By e-mail 

16 April 2010 
S939 - D12718 

Basel Committee on Banking Supervision 
Bank for International Settlements 
CH-4002 Basel 
Switzerland 

Consultation response on new liquidity rules and leverage ratio 

In December 2009 the Basel Committee on Banking Supervision published its documents "Strengthening the resilience of the banking sector - consultative document" and "International framework for liquidity risk measurement, standards and monitoring - consultative document". Danish Mortgage Banks, represented by Realkreditrådet and Realkreditforeningen have been studying the consultative documents with great interest. 

We have a number of very serious concerns about the proposals on the envisaged liquidity requirements and a fixed leverage ratio. This was also highlighted by Danmarks Nationalbank and the Danish Financial Supervisory Authority in their Memorandum sent to the Basel Committee dated 7 April 2010. 

/. Our concerns are detailed in the enclosed memorandum. 

Finally, we would like to emphasize that we support the response from the Danish Bankers Association on the Basel Committee’s "International framework for liquidity risk measurement" and on the Basel Committee's "Strengthening the resilience of the banking sector". 

Kinds regards, 

Ane Arnth Jensen 
Director General 
Realkreditrådet 

Karsten Beltoft 
Director General 
Realkreditforeningen
Proposal for new liquidity regulations and leverage ratio – consultation response

Consultation response prepared by Danish specialised mortgage banks

1. General remarks
Danish specialised mortgage banks, represented by the Association of Danish Mortgage Banks and the Danish Mortgage Banks’ Federation, welcome the opportunity to comment on the efforts of the Basel Committee and the EU Commission to strengthen the resilience of financial institutions, particularly the envisaged liquidity requirements and a fixed leverage ratio.

On a general level, we acknowledge that liquidity risks need to be monitored and managed. As such, we welcome the proposals for rules on liquidity management.

We do, however, have a number of very serious concerns about the proposals. In fact, were they to be implemented in their present form, important parts of what we call the Danish mortgage model would no longer be viable, to the detriment of investors, borrowers and the economy as a whole.

The proposed indicators suggest that the system is highly unstable and that liquidity management is completely inadequate because the system so heavily relies on mortgage bonds. Yet nothing could be further from the truth in Denmark. The Danish mortgage model has a proven record of stability, even during the most severe crises. It has not relied on government purchase or deposit guarantee schemes, which proved necessary to secure funding and liquidity for a large number of other financial institutions.

The proposed requirements would attack the Danish mortgage industry on two fronts since the liquidity rules would apply to both the banks themselves and to a very large proportion of the mortgage bond investors that they depend on. Mortgage bonds are neither recognised as a reliable source of funding for the mortgage banks themselves nor as liquid assets for investors. In some cases they are even dismissed as entirely worthless.

We believe that it is wrong to take such a negative view of covered bonds in general and to lump all covered bonds together, treating them as a uniform asset class. We argue that Danish mortgage bonds are no less liquid than sovereign debt, and that they should be treated accordingly.

If a dismissive and rigid view of mortgage bonds prevails, this would be a very serious blow, not only to Danish specialised mortgage banks, but to the financial system and the economy as a whole. The Quantitative Impact Study initiated by the Commission will, we believe, bear this out unambiguously.
The volume of Danish mortgage bonds is four times that of sovereign debt. By law, mortgage bond issuance is the only possible source of funding for Danish specialised mortgage banks. The bonds are extensively used to manage liquidity in banks. Any legal provision that penalises or excludes mortgage bonds – especially to the envisaged extent – is bound to cause turmoil as banks discard large volumes of mortgage bonds in favour of cash or sovereign debt.

We appreciate the opportunity to comment on the regulatory proposals at this early stage of the process. We look forward to a constructive dialogue on these matters and on how the Danish mortgage model can be maintained.

2. Executive summary
In our assessment, the liquidity management framework proposed (Liquidity Coverage Ratio (LCR) and Net Stable Funding Requirement (NSFR)) – and a fixed leverage ratio – will be particularly harmful to Danish financial institutions and the functioning of financial markets in Denmark. The proposals have caused great concern and attracted much attention in Denmark, both among homeowners and in the bond market.

The liquidity management framework proposed by the Commission will punish both holders and issuers of covered bonds. While the adverse implications of the requirements are likely to be moderate in most EU Member States, the implications will be amplified in Denmark by the importance of mortgage bonds to the financial system.

Our great concern about the new rules should be seen in the light of the fact that in Denmark:

- Specialised mortgage banks are key to the financial system. This is clearly shown by the following figures:
  - Issued mortgage bonds totalled EUR 366bn at end-2009
  - Issued sovereign debt totalled EUR 88bn at end-2009
  - Bank deposits stood at EUR 180bn at end-2009
  - Lending by Danish specialised mortgage banks represents 75% of all retail lending and almost 50% of all commercial lending.
- Most lending by credit institutions is granted by Danish specialised mortgage banks, which fund all loans by daily issuance of mortgage bonds. The cash flows of the loans are identical with those of the bonds issued (match funding).
- Danish specialised mortgage banks operate subject to a specialist banking principle confining the activity of mortgage banks to mortgage lending based on mortgage bond funding. Under the principle mortgage banks are prohibited from collecting deposits. This principle is instituted in Danish legislation because mortgage bond funding is generally considered the most stable.
- In connection with the customers' refinancing of loans, the liquidity flows in the financial sector up to the payment date of the bonds are often so large that the sovereign debt market is not at all an alternative to the market for mortgage bonds drawn at par. Liquidity management in mortgage banks and commercial banks is not feasible unless most of the liquidity is placed in mortgage bonds, including bonds issued by the institution itself.

The importance of mortgage bonds to the Danish financial system is further evidenced by market observations during the financial crisis:
During the entire crisis, mortgage bonds were traded in greater volumes than sovereign debt.

During the entire crisis, Danish specialised mortgage banks were able to tap the market with new issues for the full financing of all lending activities. The tap issues took place on all business days without any government purchase or deposit guarantee schemes.

The system has worked for 200 years, and loan losses have been less than 1% of total lending by Danish specialised mortgage banks, including commercial lending, even during the worst crisis in the 1930s. During the recent financial crisis – following considerable declines in property prices and GDP – the loan loss level, including commercial lending, has been modest at 0.2% annualised.

The Danish mortgage system does not fit into the proposed liquidity rules or leverage ratio rules. The specific problems in relation to the proposed regulation are:

**Definition of high quality liquid assets (LCR) and required stable funding (NSFR)**

The proposal suggests a distinction between three asset classes, where covered bonds/mortgage bonds are treated equally with corporate bonds. The actual liquidity of each asset type is not taken into consideration.

In Denmark, mortgage bonds are the main liquidity instrument. It will not be possible for Danish banks to replace mortgage bonds with sovereign debt and cash to the extent required by the rules. In terms of liquidity, neither mortgage banks nor commercial banks will be able to meet the proposed liquidity rules without having the possibility of including huge amounts of sovereign debt denominated in another currency.

This poses a problem, which must be solved as follows:

**Proposal for a solution (in respect of both the LCR and the NSFR):**

Covered bonds/mortgage bonds, which are as liquid as sovereign debt, are treated equally with sovereign debt, which means that there is no 50% limitation or haircuts of 20%/40%.

Credit institutions should also be able to include their self-issued bonds in line with sovereign debt, if they are as liquid as sovereign debt and they are bankruptcy remote and collateral is ring-fenced. This complies with the EU CRD regulation of repo-eligible instruments and the practice for repo eligibility both with the central bank and the private repo market.

**Definition of available stable funding (NSFR)**

Under the NSFR, mortgage bonds with a time-to-maturity of less than one year do not qualify as stable funding. The Danish mortgage system will not benefit from the fact that funding with a time-to-maturity of less than one year in a large liquid market which is distributed on many issue dates during a year is a more stable source of funding than retail deposits. This is even more so due to the pass-through balance principle, which prevents a run on the mortgage bank and eliminates the liquidity risk. A significant aspect of the pass-through principle is that any widening of interest rate spreads is fully paid by the borrowers, and therefore the mortgage bank does not incur any liquidity/interest rate risk.
NSFR prevents the practice of issuing pass-through mortgage bonds funding mortgage loans with interest rate resets (also referred to as adjustable-rate mortgages – ARMs). These loans typically make up 25%-50% of total lending. This will mean the end to all ARMs in their present form where the borrower has an option to prepay the loan with bonds, and where the borrower only pays a transparent funding rate that equals the funding rate of the mortgage bank.

This poses a problem, which must be solved as follows:

Proposal for a solution:
Pass-through mortgage bonds with a time-to-maturity of less than one year should be included in the NSFR as a fully stable source of funding.

Definition of net cash outflow (LCR)
The problem pertaining to the NSFR definition of available stable funding is also a problem as regards the LCR definition of net cash outflow, the only difference being the horizon of 30 days rather than one year. The rule means that ARMs in respect of which the interest rate is fixed for a certain period (generally for one year) must be refinanced at least 30 days before the bond maturity date despite the fact that the borrower bears the interest rate risk relating to refinancing. The most important consequence will be that the borrower's refinancing rate will increase, with no corresponding improvement.

Therefore, we see no need for this rule on account of our funding structure.

Leverage ratio
Specialised mortgage banks with low credit risk and low financial risk on lending and funding are most likely to be affected under a system with a fixed leverage ratio.

A fixed leverage ratio does not take into account tightly regulated lending limits, low credit risk as a result of solid security in the form of mortgages on real property and low financial risk due to a pass-through balance principle.

A fixed leverage ratio would either render specialised mortgage banks uncompetitive because of very high capital costs relative to competitors – or would encourage specialised mortgage banks to assume significantly increased risk. The capital requirement would presumably more than double.

A fixed leverage ratio would also mean that neither commercial nor Danish specialised mortgage banks would be able to acquire the mortgage bonds required for practical liquidity management in a capital-effective way, cf. above.

Proposal for a solution:
No doubt, a leverage ratio could be a useful tool for the national authorities in a Pillar II process for the purpose of regulating the actual risk.
3. Introduction
In the above summary, we have pointed out the principal problems that we see in the new liquidity regulations and leverage ratio. Below, we will elaborate with facts and details.

The memorandum is structured as follows:

Section 4 provides a brief description of the Danish mortgage system in relation to the new regulations.

Section 5 elaborates on the system in relation to the definition of high quality liquid assets (LCR) and required stable funding (NSFR).

Section 6 describes bonds issued by the institution itself ("self-issued bonds").

Section 7 elaborates on the system in relation to the definition of available stable funding (NSFR).

Section 8 elaborates on the system in relation to the definition of net cash outflow (LCR).

Section 9 elaborates on the system in relation to the leverage ratio.

Appendix A describes the balance (pass-through) principle applying to the two most significant loan products:
- 20Y/30Y fixed-rate loans with an embedded option of prepayment at par
- 20Y/30Y adjustable-rate mortgages with annual interest rate reset

4. Characteristics of the Danish mortgage model
First, we would like to emphasise that Danish mortgage bonds comply with the definition of highly secure financial assets eligible for low risk weighting, extended exposure limits among investors and repo transactions with central banks under EU regulation introduced by the UCITS Directive in the mid-1980s and the definition of covered bonds introduced by the CRD.

Also, the legal set-up for covered bonds, the structure of the Danish mortgage system and the function of the Danish bond market fully support the solutions we propose.
### Characteristics of Danish mortgage bonds/covered bonds and the mortgage bond/covered bond market

<table>
<thead>
<tr>
<th>1) Legal set-up</th>
<th>Applies to definition of high quality liquid assets and required stable funding</th>
<th>Applies to definition of net cash outflow and available stable funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mortgage bonds are bankruptcy remote based on ring-fenced assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td> • The bonds may thus be sold and payments may be received even if a mortgage bank is subject to bankruptcy proceedings.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td> • The bondholders have a preferential claim on the assets in the ring-fenced capital centres, the assets of which are mortgages on real property and financial assets financed through the mortgage bank’s capital base. Further, the bondholders have a claim against the mortgage bank in general.</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Fixing of loan limits, financial risk and funding are tightly regulated and supervised by the Danish Financial Supervisory Authority.</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>The specialised mortgage banks may not accept deposits, and they fund all loans through the issuance of mortgage bonds. All mortgage bonds comply with the UCITS rules, and largely all mortgage bonds comply with the provisions of the CRD regarding covered bonds.</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2) Stable and high liquidity in the mortgage bond market</th>
<th>Applies to definition of high quality liquid assets and required stable funding</th>
<th>Applies to definition of net cash outflow and available stable funding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mortgage bonds are traded in greater volumes than sovereign debt, also during the financial crisis.</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Danish specialised mortgage banks tap the market daily with new issues for the full financing of all lending activities. Tap issues take place on all business days.</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Primary and secondary liquidity volumes are integrated, as all mortgage bonds are issued and traded on the stock exchange.</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>The bonds (including self-issued mortgage bonds) are repo-eligible with the Danish central bank, and EUR-denominated bonds are repo-eligible with the ECB. Haircuts depend on the maturity of the bonds (1-30 years) and vary from 1% to 7.5%.</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>There is a liquid repo market for mortgage bonds</strong></td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
(including self-issued bonds) with a high turnover between banks and large investors outside the scope of central banks.

3) The balance principle eliminates financial risk
The pass-through principle – the balance principle – means that

- Mortgage bonds issued will not mature until mortgage loans backing the bonds either mature or are refinanced.
- The mortgage bank’s interest rate risk, foreign exchange risk and refinancing risk in terms of interest rate spreads etc is almost nil in relation to lending and funding.
- Borrowers are awarded the right to prepay at all times by exercising either a call option (prepayment at par) or a delivery option (prepayment at current market price of mortgage bonds issued to finance the loan). The prepayment options support liquidity both in primary and secondary markets without exposing issuing banks to prepayment risk.
- The entire loan amount is funded by way of mortgage bonds and all loans may be prepaid by the customer by way of bonds. This means that the rating of a mortgage bond issued by a specialised mortgage bank is a rating of the entire lending to customers. Consequently, Danish specialised mortgage banks cannot structure themselves to a AAA rating by funding part of an already granted loan or already granted loans by another source of funding. This is why not all mortgage bonds have a AAA rating despite the low risk of the system. All bonds are rated in the range of AA to AAA. Most are rated AAA, but the future rating cannot be predicted with any certainty.
5. Definition of high quality liquid assets (LCR) and required stable funding (NSFR)

The equal treatment of corporate bonds and mortgage bonds does not correctly reflect the structure and the market performance during the current and past crises of the instruments. Furthermore, the definition of mortgage bonds as a uniform asset class does not take into due account the differences in market liquidity observed under the current and past crises.

The Danish covered bond market

In Denmark, mortgage bonds are the main and most liquid liquidity instrument. Quite simply, Denmark has a unique liquidity structure due to the mortgage banks' dominant position in the financial system in terms of amounts.

At-end 2009 the volume of mortgage bonds issued by Danish specialised mortgage banks stood at EUR 366bn\(^1\), compared with EUR 88bn for Danish sovereign debt, cf. Table 1 below. In the following, the terms mortgage bonds and covered bonds are used synonymously.

<table>
<thead>
<tr>
<th>Gross outstanding sovereign debt*</th>
<th>GE</th>
<th>FR</th>
<th>UK</th>
<th>IT</th>
<th>SP</th>
<th>NE</th>
<th>SE</th>
<th>DK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covered/mortgage bonds **</td>
<td>579</td>
<td>119</td>
<td>187</td>
<td>7</td>
<td>315</td>
<td>21</td>
<td>126</td>
<td>366</td>
</tr>
</tbody>
</table>

* Source: Euro Government Bond Handbook. The handbook of issuers of sovereign debt within the euro area and Scandinavia, February 2010 and United Kingdom’s HM Treasury

** Source: ECBC European Covered Bond Fact Book, September 2009

Further, at end-2009 bank holdings of covered bonds (not specified by domestic or foreign issuer) stood at EUR 156bn, compared with EUR 11bn for sovereign debt, cf. Table 2 below.

<table>
<thead>
<tr>
<th>Cash</th>
<th>Sovereign debt</th>
<th>Covered bonds/mortgage bonds</th>
<th>Corporate bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,537</td>
<td>11,434</td>
<td>156,072</td>
<td>12,841</td>
</tr>
</tbody>
</table>

Source: Danish central bank statistics

As shown, it will not be possible to replace mortgage bonds with sovereign debt and cash. The situation at end-2009 would have been even worse in case of a simultaneous refinancing surge with customers refinancing their 30-year fixed-rate mortgage loans into new 30-year mortgage loans with a lower coupon rate.

The process of refinancing large amounts of mortgage loans can run smoothly and without imposing extra costs on the borrowers. But a particular problem arises, as both commercial banks and Danish specialised mortgage banks need to place very large amounts of liquidity in the weeks preceding the payment date of the bonds. This is not practically feasible unless most of the liquidity is placed in drawn mortgage bonds.

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\(^1\) All amounts in this document are listed as EUR equivalents.
**Trading activity**

Mortgage bonds are traded actively on NASDAQ OMX Copenhagen A/S. As the specialised mortgage banks issue and sell bonds to fund their daily disbursement of loans, there is a daily need for clearing and matching the supply and demand for mortgage bonds. The specialised mortgage banks, bond brokers and main institutional investors have set up mortgage bond trading desks in order to participate in the daily clearing of the market. The trading desks also clear markets for mortgage banks’ buybacks of bonds for the prepayment of loans.

This set-up provides a daily need for market making and trading by issuers, banks and investors which is different from set-ups for sovereign debt and corporate bond trading elsewhere. As all trades are reported and disclosed by NASDAQ OMX Copenhagen A/S, transparency is high.

Trading activity is supported by issuing and refinancing activity. A given series of mortgage bonds is open for issuance either for 3 years or until 1 month before maturity. Throughout this period Danish specialised mortgage banks will make tap issues of mortgage bonds whereby primary and secondary market liquidity is combined to enhance overall liquidity. Furthermore, mortgage bonds will be in demand from borrowers for the prepayment of their mortgage loans, i.e. all mortgage loans may be prepaid without the borrower being penalised for buying back and delivering the bonds funding their loans.

Long-term and medium-term mortgage bonds are traded in a fixed income submarket also including sovereign debt. The pricing of mortgage bonds is related to the pricing of sovereign debt on an ongoing basis, i.e. market liquidity is supported by spread trading. Short-term mortgage bonds (time-to-maturity of one year or less) are typically traded at money market desks.

Trading activity is supported by market making arrangements for benchmark issues.

During the financial crisis, trading activity remained high. In 2009 the total volume of mortgage bonds traded was EUR 622bn, compared with EUR 42bn for sovereign debt, cf. Chart 1.

**Chart 1** Sovereign debt and mortgage bonds, monthly turnover, EURbn

Source: NASDAQ OMX Copenhagen A/S
The 2009 average trading volume was EUR 1.0m for mortgage bonds, compared to EUR 4.8m for sovereign debt. Average trading volumes have remained stable during the financial crisis, i.e. market depth has not suffered, cf. Chart 2.

Chart 2 Sovereign debt and mortgage bonds, average trading volumes, EURm

Repo market activity

Repo transactions are important for the short-term liquidity of financial institutions. Repo eligibility allows the holder of a financial asset to raise liquidity instantaneously without being dependent on a buying interest in the market or restructuring the asset portfolio to comply with a target risk profile.

Mortgage bonds are repo-eligible with the ECB (subject to denomination in EUR), the Swedish, the Norwegian, the Swiss and the Danish central bank, at standard haircuts. Please note that repo eligibility also applies to self-issued mortgage bonds.

In addition, mortgage bonds are frequently applied for repo transactions outside the scope of central banks. The volume of third party repo transactions in Denmark is estimated at EUR 7bn-15bn at end-2009. However, no market statistics exist to verify this estimate.

According to the ICMA, Danish mortgage bonds are applied for repo transactions in greater volumes than sovereign debt. At end-2009 the volume of mortgage bond repo transactions was estimated at EUR 20bn, compared with sovereign debt repo transactions estimated at EUR 5bn, cf. Table 3.
Table 3 Volume of repo transactions by collateral, EURbn²

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<tbody>
<tr>
<td>Sovereign debt</td>
<td>18</td>
<td>14</td>
<td>7</td>
<td>9</td>
<td>5</td>
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<tr>
<td>Mortgage bonds</td>
<td>18</td>
<td>14</td>
<td>13</td>
<td>14</td>
<td>20</td>
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</table>

Source: ICMA European Repo Market Survey June 2009

**Pricing**

Mortgage bonds are priced continuously by market makers and via trading activity. Please note that members of NASDAQ OMX Copenhagen A/S are required to report trading volumes and prices in real time to enhance market transparency.

The financial crisis led to a general repricing of risk across financial markets. Spreads on mortgage bonds widened in line with e.g. spreads on German covered bonds or Spanish sovereign debt, cf. Chart 3. Since end-2008 renewed spread tightening has been observed, and spreads have now returned to normal levels.

Chart 3 Issuer swap spreads on covered bonds and sovereign debt, selected EU Member States

<table>
<thead>
<tr>
<th>bps</th>
<th>Ireland Covered</th>
<th>Germany Covered</th>
<th>France Covered</th>
<th>Spain Covered</th>
<th>Denmark Mortgage</th>
<th>Spain Sovereign</th>
<th>Ireland Sovereign</th>
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Source: Danske Markets

² Volumes are derived from the table below, published in The ICMA European Repo Market Survey June 2009:

| Q1: What are the total gross values of cash to be repaid by you and repaid to you on repo transactions maturing after 10 June 2009? (Figures in EURbn) |
|---|---|---|---|---|---|
| June-06 | Jun-07 | Jun-08 | Dec-08 | Jun-09 |
| 6,047 | 6,775 | 6,504 | 4,633 | 4,868 |

How much is against collateral issued in Denmark?
- By the central government: 0.3% 0.2% 0.1% 0.2% 0.1%
- By other issuers: 0.3% 0.2% 0.2% 0.3% 0.4%
The repricing of risk had an impact on bid-ask price spreads.\(^3\) Spreads went from 20 cents per dollar to 30 cents per dollar, which is comparable to most European sovereign debt markets, cf. Chart 4.

**Chart 4 Bid-ask price spreads (cents), benchmark mortgage bonds**

![Bid-ask price spreads chart](chart.png)

Source: NASDAQ OMX Copenhagen A/S

While leading to valuation adjustment losses among investors and increased borrowing costs among homeowners, the widening of swap spreads and to a lesser extent bid-ask price spreads facilitated the provision of liquidity to the market. If spreads had not been allowed to widen because of e.g. market regulations or market interventions, the yield earned by providing trading book liquidity to the market would have been lower and market participants might have been reluctant to provide liquidity.

Finally, it should be added that Danish mortgage bonds are held by a wide range of investors, which further supports liquidity and stability in the market.

Insurance and pension companies hold about 30% of the issued mortgage bonds. MFI institutions hold the same ownership interest. Households and non-financial companies hold about 10-15%. The same applies to foreign investors and to non-MFI financial companies.

**Conclusion:**

It has been documented that mortgage bonds issued by specialised mortgage banks in Denmark are the largest and most liquid liquidity instrument in Denmark and thereby in DKK. Sovereign debt plays a much less important role than mortgage bonds.

The system has been liquid and has worked efficiently for 200 years – also during the recent financial crisis.

The macroeconomic effects will be dramatic if mortgage bonds are not fully recognised to be as liquid and secure as sovereign debt.

Another consequence is that interest rate fixing and prepayment terms will be less transparent to borrowers. They may also have to pay markedly higher interest margin and prepayment costs than the current approximately 0.5 percentage point pa.

\(^3\) Spreads on trading price, i.e. a bid-ask spread of 20 cents is equivalent to price quotes of e.g. 99.20/99.40.
In terms of liquidity, neither mortgage banks nor commercial banks will be able to meet the proposed liquidity rules without having the possibility to include huge amounts of sovereign debt denominated in another currency.

6. Self-issued bonds
The proposed framework for liquidity management does not recognise mortgage bonds or corporate bonds issued by the holding entity as an eligible source of liquidity. In the definition of the LCR, self-issued bonds are explicitly excluded from the stock of high quality liquid assets, and in the definition of the NSFR, holdings of self-issued bonds are subject to a 100% weight when measuring the amount of funding required.

We point to four distinctive differences between corporate bonds and, in general, covered bonds, including mortgage bonds issued by Danish specialised mortgage banks.

- While corporate bonds may be issued without any regulatory constraints, issuance of mortgage bonds is constrained by the volume of eligible assets backing the bonds.
- While default on corporate bonds follows immediately after the bankruptcy of the issuing entity unless specific structures are provided, mortgage bonds are bankruptcy remote from the issuing entity, i.e. legislation is designed to enable the trustee to continue payments on mortgage bonds, made on time irrespective of the default of the issuer.
- Self-issued mortgage bonds are eligible for central bank repo transactions. Repo eligibility of self-issued mortgage bonds is also recognised in the CRD. Bankruptcy remoteness and ring-fenced collateral are the important features that assure that the bonds can be traded actively even in case of the issuer's bankruptcy.
- All Danish mortgage bonds are listed on NASDAQ OMX Copenhagen A/S and are priced by market participants. Market prices form the basis for the pricing of loans under the pass-through principle. Holdings of self-issued bonds by Danish specialised mortgage banks are acquired on the market in price competition with investors in compliance with the MiFID rules on best execution.

Danish specialised mortgage banks are allowed to issue mortgage bonds only if fully backed by eligible mortgage loans or, on an interim basis, eligible securities, cf. the balance principle. Proceeds from mortgage bond issuance must be applied for the disbursement of mortgage loans or invested in eligible securities held in custody segregated from the own funds of the issuing bank. Danish specialised mortgage banks must at all times be able to demonstrate the availability of eligible collateral sufficient to cover the value of mortgage bonds issued. Danish specialised mortgage banks are therefore prohibited by legislation from issuing mortgage bonds into their own portfolios for the purpose of raising liquidity.

Similar constraints do not apply to corporate bond issues.

Furthermore, an inherent characteristic of legislation on covered bonds, including Danish mortgage bonds, is the privileged position of bondholders in case of issuer bankruptcy. In Denmark, the bankruptcy privilege is instituted by specific, detailed regulation. Key features of the bankruptcy regulation are the following:

- All assets of the bankruptcy estate (including both cover assets and overcollateralisation) will be segregated in cover pools (referred to as capital centres). Transfer of assets between cover pools will be prohibited.
• A trustee will be appointed by the Danish FSA. The trustee will be instructed to employ the assets of the bankruptcy estate only for the timely payment of interest and principal on mortgage bonds issued.
• Payments on mortgage bonds issued will not be accelerated. Bankruptcy of the issuer does not entitle bondholders to claim payment of interest or principal prior to schedule.
• The trustee will be entitled to issue bonds for the refinancing of maturing debt and/or sell cover assets, provided that proceeds are used to pay interest or principal on mortgage bonds issued.

The framework for liquidity management in a bankruptcy estate is further supported by the pass-through principle employed by Danish specialised mortgage banks. In compliance with the principle, payments from borrowers will balance payments to bondholders at each payment date, i.e. payment gaps are absent. The trustee is therefore not dependent on access to market liquidity in his duty to pay interest and principal to bondholders on time.

The probability of holders of mortgage bonds receiving payments of interest and principal in full and on time relies completely on the quality of the cover assets and the overcollateralisation, and not on the issuing bank.

7. Definition of available stable funding (NSFR)
First, it should be pointed out that mortgage bond funding is more stable than funding based on retail deposits.

Specialised Danish mortgage banks fund all their loans by way of mortgage bonds according to the pass-through balance principle. For a more detailed description, see appendix A with examples of loan types. Funding based on deposits is prohibited.

The specialised mortgage bank incurs no pipeline risk in relation to loan or prepayment offer.

• As a result of the balance principle, loan offers are issued in the form of the right to obtain a loan funded by a specified amount of underlying bonds. Consequently, the customer assumes the risk relating to the price and interest rates prevailing at the disbursement date. The customer may fix the loan rate as at a future date by selling the mortgage bonds concerned under a forward contract.
• Prepayment offers are also linked to the issued mortgage bonds underlying the loan. Either in the form of a bond market price or in the form of the exercise of the embedded prepayment option at par.

Furthermore, the mortgage bond market is sufficiently large and liquid to sustain sales of new bonds on a daily basis – whether they are issued to fund new loans or issued in connection with the refinancing of ARMs.
**Issuance activity**

Gross issuance of Danish mortgage bonds reached EUR 113bn in 2008. This compares to total gross issuance of mortgage bonds in other jurisdictions combined in volume of EUR 504bn in 2008 (2009 figures not yet available), cf. Table 4.

**Table 4** Mortgage bond issuing activity, EURbn

<table>
<thead>
<tr>
<th>Year</th>
<th>GE</th>
<th>FR</th>
<th>UK</th>
<th>IT</th>
<th>SP</th>
<th>BE</th>
<th>NE</th>
<th>SE</th>
<th>DK</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>173,925</td>
<td>5,737</td>
<td>9,959</td>
<td>-</td>
<td>37,835</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>95,009</td>
</tr>
<tr>
<td>2006</td>
<td>167,162</td>
<td>12,637</td>
<td>23,770</td>
<td>-</td>
<td>69,890</td>
<td>150</td>
<td>5,500</td>
<td>17,569</td>
<td>114,014</td>
</tr>
<tr>
<td>2008</td>
<td>152,921</td>
<td>59,734</td>
<td>104,222</td>
<td>6,500</td>
<td>54,187</td>
<td>-</td>
<td>5,608</td>
<td>44,220</td>
<td>113,234</td>
</tr>
</tbody>
</table>

Source: European Covered Bond Council

The high issuance activity is attributable to some of the inherent characteristics of Danish mortgage banking. In compliance with the specialist banking principle and the tap issuance principle, Danish specialised mortgage banks will tap markets with new mortgage bond issues on a daily basis regardless of prevailing market conditions in order to match loan origination and loan refinancing. Due to borrowers' access to prepay at low costs, loan refinancing will typically be high when interest rates fluctuate. Issuance activity is therefore more sensitive to interest rate volatility than to the availability of favourable market conditions, i.e. low issuer spreads, as seen in other markets.

This is evidenced by issuance activity during the current crisis. In the years 2007-2009, average issuance volumes were EUR 5.0bn per month, compared with EUR 5.3bn per month in the years 2001-2007, cf. Chart 5.

**Chart 5** Gross mortgage bond issuance per month, end-year refinancing excluded, EURbn

<table>
<thead>
<tr>
<th>EURbn</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
</tr>
<tr>
<td>14</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>10</td>
</tr>
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<td>8</td>
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<tr>
<td>6</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Source: Danish central bank statistics


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4 Gross issuance figures not available.
Overall picture:
- Mortgage bonds issued by specialised mortgage banks are more liquid than sovereign debt.
- The fact that issues are made on a continuous basis throughout the year contributes to significant stability and security in terms of funding.
- The funding is final, and there is no risk of a run on the mortgage bank’s funding sources. Consequently, funding with pass-through mortgage bonds, where the cash flows of the loans are identical to the cash flows of the bonds (match funding), will often be more stable than funding by way of retail deposits.
- Moreover, the bonds are repo-eligible, which further enhances funding stability.
- The Danish system has been working smoothly every day for 200 years, also during the financial crisis.

**Conclusion**

The proposed definition of available stable funding will not be a problem in respect of the part of the loans subject to final funding by 30-year bond issues.

Yet, the definition is incompatible with the pass-through structure of ARMs offered by Danish specialised mortgage banks today.

The problem stems from the ineligibility of mortgage bonds with a time-to-maturity of less than one year as stable funding available. For a specialised mortgage bank to comply with both the NSFR and the pass-through principle, existing mortgage bond funding would have to be replaced by new mortgage bond funding one year prior to maturity at the latest.

The implications would be (1) a doubling of mortgage bonds outstanding which would need to be absorbed by the market and (2) increased funding and hence borrowing costs since the mortgage bank would need to pay interest on double funding. In addition, the double funding would be in breach of the match funding principle.

This does not add up – neither from a business nor a customer transparency point of view.
The consequence to the mortgage bank will be that the low-price, transparent model with low financial risk will be replaced by a more expensive, non-transparent model with higher financial risk.

In our opinion, there is no case for abolishing ARMs funded by 1-year bullets in Denmark, cf. the presented data and the balance principle applying to lending and funding. The solution is to require that refinancing is distributed over the year and over many funding days in order to further reduce the point-in-time risk in terms of funding. This will not be point-in-time risk in the form of interest rate risk to the mortgage bank, but in the form of the risk of having to use the repo facilities of the Danish central bank or the ECB in the absence of investor demand for the bonds. Compared with mortgage systems funded by deposits, the Danish system is more stable since it is not exposed to bank runs.

8. Definition of net cash outflow (LCR)
The purpose of the rule is to ensure the liquidity of mortgage banks in a stress scenario. As described above, data and the functionality of the Danish mortgage model show that:

- Mortgage banks are not exposed to bank runs, i.e. withdrawal of deposits by bank customers.
- The funding is final once the mortgage bonds have been sold. The greater part of the funding is therefore final for the 30-year term of the loans.
- The refinancing of ARMs presents the only potential source of funding risk. Not in the form of changes in interest rates, as the loan rate exactly matches the yield-to-maturity of the bonds issued to fund the loan as mentioned above. But rather in the form of a potential lack of opportunity to sell the bonds.
- The bonds are bankruptcy remote and will be tradable even in case of the insolvency of the mortgage bank. This also applies to the portfolio of self-issued bonds.
- The bonds are repo-eligible with the Danish central bank and the ECB at haircuts varying according to the maturity of the bonds. Maturities are 1-30 years, and haircuts are 1-7.5%. The repo market between banks and major investors is significant.
- More specifically, the LCR rule implies that ARMs must be refinanced before the maturity date of the bonds already issued in spite of the fact that the pass-through principle ensures an interest payment match. This, coupled with the above, is a relatively harsh requirement, which makes the customer's refinancing rate unnecessarily expensive.
- The problem arises in periods of high demand for ARMs in that the loans are required to be funded twice because of the balance principle. Both with the bonds that mature and with the new bonds issued to fund the loan. This will create a pressure on the exposure rules in small countries with few market players such as Denmark.

Conclusion
We see no need for this rule on account of our funding structure.
9. Leverage ratio
The treatment of specialised mortgage banks with low credit risk and low financial risk on lending and funding is inappropriate under a system with a fixed leverage ratio.

A fixed leverage ratio does not take into account tightly regulated lending limits, low credit risk as a result of solid security in the form of mortgages on real property and low financial risk due to a pass-through balance principle.

A fixed leverage ratio would either render specialised mortgage banks uncompetitive because of very high capital costs relative to competitors – or would encourage specialised mortgage banks to assume significantly increased risk. The capital requirement would presumably more than double.

A fixed leverage ratio would also mean that neither commercial nor Danish specialised mortgage banks would be able to acquire the mortgage bonds required for practical liquidity management in a capital-effective way, cf. above.

Conclusion
No doubt, a leverage ratio could be a useful tool for the national authorities in a Pillar II process for the purpose of regulating the actual risk.
Appendix A: Balance principle and specific loan and funding products

A specialised mortgage bank grants on-balance sheet loans only. The loans are thereby subject to the general capital adequacy rules, the future liquidity rules, etc.

Loans are granted at loan-to-value (LTV) ratios of up to 80% for residential loans and typically of up to 60% for other purposes, including commercial purposes. Loans are only granted against mortgages on real property. Traditionally, legislation has focused on LTV at the time of loan disbursement. The CRD introduced monitoring of compliance with LTVs on a continuous basis. Largely all Danish mortgage bonds satisfy the criteria for covered bonds set out in the CRD.

All loans are funded by way of issuance of mortgage bonds, and mortgage bonds are not issued for purposes other than lending secured by mortgages on real property. Lending may not be funded by deposits.

Legislation and supervision in this field are very comprehensive.

Mortgage bonds are issued out of capital centres. The assets consist of mortgages and various financial assets. The liabilities are issued mortgage bonds and the capital base. Accordingly, risk capital pursuant to the capital adequacy rules of the CRD is available behind all issues of mortgage bonds. The bonds are bankruptcy remote, i.e. bondholders have a preferential claim on the funds of the capital centre and a secondary claim on all other funds of the issuer.

In practice, all mortgage bonds are issued on the stock exchange.

The best way to describe the balance principle is by giving specific examples.

Example 1. 30-year fixed-rate loan prepayable at par

These loans have typically made up 50-85% of total lending.

The loan offer issued to a customer is an offer to issue a specified amount of 30-year bonds of which the call option in relation to bondholders matches the customer's prepayment option in relation to the mortgage bank.

The customer's proceeds are obtained when the mortgage bank sells the bonds in the market on behalf of the customer. The loan rate is simply the yield-to-maturity of the bonds sold. To this amount, the mortgage bank adds a margin of approximately 0.5 percentage point.

A customer may at any time prepay his loan by buying back the requisite amount of bonds in the specific ISIN and delivering them to the mortgage bank without any form of penalty. The customer may also prepay its loan at par (100) at the next bond payment date again, without any penalty. As the customer will never prepay the net present value of the loan, the customer will only pay the interest margin on the loan up to the prepayment date.

The interest payments from customers in a specific ISIN equal the mortgage bank's payments to the bondholders. A payment from a customer triggers a payment to the bondholders.
The balance principle is managed on a day-to-day basis and, accordingly, bonds are issued and traded on a daily basis as well. This way, the primary market and the secondary market converge, ensuring a daily turnover.

If interest rates fall, many borrowers want to prepay their loans at par and raise new loans with lower interest rates. Typically, a new loan is issued at the current price, and the old loan is prepaid at par at the next settlement date. In practice, mortgage banks handle the process as follows: The proceeds from the new loan are kept by the mortgage bank, which redeems the old loan in relation to the bondholders at the next payment date. The customer receives a net payment in respect of the loan proceeds relating to the new loan and the present value of the future bond redemption amount for the old loan. The redemption amount is announced to the bondholders by drawing part of the issued bonds at par as at the next payment date.

Consequently, mortgage banks have considerable excess liquidity until the bond payment date. Given the size of the amounts, the cash flows of commercial banks and mortgage banks can only be sustained if the liquid funds are placed in mortgage bonds drawn but still not redeemed in the notice period. This typically involves a combination of drawn bonds from other issuers and own drawn bonds.

As a result of the prepayment rules, mortgage bonds must necessarily be issued to fund all loans. Therefore, the mortgage bond market is inseparable from mortgage banks having self-issued bonds in their liquid securities portfolios. Indeed, self-issued bonds are repo-eligible with the Danish central bank and the ECB owing to their bankruptcy remoteness.

**Example 2. Adjustable-rate mortgage (ARM) loans with annual interest rate resets**

These loans have typically made up 0-50% of total lending.

The loans were originally refinanced at annual auctions 10 to 20 days before the fixing of the new loan rate.

The loan rate matches exactly the yield-to-maturity of the bonds sold. Thus, mortgage banks assume no interest rate risk in connection with loan refinancing.

In recent years, the refinancing has been spread over the year, and the refinancing auctions take place over a number of days during which the bonds are sold. The spreading of bond issuance over a large number of days contributes to increasing the stability of the funding to a level which is in many ways superior to the stability of funding based on retail deposits.

In our opinion, funding in a large, liquid market that is spread over many days of issuance provides funding stability, which obviates the treatment as unstable funding according to the NSFR, and also the LCR for that matter.

Although the option has never been exercised in a refinancing context, the repo eligibility with the Danish central bank and the ECB at a 1% haircut offers additional security.

In our opinion, the principal stabilising factor is the spreading of the refinancing funding in a market which is liquid on a daily basis.

For ARMs, the present wording of the NSFR will introduce financial risk on the part of mortgage banks and eliminate transparency in relation to customers as regards interest rate fixing and prepayment terms.