

# DANMARKS NATIONALBANK

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## Too-big-to-fail can be solved inexpensively

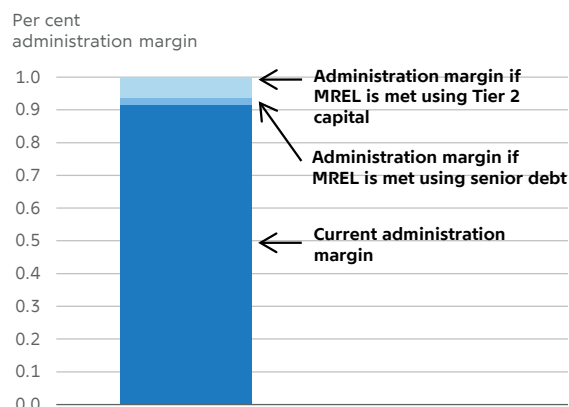
- A requirement that own funds and eligible liabilities must constitute 8 per cent of the total liabilities and own funds for the mortgage banks would solve the too-big-to-fail issue by ensuring a framework for resolution of mortgage banks without the use of public funds.
- An 8 per cent requirement for own funds and eligible liabilities for mortgage banks may increase the administration margin payable by borrowers by between 0.02 and 0.11 percentage point.

Danmarks Nationalbank's calculations show that the price of solving the too-big-to-fail issue for the Danish mortgage banks is low. Introduction of a minimum requirement for own funds and eligible liabilities, MREL, corresponding to 8 per cent of the mortgage banks' total liabilities and own funds would justify an increase of administration margins by between 0.02 and 0.11 percentage point, cf. Chart 1. An MREL would allow the mortgage banks to write down up to 8 per cent of their liabilities and own funds. Hence, the Resolution Fund can be used in the event of very large losses, cf. the fact box.

It would have considerable negative implications for financial stability and the economy if a mortgage bank were to be liquidated under the present rules. The MREL is to ensure that there are sufficient funds for institutions to be recapitalised and for functions that are critical to society to continue if an institution becomes distressed. An MREL of 8 per cent of total

**Borrower's average administration margin after introduction of MREL**

Chart 1



Note: The chart shows the mortgage credit sector's average administration margin vis-à-vis households..

Source: Danmarks Nationalbank.

liabilities and own funds means that households, firms and the economy in general can be protected if a mortgage bank becomes distressed.

The costs associated with introducing an MREL for the mortgage banks are analysed below.

### MREL for mortgage banks

If an MREL of 8 per cent of the mortgage banks' total liabilities and own funds is introduced, the mortgage banks must issue eligible liabilities. That will lead to an increase of the institutions' balance sheets, cf. Chart 2. However, the MREL will make junior covered bonds, JCBs, and the debt buffer superfluous, which to some extent counters the need to increase the balance sheets. Presumably, the mortgage banks will invest the funds from the eligible liabilities in secure assets that can be used as top-up collateral.

For borrowers, an MREL for mortgage banks may lead to higher administration margins. The institutions have costs resulting from the yield spread between the eligible assets and the assets in which the funds are invested. The institutions can compensate for the higher costs by increasing administration margins.

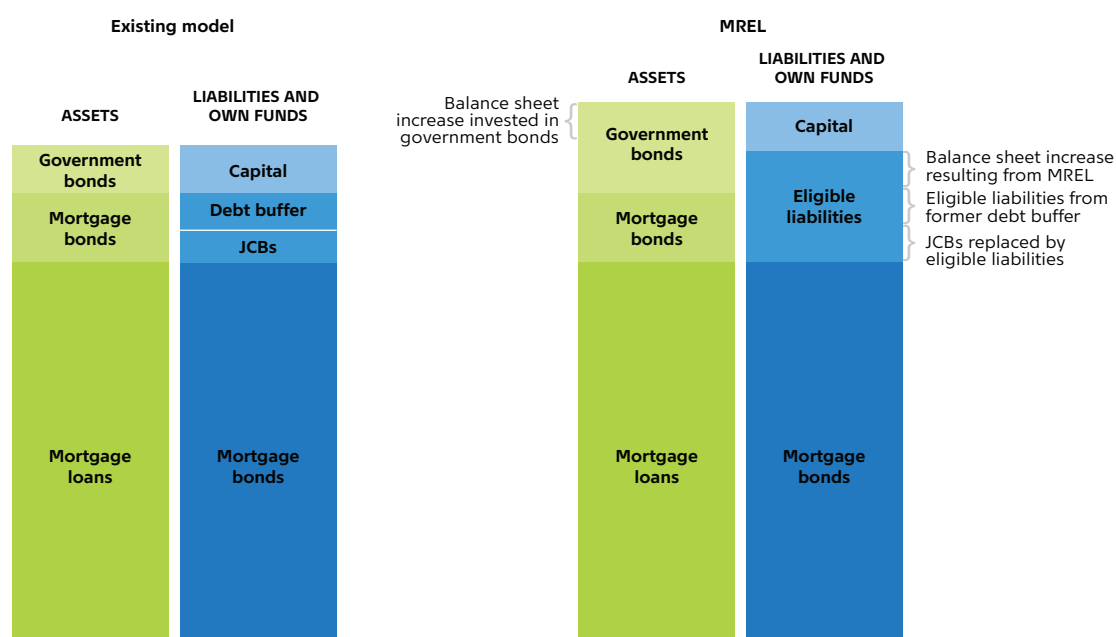
### Method and assumptions

The average increase in the administration margin payable by borrowers as a result of the introduction of an MREL of 8 per cent of the mortgage banks' total liabilities and own funds is estimated by

- calculating the volume of eligible liabilities to be issued by the mortgage banks in order to meet an MREL of 8 per cent of total liabilities and own funds,

Change in mortgage banks' balance sheet in connection with MREL

Chart 2



Note: The chart does not reflect the actual distribution of assets and liabilities and own funds.  
Source: Danmarks Nationalbank.

- calculating the total extra costs for the institutions by comparing yields on eligible liabilities, JCBs and government bonds, and
- distributing the extra costs on the total lending volume of the mortgage banks.

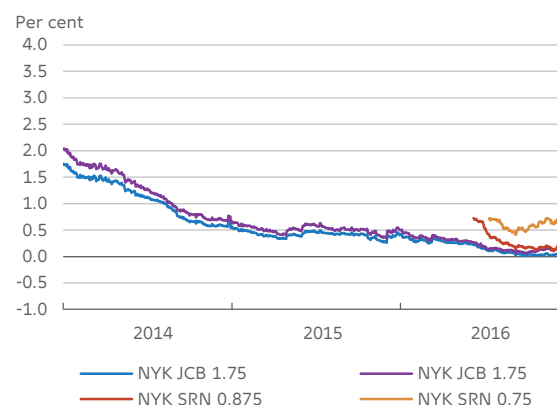
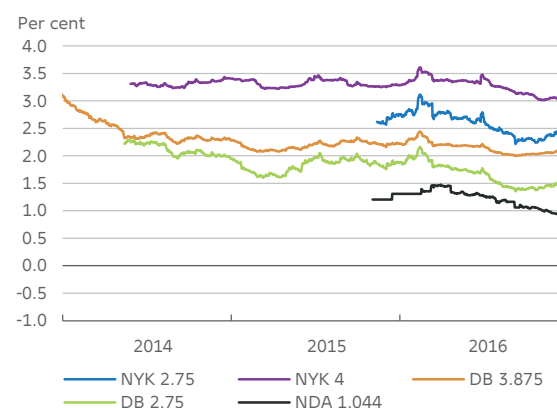
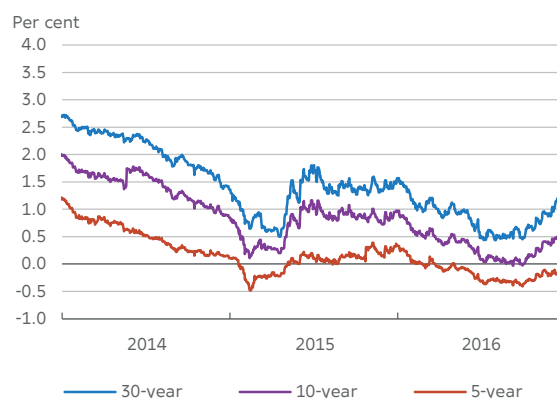
The calculations are based on the mortgage banks' balance sheets at end-2015.<sup>1</sup> To isolate the consequences of introducing an MREL, the calculated consequences of regulation already adopted have been deducted. More specifically, this means that the capital base of the institutions is deducted for the part of the combined capital buffer requirement<sup>2</sup> that was phased in in 2016, while the rest of the aggregate buffer requirement will be phased in by 2019. In addition, it has been calculated that none of the institutions will need to replace JCBs with eligible senior debt in order to meet the fully phased-in debt buffer requirement. Furthermore, it is assumed that

- the institutions issue Tier 2 capital and eligible senior debt, respectively, in order to meet the MREL,
- eligible liabilities replace JCBs, which cannot be included in the MREL<sup>3</sup>, and
- the new eligible liabilities issued, which increase the institutions' balance sheets, are placed in government bonds with a maturity of five years.

The instruments that can be used to meet the MREL are Common Equity Tier 1, Additional Tier 1 and Tier 2 capital as well as eligible senior debt, cf. the fact box. Hence, the calculations are based on the following yields to maturity, which applied at 1 December 2016 and are assumed to be constant, irrespective of the adjustment of the institutions' balance sheets:

- Eligible senior debt: 0.65 per cent.  
In mid-2016, Nykredit issued two senior resolution notes, SRNs. The highest-yielding one had

Chart 3  
**Yields to maturity on eligible senior debt, JCBs, Tier 2 capital and government bonds**



Note: The charts show the bonds' yields to maturity, which adjust for maturities and coupon rates. NYK is Nykredit, DB is Danske Bank, and NDA is Nordea. The top chart shows two senior resolution notes and two JCBs issued by Nykredit. The middle chart shows a number of euro-denominated Tier 2 bonds issued by Danish mortgage banks. The bottom chart shows yield indices for Danish government bonds with different maturities.

Source: Bloomberg.

1 The calculations are based on the Danish SIFI mortgage banks Nykredit Realkredit, Realkredit Danmark, Nordea Kredit and BRF kredit. DLRkredit has also been designated as a SIFI, but is not included in the calculations as it already meets the MREL. So calculations for DLRkredit would not show any need to increase the administration margin. For Nykredit Realkredit, data at group level has been applied.

2 Sum of the required capital conservation buffer, countercyclical capital buffer and individual SIFI buffer.

3 Eligible liabilities can be used both to meet an MREL and to fund top-up collateral. So they serve the same purpose as JCBs. This reduces the balance sheet increase, but funding of this part of the balance sheet will be a little more expensive.

a yield to maturity of 0.65 per cent and a maturity of five years, cf. Chart 3, top.

- Tier 2 capital: 3 per cent.  
This has been determined on the basis of open euro-denominated Tier 2 series issued by the mortgage banks with maturities of at least five years. 3 per cent is a high estimate of the yield to maturity on Tier 2 capital, cf. Chart 3, middle.
- Junior covered bonds: 0.25 per cent.  
This has been determined on the basis of open JCBs issued by Nykredit, cf. Chart 3, top. The bonds have a remaining maturity of 1-2 years, and hence the observed yield on 1 December 2016 was lower.
- 5-year government bonds: -0.1 per cent.  
The yield on the 5-year government bond has been chosen because its maturity matches that of eligible senior debt and newly issued JCBs. If the mortgage banks invest in government bonds with longer maturities or in other asset types instead, the return will be higher, cf. Chart 3, bottom. This will reduce the costs associated with an MREL.

It is assumed that the required returns on the institutions' other debts are not affected by the fact that the eligible liabilities injected make higher-ranking liabilities more secure.

The calculations show that the variation between the individual institutions is limited in scope. This variation will depend on the volume of JCBs that the institutions can phase out and how much they will have to increase their balance sheets.

#### **Estimate of increase in administration margins as a result of an MREL**

The costs of meeting the MREL are determined by the spread between the yields on the instruments issued to meet the MREL and on the assets in which the funds are invested. Hence, the change in the administration margins will depend on which instruments the institutions issue to meet the MREL and whether they invest in assets with other yields than those assumed.

#### **The MREL is met by means of eligible senior debt**

An MREL of 8 per cent of total liabilities and own funds can be met by issuing eligible senior debt. This will lead to an adjustment of the institutions' balance sheets, cf. Chart 2:

- Existing JCBs totalling kr. 39 billion will be replaced by eligible senior debt. That will give the institutions additional costs of kr. 158 million.

#### **Eligible liabilities**

Box 1

A core element of the Bank Recovery and Resolution Directive, BRRD, is the bail-in tool, which can be used to write down the value of liabilities or to convert them into equity. To support the use of the bail-in tool, the resolution authorities must, in connection with resolution planning, lay down a minimum requirement for own funds and eligible liabilities, i.e. an MREL, for each financial enterprise. The MREL is determined on the basis of the specific resolution plan for the financial enterprise in question. Before the Resolution Fund can be used to absorb losses of the financial enterprise, 8 per cent of the total liabilities and own funds of the financial enterprise must have been written down. The same applies if public sector stabilisation instruments are to be used.

The MREL may be met by means of Common Equity Tier 1 capital, Additional Tier 1 capital, Tier 2 capital and part of the bank's senior debt and large term deposits. Meeting the MREL by means of senior debt and large term deposits is limited to exposures (i) with a remaining maturity  $\geq 1$  year, (ii) not related to derivatives, (iii) issued and fully paid up using funds not financed by the institution itself, (iv) not comprised by collateral or guarantee, and (v) not related to preferential deposits.

In the Danish implementation of the BRRD, mortgage banks are exempted from having to meet an MREL. Mortgage banks must be restructured or resolved without the use of bail-in. It appears from the legislation that, combined with the debt buffer, other resolution tools and the liquidation procedures for mortgage banks are assessed to be sufficient to meet the resolution objective. The statutory resolution objectives, including safeguarding financial stability and the economy, are core elements of the resolution legislation and prerequisites for application of the exemption.

- Balance sheets are increased by kr. 56 billion by issuing eligible senior debt and buying government bonds. That will entail additional costs of kr. 416 million.

So the average increase in the administration margin will be 2 basis points as the additional costs of kr. 574 million are distributed on the total loans of kr. 2,500 billion.

Meeting the MREL by issuing eligible senior debt must be assumed to be the cheapest solution. Consequently, it can also be seen as a lower limit for the impact on the administration margin payable by borrowers. However, it must be assumed that the actual impact will be close to this limit as the institutions are likely to meet the requirement in an inexpensive manner.

#### **The MREL is met by means of Tier 2 capital**

Another way to meet the MREL is to issue Tier 2 capital.

- Existing JCBs totalling kr. 39 billion will be replaced by Tier 2 capital. That will give the institutions additional costs of kr. 1.1 billion.
- Balance sheets are increased by kr. 56 billion by issuing Tier 2 capital and buying government bonds. That will entail additional costs of kr. 1.7 billion.

The average increase in the administration margin will be 11 basis points when the additional costs of kr. 2.8 billion are distributed on the total loans of kr. 2,500 billion.

Meeting the MREL by means of Tier 2 capital is an expensive solution. Consequently, the calculations must be regarded as an upper limit for the impact on the administration margin.

#### **Summary and discussion**

The introduction of an MREL for mortgage banks of 8 per cent of their total liabilities and own funds would justify an increase in administration margins of between 0.02 and 0.11 percentage point. Presumably these figures overrate the ultimate effect, as high yields have been applied to Tier 2 capital and SRNs, and it has not been taken into account that the rate of interest payable by borrowers should fall as mortgage bonds will become more secure.

This is a low price for avoiding the liquidation of distressed mortgage banks. If the MREL is introduced for mortgage banks, their functions that

are important to society can continue. If that is not possible, the costs to society will be so large that the government will, in effect, be compelled to use public funds to rescue them. If the institutions can continue, this will ensure that the interests of the institutions are better aligned with those of society in general.

At the same time, the MREL has several attractive implications.

- Mortgage bonds will become more secure. Hence, the yield on mortgage bonds should fall. To the credit rating agencies it is important that securities issued do not risk being caught up in institutions that are being liquidated.
- The MREL will reduce the procyclicality of the mortgage banks' need to fund top-up collateral as the fall in house prices must be stronger before it will become necessary to fund new top-up collateral.
- The framework for resolution of mortgage banks and other banks will be the same, which will increase comparability and transparency.

In future, new regulation may be introduced that will increase the capital requirements for mortgage banks. A case in point is the capital floors in the draft for finalising the Basel III rules. If this increases the capital requirement for mortgage banks, the isolated costs arising from the MREL will be lower. This is because higher capital requirements for the institutions will reduce the distance to an MREL of 8 per cent.

The MREL does not fund sufficient top-up collateral to ensure that there will not be a need for funding further top-up collateral if house prices dive as sharply as seen in previous crises. It may be necessary to introduce other measures to ensure that the mortgage banks are resilient to such developments.

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