

# Transaction Update: Realkredit Danmark A/S (Capital Center S Mortgage Covered Bond Program)

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## Ratings Detail

<b>Reference Rating Level</b>	<b>aa-</b>		<b>Jurisdictional-Supported Rating Level</b>	<b>aaa</b>		<b>Maximum Achievable Covered Bond Rating</b>	<b>aaa</b>		<b>Covered Bond Rating</b>	
<b>Resolution Regime Uplift</b>	<b>+2</b>	+	<b>Assigned Jurisdictional Support Uplift</b>	<b>+3</b>	+	<b>Collateral Support Uplift</b>	<b>+3</b>	=	<b>AAA/Stable</b>	
<b>Systemic Importance</b>	<b>Very Strong</b>		<b>Jurisdictional Support Assessment</b>	<b>Very Strong</b>		<b>Overcollateralization Adjustment</b>	<b>-1</b>		<b>Rating Constraints</b>	<b>aaa</b>
<b>Adjusted Issuer Credit Rating</b>	<b>a</b>					<b>Liquidity Adjustment</b>	<b>0</b>		<b>Counterparty Risk</b>	<b>aaa</b>
<b>GRE And Sovereign Support</b>	<b>0</b>		<b>Legal Framework</b>	<b>Very Strong</b>		<b>Potential Collateral-Based Uplift</b>	<b>+4</b>		<b>Country Risk</b>	<b>aaa</b>
<b>Issuer Credit Rating</b>	<b>A</b>		<b>Systemic Importance</b>	<b>Strong</b>						
			<b>Sovereign Credit Capacity</b>	<b>Very Strong</b>						

Under our Group Rating Methodology, Realkredit Danmark A/S is a core subsidiary of Danske Bank A/S. We therefore raise the ratings on the covered bonds according to the long-term issuer credit rating on Danske Bank A/S.

## Major Rating Factors

### Strengths

- Jurisdiction-supported rating level (JRL) of 'aaa', resulting in a low level of overcollateralization required to maintain the 'AAA' rating.
- The match-funded structure of the capital center helps to mitigate liquidity risk.
- Most mortgages pay a fixed rate of interest, reducing interest rate risk in our cash flow simulations.

### Weakness

- Aside from the legislative minimum, there is no other commitment regarding available overcollateralization in the cover pool.
- About a quarter of residential mortgage assets are secured on properties located in non-urban areas.

## Outlook

S&P Global Ratings' stable outlook on its ratings on Realkredit Danmark A/S' Capital Center S mortgage covered bonds reflects the fact that we would not automatically lower our ratings on the covered bonds if we were to downgrade Danske Bank A/S, Realkredit Danmark's parent company. This is because, under our covered bonds criteria, the program is eligible for six notches of uplift above the rating reference level (RRL) of 'aa-', but only requires three notches to achieve a 'AAA' rating (see "Covered Bonds Criteria," published on Dec. 9, 2014).

## Rationale

We are publishing this transaction update as part of our review of Realkredit Danmark's Capital Center S mortgage covered bond program.

Our covered bonds ratings process follows the methodology and assumptions outlined in our covered bonds criteria.

From our analysis of the legal and regulatory framework for covered bonds in Denmark, we believe that the assets in Realkredit Danmark Capital Center S's cover pool are isolated from the risk of the issuer's bankruptcy or insolvency. This asset isolation allows us to assign a higher rating to the covered bond program than the long-term issuer credit rating (ICR) on Danske Bank. Although the issuer of the covered bonds is Realkredit Danmark, we use the rating on Danske Bank A/S as the starting point of our analysis. This is because we consider Realkredit Danmark to be a core entity of Danske Bank.

In accordance with our covered bonds criteria, we determine the issuer's RRL, and attribute notches of uplift from this level by assessing jurisdictional support and collateral-based support. Based on Danske Bank's long-term ICR of 'A' and our assessment of jurisdictional support, we assess the RRL at 'aa-' and the JRL at 'aaa'. In addition, the program could benefit from up to four notches of collateral-based uplift.

We determine the total collateral-based uplift by analyzing the cover pool's asset credit quality, payment structure, and cash flow mechanics. As of Sept. 30, 2016, the cover pool amounts to Danish krone (DKK) 247.75 billion, made up of residential and commercial mortgages and substitute assets (commonly called a "reserve fund" in traditional Danish covered bonds).

We generally analyze the cover pool's mortgage credit quality with the help of two key indicators:

- The weighted-average foreclosure frequency (WAFF), which reflects the expected default rate; and
- The weighted-average loss severity (WALS), which describes the expected loss given default.

Our analysis, as of Sept. 30, 2016, shows that the available credit enhancement is 8.38%. This is greater than the 2.50% credit enhancement commensurate with a 'AAA' rating, which corresponds in this instance with the coverage of 'AAA' credit risk.

As part of our analysis, we reviewed Realkredit Danmark's origination, underwriting, collection, and default management procedures. We believe satisfactory policies are in place to support our ratings on the covered bonds. As

there are no further legal, counterparty, or country risk constraints on our rating, we have affirmed our 'AAA' rating on the program.

## Program Description

**Table 1**

Program Overview*	
Jurisdiction	Denmark
Year of first issuance	2007
Covered bond type	Legislation-enabled
Outstanding covered bonds (bil. DKK)	232.6
Redemption profile	Mixed
Underlying assets	Residential and commercial mortgages
Jurisdictional support uplift	3
Unused notches for jurisdictional support	0
Target credit enhancement (%)§	6.07
Credit enhancement commensurate with rating (%)	2.50
Available credit enhancement (%)	8.38
Collateral support uplift	3
Unused notches for collateral support	3
Total unused notches	3

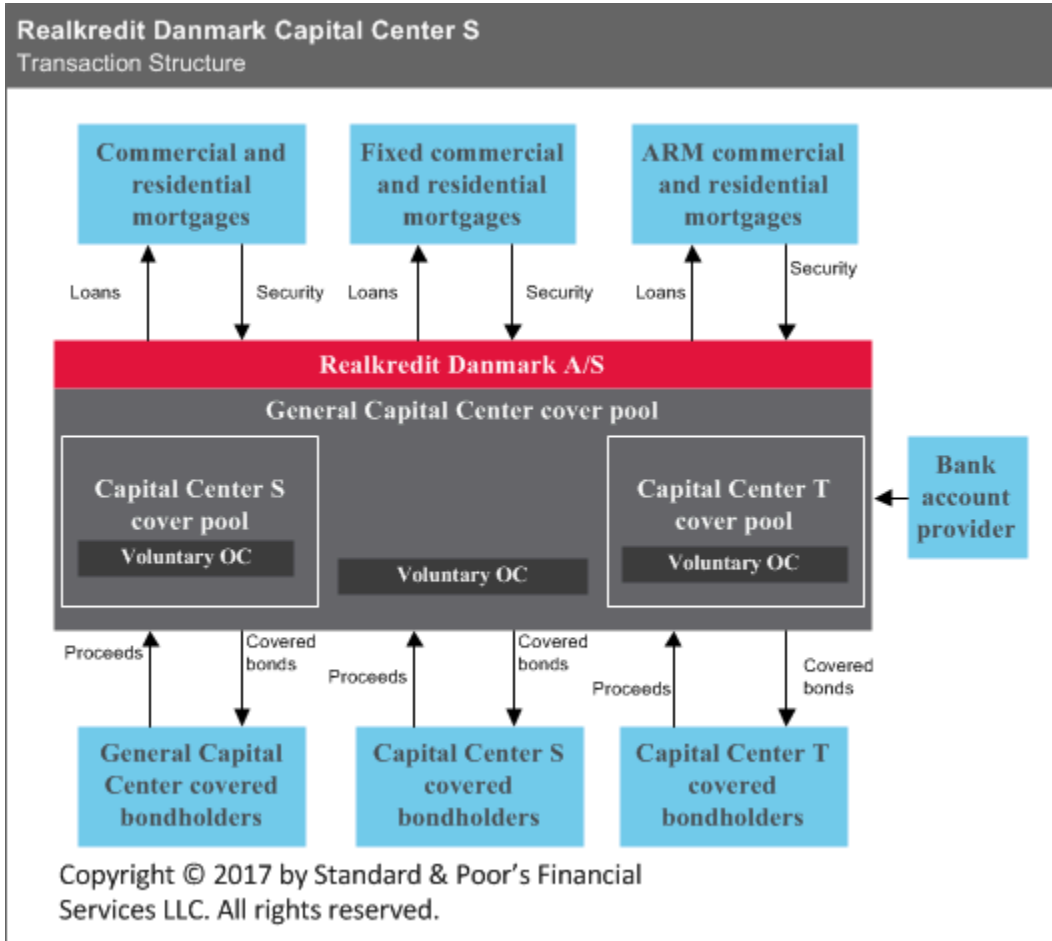
\*Based on data as of Sept. 30, 2016. §Level of credit enhancement corresponding to 100% of refinancing costs.

Realkredit Danmark is a wholly-owned subsidiary of Danske Bank and is a specialist mortgage bank in Denmark, second in size to Nykredit Realkredit A/S. Realkredit Danmark is an established issuer of Danish mortgage covered bonds, "realkreditobligationer" (ROs), and "særligt dækkede realkreditobligationer" (SDROs).

Capital Center S is currently actively issuing bonds, which includes mortgage assets--backed by both residential and commercial properties--as well as a reserve fund consisting primarily of Danish covered bonds.

Danske Bank acts as the main bank account provider. To mitigate counterparty risk, the issuer has replacement language in place, which is in line with our current counterparty criteria (see "Counterparty Risk Framework Methodology And Assumptions," published on June 25, 2013).

The cover pool assets would be ring-fenced if Realkredit Danmark were to become insolvent under the respective Danish legislative framework. SDRO covered bondholders have a primary secured claim against all assets in the cover pool.



## Rating Analysis

### Legal and regulatory risks

We analyzed legal risk by applying our European legal criteria and our criteria for rating covered bonds (see "Europe Asset Isolation And Special-Purpose Entity Criteria--Structured Finance," published on Sept. 13, 2013, and other covered bond ratings criteria listed in "Related criteria").

In our view, the Danish covered bond framework sufficiently addresses the relevant legal aspects of our covered bond and European legal criteria. This enables us to rate the covered bonds above our long-term ICR on the issuer's parent bank. The Danish Covered Bond Act provides the legal framework for the issuance of the Danish covered bonds.

SDRO covered bond investors have a primary secured claim against all assets in the cover pool. The ratings on the covered bonds issued from Capital Center S rely on the issuer's active management of the overcollateralization to support the current ratings.

To become eligible as collateral, mortgage loans must be entered in the Danish land register. The registration is legally binding and will form the basis of any bankruptcy proceedings. If bankruptcy proceedings have been initiated, a trustee

appointed by the bankruptcy court will administer the cover pool assets. The trustee is ordered by law to meet all payment obligations as they fall due.

The issuer must maintain an overcollateralization of at least 8% of risk-weighted assets. Banking supervision is carried out by the Danish Financial Supervisory Authority (DFSA, or Finanstilsynet). The DFSA has the authority to issue an order with which the issuer must comply. In case of severe or multiple breaches, the DFSA may revoke the license.

### **Operational and administrative risks**

In June 2016, we conducted a review of Realkredit Danmark's origination, underwriting, collection, and default management procedures for the capital center's cover pool assets. We also reviewed the cover pool's management and administration. We consider that Realkredit Danmark actively manages the cover pool and has strict underwriting and loan management policies. In addition to an annual meeting, we have ongoing regular contact with the issuer.

We analyzed operational and administrative risk by applying our covered bonds criteria.

### **Resolution regime analysis**

As part of our covered bonds criteria, our analysis considers any resolution regime in place in Denmark to determine the RRL. The EU's Banking Resolution and Recovery Directive (BRRD) was transposed into Danish law and came into effect on June 1, 2015. In Denmark, mortgage credit institutions like Realkredit Danmark are excluded from bail-in, but are required to issue a certain amount of "bail-inable" debt instruments. Covered bonds are protected during resolution. As such, we assign two notches of uplift from the adjusted ICR, resulting in a RRL of 'aa-'.

### **Jurisdictional support analysis**

In analyzing jurisdictional support, we assess the likelihood of a covered bond under stress receiving support from a government-sponsored initiative instead of from the liquidation of collateral assets in the open market. Our assessment of jurisdictional support for mortgage programs in the Denmark is very strong (see "Assessments For Jurisdictional Support According To Our Covered Bonds Criteria," published on July 20, 2016). The assessment of "very strong" means that the program can receive up to three notches of jurisdictional uplift. The JRL is therefore 'aaa'. This is the rating the program can achieve by covering the legal minimum overcollateralization requirement, according to our covered bonds criteria.

### **Collateral support analysis**

We have reviewed the mortgage asset and substitute collateral information as of Sept. 30, 2016. We have analyzed the mortgage loan-by-loan data from the issuer and applied stresses commensurate with a 'AAA' rating scenario to estimate the WAFF and WALs. The cover pool primarily comprises Danish residential and commercial mortgages (92.3%), and also includes substitute assets (7.7%). Most of the mortgage assets (91%) pay based on a fixed rate.

Both the WAFF and WALs are slightly lower compared to September 2015, at 17.23% and 31.27%. The reduced WAFF is mainly driven by the decrease in LTVs above 80% for residentials and subsidized housing and LTVs above 70% for commercials, and by the drop in the amount of loans to which we apply a payment shock adjustment, to 4.36% from a previous 12.19%.

The decrease in WALs is due to a lower weighted-average LTV, down to 64.54% from a previous 65.38%, which offsets the increase in jumbo valuations on the residential portion of the pool.

Our credit analysis of the substitute pool (also referred to as the "reserve fund") includes an asset-by-asset review of underlying securities to estimate the credit risk of each individual exposure. To determine the default and loss on the reserve fund, we apply our "Methodology And Assumptions For Assessing Portfolios Of International Public Sector And Other Debt Obligations Backing Covered Bonds And Structured Finance Securities," published on Dec. 9, 2014.

We consider the pool of substitute assets to exhibit low granularity as the eight largest obligors account for over 99% of total substitute assets. For low granularity pools, in a 'AAA' stress scenario, we assume that assets with a S&P Global Ratings' credit rating of 'AAA' will not default, except for covered bonds that are issued by other Realkredit Danmark capital centers (we assume these default as our analysis presumes the issuer has already defaulted). For the assets that default, we determine the recovery by applying paragraphs 76 and 77 of the aforementioned criteria. As all of the bonds that we assume to default are structurally match-funded covered bonds, we are able to apply higher recoveries (see table 5 of the criteria). The analysis results in an assumed default rate of the reserve fund of 20.33% and a recovery rate of 22.12%, versus 22.07% and 23.75% previously.

**Table 2**

Program Participants			
Role	Name	Rating	Rating dependency
Issuer	Realkredit Danmark A/S	NR*	Yes
Originator	Realkredit Danmark A/S	NR	No
Servicer	Danske Bank A/S	A/Stable/A-1	No
Bank account provider	Danske Bank A/S	A/Stable/A-1	Yes
Bank account provider	Jyske Bank A/S	A-/Stable/A-2	Yes
Bank account provider	Nordea Bank AB	AA-/Negative/A-1+	Yes
Bank account provider	Grønlandsbanken	NR	No

\*In our analysis, we uplift the rating from the issuer credit rating on the parent Danske Bank A/S.

**Table 3**

Asset type	As of Sept. 30, 2016		As of Sept. 30, 2015	
	Value (DKK)	Percentage of cover pool (%)	Value (DKK)	Percentage of cover pool (%)
Residential mortgages	153,237,243,248	61.85	152,115,959,291	60.74
Subsidized housing	22,371,094,586	9.03	23,107,481,211	9.23
Commercial mortgages	52,971,566,377	21.38	53,659,939,312	21.43
Substitute assets	19,171,944,156	7.74	21,566,485,638	8.61
Total	247,751,848,367	100.00	250,449,865,452	100.00

**Table 4**

	Key Credit Metrics	
	As of Sept. 30, 2016	As of Sept. 30, 2015
Weighted-average LTV ratio (%)	64.54	65.38
Balance of loans in arrears (%)	0.24	0.34
<b>Credit analysis results</b>		
Weighted-average foreclosure frequency (WAFF, %)	17.23	17.83

**Table 4**

<b>Key Credit Metrics (cont.)</b>		
	<b>As of Sept. 30, 2016</b>	<b>As of Sept. 30, 2015</b>
Weighted-average loss severity (WALS, %)	31.27	32.18
WAFFxWALS (%)	5.39	5.74

LTV--Loan to value.

**Table 5**

<b>Cover Pool Assets By Loan Size</b>		
	<b>Percentage of cover pool (%)</b>	
<b>Residential assets (DKK '000s)</b>	<b>As of Sept. 30, 2016</b>	<b>As of Sept. 30, 2015</b>
0-500	5.07	4.90
500-1,000	21.44	21.84
1,000-1,500	23.30	24.16
1,500-2,000	16.88	17.42
2,000-2,500	11.96	11.89
2,500-3,000	7.35	6.93
Greater than 3,000	14.00	12.85

DKK--Danish krone.

**Table 6**

<b>Loan-To-Value Ratios</b>		
	<b>As of Sept. 30, 2016*</b>	<b>As of Sept. 30, 2015*</b>
	<b>Percentage of sub cover pool (%)</b>	
<b>Residential and subsidized assets (%)</b>		
0-60	37.78	36.85
60-70	16.59	17.02
70-80	23.56	23.67
80-90	15.96	17.15
90-100	0.59	0.63
Above 100	5.51	4.69
<b>Commercial assets (%)</b>		
0-60	66.15	59.73
60-70	15.62	15.85
70-80	10.95	11.17
80-90	5.09	8.53
90-100	0.82	2.39
Above 100	1.38	2.34
Weighted-average LTV ratio	64.54	65.38

\*LTV ratios presented here are calculated by aggregating all exposures at a borrower level. LTV--Loan to value.



**Table 7**

<b>Geographic Distribution Of Loan Assets</b>		
	<b>As of Sept. 30, 2016</b>	<b>As of Sept. 30, 2015</b>
	<b>Percentage of cover pool</b>	
<b>Regional concentration</b>		
<b>Residential and subsidized assets</b>		
Capital Region of Denmark	39.38	38.52
Central Denmark Region	17.51	17.88
Region Zealand	18.55	18.84
North Denmark Region	5.99	6.12
Region of Southern Denmark	18.58	18.64
Total	100.00	100.00
Of which non-urban (North Denmark, Southern Denmark)	24.57	24.76
<b>Commercial assets</b>		
Central Denmark Region	17.91	17.53
North Denmark Region	7.03	7.32
Region Zealand	10.52	11.68
Region of Southern Denmark	18.69	19.02
Capital Region of Denmark	45.31	43.92
Other in Denmark	0.54	0.53

Our analysis of the covered bonds' payment structure shows that cash flows from the cover pool assets would be sufficient, at the existing rating level, to make timely payments of interest and principal to the covered bondholders.

As there is an active secondary market for mortgages in Denmark, the program can benefit from up to four notches of collateral-based uplift according to our covered bonds criteria. Before determining the number of collateral-based notches needed to reach a 'AAA' rating, we consider the following adjustments:

- According to paragraphs 78-79 of the criteria, a one-notch reduction applies if the program does not benefit from at least six months of liquidity. Due to the match-funded nature of the Realkredit Danmark Capital Center S, we consider that liquidity coverage is met. Each covered bond is matched to a specific mortgage loan, and any payments from the loan will be used to make payments on the bond.
- According to paragraph 81 of the criteria, a further one-notch reduction applies if the program does not benefit from any form of commitment on overcollateralization. As Realkredit Danmark's Capital Center S only has voluntary overcollateralization without any commitment, this results in a one-notch reduction to the potential collateral-based uplift.

Given the JRL of 'aaa', the program only needs to cover 'AAA' credit risk to reach a 'AAA' rating. In addition, under our CRE criteria, we apply an out-of-model supplemental test to address borrower concentration risk. In this instance, the 'AAA' credit risk is not floored by this test.

In particular, this supplemental test captures concentration risks in the cover pool. The assumed number of defaulted obligors is a function of the applicable stress scenario ('AAA', in our case) and the obligors' credit quality. Since assets

in this pool are not rated, we assume an obligor rating in the 'B' to 'CCC-' range, so the credit enhancement commensurate for the cover pool is at least equal to the loss related to the 10 largest obligors, as defined by the gross outstanding balance of the largest loans in the cover pool. This represents 1.10% of overcollateralization. In order to cover a 'AAA' credit stress scenario, the available credit enhancement must exceed the higher of this net loss result and our measure of 'AAA' credit stress. Therefore, the minimum level of overcollateralization to maintain 'AAA' ratings on the covered bonds is 2.50%, corresponding to the minimum amount of "hard" credit enhancement as defined in our covered bonds criteria.

We analyzed the cash flows under 'AAA' credit stresses, as well as liquidity, interest rate, and currency stresses to reflect the fact that the pool does not have recourse to derivatives but relies on "natural hedging." The terms of the issued bonds match those of the underlying mortgages due to the balancing principle. We also ran different default timing and prepayment patterns.

In our analysis the recession starts on day one. This is because we assume the insolvency of the issuing bank as the starting point of the analysis, and we assume that the bank would default at the beginning of the 'AAA' recession.

For prepayments, we ran a "low" scenario, with a 0.5% conditional prepayment rate (CPR) and a "high" scenario with a 24% CPR.

The target credit enhancement has slightly increased to 6.07% in September 2016 from 5.92% in September 2015.

Our cash flow analysis is based on the applicable criteria in the "Related criteria" section below.

**Table 8**

Collateral Uplift Metrics		
	As of Sept. 30, 2016	As of Sept. 30, 2015
Asset WAM (years)	13.29	12.95
Liability WAM (years)	14.25	14.04
Available credit enhancement (%)	8.38	9.56
AAA' credit risk (%)	2.50	2.62
Required credit enhancement for first notch of collateral uplift (%)	3.06	3.45
Required credit enhancement for second notch of collateral uplift (%)	4.06	4.27
Required credit enhancement for third notch of collateral uplift (%)	5.07	5.10
Target credit enhancement for maximum uplift (%)	6.07	5.92
Potential collateral-based uplift (notches)	4	4
Adjustment for liquidity (Y/N)	N	N
Adjustment for committed overcollateralization (Y/N)	Y	Y
Collateral support uplift (notches)	3	3

WAM--Weighted-average maturity

### Counterparty risk

We have identified several counterparty risks to which the covered bonds could be exposed. However, these are mitigated through either structural mechanisms, or by applying the Danish Covered Bond Act. Therefore, we consider them not to constrain our ratings on the covered bonds.

**Commingling risk.** The collection accounts are not held in Capital Center S's name, but under Realkredit Danmark's name. This introduces potential commingling risk. Indeed, the funds in the accounts are commingled with the funds collected for the other Realkredit Danmark capital centers, as well as with Realkredit Danmark's funds. However, under the Danish covered bond legislation, we understand that covered bondholders have the right to these funds. Therefore, we do not consider cash to be lost, but that it could be temporarily unavailable for a period of time. Therefore, commingling risk amounts not to a credit loss but to a liquidity stress.

Due to the balance principle in Danish covered bond law, mortgage banks in practice do not hold large cash balances but reinvest payments received before the bond due date for securities whose maturity matches the remaining maturity and interest of such bonds. Given the replacement language in place for bank accounts (see below) and the limited time--less than a working day--that funds stay in bank accounts, we do not apply a liquidity stress in our cash flow calculations.

**Bank account providers.** Several banks provide accounts for the program. Incoming cash is invested in a defined group of high-quality assets intraday. As a result, the cash balance on any collection accounts is managed to be as close to zero as practically possible. To mitigate bank account and commingling risk, the issuer has replacement language in place, which is in line with our counterparty criteria. The issuer commits to holding less than 5% cash with commercial banks that are rated at least 'BBB/A-2'. If the bank account provider does not meet this ratings requirement, Realkredit Danmark will make commercially reasonable efforts to replace the account holding bank with a bank that meets our criteria within 30 calendar days.

**Derivatives.** There are no swap counterparties in the program.

**Set-off risk.** The issuer is not a deposit-taking institution. The program is therefore not exposed to set-off risk.

### **Country risk**

Where applicable, our "Ratings Above The Sovereign - Structured Finance: Methodology And Assumptions" criteria, published on Aug. 8, 2016, cap our covered bond ratings. Under these criteria, we consider the exposure to country risk to be moderate, which allows the program to achieve four notches of uplift above the long-term sovereign rating on Denmark (AAA/Stable/A-1+). Therefore, country risk does not constrain our ratings on the covered bonds.

## **Potential Effects Of Proposed Criteria Changes**

Our analysis is based on our current applicable criteria, including those set out in the criteria article "Methodology And Assumptions For Analyzing Mortgage Collateral In Danish Covered Bonds," published on May 2, 2012. However, these criteria are under review (see "Request For Comment: Methodology And Assumptions For Analyzing Pools Of Austrian, Danish, And Swedish Residential Loans," published on June 27, 2016). As a result, our future assumptions and methodologies may differ from our current criteria.

## **Related Criteria And Research**

### **Related Criteria**

- Ratings Above The Sovereign - Structured Finance: Methodology And Assumptions, Aug. 8, 2016
- Counterparty Risk Analysis In Covered Bonds, Dec. 21, 2015
- Covered Bond Ratings Framework: Methodology And Assumptions, June 30, 2015

- Methodology And Assumptions: Analyzing European Commercial Real Estate Collateral In European Covered Bonds, March 31, 2015
- Covered Bonds Criteria, Dec. 9. 2014
- Methodology And Assumptions For Assessing Portfolios Of International Public Sector And Other Debt Obligations Backing Covered Bonds And Structured Finance Securities, Dec. 9, 2014
- Europe Asset Isolation And Special-Purpose Entity Criteria--Structured Finance, Sept. 13, 2013
- Counterparty Risk Framework Methodology And Assumptions, June 25, 2013
- Methodology And Assumptions For Analyzing Mortgage Collateral In Danish Covered Bonds, May 2, 2012
- Update To The Cash Flow Criteria For European RMBS Transactions, Jan. 6, 2009
- Methodology: Credit Stability Criteria, May 3, 2010
- Use Of CreditWatch And Outlooks, Sept. 14, 2009
- Commercial Paper I: Banks, March 23, 2004
- Cash Flow Criteria for European RMBS Transactions, Nov. 20, 2003

### **Related Research**

- Global Covered Bond Characteristics And Rating Summary Q4 2016, Jan. 13, 2017
- Banking Industry Country Risk Assessment: Denmark, Dec. 19, 2016
- Danish Covered Bond Index Report H1 2016: Improved Collateral Performance Reflects Return To Economic Growth, Oct. 6, 2016
- Kingdom of Denmark 'AAA/A-1+' Ratings Affirmed; Outlook Stable, Sept. 16, 2016
- Assessments For Target Asset Spreads According To Our Covered Bonds Criteria, Aug. 15, 2016
- Danske Bank A/S, July 22, 2016
- Assessments For Jurisdictional Support According To Our Covered Bonds Criteria, July 20, 2016
- Request for Comment: Request For Comment: Methodology And Assumptions For Analyzing Pools Of Austrian, Danish, And Swedish Residential Loans, June 27, 2016
- Ratings Raised On Danish Section 15 Bonds From Six Capital Centers Following Clarification On Bank Resolution, Dec. 11, 2015
- Credit FAQ: The Danish Covered Bond Market Explained, July 15, 2014

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