BRFkredit

Overcollateralisation of Danish mortgage covered bonds

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Rating & IR

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1 Over-collateralisation of Danish mortgage covered bonds

This memo briefly describes the various requirements that apply to over-collateralisation of Danish mortgage covered bonds.

In order for Danish mortgage covered bonds to meet the legislative requirements and obtain the best rating from the international credit rating agencies, they must meet three types of requirements:

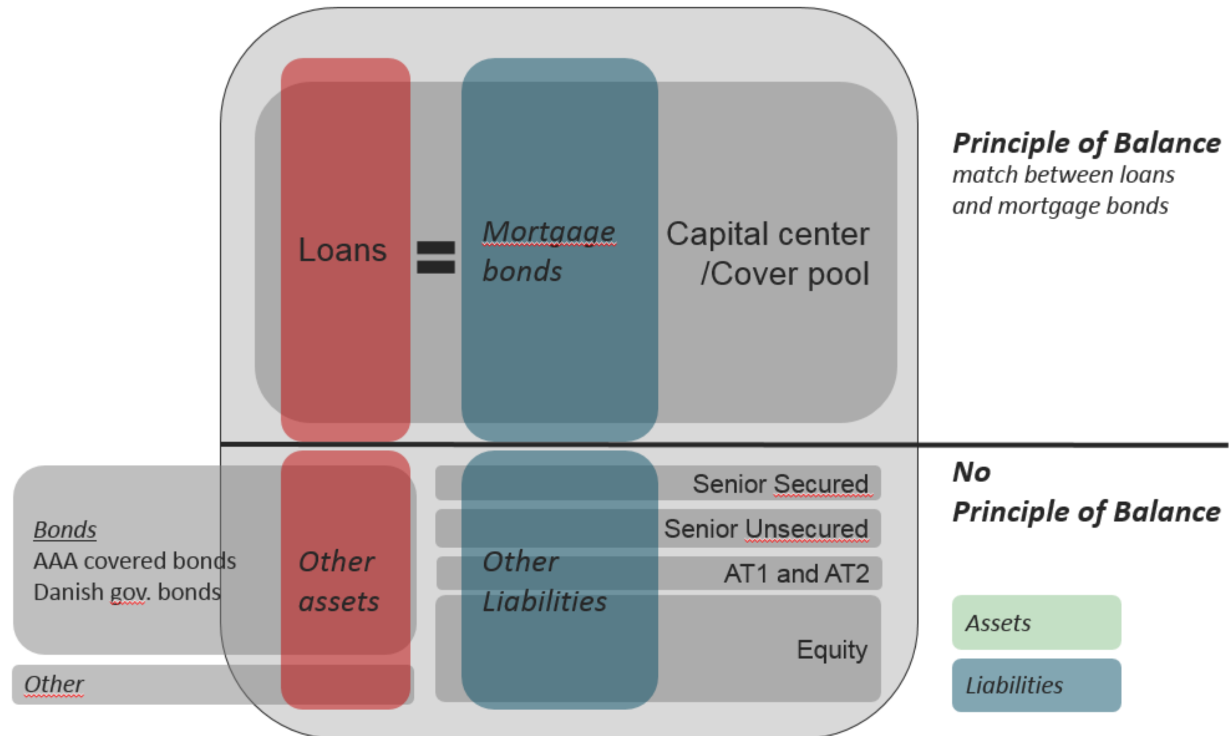
1. Regulatory requirements
2. Requirements under the EU capital requirements directive (depends on the bond type)
3. Rating requirements for over collateralisation to achieve an AAA rating

The requirements apply to the individual capital centres (cover pools) from where the bonds are issued. The over-collateralisation requirement is not for of the individual bond issued from the capital centre; it applies to the capital centre from where the bond is issued. It applies to all three above requirements that the assets belongs to the capital centre to which they were allotted. Consequently, assets allotted to a particular capital centre cannot be freely transferred to other capital centres.

2 The Danish Principle of Balance and Danish mortgage act

One of the things that separates Danish covered bonds from covered bonds from other jurisdictions is that Danish Mortgage bonds needs to fulfil the Danish principle of balance. Under the principle of balance it is stated that Danish mortgage institutes must always be fully funded in covered bonds. As all lending in a Danish mortgage credit institution always needs to be fully funded in covered bonds, the amount of issued bonds will always as a minimum correspond to the number of loans. Therefore, a loan can never be placed in the cover pool without a corresponding amount issued in covered bonds. Due to the principle of balance, Danish mortgage institutes cannot grant loans and fund them with deposits or other types of debt instruments. This also means that Danish mortgage institutes cannot use loans as over-collateral.

Figure 1 Funding of a Danish mortgage bank



The requirements to over collateral from regulators or rating agencies can be fulfilled with assets from core capital and other types of debt issues (e.g. senior debt). However, there is a difference between the types of assets that may be used to meet the three requirements, as the type determines how easily the assets can be realised. A distinction is made between the gilt-edged and non-gilt-edged assets. Gilt-edged assets are assets that can easily be realised and therefore may be used to cover losses in the short term. Gilt-edged assets may be cash, Danish government bonds and AAA-rated mortgage covered bonds. The non-gilt-edged assets may be the mortgage credit institution's domicile, properties taken over or long-term positions in other banks.

The gilt-edged assets are typically short dated assets with a maturity between one and three years. Since loans are not used as over-collateral and collateral is placed in liquid short-dated assets, the maturity mismatch between assets and liabilities in a stressed environment with credit losses will be relatively small.

For a Danish mortgage institute all assets in the company are allocated to the cover pools, i.e. no assets will be allocated outside the cover pool. If the mortgage institute defaults all assets will remain in the different cover pools. If there are assets left in a cover pool when it is fully amortised the assets will be transferred to other cover pools as collateral.

3 Regulatory requirement

The regulatory requirements for the capital centre are the same as the minimum regulatory requirements applicable to the institution. In order for a capital centre to meet the regulatory requirements for the centre, as a minimum there must be an over-collateralisation of 8% of the risk-weighted assets in the centre. The risk-weighted assets are calculated by the institutions using internal IRB models. The risk-weighted

assets will typically be lower than the total lending and will be lower for residential lending than for commercial lending.

The regulatory requirements can be met with the same types of capital that are used in the institution's capital adequacy. This means that it may be covered, i.a., by equity. Just as for the minimum solvency requirement for institutions, there is no requirement as to how liquid assets may be placed in, and part of it will thus be placed in less liquid assets (non-gilt-edged).

It applies to Danish mortgage covered bonds that the sum of regulatory requirements for all capital centres must as a minimum correspond to the requirement for the institution as a whole (8% of the risk-weighted assets). The regulatory requirement for the capital centre must therefore, in addition to the requirement based on the credit risk, also cover a proportionate share of the institution requirement for the risk-weighted assets on market and operational risk. These requirements will be allotted proportionately to the individual capital centres, as they, as opposed to the risk-weighted assets on lending, cannot be directly allotted to the individual capital centre. If the base capital is not sufficient to cover the solvency requirement (8%) for the institution, it will not be sufficient to cover the requirement for the individual capital centres either.

The Danish Financial Supervisory Authority will regularly check that the individual capital centres meet the regulatory requirement.

4 Requirements for covered bonds

Danish mortgage credit institutions issue two types of bonds: Mortgage covered bonds (Realkreditobligationer - RO) and covered bonds (Saerligt daekkede obligationer - SDO). For these two types of bonds, there are special requirements for the over-collateralisation on which these bonds must be secured.

Until mid-2007, the Danish mortgage credit institutions exclusively issued mortgage bonds (RO). But in order to be able to issue Danish mortgage covered bonds in accordance with the EU capital requirements directive (CRR/CRD), the Danish Act on covered bonds was introduced on 1 July 2007.

In order for covered bonds to fulfil the EU capital requirements directive, the loan-to-value ratio of the property may not exceed 80% for residential properties and 60% for properties for other purposes. These requirements must apply at any time. If property prices fall, so that a number of the loans in the capital centre are no longer in compliance with these loan-to-value ratios, these loans should be removed from the capital centre, or the mortgaging of the properties should be reduced. But as, according to Danish mortgage credit legislation, Danish mortgage credit institutions cannot remove loans for customers who fulfil their obligations to the mortgage credit institution, Danish mortgage credit institutions can, as a result of the covered bonds legislation, instead add over-collateralisation to the capital centre, so as to fully cover the excess of the lending limit. By doing so, the Danish mortgage covered bonds continue to meet the CRD/CRR.

Example: a private individual buys a house for DKK 1.3 million, financing it through a mortgage credit loan of DKK 1 million, which is financed by issuing covered bonds. Consequently, the property will have a loan-to-value ratio (LTV) of 77% and is thus within the maximum lending limit of 80% for residential properties. If the value of the property drops to DKK 1 million, so the loan-to-value ratio is 100%, the mortgage credit institution must add over-collateralisation in the amount of DKK 200,000 to the capital centre from where the bond is issued.

The requirement for compliance with the Danish Act on covered bonds is calculated for each individual loan. The sum of the individual requirements represents the total requirement for the capital centre.

Covered bonds are issued from independent capital centres. Thus, the same capital centre cannot issue both covered bonds and mortgage covered bonds. However, there is an exception, as mortgage covered bonds issued before January 2008 are also regarded as covered bonds (grandfathered). In BRFkredit, covered bonds are issued from capital centre E, while mortgage covered bonds are issued from capital centre B. However, part of the bonds from capital centre B are issued before January 2008. Therefore, these continue to fulfil the EU capital requirements directive.

In order to comply with the Danish Act on covered bonds the required over-collateralisation is placed in gilt-edged assets. Equity invested in e.g. buildings cannot count as over-collateralisation to meet the requirement.

In order to fulfil the CRR/CRD, the institution must also publish a number of data for the individual capital centres. In this regard, the institution must report the size of the cover pool and the amount of over-collateralisation. For BRFkredit, these data are published in the quarterly ECBC templates that are available on brf.com.

5 Over-collateralisation for rating purposes

For Danish mortgage covered bonds, it is essential that they achieve the best rating from minimum one of the international rating agencies (e.g. Moody's, Fitch or Standard & Poor's). If they do not, they will most likely be traded at a spread to the other bonds, which means a higher interest rate for the borrowers.

To calculate the required over-collateralisation to achieve a certain rating, the rating agencies stress test the individual capital centres using different stress scenarios. In order to achieve the best rating (AAA), the capital centre must be able to make timely payments to the bond investors, even at a severe stress scenario with increasing interest rates and falling house prices. In the scenarios, it is assumed that the issuing institution has defaulted and the capital centre must therefore independently be able to meet its obligations to the investors. In the stress test, it is presumed that a portion of the borrowers default and thus cannot meet their payment obligations. Thus, there will be a mismatch between payments from the borrowers and payments to the bond investors. The capital centre can, among others, cover this mismatch through the margins from the other customers, but if the margins are not sufficient to cover the mismatch, there will be a need for supplying extra assets to the capital centre. These additional assets represent the requirement for over collateralisation made by the rating agencies to be added to the capital centre in order for the best rating to be achieved.

The credit rating agencies assign a rating to the individual capital centres. All bonds issued from one capital centre will therefore have the same rating, independent of the bond type.

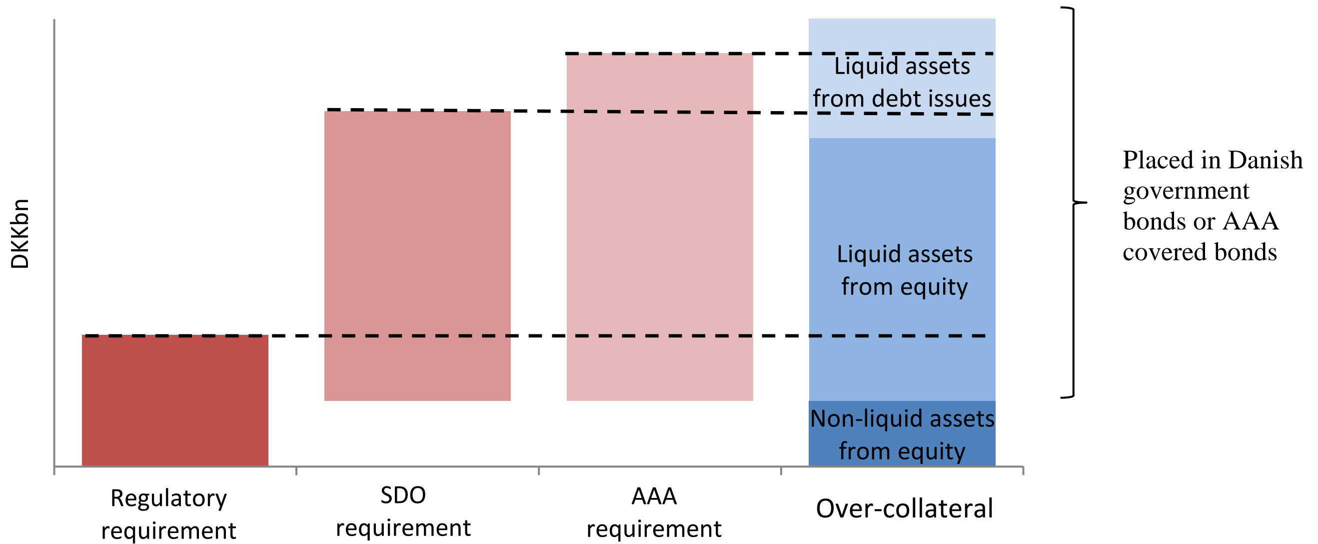
Just like the LTV-requirement from the Danish Act on covered bonds, the over collateralisation requirement can only be met by means of gilt-edged. But unlike over-collateralisation to cover the LTV-requirement, the final requirement for over-collateralisation is determined by the type of assets provided as security in the capital centre. This means that non-AAA-rated assets create a greater need for over-collateralisation, as the rating agencies believe that this type of asset is more likely to default and thus will not be able to cover any mismatch between loan repayments and payments to bond investors.

It is up to the individual rating agency to make ongoing assessments of whether the over-collateralisation in the capital centre is sufficient for it to achieve a specific rating. For capital centres rated by Standard & Poor's, this is done on a quarterly basis through reporting of loan-by-loan data and cash flows.

6 Meeting of overall requirements

All three requirements must be met independently, but the same funds may be partially used to meet several requirements. Thus, 1 billion in equity placed in liquid assets may be held as collateral for the bonds and at the same time serve to meet all three of the above requirements.

Figure 2 Meeting of requirements



The size of the different needs will depend on the portfolio mix. Historically, the regulatory requirement has been the lowest requirement, but it can also only be covered by base capital. The requirement from the Danish Act on covered bonds has – historically - been the second-highest, while the rating requirement has been the highest. However, the SDO legislation was not implemented until mid-2007 (with the first issues at end-2007), so no Danish capital centres under Danish Act on covered bonds have experienced any really serious periods of falling property prices.

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