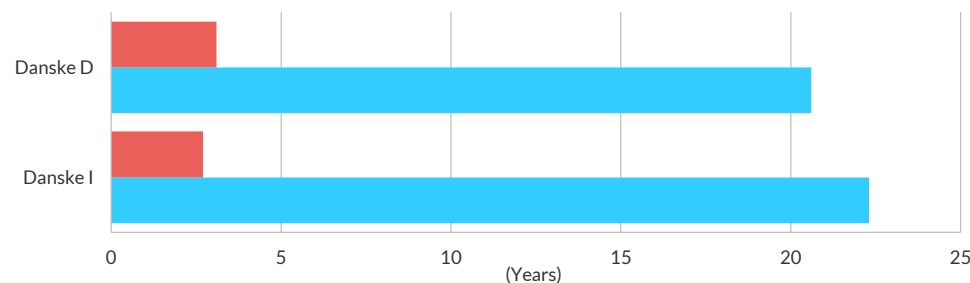
### Cash Flow Analysis Driving Scenarios

Programme	Driving prepayment scenario	Driving interest-rate scenario	Driving default timing scenario
Danske D	Low	Decreasing	Quarter 6
Danske I	Low	Decreasing	Quarter 6

Source: Fitch Ratings

### Unstressed Assets & Liabilities Maturity Mismatches (3Q22)

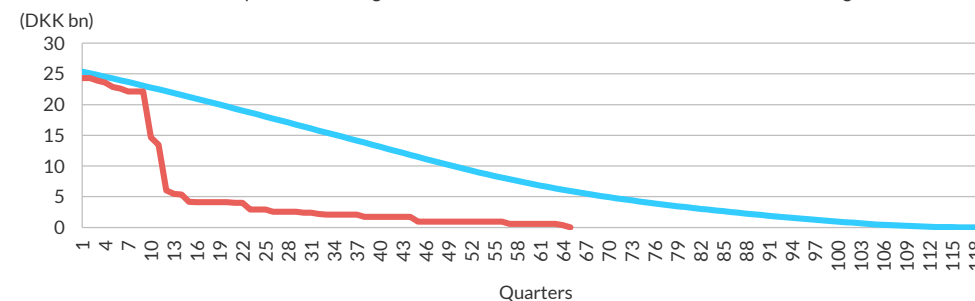
■ Unstressed WA time to maturity of liabilities (years) ■ Unstressed WA residual life of assets (years)



Source: Fitch Ratings, Danske Bank

### Danske D - Assets and Liabilities Amortisation Profile (2Q22)

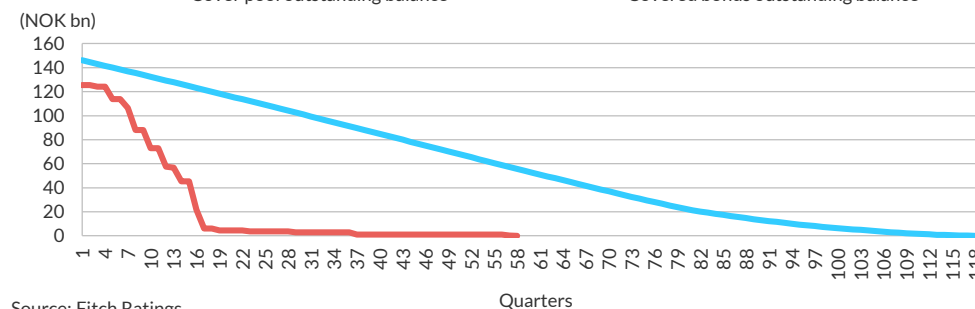
■ Cover pool outstanding balance ■ Covered bonds outstanding balance



Source: Fitch Ratings

### Danske I - Assets and Liabilities Amortisation Profile (2Q22)

■ Cover pool outstanding balance ■ Covered bonds outstanding balance



Source: Fitch Ratings

## Resolution Uplift, PCU and Recovery Uplift – Peer Analysis

### Continuity Uplift Assessment

Programme	Resolution uplift (notches)	PCU (notches)
Danske D	2	5
Danske I	2	6

Source: Fitch Ratings

### Resolution Uplift

- The two-notch resolution uplift of each programme reflects the fact that covered bonds issued by commercial banks in Denmark are exempt from bail-in.
- The risk of under-collateralisation at the point of resolution is sufficiently low in Fitch’s view because the issuer has to ascertain the pool includes sufficient collateral to compensate for a decrease in the collateral value securing each loan when the lower collateral value leads to a breach in LTV thresholds established by financial legislation.
- In addition, Danske bank has unencumbered eligible assets to replenish the cover pool if needed to meet the legislative requirement that the value of the cover pool must be higher than that of the covered bonds at all times. Also, once an administrator has been appointed, even prior to issuer insolvency, the issuing bank is required to ensure the value of the assets in the cover pool is sufficient and the administrator may require the issuing bank to provide further assets.

### Payment Continuity Uplift (PCU)

- Fitch’s PCU for Danske’s I programme is six notches, reflecting mortgage covered bonds with a 12-month principal maturity extension and three-month protection for interest payments. Changes to Denmark’s covered bonds law, which took effect from July 2022, have clarified how and when maturities could be extended. The changes are only applicable after a new bond is issued under the cover pool register after the effective date of the directive. As Danske has issued a new bond under cover pool I since, Fitch’s PCU has increased to six notches from five previously.
- The PCU for Danske’s D programme remains five notches until a new issuance is made from the programme. This is because we believe that, until the new legislation takes effect, there is a risk that the extension does not coincide with the appointment of an alternative manager in charge of making decisions for timely payment. A delay in the appointment of a manager could therefore reduce the time available for refinancing part of the cover pool.

### Recovery Uplift Assessment

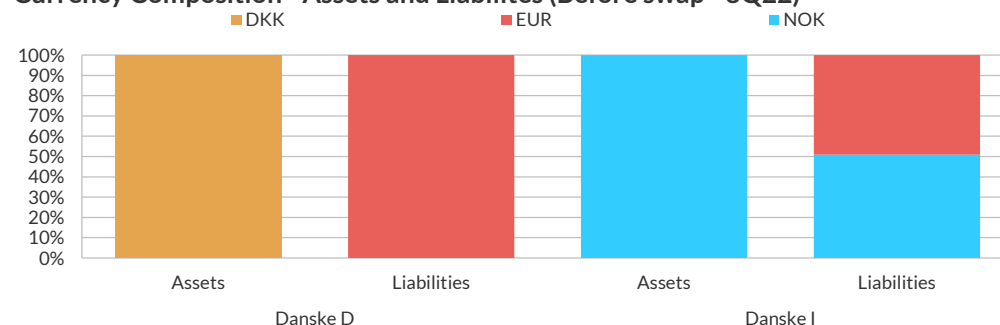
Programme	CVB rating	Credit loss (%) in timely payment rating level	OC (%) Fitch relies upon in its analysis	Maximum achievable recovery uplift (notches)
Danske D	AAA	3.3	6.7	2
Danske I	AAA	3.3	12.1	1

Source: Fitch Ratings

### Recovery Uplift

- The recovery uplift assigned to Danske D is two notches as Fitch expects the covered bonds to experience outstanding recoveries in the event of default. The agency considers the Danish krone peg to the euro a mitigating factor to the presence of significant pre-swap foreign-exchange (FX) mismatches between Danish krone-denominated cover assets and euro-denominated liabilities.
- The recovery uplift assigned to Danske I is capped at one notch due to the presence of significant pre-swap FX mismatches between cover assets and liabilities. The FX-covered bonds are fully hedged until maturity (including the extension period), but upon a covered bond default, recoveries from Norwegian krone-denominated assets, which have a longer weighted average life than the covered bonds, could expose holders of non-Norwegian krone-denominated bonds to FX risk.

### Currency Composition - Assets and Liabilities (Before swap - 3Q22)



Source: Fitch Ratings, Danske Bank

## ESG Considerations

### ESG Relevance Scores Recap

	Danske D	Danske I	
Environmental (E)	GHG emissions & air quality	1	1
	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 Danske D and Danske I, Fitch assigned a maximum ESG relevance score of 3.

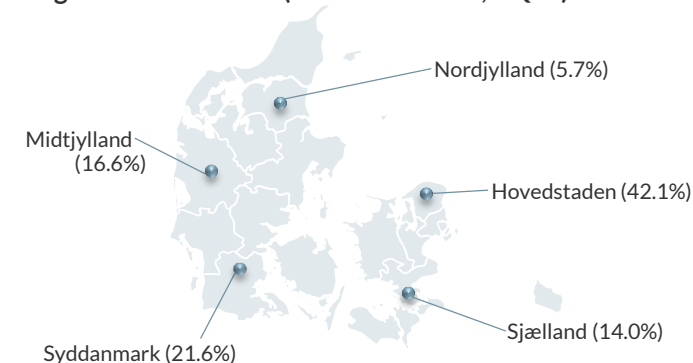
For more information on our ESG Relevance Scores, visit [www.fitchratings.com/esg](http://www.fitchratings.com/esg)

## Appendix 1A – Danske D

### Programme Structure

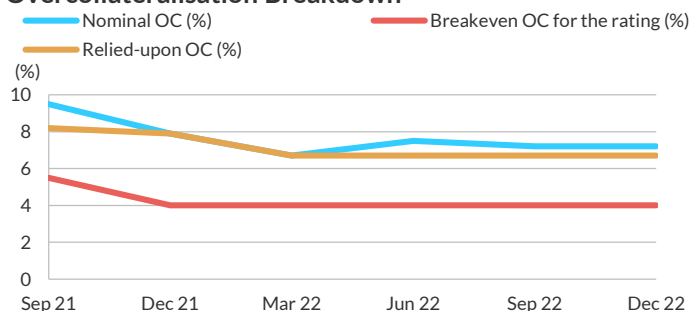
- Key Rating Drivers:** The 'AAA' rating of the covered bonds is based on Danske Bank A/S's IDR of 'A', a resolution uplift of two notches, a PCU of five notches, a two-notch recovery uplift and the OC Fitch relies upon of 6.7%, which provides more protection than the 'AAA' break-even OC of 4%. The Stable Outlook on the rating reflects the four-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 100% Danish residential loans that are geographically diversified within Denmark. At end-September 2022, total cover assets stood at DKK25.5 billion with a weighted average current loan-to-value (WA CLTV) of 44% and a WA seasoning of 8.3 years.
- Rating Sensitivities:** The 'AAA' rating of Danske's cover pool D mortgage covered bonds would be vulnerable to a downgrade if Danske's Long-Term IDR was downgraded by five notches to 'BB+' or below, or if the level of OC Fitch gives credit to in its analysis fell below the 'AAA' break-even OC of 4%. If the actual OC is reduced to the legal minimum of 2% (in line with the new legislation), the covered bonds would be downgraded to 'AA', three notches above the bank's Long-Term IDR.

### Regional Distribution (% of total assets, 3Q22)



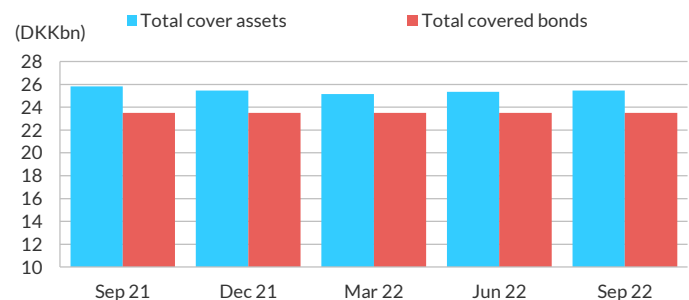
Source: Fitch Ratings, Danske Bank

### Overcollateralisation Breakdown



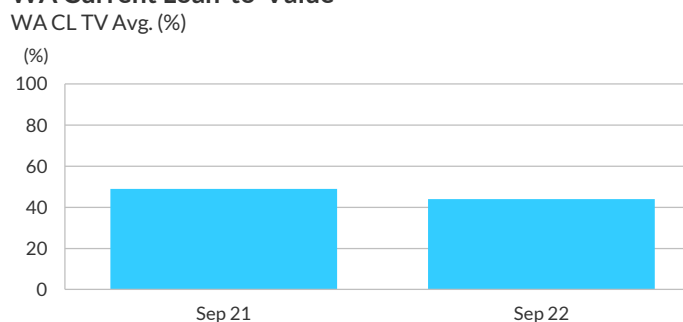
Source: Fitch Ratings, Danske Bank

### Assets and Liabilities



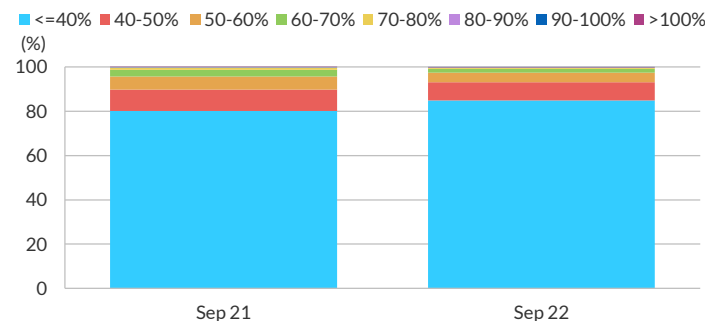
Source: Fitch Ratings, Danske Bank

### WA Current Loan-to-Value



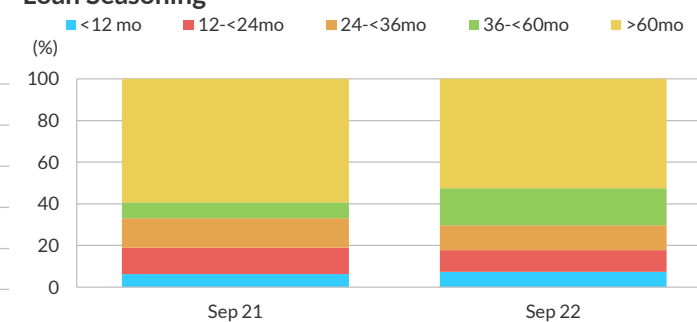
Source: Fitch Ratings, Danske Bank

### CLTV Buckets



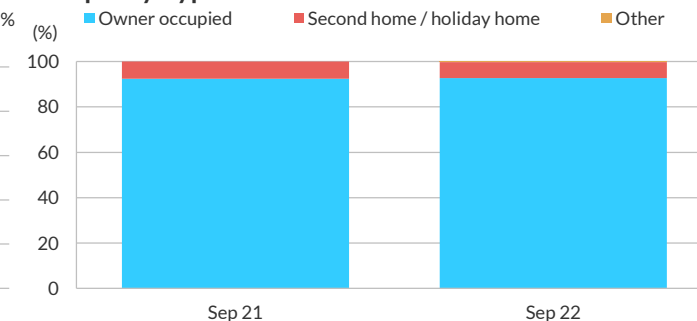
Source: Fitch Ratings, Danske Bank

### Loan Seasoning



Source: Fitch Ratings, Danske Bank

### Occupancy Type



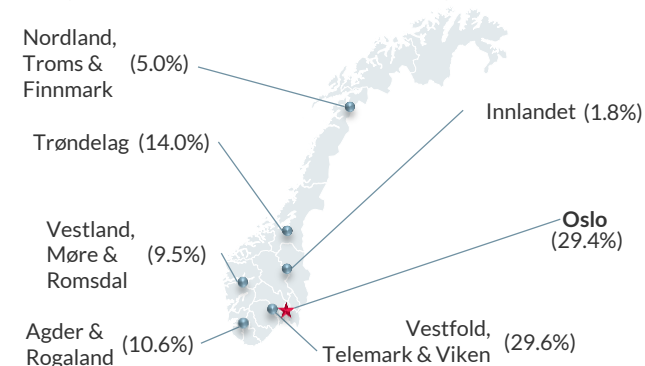
Source: Fitch Ratings, Danske Bank

## Appendix 1B – Danske I

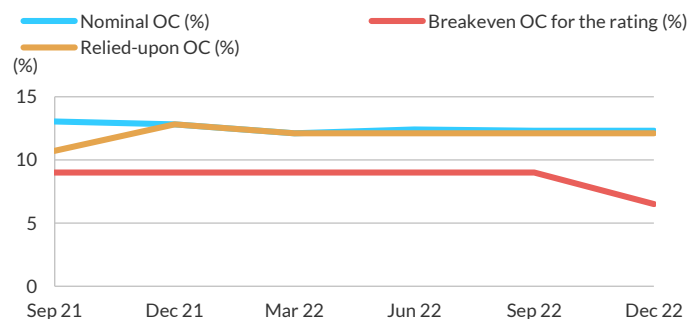
### Programme Structure

- Key Rating Drivers:** The 'AAA' rating of the covered bonds is based on Danske Bank A/S's IDR of 'A', a resolution uplift of two notches, a PCU of six notches, a one-notch recovery uplift and the OC Fitch relies upon of 12.1%, which provides more protection than the 'AAA' break-even OC of 6.5%. The Stable Outlook on the rating reflects the four-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 Norwegian residential loans that are geographically diversified within Norway. At end-September 2022, total cover assets stood at DKK120.8 billion with a weighted average current loan-to-value (WA CLTV) of 52% and a WA seasoning of 4.1 years.
- Rating Sensitivities:** The 'AAA' rating of Danske's cover pool I mortgage covered bonds would be vulnerable to a downgrade if Danske's Long-Term IDR was downgraded by five notches to 'BB+' or below, or the level of overcollateralisation (OC) Fitch gives credit to in its analysis fell below the 'AAA' break-even OC of 6.5%. If the actual OC was reduced to the legal minimum of 2%, the covered bonds would be downgraded to 'AA', three notches above the bank's Long-Term IDR.

### Regional Distribution (% of Norwegian pool, 3Q22)

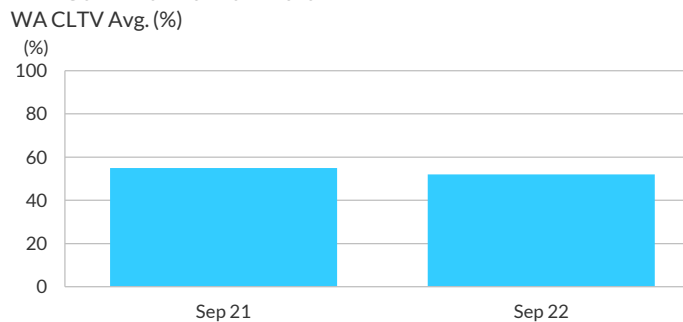


### Overcollateralisation Breakdown



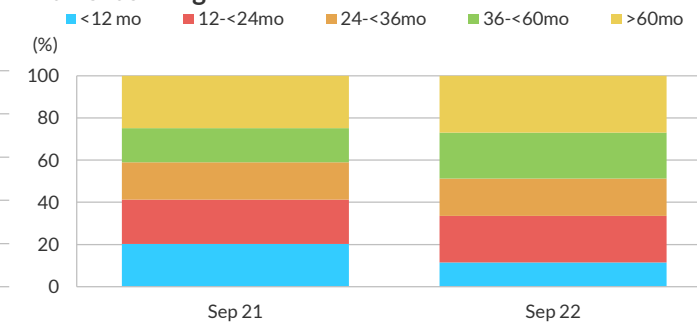
Source: Fitch Ratings, Danske Bank

### WA Current Loan-to-Value



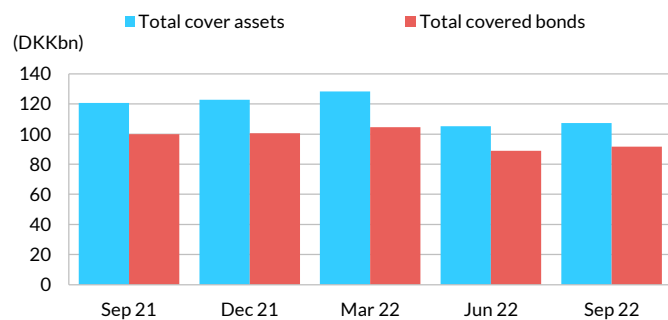
Source: Fitch Ratings, Danske Bank

### Loan Seasoning



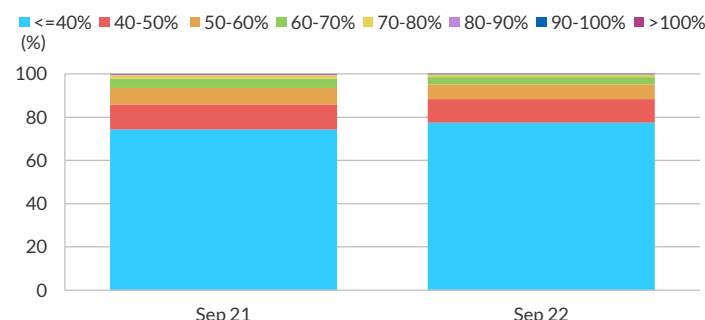
Source: Fitch Ratings, Danske Bank

### Assets and Liabilities



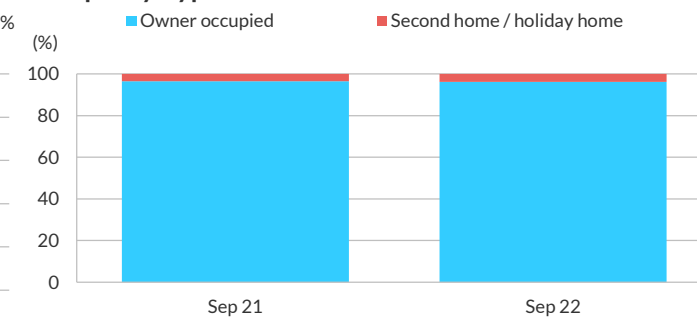
Source: Fitch Ratings, Danske Bank

### CLTV Buckets



Source: Fitch Ratings, Danske Bank

### Occupancy Type



Source: Fitch Ratings, Danske Bank

## Appendix 2 – Summary of Applicable Covered Bonds Legislation

Items	Description
Basis of the framework	The Danish covered bond legislation.
Issuer type	There are three types of Danish covered bonds: <ul style="list-style-type: none"> <li>• 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</li> <li>• Særligt Dækkede Realkreditobligationer (SDRO): Issued by mortgage banks only, both UCITS- and CRR-compliant, a minimum OC of 8% of risk-weighted assets applies.</li> <li>• 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).</li> </ul>
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 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 specify 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"> <li>• Loans granted against mortgages on real property;</li> <li>• Exposure to public authorities: <ul style="list-style-type: none"> <li>- bonds and debt issued by or guaranteed by central government, central banks, public entities, and regional and local authorities in the EU/EEA;</li> <li>- 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).</li> </ul> </li> <li>• Bonds and debt issued by credit institutions if risk-weighted 20%, provided they do not exceed 15% of the outstanding covered bonds;</li> <li>• Mortgages on ships (only for commercial banks; a register may not include assets secured on both real estate and ships);</li> <li>• Other assets eligible for covered bonds financing according to the Capital Requirements Directive, if allowed by the Danish FSA;</li> <li>• In practice, supplementary collateral is made of exposure to public authorities and covered bonds.</li> </ul>
Maximum LTV limits for the cover test	<ul style="list-style-type: none"> <li>• ≤ 80% for residential real-estate loans with up to 30 years' maturity and 10 years' interest-only period;</li> <li>• ≤ 75% for residential real-estate loans with up to 30-year interest-only period and for holiday real-estate loans;</li> <li>• ≤ 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.</li> </ul>
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	Meant 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 were concluded with the purpose of hedging cash flows between assets and liabilities.
Supervision	Danish Financial Services Authority (FSA)
Cover pool administrator	An administrator (trustee) will be appointed by the Danish FSA upon or prior to insolvency of the mortgage lender. An alternative manager has the power to inter alia 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 Danske Bank A/S's Cover Pools D and I Mortgage Covered Bonds at 'AAA'/Stable \(October 2022\)](#)

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

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

[European RMBS Rating Criteria \(December 2022\)](#)

### 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
FF	Foreclosure frequency
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
Danske D	Danske Bank A/S, Mortgage SDO - Cover Pool D
Danske I	Danske Bank A/S, Mortgage SDO - Cover Pool I

Source: Fitch Ratings

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