The traditional Danish mortgage model

Realkreditrådet

Contents

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Foreword

Denmark has the best mortgage system in the world. It is transparent and inexpensive. Mortgage rates and prepayment prices are directly reflected in the price of the mortgage bonds funding the loan. And everybody can monitor bond prices daily – for instance in newspaper price lists.

Interest rates mirror the prices investors pay for the bonds. And Danish mortgage bonds are attractive due to the high security level. This makes for low mortgage loan rates.

International experts have repeatedly praised the Danish mortgage system, emphasising that Danish mortgage banks operate in a transparent market and that loan rates are low.

The European Consumer Organisation has praised the option of prepaying a loan on favourable terms as being smooth and efficient, and the EU Commission has singled out the Danish prepayment system. These views have been of great importance in the current negotiations in the EU on a directive on housing loans.

The bottom line is: The Danish mortgage system makes for inexpensive property finance!

STABLE, SECURE AND ROBUST SYSTEM

We have a very stable, robust and efficient mortgage system both during upturns and downturns in the Danish economy. This was true during the financial crisis and also applies in the current economic downturn. Banks and mortgage lenders around the world have been in serious difficulties, and governments have had to issue guarantees. This has not been necessary in Denmark. Danish mortgage banks have been able to continue to grant loans and sell mortgage bonds all along.

The reason why Danish mortgage banks have continuously been able to provide affordable and stable financing to Danish homeowners and businesses before, during and after the financial crisis is that Danish covered bonds are considered a very safe investment in which both Danish and international investors have great confidence. Even the turbulence in European markets in recent years has not prevented investors from investing in Danish covered bonds. On the contrary –

foreign investors' demand for Danish covered bonds is just as high today as before the financial crisis.

In other words: The Danish mortgage system has proved its reliability of supply – also in times of crisis. Financial systems elsewhere in the world have crashed. The Danish mortgage system has proved robust, because the structure involves very little risk. Accordingly, the mortgage system contributes to financial stability. And the low interest rates have helped Danes get through a number of difficult years, mitigating the adverse effects of unemployment and a subdued housing market.

UNIQUE MORTGAGE SYSTEM

The Danish mortgage system is unique, as it is based on an important general principle called the match-funding principle. Under this principle, there is a direct match between the loan which a homeowner raises with a mortgage bank and the bonds which a mortgage bank issues to fund a loan. It contributes to securing financial stability, because the match funding principle to a greater extent eliminates risk in the financial sector. This connection also forms the basis of a transparent and flexible prepayment system. Borrowers may redeem their mortgage loans at any time without negotiating the price – prepayment may always take place at current market prices. This unique principle is found nowhere else in the world.

The complete match between loans and specific bonds, the match-funding principle, has always been the mainstay of the Danish mortgage system. This principle must be protected and treasured.

MAJOR CHALLENGES LIE AHEAD

The Danish mortgage system is facing several major challenges these days.

Above all the requirement of supplementary collateral applicable to Danish covered bonds of the SDO type. This is an EU requirement which was implemented in Denmark in 2007. The requirement means that mortgage banks must provide supplementary collateral if LTV limits are exceeded after a loan has been granted.

This is entirely unnecessary.

Danish mortgage bonds are already secure – to such an extent that the Danish mortgage system has survived for 200 years through several crises and huge price declines in the property market. Without a single mortgage bank going bankrupt, that is. And no bondholder has ever suffered any losses whatsoever as a result of default on the part of a mortgage bank. So the requirement is like having to pay a high price for a set of expensive braces when you already have a robust belt.

In practice, the requirement means that mortgage banks have to provide more collateral when property prices decline. And the amounts are quite substantial. As a consequence of the property price declines in recent years, mortgage banks have been required to provide supplementary collateral of an amount exceeding DKK 110bn. This makes it more expensive for mortgage banks to lend money, and the revenue base decreases. This is no good, neither for borrowers nor for the economy at large. Mortgage banks will eventually end up passing more costs on to borrowers.

The requirement of supplementary collateral may therefore ultimately aggravate economic downturns in Denmark – for no good reason. The Association of Danish Mortgage Banks is therefore working on having the requirement abolished altogether or making it more flexible.

Indeed, the initiatives currently being launched by several mortgage banks are reactions to the challenges posed by the requirement of supplementary collateral. This is mistakenly construed by some as if the Danish mortgage lending model is undergoing major changes. This is not the case. The basic model is still intact with transparent prices, the match-funding and prepayment systems are maintained, and the security behind the loans is still based on mortgages on property.

Another major challenge for Danish mortgage lending is the increased tendency towards credit ratings by the large international credit rating agencies finding their way into and becoming formal requirements in international financial legislation.

In the opinion of the Association of Danish Mortgage Banks, excessive reliance on credit rating agencies in the legislation is a dangerous path. If, for instance, a rating agency suddenly changes its methodology, capital requirements may change accordingly from one day to the next. Investors will be forced to sell some of their bonds so as not to trigger higher capital requirements. This could result in considerable negative shocks to the economy. Therefore, the Association of Danish Mortgage Banks is working towards having the rating requirement reduced or eliminated entirely from legislation.

A third challenge for Danish mortgage lending is the future stricter capital and liquidity rules in the EU. The rules are aimed at making the financial sector in Europe more resilient to future economic crises and set out new criteria for which assets banks and mortgage lenders may include in their liquidity statements and recognise as stable funding.

Denmark has made an intense effort to have Danish covered bonds recognised for what they are – ultra-liquid assets and stable funding.

There is a lot at stake. If Danish covered bonds are not recognised as ultra-liquid assets, banks and mortgage lenders may only invest in Danish covered bonds to a limited extent. This will reduce demand for covered bonds, and higher returns will be required in order to attract investors. For borrowers, this could lead to higher mortgage and property finance rates. That would seriously damage the Danish mortgage lending model.

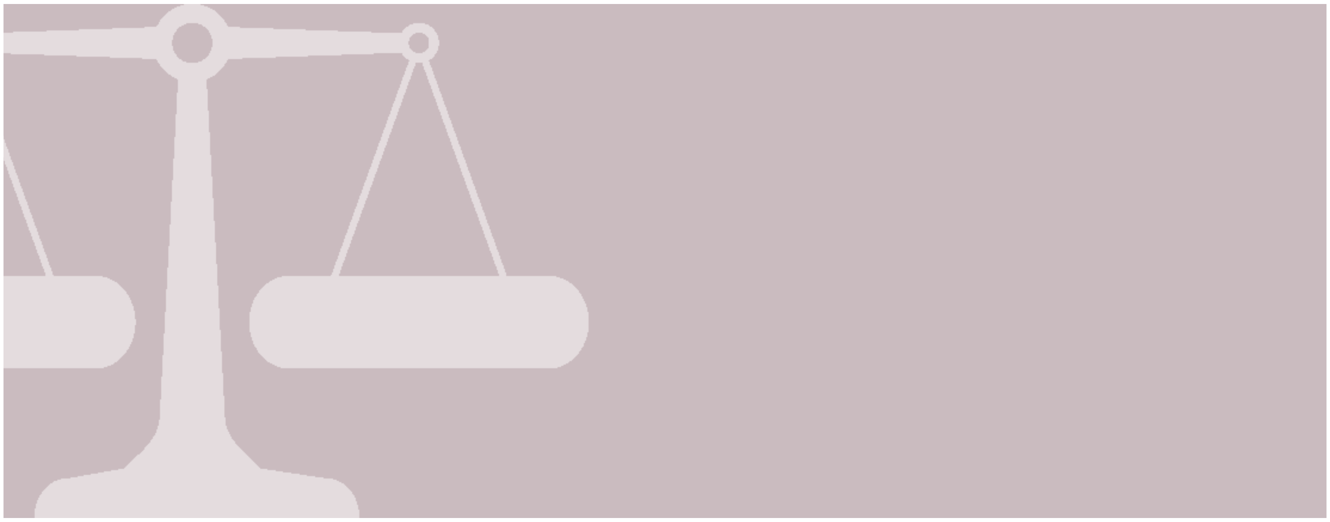
This publication, revised in 2012, is the contribution of the Association of Danish Mortgage Banks to a qualified debate about the future of the Danish mortgage model. It describes how the Danish mortgage system operates and outlines the importance of mortgage lending to the Danish economy.

I hope that you will enjoy reading this publication!

Ane Arnth Jensen

Director General of the Association of Danish Mortgage Banks

June 2012



1 | The traditional Danish mortgage model

A mortgage loan is a loan granted against a mortgage on real property by a mortgage bank. In Denmark the mortgage system dates back more than two centuries, and therefore it is referred to as the traditional Danish mortgage model. The model is based on a principle of matching a loan and the underlying bonds funding it. It is unique – also from an international perspective.

The traditional Danish mortgage model reflects the way Danish mortgage banks operate. The model has a number of attractive properties, not only to borrowers and bond investors, but also to the Danish economy at large:

- The model ensures low and transparent loan rates and unique prepayment terms.
- Investors who buy the issued bonds do not incur any default risk in practice.
- The mortgage model has a stabilising effect on the Danish economy and helps sustain financial stability.

The chart on page 8 shows how the traditional mortgage model works in practice.

THE LEGAL FRAMEWORK

The Danish mortgage model is based on the statutory framework and the way in which mortgage banks operate in practice within this framework.

The most important parts of the legal framework are:

- Mortgage banks grant loans secured by mortgages on real property. A limit has been determined for every loan relative to the assessed value of the property financed (LTV limit). Further, the loans are subject to a number of provisions on terms and interest-only periods.
- Mortgage banks must observe the rules of the Danish Financial Supervisory Authority when assessing the value of a property.

- Mortgage banks have only one source of funding: bond sales. A mortgage bank does not operate in the same way as a commercial bank, which may take deposits or raise funding with other banks for lending purposes.

- Mortgage banks must observe a so-called balance principle when issuing bonds. The balance principle limits the risk that mortgage banks may incur.

- The bonds are bankruptcy-remote. Hence, it is very unlikely that investors should suffer any losses. Throughout the past two centuries, all investors have been paid in full.

MORTGAGE LENDING IN PRACTICE

Within the legal framework, mortgage banks operate in a way which offers borrowers and investors further advantages.

The mortgage system is based on a principle of matching a loan with certain bonds, see the chart on page 10. This means that mortgage banks fund loans by selling bonds with matching characteristics. Therefore, the loan type, repayment profile, term and currency determine which bonds the mortgage bank will sell.

Mortgage banks fund loans on a current basis. In other words, the mortgage bank does not sell the required bonds until it disburses the loan to the borrower. The market price of the bonds at the time of sale consequently determines the loan rate. As mortgage banks grant new loans daily, they also issue new bonds daily. This is called tap issuance.

MATCH FUNDING PRINCIPLE MINIMISES RISK OF LOSS

There are several reasons why mortgage banks want to maintain the principle of match funding, even if they are not obliged to do so under Danish law.

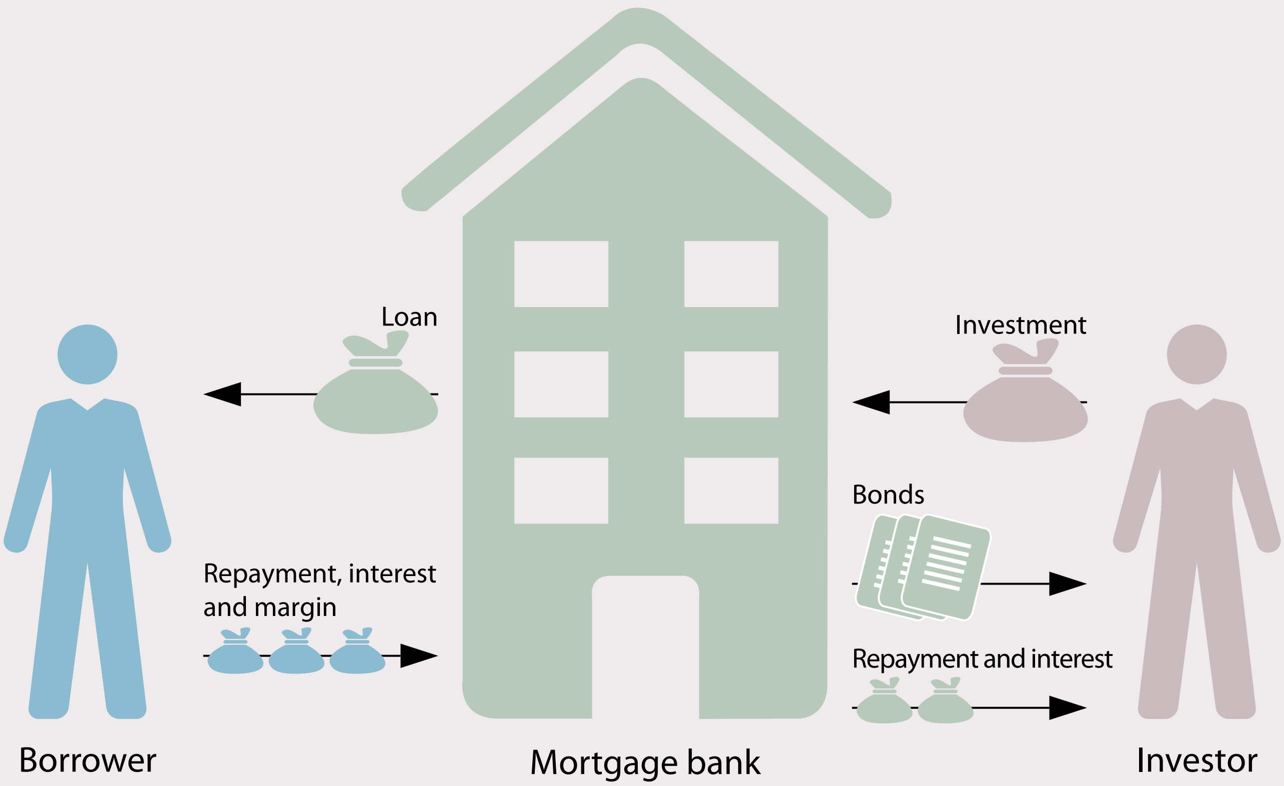
This is a result of past legislation and mortgage banks' need for reducing the risk of loss prompted by financial market developments. The match funding principle eliminates mortgage banks' loss risk if the market changes during the loan term – for instance if interest rates go up. This is due to the fact that the payments received by a mortgage bank from its borrowers correspond exactly to the payments it makes to the bondholders.

However, mortgage banks incur a risk relative to their borrowers, as they suffer a loss if a borrower fails to make interest and principal payments. On the other hand, this strongly encourages mortgage banks to provide good and sound advice to borrowers to reduce this risk to a minimum.

MATCH FUNDING PRINCIPLE GUARANTEES THE UNIQUE PROPERTIES OF THE MODEL

It is the match funding which makes the Danish mortgage system unique – also by international standards.

The mortgage system



A mortgage bank is an intermediary between persons requiring a loan for the purchase of real property and investors funding the loans by purchasing bonds.

A mortgage bank does not operate as a commercial bank, which may take deposits or raise funding with other banks for lending purposes. When a mortgage bank grants a customer a loan for the purchase of real property, it must first raise the funds.

Mortgage banks will issue and sell bonds to investors, which then fund the loans. During the loan terms, borrowers make principal and interest payments to mortgage banks, which transfer the amounts to investors.

A mortgage bank is therefore unaffected by any changes in floating loan rates. In case of declining interest rates, it will receive a lower interest payment from the borrower, but is only required to transfer the same low interest amount to bondholders, ie the investors. Thus, such changes affect only investors and borrowers.

Mortgage banks charge a margin from the borrower to cover daily operating costs and any losses and ultimately to make a profit. The margin is a percentage of the debt outstanding which the borrower pays throughout the loan term. The margin rate corresponds to the interest margin of a bank, but is generally lower.

This principle ensures that borrowers benefit from attractive terms such as:

- Transparent loan costs
- Market-based prices
- Unique prepayment options.

TRANSPARENT LOAN COSTS

Borrowers have a full overview of all loan costs. Total costs consist of interest and principal payments relating to the bonds funding the loan as well as a margin charged by mortgage banks to cover their daily operating costs including any losses.

Borrowers know which bonds fund their loans, and the bonds are listed on a stock exchange. Bond prices are quoted daily, for instance in newspaper price lists. There is transparency in connection with new loans as well as refinancing and prepayment.

MARKET-BASED PRICES

The price a borrower pays for a loan depends directly on the current financial market trends, as the loan rate is determined by the yield on the bonds funding the loan. The match funding principle therefore ensures market-based prices.

At the same time the supply of loan products has been standardised, ensuring that borrowers are offered the lowest interest rates possible, as large bond series are generally attractively priced by financial markets.

UNIQUE PREPAYMENT OPTIONS

Also, the match funding principle ensures favourable prepayment terms for the borrowers. Borrowers may always prepay their loans by buying the underlying bonds in the market – an option of which they take advantage when market prices are in their favour.

Borrowers may prepay their loans in other ways depending on the loan type. For a detailed description, please refer to chapter 2.

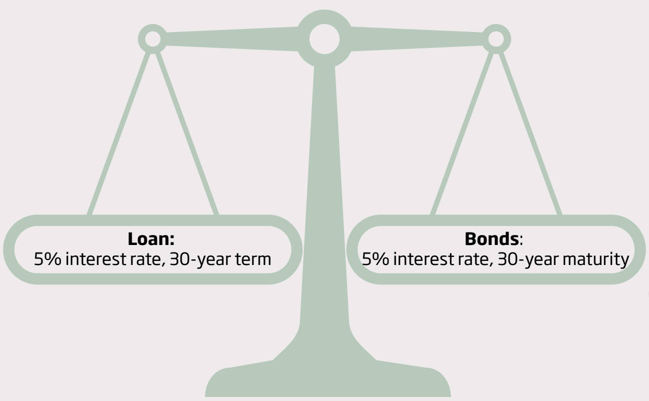
FOCUS ON MINIMISING LOSS RISK

Mortgage banks focus on minimising loss risk. Therefore, they do not only look at the value of the property when determining the amount that a borrower can borrow. The assessment also includes the borrower's current income and wealth, which are of great importance to the borrower's ability to repay the loan.

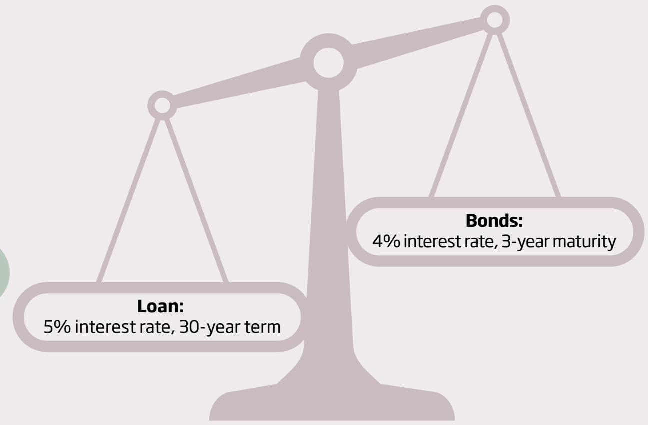
Finally, mortgage banks retain the loans on their books throughout the loan terms. Therefore, they have a clear interest in granting loans which can be expected to be repaid. Consequently, mortgage banks carry out a thorough valuation of the properties financed and of the borrowers' expected ability to repay the loans.

Match between loan and underlying bonds

With match funding principle



Without match funding principle



There is a match between a loan and the bonds funding the loan in the traditional Danish mortgage model. Mortgage banks maintain this model although they are not legally obliged to do so.

Example of the match funding principle: *A borrower raises a traditional 30-year mortgage loan at a fixed interest rate of 5%. The mortgage bank funds the loan by issuing bonds with a coupon rate of 5% and a maturity of 30 years. If the borrower repays the loan on a current basis, the mortgage bank makes principal payments to the bondholders on a current basis, too. If the borrower prepays the loan, the bondholders get their money back when the loan has been prepaid. Accordingly, the mortgage bank does not incur any risk of loss due to movements in financial markets. At the same time the loan terms are transparent. This is an advantage because borrowers can monitor the price of the bond underlying the loan, for instance in newspaper price lists. Therefore, borrowers always know the price of prepayment.*

The match funding principle applies to all mortgage loans. In connection with adjustable-rate mortgages (ARMs), the maturity of the underlying bonds is shorter than the loan terms. Here the match funding principle applies to the individual interest periods between refinancings. When the loan is refinanced, the underlying bonds are replaced.

Danish covered bond legislation allows mortgage banks and commercial banks to grant mortgage loans without using the match funding principle. Commercial banks make use of this possibility. For more details on covered bond legislation, please refer to chapter 3.

Example without the match funding principle: *A borrower raises a 30-year mortgage-like loan at a fixed interest rate of 5%. The loan is granted by a commercial bank. The bank funds the loan by issuing bonds with a maturity of three years and a fixed coupon of 4%. Therefore, the bank knows its obligations only three years ahead. At that time, the bondholders must have been repaid, and the bank must sell new bonds in order to continue funding the loan. In the meantime, rates may have risen or fallen. The bank thus runs a risk that its funding costs exceed the interest received from the borrower. Further, the loan terms are not transparent, because the borrower does not know which bonds fund the loan. Consequently, it may be difficult to ascertain whether the loan rate and prepayment terms tally with the current market conditions.*

2 | Mortgage loans finance property purchases

Mortgage loans play an important part in the finances of many Danes, and by far the most turn to a mortgage bank for finance to buy real property. One of the most important reasons is the favourable interest rates. But there are many other advantages: The loans offer transparent terms, are available to all and may be prepaid on favourable terms.

Mortgage lending is on the increase in Denmark. In the beginning of 2012 mortgage loans totalled DKK 2,400bn. This corresponds to a mortgage loan exceeding DKK 430,000 for every citizen in Denmark – young and old. Mortgage bank lending exceeds commercial bank lending. See Figure 1.

Mortgage banks grant loans for all types of property, but housing loans account for the bulk. See Figure 2.

MANY ADVANTAGES FOR BORROWERS

Mortgage loans are so popular because they are available to all purchasers of real property if they are creditworthy, and because mortgage loans offer the following advantages to the borrowers:

- Interest rates are attractive: Loan rates are attractive, because the legal framework and the lending terms and credit policy of mortgage banks make the loans very secure. When security is high, the buyers of the underlying bonds do not demand high interest. And the interest paid on the loan matches the interest demanded by investors to buy the underlying bonds – ie the market rate – plus a margin payable to the mortgage bank. The margin is calculated on the basis of the debt outstanding, and it is usually in the region of 0.6% annually for a private borrower.

- Everybody can monitor loan prices on a current basis: The loan rate is determined by a particular bond series. Everybody can always monitor the price of a particular bond, for instance in the newspaper price lists or on the websites of banks or the stock exchange.

- Borrowers may prepay their loans on attractive terms: Loans may always be prepaid by purchasing the underlying bonds at market price. The favourable prepayment terms make for flexible management of the borrower's debt and financial risk. This may be of great importance in case of unexpected events, such as a divorce or change of jobs, prompting a prepayment need.

- Mortgage banks cannot call loans prematurely: A loan is non-callable as long as the borrower pays principal and interest.

GENERAL LENDING PROCEDURE

When a person wants to buy real property and raise a mortgage loan, a mortgage bank will first determine the value of the property. This is due to the statutory LTV limit, which is currently 80% for owner-occupied properties.

The mortgage bank then assesses the repayment ability of the borrower. This assessment is usually based on income, wealth, credit record and a budget.

When the mortgage bank has approved a loan application, the borrower will choose the type of loan. The mortgage bank will then disburse the loan amount, and the purchase may be completed.

THREE MAIN TYPES OF MORTGAGE LOAN

Today, mortgage banks offer three main types of mortgage loan:

- Fixed-rate loans
- Adjustable-rate mortgages
- Floating-rate loans (with or without interest rate caps).

They may all be combined with interest-only periods.

They are all standardised loans – or in popular terms: off-the-shelf items. Mortgage loans are not customised. This offers economies of scale and keeps prices down.

Nonetheless, the complete loan range accommodates the risk profile and investment requirements of both borrowers and investors.

Figure 3 illustrates how the popularity of the loan types varies over time. Borrowers' preferred choice of loan type depends on for instance the current interest rate level.

FIXED-RATE LOANS

The long-term – typically 30-year – fixed-rate, callable loan is considered the most traditional mortgage loan. With this loan, the borrower knows in advance the fixed

Mortgage bank lending exceed commercial bank lending.

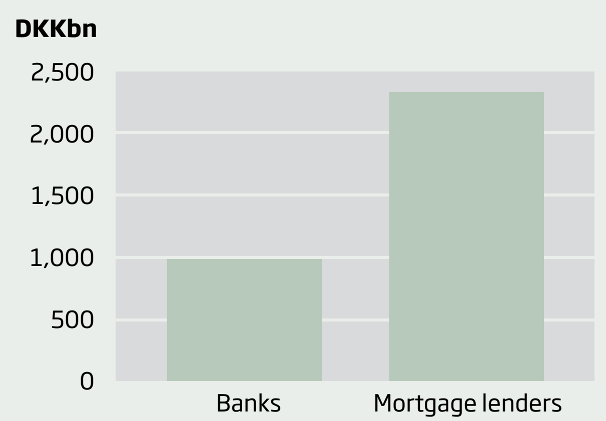


Figure 1: Retail and commercial lending by commercial banks and mortgage banks, March 2012. (Source: Danmarks Nationalbank)

Breakdown of mortgage lending by type of property. Most lending is for owner-occupied properties and holiday homes.

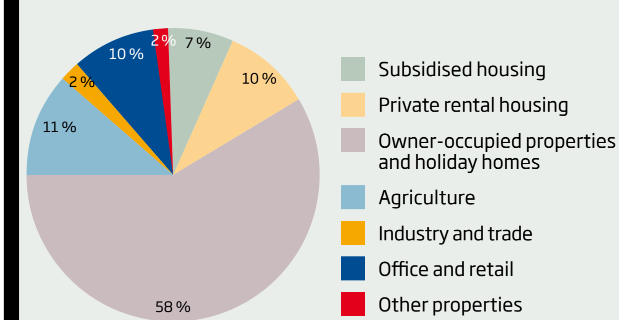


Figure 2: Breakdown of mortgage lending by type of property, Q1/2012. (Source: The Association of Danish Mortgage Banks)

repayments payable throughout the term of the loan.

The long-term fixed-rate mortgage loan has a prepayment option, which may be exercised in two ways:

- Borrowers may prepay their debts outstanding at a price of 100 (par).
- Borrowers may purchase the underlying bonds in the financial markets and deliver them to the mortgage bank. This is the cheapest method if the price of the bonds is below 100. In practice, mortgage banks purchase the bonds on behalf of borrowers.

Today, all long-term fixed-rate loans may be prepaid at a price of 100. This provides borrowers with a high degree of security. Without this option, the market price of the bonds could rise to much more than 100 if yields tumble. And that would make it expensive to buy the underlying bonds – they would be much more expensive than the borrower's debt in nominal terms.

The option of prepaying at a price of 100 also gives borrowers a higher protection against becoming technically insolvent if interest rates decline, leading to a rise in bond prices. A borrower is technically insolvent if the total mortgage debt exceeds the value of the property. Being technically insolvent is not a problem until a borrower needs to sell the property, because the sales proceeds will not cover the mortgage debt.

The popularity of the different types of loan varies over time.

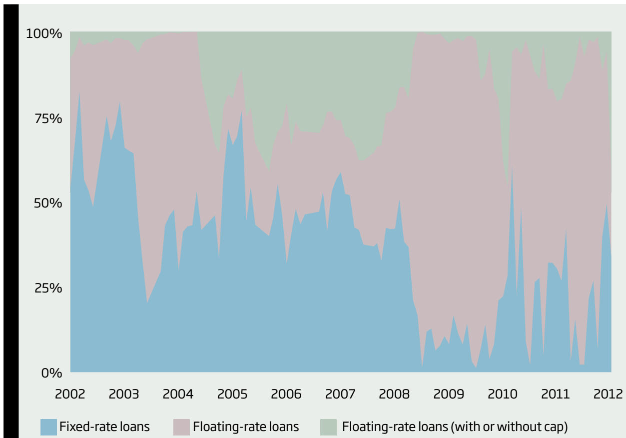


Figure 3: New mortgage lending by loan type, 2000 to mid-2012. (Source: iBoxx)

ADJUSTABLE-RATE MORTGAGES

Adjustable-rate mortgages (ARMs) were introduced in 1996 and soon became popular.

The main advantage of ARMs is that interest rates are generally lower than those of fixed-rate loans when raised. However, the borrower does not know the future repayments as the interest rate will change throughout the loan term following interest rate resets. The interest rate is generally reset at a frequency of 1, 3, 5 or 10 years.

The interest rate is reset when the underlying bonds are replaced by new bonds. The yield of the new bonds determines the loan rate for the period until the next interest rate reset. The lower initial loan rate should therefore be weighed against the risk that it will increase during the loan term.

An ARM may be prepaid at a price of 100 in connection with each interest rate reset. Alternatively, the borrower may prepay the loan by purchasing the bonds on market terms – as with all mortgage loans.

FLOATING-RATE LOANS (WITH OR WITHOUT INTEREST RATE CAP)

Floating-rate loans derive from ARMs. The principal difference is that the loan rate changes at a shorter frequency, generally three or six months. In addition, the loan type differs from ARMs in that this interest rate depends on a reference rate, ie an interest rate determined in another market. The reference rate of DKK-denominated loans is Cibor (Copenhagen Interbank Offered Rate), an interest rate which is quoted daily by OMX NASDAQ.

It is possible to get a loan with a floating interest rate which cannot exceed a certain level (cap). This way, the borrower hedges against major interest rate increases. If a loan has a cap of 6%, the interest rate can never be higher than 6%. The loan rate will track Cibor, as long as it does not exceed 6%. A floating-rate loan may be prepaid in two ways: either at an agreed price – typically 100 or 105 – or the borrower may buy the underlying bonds at market price.

MARKET-BASED PREPAYMENT – APPLICABLE TO ALL TYPES OF LOAN

All types of mortgage loan may be prepaid on market terms. This means that borrowers may prepay their loans by purchasing the underlying bonds in the market on the same terms as other investors. This option is a direct consequence of the match funding principle.

The option of market-based prepayment is a considerable advantage to borrowers, as they can rely on the price of prepayment being neither too high nor too low. It depends on market prices and is not to be negotiated with the mortgage bank.

As regards fixed-rate loans, market-based prepayment also involves a mechanism which offers the borrower cheaper prepayment if interest rates have increased as bond prices will then have decreased. This is an advantage not least if a borrower has to sell its house at a time when house prices are down. As declines in house prices often coincide with interest rate increases, Danish borrowers often benefit from this mechanism.

ATTRACTIVE PREPAYMENT TERMS FAVOURABLE TO BORROWERS

The attractive prepayment terms offer borrowers various options for active debt management. Borrowers may refinance their loans if interest rates have changed or are expected to change in future. Refinancing is a widespread practice in Denmark.

By refinancing loans with a high fixed interest rate into loans with a lower fixed interest rate, borrowers may reduce their interest expenses. When interest rates go down, tens of thousands of borrowers exercise this option.

Borrowers with fixed-rate loans may also reduce their debt outstanding when interest rates increase as bond prices will be down. The drawback is that the interest rate of the new fixed-rate loan will be higher. But if rates drop again, borrowers may again refinance to obtain a lower loan rate.

Finally, a borrower may adopt a new risk profile by switching from one type of loan to another. For instance, by refinancing a fixed-rate loan into a loan with an annual interest rate reset or vice versa.

MORTGAGE PRODUCTS IN 2012:

- *Fixed-rate loans*
  Loans with a fixed interest rate. The loan may be prepaid at a price of 100 throughout the loan term.

- *Adjustable-rate mortgages*
  Loans with an interest rate that is reset every 1, 3, 5 or 10 years.

- *Floating-rate loans (with or without interest rate cap)*
  Loans with an interest rate which changes regularly – generally every three or six months – depending on the development of a reference rate. The loan rate may have an interest rate cap.

All loan types are offered with interest-only periods.

3| The covered bond legislation

Danish covered bond legislation came into force on 1 July 2007, and in many ways it changed the conditions for financing real property in Denmark. The legislation enabled a breakaway from the traditional Danish mortgage model based on the principle of matching loans and bonds. But mortgage banks have decided to maintain the match funding principle. It is the backbone of the Danish mortgage model and a guarantee of the model's unique properties.

The purpose of the covered bond legislation was to implement a new set of rules from the EU – the Capital Requirements Directive – into Danish law. Covered bonds – or SDOs (særligt dækkede obligationer) – are bonds which meet specific requirements. Legislation sets out the framework for their use in the Danish market.

The Danish parliament took the opportunity to make further adjustments of the Danish mortgage market than those directly required by the EU rules. A majority wanted legislation allowing commercial banks to grant mortgage-like loans. Further, the politicians decided that both commercial banks and mortgage banks should be able to break away from the traditional Danish mortgage model based on the principle of matching loans with bonds.

The principal elements of Danish covered bond legislation are:

- Two new bond types: covered bonds (særligt dækkede obligationer – SDOs) and covered mortgage bonds (særligt dækkede realkreditobligationer – SDROs).

- Commercial banks may now fund their lending against mortgages on real property by issuing covered bonds.

- Both mortgage banks and commercial banks may grant loans without any restrictions on the loan term and repayment profile, if they are funded by covered bonds (or covered mortgage bonds as regards mortgage banks).

- Mortgage banks and commercial banks must ensure that the LTV limits are observed throughout the term of each loan funded by covered bonds or covered mortgage bonds.

- Mortgage banks and commercial banks issuing covered bonds or covered mortgage bonds may issue a new type of bond, junior covered bonds, to obtain capital for supplementary security to ensure compliance with LTV limits.

- A new balance principle makes it possible to segregate the loan and the underlying bonds completely.

- A rule that loans not directly linked to listed bonds may be prepaid at a price of 100 (par). This rule is called the par rule.

FROM ONE TO THREE BOND TYPES

With the introduction of the new covered bonds, Danish mortgage banks may today choose from three types of bonds to fund their loans:

- The traditional mortgage bond (RO)
- The covered mortgage bond (SDRO)
- The covered bond (SDO)

Both commercial banks and mortgage banks may issue covered bonds, but only mortgage banks may issue covered mortgage bonds and mortgage bonds. In practice, there is no essential difference between the two types of covered bond.

Both covered bonds and covered mortgage bonds must comply with a number of requirements not applying to mortgage bonds. The most important requirement is that the loans funded must comply with a statutory LTV limit applicable throughout the loan term. In the case of mortgage bonds, loans must comply with LTV limits only at the time the loans are granted. See the chart on page 17.

In general, mortgage banks have mainly issued covered bonds and covered mortgage bonds since the legislation came into force. Accordingly, a large part of the existing volumes of bonds issued by mortgage banks consist of covered bonds and covered mortgage bonds. See Figure 4. This results from the fact that investors are generally willing to pay a higher price for these bonds than for mortgage bonds. One reason is that they are subject to more lenient capital requirements when buying a covered bond or a covered mortgage bond than a mortgage bond.

Borrowers benefit from the higher price paid by investors because it means lower loan rates.

NO RESTRICTIONS ON LOAN TERM OR INTEREST-ONLY OPTION

Prior to the covered bond legislation, when all mortgage loans were funded by mortgage bonds, the term of a mortgage loan and any interest-only option were subject to a maximum of 30 years and 10 years, respectively.

These restrictions do not apply to loans funded by covered bonds or covered mortgage bonds. But a 75% LTV limit applies to these loans if the term is longer than 30 years or the interest-only period exceeds 10 years.

The LTV limit for commercial properties is generally 60%.

Covered bonds and covered mortgage bonds account for about 40% of the outstanding bonds of Danish mortgage banks.

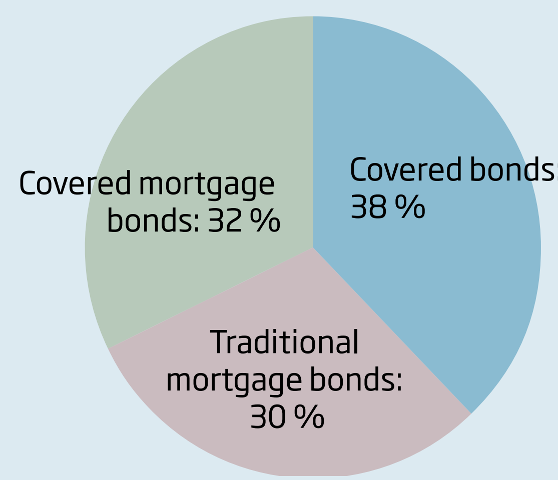


Figure 4: Breakdown of outstanding bonds issued by mortgage banks (market value) by covered bonds, covered mortgage bonds and traditional mortgage bonds, August 2009. (Source: Danmarks Nationalbank)

Differences and similarities between covered bonds, covered mortgage bonds and traditional mortgage bonds

	COVERED BONDS (SDOs)	COVERED MORTGAGE BONDS (SDROs)	TRADITIONAL MORTGAGE BONDS (ROs)
ISSUERS	Commercial banks Mortgage banks Ship finance institutions	Mortgage banks	Mortgage banks
DO THE BONDS COMPLY WITH THE EU'S COVERED BOND REQUIREMENTS?	Yes	Yes	No, not bonds issued after 1 January 2008
INTEREST-ONLY OPTION AND TERM	Unlimited for residential property up to a 75% LTV ratio	Unlimited for residential property up to a 75% LTV ratio	Maximum interest-only period of 10 years and maximum term of 30 years
MUST LTV LIMITS BE COMPLIED WITH?	Yes, currently	Yes, currently	Yes, but only at the time the loan is granted
INVESTOR CAPITAL REQUIREMENT	Low	Low	High
HOW ARE THE BONDS CONSIDERED AS AN INVESTMENT OBJECT?	Gilt-edged	Gilt-edged	Gilt-edged

LTV LIMIT TO BE OBSERVED ON A CONTINUOUS BASIS

The requirement that loans funded by covered bonds or covered mortgage bonds must comply with the LTV limits on a continuous basis represents a new challenge to mortgage banks. They must monitor the market value of mortgaged properties on a current basis and provide supplementary security if LTV limits are exceeded.

Commercial properties must be monitored annually, while owner-occupied properties must be monitored at least every three years.

In periods with declining property prices, LTV limits may be exceeded. If so, mortgage banks must provide supplementary security to ensure compliance with the LTV limits. Under the Danish covered bond legislation, mortgage banks may issue and sell so-called junior covered bonds. The proceeds from the sale may be used to buy supplementary security. See the chart on page 19.

NEW BALANCE PRINCIPLE BREAKS AWAY FROM TRADITIONAL MODEL

The covered bond legislation has introduced a new balance principle. This new balance principle – the general balance principle – enables commercial banks and mortgage banks to segregate loans and underlying bonds completely. This breaks away from the traditional mortgage model in Denmark which is based on the match funding principle.

Mortgage banks maintain the match funding principle as the backbone of the Danish mortgage system although they are not obliged to by law. Without a direct match between loans and bonds, the loans will lose their transparency. This makes it difficult for borrowers to determine whether the price and terms of loans offered are in line with the current market conditions.

THE PAR RULE ENSURES TRANSPARENT PREPAYMENT TERMS

To secure the advantages relating to prepayment under the traditional Danish mortgage model, the Danish parliament adopted the so-called par rule in connection with the covered bond legislation. The rule prescribes that a loan may be prepaid at a price of 100 (par) if it is not directly linked to listed bonds.

If a commercial bank or a mortgage bank grants a loan that is not directly linked to listed bonds, the rule therefore gives the borrower the following advantages:

1. Borrowers know the prepayment price in advance – they do not need to ask or negotiate.

2. Borrowers are guaranteed a maximum prepayment price.

3. Borrowers do not risk having to make up for the mortgage bank's loss of income from the loan as a result of prepayment.

4. The borrower does not risk having to pay penalty interest for prepaying the loan.

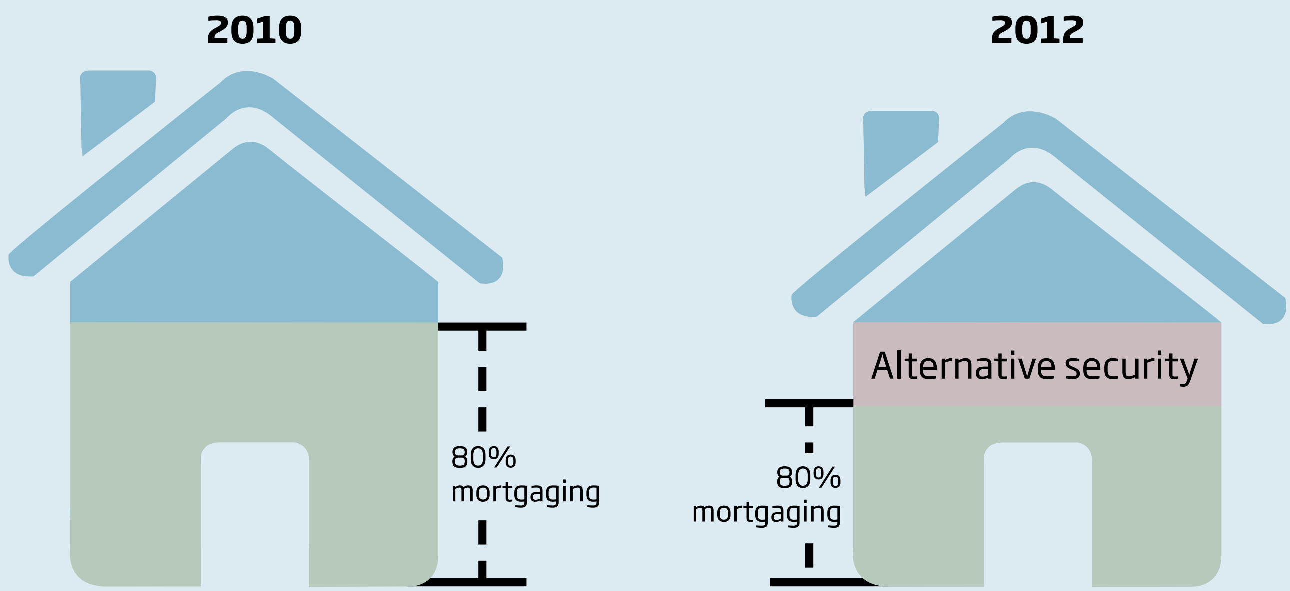
MATCH FUNDING PRINCIPLE AND BALANCE PRINCIPLE

In this publication, we use the match funding principle to describe the specific interrelation between a loan and the underlying bonds. The intention is to avoid conceptual confusion relative to the statutory balance principles.

The statutory balance principle limits the risk that mortgage banks may incur. In other words, it governs the balance required between the lender's total lending and the bonds funding it.

The new general balance principle introduced by the covered bond legislation has in practice given the go-ahead to commercial banks and mortgage banks for a complete segregation of loans and bonds. Mortgage banks have deliberately maintained the principle of match funding, which is the backbone of the Danish mortgage model and a guarantee of the unique properties of the model.

Supplementary security if property prices decline



Covered bond legislation prescribes that mortgage banks must provide supplementary security for their issued covered bonds or covered mortgage bonds if property prices decrease causing loans to exceed statutory LTV limits.

Example: *A house is mortgaged up to the LTV limit of 80% in 2010. Two years later, in 2012, the value of the house has decreased so much that the initial loan exceeds 80% of the current value. Consequently, the mortgage bank must raise capital to provide supplementary security in order to compensate for the LTV exceeding.*

4 | Danish mortgage bonds – a very safe investment

The Danish mortgage bond market is one of the largest in the world, both in absolute terms and relative to the size of the economy. Danish mortgage bonds are popular among investors partly because of their very high level of security. The high level of security is a consequence of Danish legislation and the way Danish mortgage banks operate.

The market value of all Danish outstanding mortgage bonds (traditional mortgage bonds, covered bonds and covered mortgage bonds) exceeds DKK 2,400bn. The Danish mortgage bond market is actually more than four times larger than the Danish government bond market, see Figure 5. The market value also exceeds total Danish GDP. In Europe, only the German mortgage bond market surpasses the Danish.

Due to its size alone, the mortgage bond market plays an important role in the Danish financial markets.

MORTGAGE BONDS ARE GILT-EDGED SECURITIES

Danish mortgage bonds are considered as very safe investment objects:

- Danish legislation describes mortgage bonds as "gilt-edged securities".
- Danish mortgage bonds are repo-eligible with Danmarks Nationalbank, and some EUR-denominated mortgage bonds are also repo-eligible with the European Central Bank.
- Danish mortgage bonds are among the highest rated mortgage bonds with international credit-rating agencies – almost as high as government bonds.

Due to the high ratings, the bonds are traded at attractive prices. This has a direct positive effect on mortgage loan rates, which benefits borrowers.

The high level of security and the ensuing high ratings derive from Danish legislation and the way Danish mortgage banks operate, which minimises the risk of loss.

MORTGAGE BONDS WITH LARGE VOLUMES

The mortgage banks sell new bonds every time they sell new loans on a daily basis.

The bond series traded are usually relatively few, but volumes may be quite large. New bond series are opened by the mortgage banks on a current basis, eg when interest rates change or when new loan products are offered which require new corresponding bonds.

The large volumes are an advantage to borrowers as bonds with large volumes are typically traded at more favourable prices than small bond series.

MORTGAGE BONDS ATTRACT BOTH DANISH AND FOREIGN INVESTORS

The high level of security has generated broad interest in Danish mortgage bonds – among Danish as well as foreign investors.

The majority of bonds are owned by commercial and mortgage banks, investment funds and insurance and pension companies, which combined account for 70-75% of the bonds.

Traditionally, life insurance and pension companies have large portfolios of long-term, fixed-rate mortgage bonds. These companies have a long investment horizon and are therefore particularly interested in secure long-term bonds. Commercial banks, on the other hand, often invest in mortgage bonds with shorter maturities.

In recent years, foreign investors have held 10-15% of the total mortgage bond portfolio, see Figure 6.

The Danish mortgage bond market is more than four times larger than the Danish government bond market.

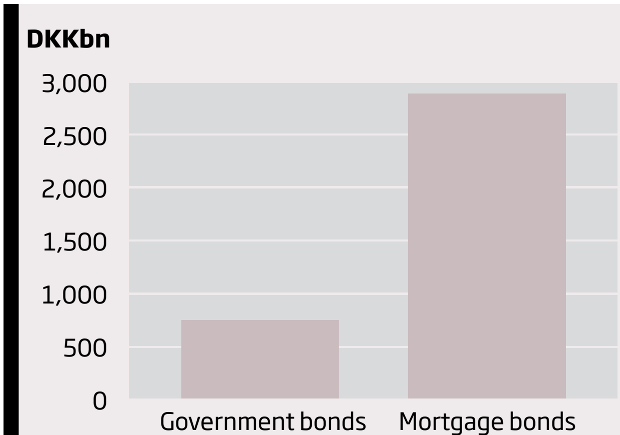


Figure 5: The market value of Danish government and mortgage bonds, March 2012.
(Source: Danmarks Nationalbank)

Danish mortgage bonds are popular among a wide range of investors – including foreign investors.

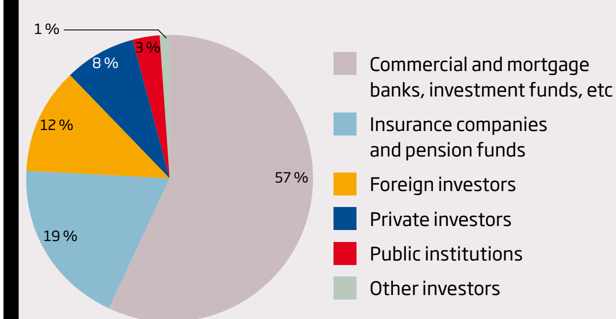


Figure 6: Breakdown of Danish mortgage bonds by investor type, April 2012.
(Source: Danmarks Nationalbank)

5 | Efficient Danish mortgage system despite financial crisis

Despite historic turmoil in financial markets, Danish mortgage bonds have performed remarkably well. Danish mortgage banks have granted new mortgage loans to homeowners and companies throughout the crisis. This emphasises the strength of the Danish mortgage model.

The financial crisis that began in the autumn of 2007 emerged from the US financial system. US banks had granted a large number of housing loans to persons with low creditworthiness. The loans were funded through issuance of non-transparent bonds. It was impossible to identify the loans behind the bonds, and consequently the risk of loss associated with the bonds.

The banks that granted loans to homeowners resold the loans to third parties to avoid incurring the full loss should the borrower fail to repay the loan. Consequently, the incentive to grant loans only to good and creditworthy customers was impaired.

LOSS OF CONTROL – AND SUBSEQUENTLY OF TRUST

No one was able to foresee which banks risked incurring losses due to subprime loans in the US. As a result, confidence in the entire banking system was shattered within a short period of time. When the large US investment bank Lehman Brothers collapsed in September 2008, the remaining confidence between banks vanished. After that, it became very difficult for US and European banks to borrow funds from each other.

In consequence, the US and most Western European governments were forced to provide support for the banks or issue government guarantees to prevent a total breakdown of the banking system. The Danish parliament also cast a government safety net to secure confidence in the banking system.

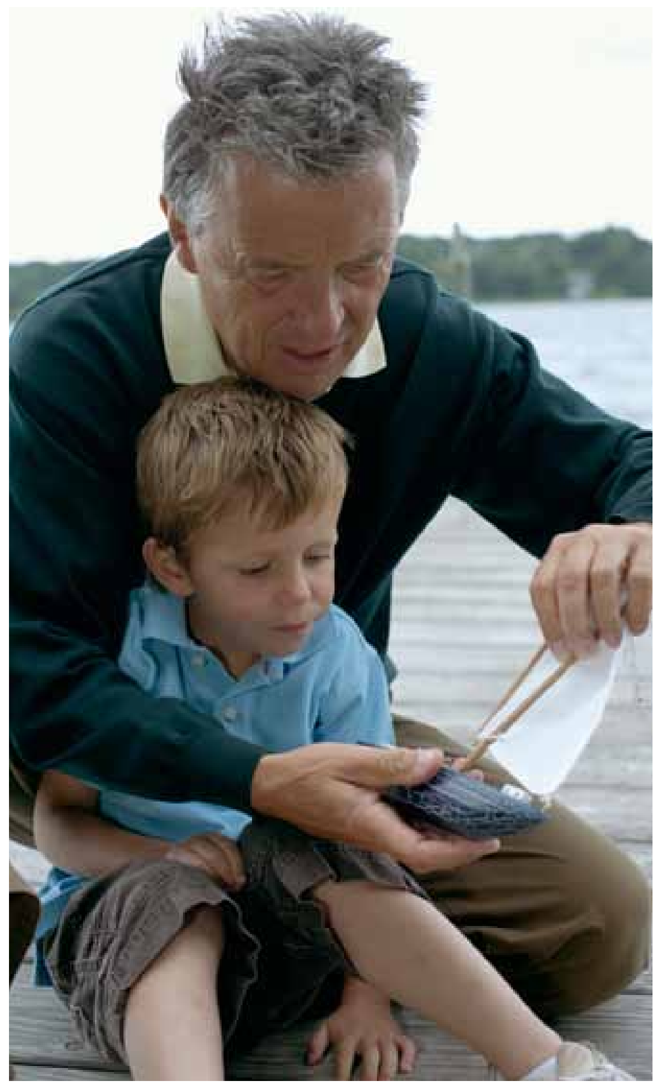
THE EUROPEAN MARKET CAME TO A HALT

In the beginning, European mortgage bond issuers were not seriously affected by the crisis. The high security of the bonds meant that bond markets in this part of the world were relatively stable – at least until Lehman Brothers filed for bankruptcy protection.

After that, also the European mortgage bond market came to a halt. Commercial and mortgage banks had to pay significantly higher interest rates than usual to raise funds in the bond market. Most banks were compelled to issue bonds with notably shorter maturities than usual in order to raise funds – and many were refused loans, notwithstanding the terms.

The Irish, German and Belgian governments had to step in and rescue credit institutions with a large shortfall between loans granted and bonds issued to fund the loans. The mismatch between loan rates and bond yields made the institutions highly sensitive to interest rate developments. Therefore, they suffered great losses when interest rates began to rise as they had to pay higher interest to bondholders while receiving unchanged interest from borrowers.

An example is the German credit institution Hypo Real Estate, which was rescued by a German government contribution of EUR 100bn in the spring of 2009. Following the collapse of the financial markets, the credit institution's interest expenses surged – and exceeded interest income.



THE DANISH MARKET PULLED THROUGH

The Danish mortgage lending sector did not require government guarantees for mortgage bonds. As appears from Figure 7, Danish mortgage banks were able to continue lending activities throughout the entire crisis because new bonds were saleable. Consequently, Danish homeowners and companies seeking financing for properties did not experience any limitations attributable to the financial market turmoil.

The financial crisis peaked in the last months of 2008, and most European bond markets were paralysed. The Danish market did not escape entirely unscathed, but it was never paralysed. For a period, there were much fewer bond buyers than sellers, which depressed bond prices further. Interest rates were therefore higher than under normal circumstances.

Foreign investors opted to sell part of their Danish mortgage bond portfolios – presumably simply because these bonds were saleable, which was far from the case for all securities.

Danish insurance and pension companies also came close to being forced to sell off part of their Danish mortgage bond portfolios due to unusual financial market conditions and rules. The companies avoided any forced sell-offs because the authorities decided to amend the rules.

Mortgage banks had to reset interest rates for many adjustable-rate mortgage loans during the peak of the crisis in December 2008. As a result, mortgage banks had to sell a large number of bonds in replacement of bonds maturing. Despite the crisis, Danish mortgage banks managed to sell bonds of more than DKK 350bn.

Danish mortgage banks continued lending activities throughout the latest financial crisis.

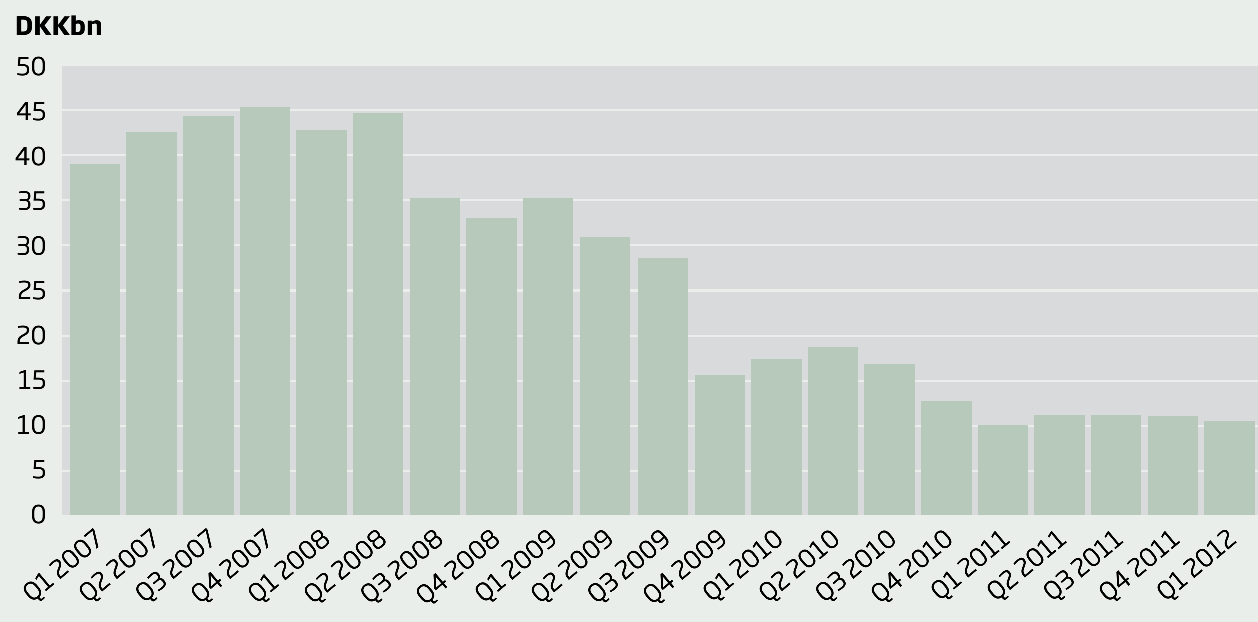


Figure 7: Net lending of the mortgage banks. (Source: The Association of Danish Mortgage Banks)

Mortgage lending and recent economic crises

In the past 40 years, the Danish economy has lived through four major downturns:

- The two oil crises of the 1970s
- The 1986 austerity package and the 1987 tax reform
- The 2001 dot-com bubble.

Each of the crises has affected the mortgage system in different ways – but never strained it.

The oil crises of the 1970s

The first oil crisis set in at the beginning of the 1970s, the second at the end of the decade. Both crises were triggered by massive oil price increases. During the oil crises, unemployment and the number of repossessions rose significantly, but the Danish mortgage system was not seriously affected.

Austerity package and tax reform

In the mid-1980s, the Danish government intervened substantially in the Danish economy. Considerable economic imbalances had built up with a large and growing current account deficit and substantial government debt. An economic policy change was required.

In the autumn of 1986, the Danish government implemented an austerity package. The package resulted in increased housing loan costs, as maximum mortgage loan terms were lowered to 20 years, and borrowers were forced to raise so-called mix loans. In consequence, principal payments were given a strong push upward in the first years of the loan term.

On 1 January 1987, a new tax reform entered into force, which significantly reduced the tax value of deductible interest expenses. The reform was followed by seven years of low economic growth, soaring unemployment and declining housing prices. The number of repossessions has never been higher in Denmark than during that period.

Danish mortgage banks suffered heavy losses, which resulted in some consolidation in the sector as small banks merged into larger ones. But the losses did not affect investors. Not one Danish mortgage bondholder lost its investment.

The dot-com bubble

The next downturn in the Danish economy began in 2001 and was brought about by a minor international financial crisis. The crisis arose from a sharp drop in dot-com equity prices after years of skyrocketing. The burst of the dot-com bubble resulted in a general, but short-lived economic slowdown. The Danish mortgage system was not adversely affected by the crisis. Quite the contrary. Investors disposed of their equities and sought safer securities – such as Danish mortgage bonds.

6 | Danish mortgage lending and financial stability

The Danish mortgage system has survived all economic downturns thanks to a strong foundation. Over the years, this foundation has contributed to stabilising the Danish economy and continues to do so today. This is evidenced by the current financial crisis.

A stable and tested mortgage system that has survived through two centuries of up- and downturns in the Danish economy is of great value to society. It creates confidence – and confidence plays a decisive role for the investment appetite of citizens and companies.

To businesses, financial stability implies renewed appetite for long-term investments. This is crucial to the economy as it creates new jobs and consequently economic growth.

Investors also respond positively to financial stability. Stability means that investors feel safe providing capital to eg the bond market as they can expect to get their money back. The risk of an overnight financial system breakdown is extremely small.

MORTGAGE SYSTEM RESISTS CRISES

The strengths of the Danish mortgage system become particularly clear during economic crises. This was also the case in the most recent financial crisis, which intensified in the autumn of 2008. The Danish system overcame the fact that it was bad loans in the US housing market – the so-called subprime loans – that accelerated the crisis, see chapter 5.

But the dislocation in financial markets in 2008-2009 has not thrown the Danish mortgage system out of kilter. Homeowners and companies have been able to raise loans with mortgage banks as always, and mortgage bondholders – the investors – have had no reason to worry about the security behind the bonds.

MORTGAGE LENDING CONTINUES DURING CRISES

Danish mortgage banks continue their lending activities, also during economic downturns. This is important to society as companies and private borrowers must be able to raise loans during a crisis in order to create new activity, which is decisive to mend the economy.

Mortgage banks are able to uphold lending as long as there are buyers for the bonds funding the loans, and investors are often inclined to buy very secure assets during economic downturns. Danish mortgage bonds are attractive, as the security behind them is very high due to Danish legislation as well as the lending terms and credit policies of Danish mortgage banks.

During economic downturns, mortgage banks face a higher risk of loan losses as more borrowers are unable to make timely interest and principal payments. If necessary, mortgage banks may raise administration margins to maintain earnings and, consequently, ensure that the security behind the bonds remains high. Mortgage banks may lower administration margins again when the economy improves.

EQUITY PROTECTION AGAINST HOUSING PRICE DECLINES

A great strength of the Danish mortgage system is that homeowners with fixed-rate loans are often automatically protected against a loss of home equity when housing prices decline in difficult times.

This is due to the fact that housing prices often drop when interest rates increase. A rise in interest rates also means a drop in bond prices. As mortgage debt is linked to bond prices, it will decrease when housing prices decline.

The equity protection has a stabilising effect on the Danish economy as fewer homeowners become technically insolvent. Technical insolvency occurs when your mortgage debt exceeds the value of your property. Technically insolvent homeowners may find it difficult to sell their property as the sales proceeds do not cover the mortgage debt.

HOMEOWNERS MAY BENEFIT FROM FALLING INTEREST RATES

Homeowners may also benefit from falling interest rates as traditional fixed-rate mortgage loans may be prepaid at par (100). When interest rates drop, borrowers may prepay their loans and raise new loans with lower interest rates.

This is a fairly unusual option. In most countries, the penalty charged for prepaying a fixed-rate loan will eliminate the gain from refinancing into a loan carrying a lower interest rate.

7 | 200 years of Danish mortgage lending

Danish mortgage lending literally emerged from the ruins of the Great Fire of Copenhagen in 1795 and consequently dates back more than two centuries. The basic principles are the same, but legislation has been amended on an ongoing basis according to a ”change to preserve” principle.

1795

Danish mortgage lending emerged after the Great Fire of Copenhagen in 1795, when a quarter of the city burnt to the ground. After the fire, a great need arose for an organised credit market as a large number of new buildings were needed over a short period of time.

1797

A number of wealthy persons took the initiative to establish the first mortgage association in Denmark in 1797. It was called Kreditkassen for Husejerne i Kjøbenhavn and granted loans based on the issuance of bonds.

The lenders established the association – not the borrowers. This may be the reason why the first loans were a rough version of what later came to characterise mortgage loans.

Kreditkassen for Husejerne i Kjøbenhavn was the only mortgage association in Denmark for more than 50 years.

1849

In the 1830s, the debate about more organised mortgage lending flared up as a consequence of the large funding need that arose in the wake of the agrarian reforms at the end of the 18th century.

The adoption of the Constitution of the Kingdom of Denmark Act in 1849 gave the deciding push to the establishment of mortgage associations. The constitution ensured the right of association, and groups of borrowers formed new associations in which the members were jointly and severally liable for the capital raised through the issuance of bonds. This type of organisation characterised the Danish credit market for nearly a century. Mortgage associations were able to offer loans of up to 60% of the property value.

The new mortgage associations were founded to safeguard member – ie the borrower – interests. The loans were therefore made non-callable by the lender, and the assets of the associations belonged to the members, to whom part of the assets was distributed on retirement from the association. The joint and several liability of the associations resulted in very restrictive credit policies. Upon reaching a certain size, the incentive to withhold funds was very strong. New borrowers would increase the risk of the association as younger borrowers often have lower creditworthiness than established borrowers.

1936

The Danish act on credit institution lending against second and third mortgages was adopted in 1936. This type of credit institution had existed since 1896 and was able to supplement lending up to 75% of the value of a property. But legislation was not introduced in this field until 1936, mainly because the politicians doubted the viability of the system.

1959

In 1959 and 1960, special mortgage funds were founded for the purpose of supplementing lending. These funds were needed for several reasons: Mortgage associations and credit institutions lending against second and third mortgages were extremely reluctant to grant loans due to their structure and the subdued credit markets following World War II.

The mortgage funds were independent institutions characterised by not holding their members jointly and severally liable for their lending.

1970

The next major amendments to the Danish mortgage system took place in 1970, when the Danish parliament adopted the Danish Mortgage Credit Act of 1970. The Act limited the very free access to organised mortgage lending and introduced lower LTV limits, shorter loan terms and limitations to the purposes for which mortgage loans are available.

The number of mortgage banks was also reduced through mergers. Few, but national, mortgage banks would generate economies of scale to the benefit of borrowers and investors.

1989

In 1989, a new reform of the Danish mortgage legislation was introduced in accordance with an EC directive. It was the first time the European Community imposed changes on the Danish mortgage system. A number of objective conditions for approval of new credit institutions was introduced, and the institutions became subject to approval on meeting the conditions. New institutions could no longer be denied approval based on an assessment of demand. In addition, new mortgage banks had to be public limited companies. Existing mortgage banks were also allowed to convert into public limited companies. A number of Denmark's large banks established own mortgage banks as a consequence of the reform.

2003

In 2003, the Danish parliament adopted the Danish Financial Business Act, which altered the entire legal basis for mortgage banks. The Act combined six specific industry acts into one general act for the financial sector. Since then, Danish mortgage banks have been governed by the Danish Mortgage-Credit Loans and Mortgage-Credit Bonds etc. Act and the Danish Financial Business Act.

2007

The latest amendments to the legal framework of Danish mortgage banks took effect in July 2007, when the Danish parliament adopted legislation on covered bonds. The act implemented EU rules on covered bonds from the Capital Requirements Directive into Danish legislation. In addition, covered bond legislation allowed mortgage banks and commercial banks to issue covered bonds. For more information about covered bond legislation, please refer to chapter 3.

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