Realkredit Danmark A/S – Capital Centres S and T

Mortgage Covered Bonds

Update

Ratings/Outlook

Realkredit CC S Mortgage Covered Bonds	AAA/Stable
Realkredit CC T Mortgage Covered Bonds	AA+/Stable

Rating Rationale

Capital Centre S/Capital Centre T	
IDR/Outlook	A/Stable
IDR uplift	0/0
PCU	6/4
Tested rating on a PD basis	AA+/AA
Recovery given default uplift	1/1
Covered bonds rating	AAA/AA+
Lowest level of OC over the past 12 months (%)	7.3/9.4
AAA breakeven OC (%)/AA+ breakeven OC (%)	6.0/8.0

Key Data

	Dec 16
Asset type	Residential and commercial mortgages
Capital Centre S/Capital Centre T	
Mortgage assets (DKKbn)	240.0/458.0
Reserve OC (DKKbn)	17.0/43.0
Covered bonds (DKKbn)	240.0/458.0
AAA breakeven OC/AA+ breakeven OC (%)	6.0/8.0
WA life of assets (years)	14.2/14.9
WA life of liabilities (years)	14.5/2.4

Source: Fitch

Related Research

Realkredit Danmark A/S – Ratings Navigator (September 2016)

Covered Bonds Surveillance Snapshot (January 2017)

Global Housing and Mortgage Outlook – 2017 (February 2017)

Covered Bonds Investor Survey Year-End 2016 (January 2017)

2017 Outlook: Covered Bonds (December 2016)

Danish Covered Bond Programmes – Rating Action Report (November 2016)

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Key Rating Drivers

Three- and Two-Notch Downgrade Buffers: The ‘AAA’/Stable and ‘AA+’/Stable ratings of Realkredit Danmark A/S’s mortgage covered bonds are based on the issuer’s Long-Term Issuer Default Rating (IDR) of ‘A’, a Payment Continuity Uplift (PCU) of six and four notches, respectively, and the level of overcollateralisation (OC) relied upon that is the lowest level over the past 12 months, of 7.3% and 9.4%. This gives more protection than the Fitch Ratings’ ‘AAA’ and ‘AA+’ breakeven OC of 6.0% and 8.0%.

The Stable Outlook on Capital Centres S and T reflects the Stable Outlook of Realkredit’s IDR, the IDR downgrade cushion and that the rating is constrained by the relied upon OC for CC T.

Stable PCU of Six for CC S: The PCU for CC S is stable at six notches and reflects the liquidity protection in place for at least 12 months (the 5% remaining hard-bullet bonds have their redemption covered by liquid assets for at least 12 months) and the three months of interest payment protection in the form of government bonds.

PCU Increases to Four for CC T: The PCU for CC T has increased to four notches from three previously assigned. The higher PCU highlights the fact that the liquid assets provide protection for principal payment for six month for the 28% remaining of hard-bullet bonds, which will extend to nine months once upcoming hard-bullet bonds mature this year. Three months of interest payment are covered by government bonds.

Currency Matching: The programmes have been assigned one notch of recovery uplift but are eligible for two notches. There is a natural hedge between the assets and covered bonds due to the balance matching principle. Cover assets and covered bonds are mostly denominated in Danish kroner. CC S has some exposures in euros and CC T in euros, Norwegian kroner and Swedish kronor, with bonds issued in the same currencies.

Rating Sensitivity: CC S would be vulnerable to a downgrade if Realkredit’s Long-Term IDR were downgraded by four notches to ‘BBB-’, the PCU were reduced to two or lower or the OC that Fitch takes into account decreased below the agency’s ‘AAA’ breakeven level of 6.0%. CC T may be downgraded if the issuer’s IDR were downgraded to ‘BBB’, the PCU is reduced to one or lower or the OC that Fitch takes into account decreased below the agency’s ‘AA+’ breakeven level of 8.0%.

Programme Highlights

Mixed Asset Cover Pools: CC S comprises 66% residential mortgage loans and 34% commercial loans, while the respective figures for CC T are 54% and 46%. The expected loss was 6.6% for CC S in a ‘AAA’ scenario and 10.1% for CC T in ‘AA+’ scenario. The higher expected loss for CC T cover pool is due to the larger proportion of ARM loans and commercial assets in CC T which have higher credit risk.

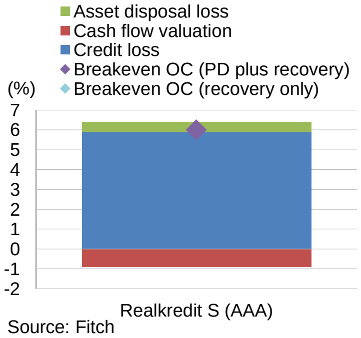
Credit Risk Drives Breakeven OC: The credit loss component is 5.9% on a ‘AA+’ probability of default (PD) basis for CC S and 8.5% on a ‘AA’ PD basis for CC T, both reduced from last year. A lower assumption on the minimum PD was applied to social and cooperative housing assets (to 0.0% from 0.5%). The excess margins in both capital centres are positive for the breakeven OC. Fitch does not model a fire sale, but considers the possibility of bond refinancing post insolvency or models the maturity extension of bonds with this feature.

Cover Pool Characteristics: Jan 17

Capital Centre S/Capital Centre T	
Current balance (DKKbn)	237.1/474.2
Number of mortgages	158,098/ 263,331
Interest rate type (%)	
Fixed rate	92.2/0.0
ARM	3.0/77.1
Variable	2.6/22.9
Capped/Ratchet	2.1/0.0
Repayment type (%)	
Repayment	74.6/41.5
Interest only	25.4/58.5

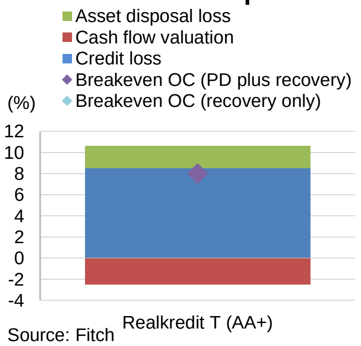
Source: Realkredit, Fitch

CC S Breakeven OC Components



Source: Fitch

CC T Breakeven OC Components



Source: Fitch

Related Criteria

Covered Bonds Rating Criteria (October 2016)

Counterparty Criteria for Structured Finance and Covered Bonds (March 2017)

Counterparty Criteria for Structured Finance and Covered Bonds: Derivative Addendum (March 2017)

EMEA RMBS Rating Criteria (November 2016)

Criteria Addendum: Denmark – Residential Mortgage Assumptions (December 2016)

SME Balance Sheet Securitisation Rating Criteria (March 2017)

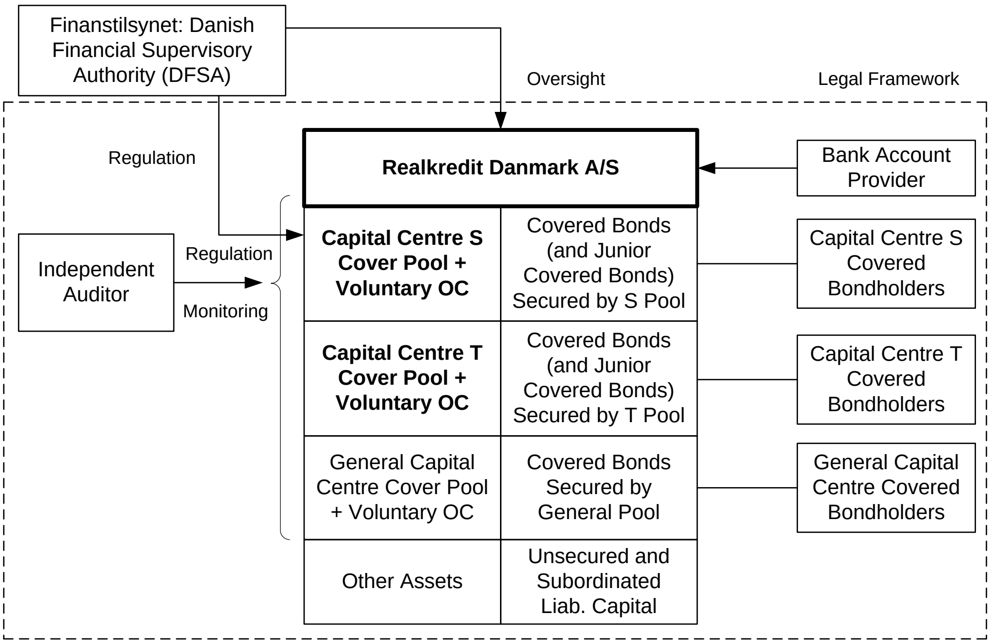
Criteria for the Analysis of Commercial Real Estate Loans Securing Covered Bonds (November 2016)

Structure Finance and Covered Bonds Interest Rate Stresses Rating Criteria (February 2017)

Risk of Undercollateralisation of Covered Bonds – Excel file (June 2016)

Criteria for Country Risk in Global Structured Finance and Covered Bonds (September 2016)

Programme Structure Diagram



Source: Fitch

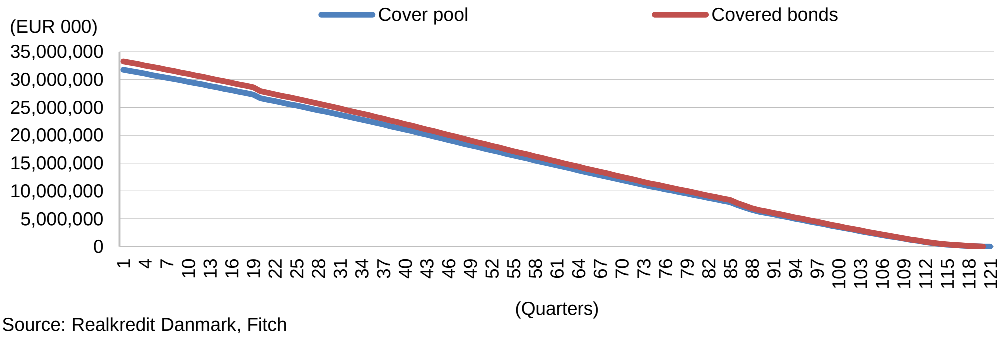
Fitch Default Model Output (%)

Rating level	WAFF	WARR	WAFF*(1-WARR)
CC S			
Instrument rating level (AAA)	16.1	59.0[a]	6.6
'B' case	3.7	78.3	0.8
CC T			
Instrument rating level (AA+)	29.8	66.2	10.1
'B' case	8.0	85.4	1.2

[a] A 4% minimum expected loss was applied to the residential assets of CC S to reflect idiosyncratic risks (see EMEA RMBS Rating Criteria). As a result, recoveries are lower than what they would have been otherwise

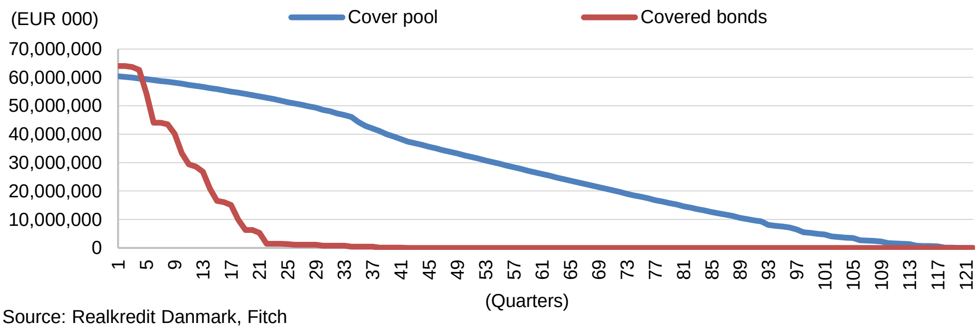
Source: Fitch

Amortisation Profiles of Assets and Bonds for Capital Centre S



Source: Realkredit Danmark, Fitch

Amortisation Profiles of Assets and Bonds for Capital Centre T



Source: Realkredit Danmark, Fitch

Appendix: Commercial Mortgage Loss and Cash Flow Assumptions

In its analysis of commercial mortgage loan portfolios, which include agriculture, business, private rental and multifamily mortgage loans, Fitch relied on its *Criteria for the Analysis of Commercial Real Estate Loans Securing Covered Bonds* (November 2016) and *SME Balance Sheet Securitisation Rating Criteria* dated March 2017. The asset analysis was performed using the PCM.

Default Rate

Fitch derived the expected default rate for the commercial pool, taking into consideration default and loss data provided by Realkredit and the macroeconomic developments in the country. In this year's analysis, Fitch differentiated the PD treatment between social and cooperative housing assets and the other commercial segments' assets.

Commercial Segment

The expected average one-year default rate (90 days passed due) for a performing commercial mortgage portfolio is 1.75%, which is at the lower end of the assumptions used for commercial mortgage portfolios in other European jurisdictions (in the 1.75%-6.5% range, see *SME Balance Sheet Securitisation Rating Criteria*).

Fitch used Realkredit's credit scoring to distribute the assets' one-year PD around the benchmark, applying a 0.5% floor to the default probabilities. The one-year PDs were then combined with Fitch's long-term PD curves and with the maturities of the assets to derive long-term PD assumptions for each of the commercial assets in the pool. The foreclosure frequency rates were then derived based on the default rate outputs from PCM and applying a cure rate of 15% in a 'AAA' scenario and up to 50%, in a 'B' scenario, in line with Fitch's criteria.

Social and Cooperative Housing

Mortgage loans to social and cooperative housing represent about 17% of the CC S cover pool balance and about 7% of the CC T cover pool balance. Given the very good performance observed for these segments, the analysis now differentiates the PD applied to these segments.

The expected average one-year default rate assumed in this analysis for the performing social and cooperative housing mortgage sub-portfolio was 0.5%.

Fitch used Realkredit's credit scoring to distribute the assets' one-year PD around the benchmark, without applying a PD floor to the default probabilities. The one-year PDs were then combined with Fitch's long-term PD curves and with the maturities of the assets to derive long-term PD assumptions for each of the subsidised housing assets in the pool. The foreclosure frequency rates were then derived based on the default rate outputs from PCM and applying a cure rate of 15% in a 'AAA' scenario and up to 50%, in a 'B' scenario.

Most of these social housing loans benefit from a guarantee from local municipalities or the Danish state. The state contributes to the borrower's payment and the municipality provides a loss guarantee to Realkredit.

The guarantee can differ according to the disbursement of the loan. Mortgage loans granted prior to 2007 have a loss guarantee of up to 28.5% of the principal. Mortgage loans disbursed after 2007 have guarantees that cover the part of the loan that exceeds 60% of the property value. Furthermore, a 100% guarantee is granted from the municipality for major renovation works. This results in an average guarantee of about 50%.

The strong governance structure covering social housing explains the limited number of losses in this segment. In the past three years, Realkredit has only called guarantees three times, with a total value of DKK6 million.

Fitch did not give full credit to guarantees provided by municipalities on subsidised housing loans in a stressed scenario; rather, it conservatively assumed a 50% credit to these partial guarantees in a 'AAA' scenario.

Recovery Rate

With respect to recovery rates, Fitch derived a stressed property market value, applying MVD assumptions based on Realkredit repossession data and Fitch's stressed property price decline.

MVD Assumptions for Commercial Properties

(%)	AAA	AA	A	BBB	BB	B
Agricultural	65	61	59	55	48	40
Business	65	61	59	55	48	40
Industrial	75	71	69	65	58	50
Multifamily/rentals	65	62	60	57	52	45
Subsidised housing	53	49	45	41	37	33

Source: Fitch

Cash Flow Assumptions

Transaction and Servicing Costs

Servicing fee assumptions are applied in Fitch's cash flow modelling to take account of the capital centre expenses and the costs of engaging a replacement servicer in the event of a servicer default in a stressed environment.

Transaction and Servicing Costs Assumptions

	AAA	AA	A	BBB	BB	B
Servicing costs (%)	0.40	0.30	0.25	0.20	0.20	0.20

Note: The fees are applied to the outstanding portfolio balance, including performing, delinquent and defaulted loans
Source: Fitch

Prepayment Rates

In its cash flow model, Fitch applies prepayment rate (ie voluntary early repayment) assumptions to the portfolio's performing principal balance to determine the lifetime volume and periodic percentage of excess spread.

Fitch derived its low prepayment assumption for commercial mortgages at 0.0% from the *Criteria for the Analysis of Commercial Real Estate Loans Securing Covered Bonds* (November 2016). The high prepayment assumptions are between 15.0% and 25.0% depending on rating scenario.

Prepayment Assumptions (%)
Commercial mortgages

	AAAsf	AAsf	Asf	BBBsf	BBsf	Bsf
High prepayment	25.0	22.5	20.0	17.5	15.0	15.0
Low prepayment	0.0	0.0	0.0	0.0	0.0	0.0

Source: Fitch

The ratings above were solicited by, or on behalf of, the issuer, and therefore, Fitch has been compensated for the provision of the ratings.