



FINANSINSPEKTIONEN

Bank interest rates and lending

MAY 2012 (Q1 2012)



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Summary

In order to strengthen financial stability and avoid future financial crises, new regulations for the banking sector are being prepared. The regulations include higher capital adequacy requirements. The Government has given Finansinspektionen (FI) the assignment of reviewing how the adaptation of credit institutions is affecting lending to corporations and households, and their terms.

In this initial report, FI has chosen to focus on mortgage lending and the mortgage margin trend. A mortgage is often a person's largest financial commitment. However, the information is often complex and it is difficult for a consumer to really understand what the banks are charging for. Using a simple model to assess the banks' costs, we aim to attempt to increase transparency.

Several factors have contributed to an increase in the banks' funding costs following the financial crisis. The Riksbank has gradually raised the repo rate and the price of risk has risen. The mark-up for risk was around zero for a time prior to the financial crisis. The actual lending rate paid by the customer has, however, increased more than the banks' funding costs. FI can thus ascertain that the margin on mortgages, i.e. the difference between the lending rate and the funding cost, has gradually increased in recent years. The margin was at 1.10 percentage points at the end of the first quarter of 2012. However, during the period preceding the financial crisis, the margin was under pressure.

The banks also have other costs. When these were removed, the margin amounted to 0.40 percentage points at the end of the first quarter, according to FI's calculations. Based on the model used by FI, a margin of 0.40 percentage points entails a return on equity of 22 per cent. This can be compared to 10–13 per cent for the banks' entire operations.

There should thus be scope for mortgage rate negotiation. It is also important that customers are aware of the costs they pay on other banking services and products, and not just look at the mortgage offering.

Background

Finansinspektionen (FI) has been assigned by the Government to review how banks and other credit institutions are adapting to increased capital requirements. The review shall include the effects of this adaptation on lending and setting interest rates on loans to households and corporations. The report shall be published on a quarterly basis, and in the first one FI has chosen to focus in particular on mortgage lending and the banks' mortgage margins.

Since the financial crisis, conditions on the financial market have changed. During the crisis, the Government was obliged to take various measures to reduce risks and avoid major disruptions in the Swedish financial system. For instance, the deposit guarantee was extended, a guarantee programme for the banks' borrowing was created and the Riksbank, together with the Swedish National Debt Office, undertook measures to support liquidity. Since 2008, FI has had the assignment of evaluating the effects of the Government's stability measures and has published reports on an ongoing basis about the effects on interest rates and lending to corporations and households.¹

The supporting measures for the Swedish banking system have now been wound up, and hence so too FI's review assignment regarding their effects. In order to strengthen financial stability and avoid future financial crises, new international regulations for the banking sector are being prepared. The regulations include higher capital adequacy requirements. A great deal of the regulations are decided by the EU in the form of a new capital adequacy regulation and a capital adequacy directive (CRR/CRD 4), a decision about which is expected in 2012. In addition to these requirements, the Swedish Ministry of Finance, the Riksbank and FI have notified that Sweden will introduce further capital requirements for systemically important banks,² and FI is in the process of preparing a new regulation of quantitative liquidity cover ratio (LCR) requirements. Although the regulations have largely not yet come into effect, it is clear that credit institutions have commenced their adaptation processes. This is occurring partly because of the new regulations, and partly because their funds providers and other market players such as credit assessment companies are requiring more capital and better liquidity reserves. A brief description of the new regulations is provided in Appendix 3.

The new regulations and changed conditions on the financial market involve higher costs for the banks. These costs have to be borne by somebody – shareholders or customers. The distribution of costs among shareholders occurs in the form of lower return. Higher capital buffers and more stable financing lead to a bank with lower risk, which should mean that shareholders expect lower return on their invested capital. The banks' possibilities of raising prices on their services and lending, thus transferring the costs onto their customers, in turn depends on how competition on the banking market functions. The Government has given FI

1 Click on the following link for FI's reports: <http://www.fi.se/Utredningar/Statistik/Utvardering-av-statliga-stabilitetsatgarder/Tidigare-utvarderingsrapporter/>

2 <http://www.fi.se/Press/Pressmeddelanden/Listan/Nya-kapitalkrav-pa-svenskabancker/>

the assignment of reviewing how the adaptation of credit institutions is affecting corporations and households through effects on their terms as banking customers.

Assignment in the Letter of Appropriation

The assignment involves FI monitoring the adaptation of credit institutions to increased capital adequacy requirements, and how it affects Swedish corporations and households. The assignment involves the following:

Reviewing the effects of the credit institutions' adaptation on the issuing of loans to corporations and households, including margins on mortgages.

Following the credit institutions' interest rates and also placing the interest rate in relation to the institutions' lending costs at different maturities.

Including in one of the reports an analysis of how and to what extent the credit institutions adapted to the increased capital adequacy requirements prior to 2012 and the effects this has had on corporations and households.

The assignment will be reported on a quarterly basis in 2012. In the first report, which relates to the first quarter of 2012, FI has chosen to focus on mortgages, the banks' funding costs and mortgage margin.

Almost two thirds of Swedish households own their homes. To be able to afford to buy a home, most people need to borrow money from a bank. The majority of households' debt therefore consists of mortgages. In this report, FI's intention is to help increase consumers' understanding of the mortgage market by explaining how banks finance mortgages and what it costs them. In the report, the banks' funding costs are calculated and then compared with the actual lending rate encountered by consumers. The intention of the report is to help achieve better transparency on the mortgage market.

A more detailed account of other parts of the assignment will be provided in forthcoming reports. In one of the forthcoming reports, the effects of the future regulation on the granting of loans will be looked at in more detail.

Lending, deposits and interest rates

At the end of the first quarter, growth in lending to households showed the lowest rate of increase since the mid-1990s. In terms of the annual rate, mortgage lending increased by 5.2 per cent at the end of the first quarter of 2012. The growth rate for lending to corporations recovered after the financial crisis and was at 4.6 per cent at the end of the quarter. The three-month lending rate for both households and corporations has risen since the financial crisis, but dropped slightly in the first quarter of 2012. The general interest rate level remains at a historically low level.

In this report, market rates and the banks' mortgage rates and deposit rates are as per 30 March 2012.³

LENDING TO CORPORATIONS AND HOUSEHOLDS

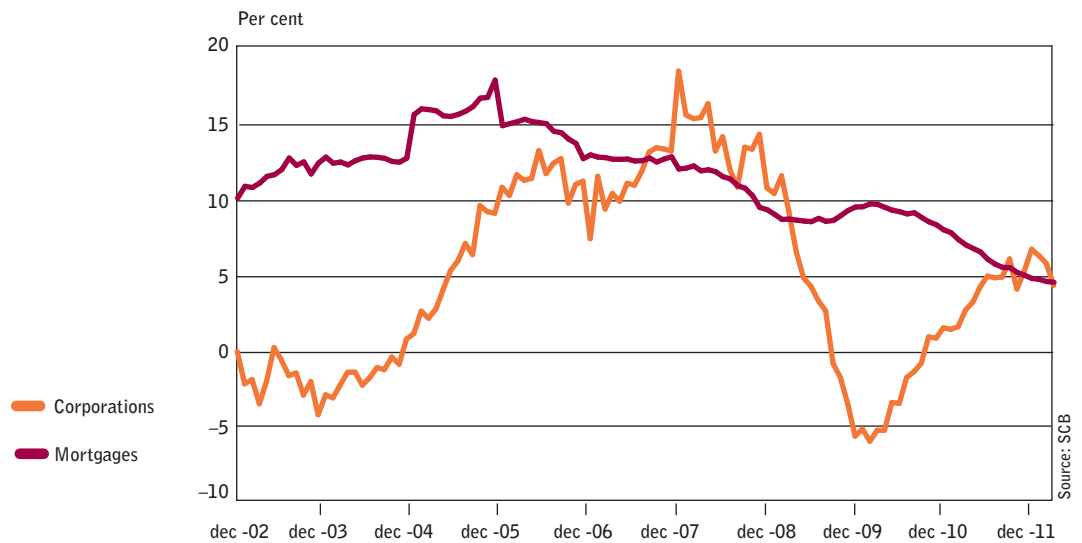
Lending growth in loans to households continued to decline slightly in the first quarter of 2012. Swedish credit institutions⁴ lending to households increased 5 per cent annually. This is the lowest rate of increase since 1997. The rate of increase in mortgage lending was also lower. At the end of the first quarter of 2012, the annual growth rate for mortgage lending was 5.2 per cent. This is the lowest growth rate since 2002, which is as far back as comparable statistics are available. Total mortgage lending to households was around SEK 2,144 billion in March 2012.

Lending to Swedish non-financial corporations was affected to a greater extent than mortgage lending by the turbulence during the financial crisis. After a sharp increase before the financial crisis, lending to companies decreased in 2009 and 2010. Since then, it has recovered and the annual growth rate was 4.6 per cent at the end of the first quarter of 2012. The total lending volume to non-financial corporations was at the same time around SEK 1,827 billion.

3 All lending and deposit rates and lending and deposit volumes in this chapter were obtained from SCB, Financial Market Statistics per 30 April 2012.

4 The definition according to SCB is Monetary Financial Institutions (MFI) and includes banking, housing credit institutions, financing companies and other MFIs (municipal and corporate funding institutions, monetary investment funds, monetary investment firms and brokerages and other monetary financial institutions).

DIAGRAM 1. Lending growth, household mortgages and corporations

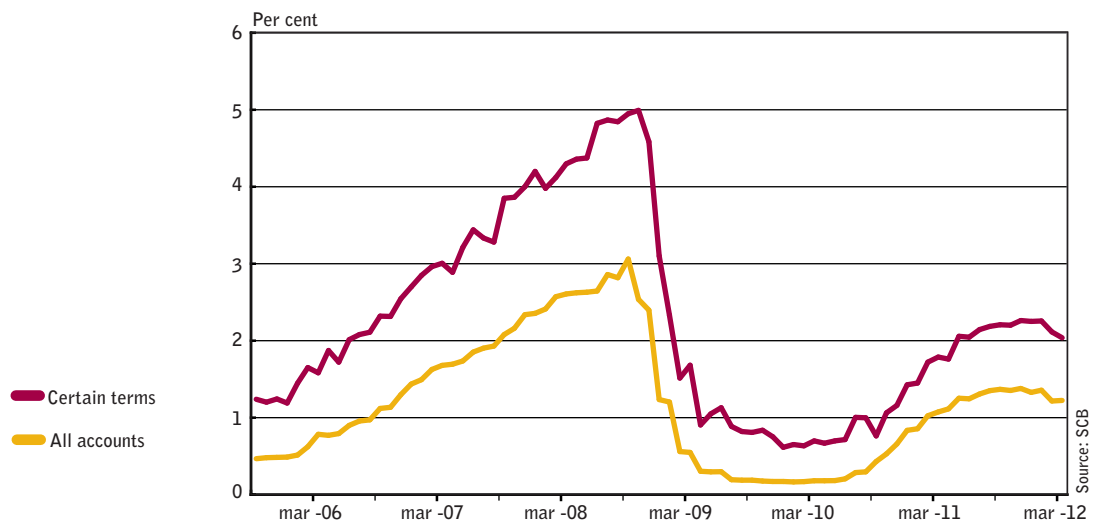


DEPOSITS FROM HOUSEHOLDS

At the end of the first quarter of 2012, households' deposits at Swedish credit institutions amounted to SEK 1,208 billion. The growth rate in deposits at Swedish credit institutions has continued to rise and increased 10.2% on an annual basis. This is the highest rate of increase since 2008.

The average interest rate on new agreements for households' total deposit accounts declined slightly in the first quarter of 2012. At the end of the quarter, it stood at 1.22 per cent. The deposit rate on new agreements associated with certain terms, usually restrictions on withdrawals, also declined slightly in the quarter, amounting to 2.04 per cent at the close of the first quarter (diagram 2).⁵

DIAGRAM 2. Banks' deposit rates for Swedish households (new agreements).

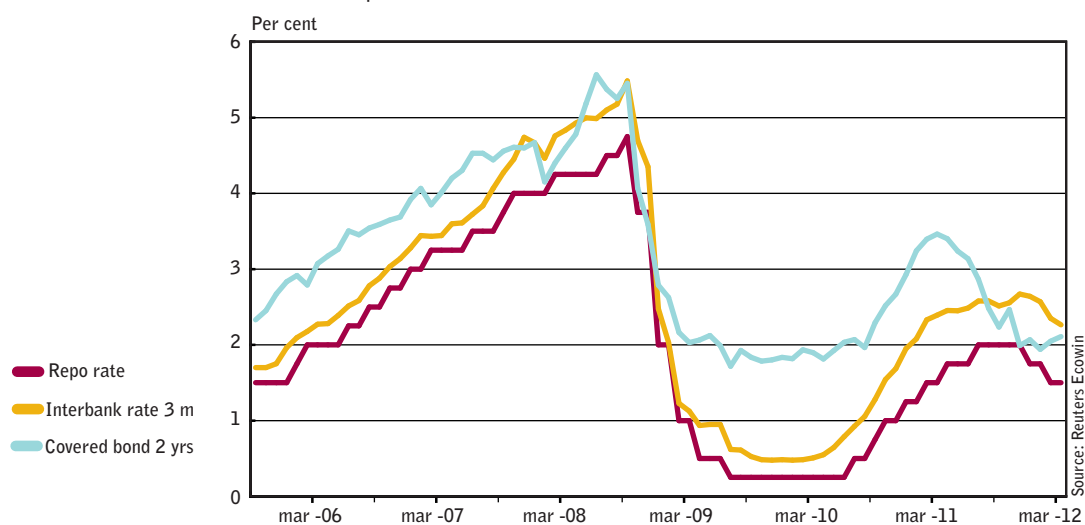


⁵ The term 'total deposit accounts' includes transaction accounts and deposits associated with certain terms. These terms can include a limitation on the number of withdrawals or a certain fixed term. New agreements means, on the one hand, new deposits and, on the other, deposits whose terms and conditions have changed during the period.

MARKET AND LENDING RATES

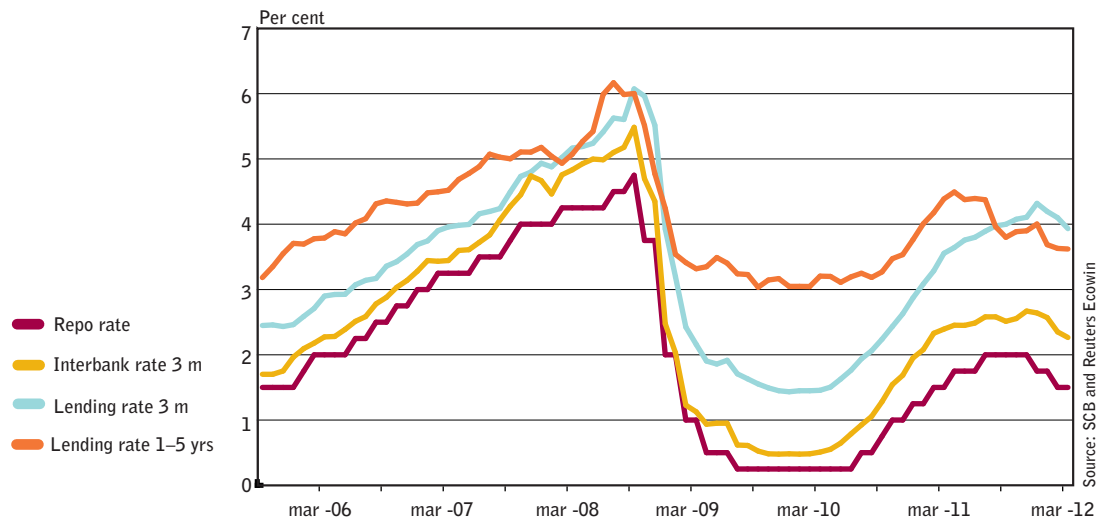
The interest rate level affects how much it costs households and corporations to borrow money. A higher interest rate generally entails lower economic activity. Since the financial crisis, which was ensued by a period of low interest rates, market rates have increased slightly. Interest rates in the Swedish economy remain low in a historical perspective, however. At the end of the first quarter of 2012, the difference between the repo rate and the interbank rate was greater than it was prior to the financial crisis. Unease in the eurozone and increased risk awareness have contributed to this trend. The covered bond rate also decreased in connection with the financial crisis, but was affected by unease surrounding the sovereign debt crisis and increased at the end of 2010 and beginning of 2011. Since then, the covered bond rate has fallen back (diagram 3).

DIAGRAM 3. Interest rate trend interbank, covered bonds and the repo rate



The relationship between the repo rate and banks' lending rates has weakened since the financial crisis. In the first quarter of 2012, the difference was at a historically high level. The reasons for this include increased risk awareness on financial markets. This has resulted in a higher price for risk. This means that the difference has increased between so-called risk-free rates, such as the repo rate, and rates containing credit and liquidity risk, such as loans to corporations and households, and also interbank loans. For banks, the effect of the higher risk premiums has been that the cost of their market funding has increased in relation to the repo rate.

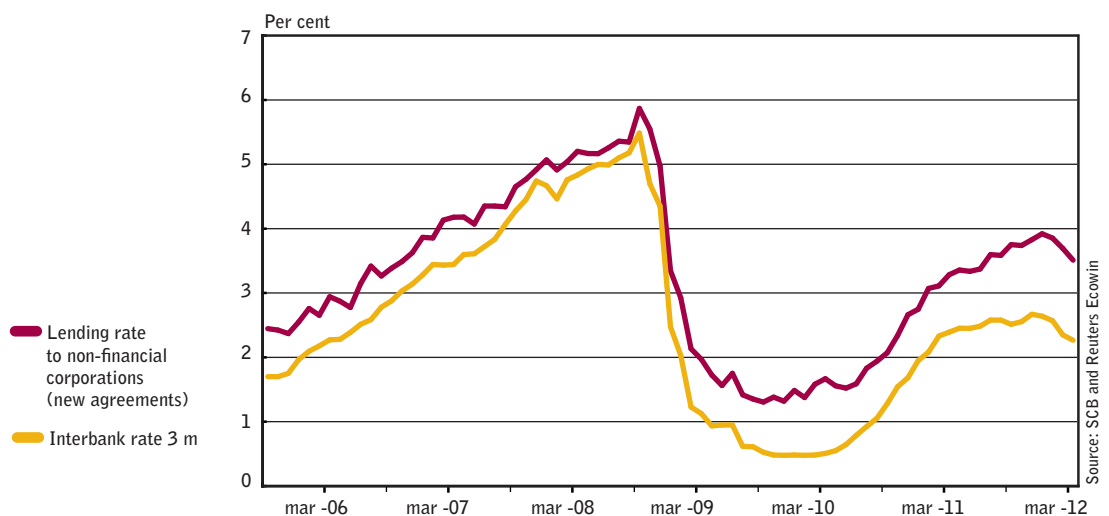
DIAGRAM 4. The lending rates of housing credit institutions to Swedish households (new agreements), the repo rate and interbank rate



Mortgage rates affect the finances of households to a great extent. In connection with the financial crisis, there was a sharp drop in short-term mortgage rates when the repo rate was cut to record-low levels.⁶ Mortgage rates with a lower fixed interest period also decreased in the financial crisis, but not to the same extent. Since then, short-term interest rates have increased and are now at around the same level as long-term rates (diagram 4). In the last quarter, mortgage rates have however decreased slightly. The three-month lending rate to households was at 3.93 per cent at the end of the first quarter of 2012.

The average three-month rate on new loans to corporations has risen since the beginning of 2010. However, in the last quarter it declined slightly. Interbank rates also decreased at the same time. The difference between the lending rate to corporations and the three-month interbank rate is at a high level in a historical comparison (diagram 5).

DIAGRAM 5. Banks' lending rate to non-financial corporations and the interbank rate



⁶ Mortgage rates refer to new lending rates. Short-term mortgage rates are the three-month new lending rate and long-term rates are with a fixed interest term of up to five years.

In terms of lending to households and companies, it can thus be ascertained that deposit rates have not tracked market rates. In order to attempt to explain which factors affect a bank's mortgage costs, a calculation of the banks' funding cost for mortgages is provided in the chapter "The banks' funding costs for mortgages". It is subsequently compared with the actual lending rate to estimate the mortgage margin.

For banks, market rates are important to how they determine their internal interest. Internal interest is the price a bank uses to distribute money between its various operational areas. It can be seen as a cost on the margin or as an alternative cost to which the bank can allocate money. Hence, the banks use the different market rates to set an internal price of money for different maturities when it is to be distributed within the bank.

The banks' funding costs for mortgages

In this report, FI has calculated a funding cost for mortgages using a simple model. The estimate shows that banks' costs for funding a mortgage increased after the financial crisis, but have recently declined.

Calculating the exact funding cost of a mortgage is complicated and requires information about the individual business. The purpose of creating a simple model to calculate a bank's funding cost is to better illustrate the costs associated with funding a mortgage, and how they have changed over time. The model, which has been prepared in collaboration with the Riksbank, is based on certain assumptions and is a simplification of reality. This is in order to make it easy to understand on the one hand, and on the other hand because statistics are not always available or possible to publish due to confidentiality reasons.⁷

FI'S CALCULATION OF FUNDING COSTS

In order to calculate the costs associated with funding mortgages, information from major banks and their housing credit institutions is used.⁸ The funding cost calculated is the cost of a new mortgage with a three-month fixed interest period.⁹

The model describes a bank that issues mortgages from a separate housing credit institution.¹⁰ The model is based on both observable data and assumptions. By studying the liabilities side of the balance sheets of major banks' housing credit institutions, FI has estimated the size of various funding sources' share of total funding. The share of the funding sources varies between the banks, and in the model the average for the banks' shares has been used. The shares also vary over time. The funding sources in the model are covered bonds and other funding. Other funding consists of unsecured market funding and deposits from the banks' customers. A housing credit institution accesses the majority of other funding through borrowing from the parent company (the bank).¹¹ See appendix 1 for a description of the various funding sources.

To allocate a cost to the different types of market funding, observable data from the fixed income market is used. It can be assumed that the majority of the loan from the parent company to the housing credit institution consists of deposits, but the parent company also has funding from much more expensive unsecured borrowing. The share of deposits varies over time. FI's model estimates the cost of other funding using the three-month interbank rate. Because the interbank rate is higher than the deposit rate, it can be assumed that this overestimates the appraised funding cost for the mortgage.

⁷ See appendix 2 for a detailed description of the model.

⁸ The model is based on statistics from Swedbank, Nordea and Handelsbanken and their housing credit institutions (Spintab, Nordea Hypotek and Stadshypotek). Because SEB's housing credit institution is included in the parent company, SEB Bolån is only included until the end of 2006.

⁹ 58 per cent of new mortgages are granted at the three-month rate. 49 per cent of the total mortgage stock carries the three-month rate. The fixed interest period is not the same as the loan maturity, which is usually much longer.

¹⁰ A housing credit institution is often a subsidiary of the bank company.

¹¹ The model does not take into account the cost of equity.

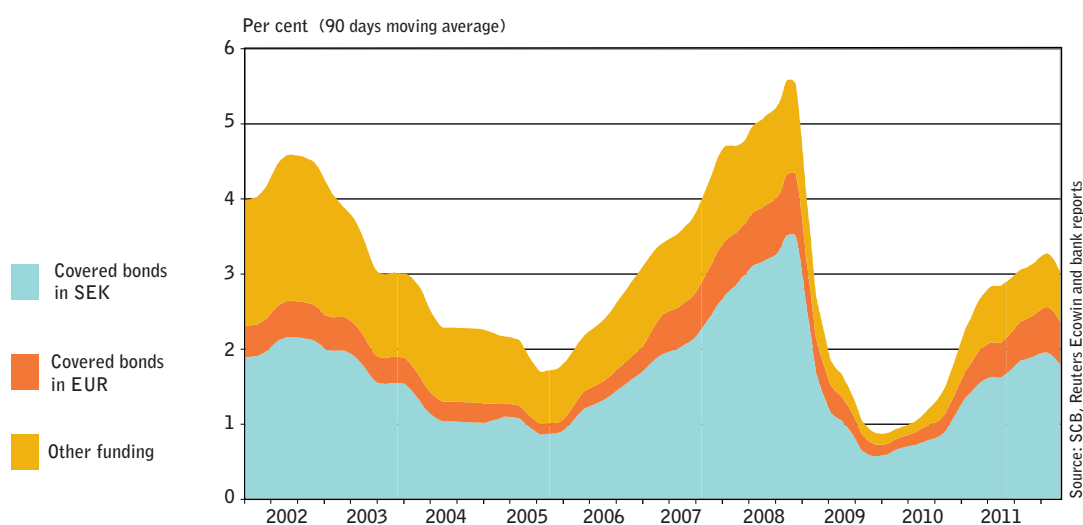
As already mentioned, the financial crisis brought about higher awareness about liquidity risks and the banks have extended their funding. A mortgage with a three-month fixed interest term is not funded with three-month borrowing, because this would involve liquidity risks. Instead, the mortgage is mainly funded by issuing covered bonds with longer maturities. Long-term funding is generally more expensive than short-term funding. To obtain a picture that is as realistic as possible, the average maturity of the covered bonds issued by banks is therefore permitted to vary over time in the model.¹²

The funding cost of banks is estimated by allocating a cost to each funding source and then weighting these based on the distribution of funding and estimated maturity.

The banks' funding cost trend

The funding cost gradually increased from the end of 2005 to the autumn of 2008 (diagram 6).¹³ This was mainly because interest rates rose in general, and hence so too the funding cost of banks. It then dropped sharply in connection with measures undertaken to tackle the financial crisis. The Riksbank cut the repo rate to record-low levels and Government support measures were launched at the end of 2008 and beginning of 2009.

DIAGRAM 6. The funding cost divided into different funding types



In line with a strong Swedish economy in the last two years, interest rates have been hiked. Conditions on financial markets also changed after the financial crisis, bringing about an increase in the funding cost. At the end of 2010, the European sovereign debt crisis led to heightened tension on the interbank market and a higher funding cost for banks. In uncertain times, investors seek safe assets. Thanks to strong public finances, an upbeat economic trend and well-capitalised banks, Swedish government bond rates fell to record-low levels at the beginning of 2012.

With the help of two loans targeting European banks with a three-year maturity and very low interest, the ECB has helped to reduce the uncer-

12 Maturity information has been obtained by the Association of Swedish Covered Bond issuers (ASCB).

13 The funding cost is weighted based on distribution and maturity. The cost of covered bonds is shown after managing interest rate and currency risks, i.e. including swaps.

tainty in the banking sector and current debt fears in Europe have been subdued. These factors have also benefited the funding cost of banks, and in the last quarter the funding cost has decreased.

Margins on mortgages

FI wants to increase consumers' understanding of the banks' interest rates and margins. By comparing the funding cost with actual lending rates, a gross margin can be calculated. The calculated gross margin was at around 1.10 percentage points at the end of the first quarter of 2012. Even taking other costs into consideration, there remains scope for negotiation for the consumer. We call this scope the net margin. It was at 0.40 percentage points at the end of the first quarter of 2012. The net margin shall also include the expected return of shareholders on their investment.

GROSS MARGIN ON MORTGAGES

The gross margin on a new mortgage with a three-month fixed interest term is calculated by comparing the average rate actually paid by the consumer with the calculated funding cost. FI chooses to call this difference a gross margin, because it must also cover other costs for the bank and profit (see section "Other costs to be covered by the gross margin").

DIAGRAM 7. The gross margin on newly issued mortgages with a three-month fixed interest term¹⁴



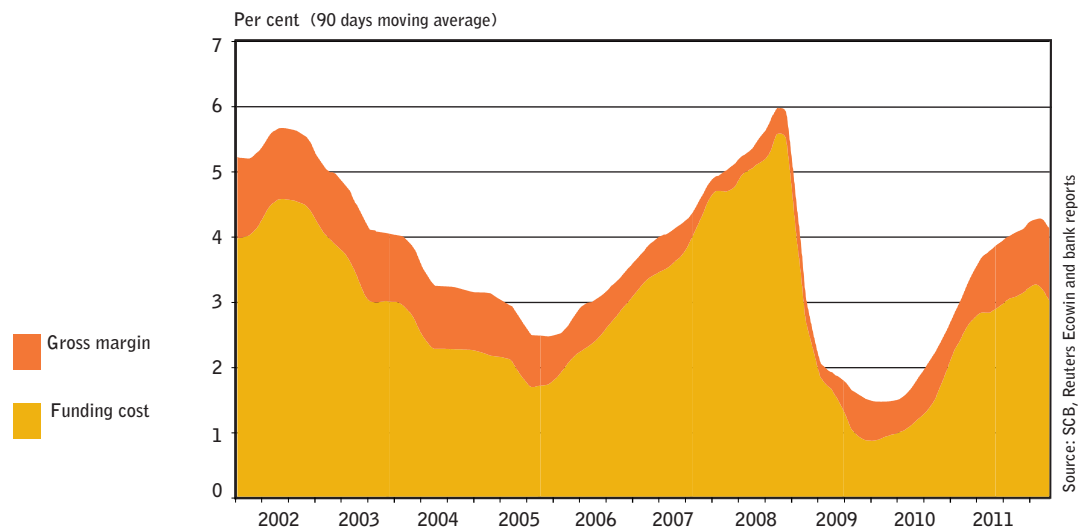
FI's calculation of the funding cost shows that it rose sharply for the banks in the years leading up to the financial crisis. Due to stiff competition for mortgage holders, lending rates did not rise to the same extent. This led to a drop in the gross margin, and it was under pressure in the years leading up to the crisis.

At the end of the first quarter of 2012, the gross margin on mortgages was 1.10 percentage points. In terms of the trend after the financial crisis, it can be ascertained that the gross margin on mortgages has gradually risen since mid-2009. This means that the lending rate has risen more than the funding cost of banks during this period. The gross margin also increased in the first quarter of 2012. The gross margin for mortgages is

¹⁴ The calculation uses the same funding cost that was divided into three parts in diagram 6.

now back at the levels observed between 2002 and 2004.

DIAGRAM 8. Actual lending rate divided into gross margin and funding cost for newly issued mortgages with a three-month fixed interest term



NET MARGIN ON MORTGAGES

In addition to the direct costs arising through the banks' funding, there are also other costs associated with banking operations and hence mortgages. These costs must be distributed between the different areas in which the bank operates. The net margin on mortgages is calculated by comparing the average interest rate actually paid by the consumer with the sum of the calculated funding cost and other costs associated with conducting mortgage operations. The net margin can also be seen as the gross margin minus other costs. FI chooses to call this difference a net margin because costs in addition to the funding cost have then been taken into account. The net margin must cover the cost of capital including the expected return of shareholders.

Other costs to be covered by the gross margin

The other costs primarily comprise administrative costs, the costs of maintaining a liquidity buffer and costs for expected credit losses. Tax is also included.

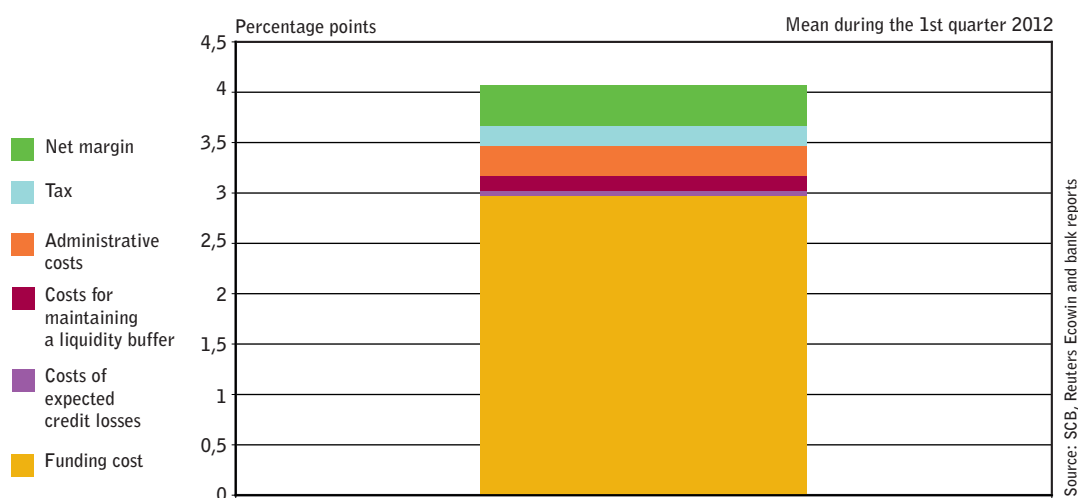
The other costs vary between the different banks. FI has estimated an average for the four major banks. The other costs amount to 0.50 percentage points in the calculations performed by FI. FI estimates the cost of tax at 0.20 percentage points. At the end of the first quarter of 2012, the net margin therefore amounted to 0.40 percentage points (see diagram 9).

The net margin must cover the cost of capital including shareholders' expected return and may, according to FI's model, be compared with the profit of banks on mortgages. In order to conduct banking operations, loss-bearing capital is required in the bank for unforeseen events. This is known as a capital adequacy requirement. Because banks are sensitive by nature to liquidity problems, it is crucial that capital suffices to cover a series of different negative scenarios. Shareholders also expect a return on equity. The expected return is governed by the risk level associated with the investment. More stringent requirements on both liquidity management and capital adequacy lead to safer and more stable banks.

Over time, this should mean that the expected return of shareholders decreases.

According to the model, the net margin after tax is 0.40 percentage points. An average loan in Stockholm which, according to FI's 2012 mortgage survey was at around SEK 1.5 million, involves an annual profit for the bank of SEK 6,000. A net margin of 0.40 percentage points means a return on equity of 22 per cent. This can be seen in relation to 10–13 per cent, which is the banks' return on their entire operations. Return on equity is calculated according to a risk weighting for mortgages of 15 per cent and a capital requirement of 12 per cent.

Diagram 9. Estimate of gross margin and average costs for mortgages



The following sections provide a brief description of individual other costs. A more detailed account and analysis of the banks' adaptation to the forthcoming reinforced regulations will be provided by FI in future reports in 2012.

Costs of expected credit losses

There is always a probability of a mortgage customer's inability to pay interest and loan instalments. The bank has access to historical data regarding this probability, and supplements it with statistics about how much of the loaned amount can perceivably be recovered in the event of bankruptcy. In this manner, the bank obtains the average expected loss associated with the mortgage. Expected credit losses can vary between borrowers because their credit risks differ. FI estimates the expected credit losses at 0.05 percentage points for an average mortgage holder. In the calculations performed by FI, the interval ends up between almost zero and 0.10 percentage points when the mortgage calculation is established.

Administrative costs

Administrative costs mainly comprise costs for personnel, premises and system support associated with conducting mortgage operations. This cost varies between the banks and is difficult to allocate to each product at each bank. In FI's calculations, these costs amount to 0.30 percentage points on average. The cost varies depending on the size of the loan, and this level refers to an average-sized mortgage.

Costs for maintaining a liquidity buffer

Out of the forthcoming new regulations, it is deemed that the new liquidity regulations might be those with the greatest effect on banks' costs. In order to meet the sharper requirements, Swedish banks, which have a relatively large share of mortgages in relation to their overall balance sheet totals, must extend the maturity of their funding and maintain a liquidity buffer. The banks have already started to adapt to the forthcoming requirements. FI estimates the cost of maintaining a liquidity buffer and adaptation to the forthcoming requirements with regard to extended funding maturities at 0.15 percentage points. The cost estimate varies between 0.10 and 0.20 percentage points. The cost arises out of the bank's need to invest part of its borrowing in assets with long maturities and relatively low return.

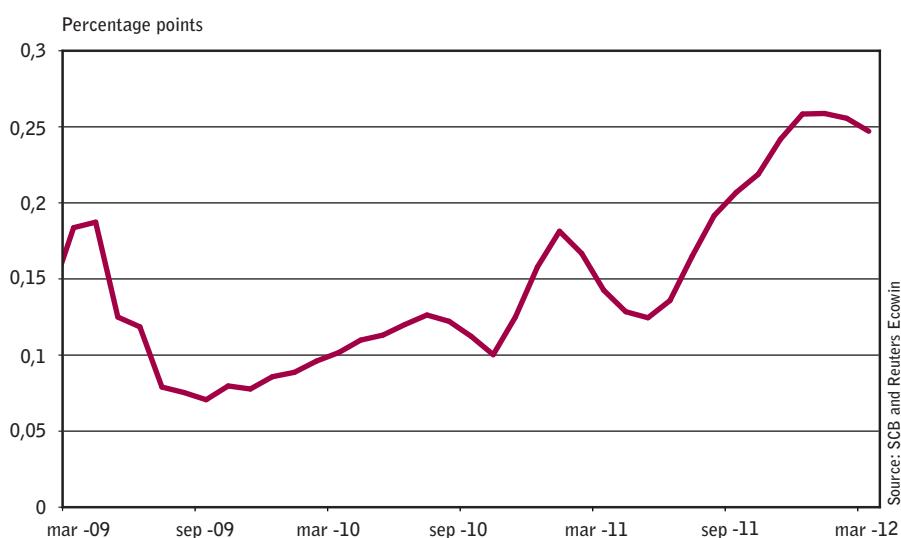
Customers' negotiation

Better transparency on mortgage margins can be useful in mortgage negotiations between customer and bank. Well-informed customers who negotiate their terms and who are willing to change banks are required for functioning competition. It is important that consumers consider all parts of their banking services and products. At the same time, the bank decides on an individual basis which customers shall be granted loans, and on which terms.

The bank determines the interest rate and the fees a customer to which a mortgage is granted shall pay for his or her loan, but there is a possibility to negotiate. When negotiating, the consumer is often at a disadvantage in relation to the bank in terms of information. Here, information from FI can help create better transparency into the banks' costs. However, it is ultimately up to the consumer to study the personal offer and compare it between several different banks. It's a case of being prepared for a negotiation with the bank.

The lending rate published by the bank on, for instance, its website is known as the list rate. The list rate often differs from the rate agreed by the customer and bank. Since 2002, the banks' variable list rates have on average been 0.20 percentage points higher than the actual average interest rate paid by customers on their variable loans¹⁵ (diagram 10). This means that a bank can grant a certain discount on the interest rate presented on its website.¹⁶

DIAGRAM 10. Difference between list price and actual interest rate, three months



In simplified terms, the list rate can be seen as an upper limit for the actual interest rate in mortgage rate negotiations. However, negotiation skills alone do not determine a consumer's mortgage rate. The financial circumstances of consumers vary, which means that different borrowers constitute differently sized risks for the bank. Factors that affect negotia-

¹⁵ In most cases, a variable rate is not entirely "variable" but has a fixed term of three months.

¹⁶ The model uses the average interest rate actually paid by customers, i.e. after the discount.

tion scope include the borrower's income and size of other assets, as well as the proportion of the home the customer wants to mortgage.

Negotiations also include different fixed interest terms for the loan. In the model presented by FI in this report, only the three-month rate is discussed. Each customer must consider the advantages and disadvantages in the choice of interest term. The choice depends on the customer's situation and the size of the premium the customer can consider paying to fix the rate of a mortgage and hence know what the loan will cost over a long period of time.

An overall view is taken of the customer

Because a mortgage is often the biggest banking transaction in a person's life, many consumers choose their banks based on the best mortgage rate. Banks therefore sometimes use mortgages as an enticer. In connection with mortgage negotiations, banks can offer various types of holistic customer solutions, meaning that they grant a cheaper mortgage rate in exchange for customers placing all of their other banking services with the bank. This is therefore another factor that affects the consumer's scope for negotiation. The fact that the banks present a holistic customer solution makes it difficult for customers to distinguish the costs of different services. It also impairs comparability between different banks.

It is therefore also important to negotiate terms and pricing on services besides mortgages, for instance card and payment services. Fund and pension saving is associated with costs that are often hidden in the holistic customer solution. The deposit rate can also be discussed and there ought to be a possibility of obtaining better deposit terms. For example, a certain part of the deposits, a part that can be set aside for saving, can be placed in an account with certain restrictions. This could be withdrawal restrictions or the deposit being tied up for a certain period.

Appendix 1: The banks' funding

The traditional description of banking operations is about the bank's role as a recipient of short-term deposits that are converted to long-term lending to corporations and households. For the Swedish banking sector and mortgage lending, the picture is more complex. At the end of the first quarter of 2012, the lending of Swedish credit institutions to the general public in Sweden amounted to around SEK 4,500 billion. Almost half consisted of mortgages to Swedish households. In the same period, credit institutions had total deposits from the general public of SEK 1,876 billion. This means that lending cannot only be funded by deposits. There is a so-called deposit deficit. This has built up over a long time in connection with developments in the financial sector in Sweden.

Swedish households do not keep their savings in deposit accounts to any great extent, but save a great deal in, for instance, funds and shares. At the end of the first quarter of 2012, the deposit deficit amounted to SEK 2,622 billion. In spite of the deposit deficit increasing in absolute terms, deposits as a share of total lending have been stable in the past 20 years (diagram 11). From having constituted almost 70 per cent of total deposits in 1975, deposits as a share of lending for Swedish credit institutions have stabilised at a level of around 40 per cent since the mid-1990s. Due to the deposit deficit, the banks rely on financial markets to fund their lending.

DIAGRAM 11. Volume of deposits as a share of total lending



Note: Only deposits from and lending to the general public in Sweden are included in this diagram.

Covered bonds

Covered bonds are the most important mortgage funding source for banks. They constituted around 75 per cent of total mortgage funding at the end of the first quarter of 2012. Covered bonds have been issued in Sweden since 2006 and have replaced housing bonds. A covered bond is different from a traditional bond in that it is guaranteed by selected collateral that makes up what is known as the cover pool. The cover pool mainly consists of housing credits. If an issuing institution suspends its payments, the covered bond holder has priority to the assets included in

the cover pool. The extra collateral in covered bonds means that they are deemed to be associated with lower risk than traditional bonds. Investors in covered bonds therefore do not require as high interest rates as for other bonds. This makes covered bonds an advantageous funding alternative for the banks.

Covered bonds are usually issued at a fixed rate of interest with a maturity of between two and five years. Upon maturity, the borrowed amount is repaid. A mortgage generally has a much longer maturity. Because of the difference in maturities, the banks must turn to the financial markets from time to time for refunding, which gives rise to liquidity risk.

In addition to liquidity risks, the banks are also exposed to interest rate risks and currency risks through their market funding. Interest rate risks arise because the fixed interest terms of the mortgages are generally shorter than those of the covered bonds. This means that the banks' interest income changes more frequently than their interest expense, which creates uncertainty in terms of their earnings.

Covered bonds can also be issued in foreign currency and in this case give rise to currency risks. Currency risks involve vulnerability in the event of unfavourable exchange rate fluctuations. These arise when the banks borrow and pay interest in a foreign currency, while they lend and receive interest in Swedish kronor. To manage interest rate risks and currency risks, the banks use swaps. Two types of swaps are used primarily – interest rate swaps and cross currency basis swaps.

Interest rate swap

To neutralise interest rate risks, the banks convert their interest expense from long-term (fixed) interest rate levels to short-term (variable) interest rate levels by using what are known as interest rate swaps. An interest rate swap is an exchange contract between two parties in which a fixed interest rate flow is exchanged for a variable one, or vice versa, for a determined period. This enables better matching of the fixed interest period for the banks' interest expense and interest income, which is necessary for the banks to limit their interest rate risks.

Cross currency basis swap

Besides interest rate risk, the part of the banks' funding that occurs in foreign currency also gives rise to currency risk. In order to eliminate the currency risk, the banks can enter a combined interest rate and currency swap.¹⁷ The swap involves the bank that borrows in a foreign currency receiving the domestic currency, and giving the foreign currency. In the swap, the parties also pay variable interest to each other, linked to the currency they receive. In this way, the currency risk is reduced for both the interest payments and the loan amount.

Other funding

Besides using covered bonds, the banks can also fund their mortgages through other market funding or from deposits from the banks' customers. Other market funding can consist of traditional bonds or certificates. Traditional bonds are more expensive than covered bonds because they are not guaranteed by any collateral. Certificates have a short maturity while bonds are debt instruments with longer maturities. The banks can also borrow directly from each other. These loans are called inter-bank loans and usually carry short maturities of up to a year.

17 This known as a cross currency basis swap.

As already described, deposits account for over 40 per cent of total lending to the general public in Sweden. The mortgage is an important product for banks and constitutes around half of total lending to the general public. It is therefore reasonable to allocate at least a certain part of the banks' deposits to mortgages. At the end of the first quarter, other funding accounted for 28 per cent of mortgage funding according to FI's model.

Appendix 2: Calculation of the average funding cost

Shares of funding are calculated as an average of Swedbank Hypotek, Nordea Hypotek and Stadshypotek over the period 2002–2011. SEB Bolån is included in the calculations for the years 2002–2006. SEB Bolån is subsequently included in the parent company.

DISTRIBUTION OF FUNDING

The model includes the following funding types:

covered bonds SEK (maturity two and five years)

covered bonds EUR (maturity two and five years)

other funding

Table 1. Estimated distribution of funding 31 March 2012 (per cent)

Covered in SEK 55.1

Covered in EUR 17.3

Other funding 27.6

Covered bond volumes were obtained from statistics of issued securities from SCB. Other funding consists of issued certificates in SEK and EUR as well as loans from the parent company in the form of e.g. deposits. Certificate volumes in SEK and EUR have also been obtained from SCB. Loans from the parent company are estimated as net debt to credit institutions, which is calculated as the difference between the company's debts to credit institutions and lending to credit institutions. The volumes for each type of funding are then converted to shares of the total funding volume. These shares vary over time.

Maturity

The average maturity for the covered bonds was obtained from statistics from SCB and the Association of Swedish Covered Bond Issuers, and varies over time. In order to reach the observed maturity, the calculations use a combination of two-year and five-year covered bonds.

COSTS OF FUNDING

Observable data from the fixed income market is used to price the banks' different types of funding. Interpolation is used to estimate a cost for covered bonds with an exact maturity of two and five years in SEK and EUR, respectively. Also, interest rate conversion is compensated by interest rate swaps for covered bonds in SEK, and by interest rate and currency conversion for covered bonds in EUR. Interest rate and currency conversion usually involves a cost that depends on the maturity and currency being converted. Other funding is priced using the three-month interbank rate (Stibor).

Funding cost

By aggregating the distribution of the types of funding, maturity distribution and costs of the different types of funding, FI arrives at a funding cost. Because all long-term funding is converted to three-month rates through swaps, the cost refers to funding three-month lending.

Appendix 3: Financial regulation

In order to strengthen financial stability and avoid future financial crises, new regulations for the banking sector are being prepared in the EU. The regulations include higher capital adequacy requirements. The Ministry of Finance, the Riksbank and Finansinspektionen are of the opinion that Sweden needs to go beyond the Basel 3 accord¹⁸ and the EU's rules in order to safeguard stability in the Swedish financial system.¹⁹ Finansinspektionen is also working on preparing new regulation of liquidity risks.²⁰ Here, Sweden is ahead of Basel 3 and the EU in terms of drawing up and introducing quantitative requirements for Swedish banks. This appendix explains the background and content of the planned regulations.

CAPITAL ADEQUACY REQUIREMENTS

Compared with non-financial companies, the balance sheets of banks consist of relatively little equity. The purpose of equity is for the banks to be able to absorb losses, for instance as a consequence of borrowers not being to fully meet their commitments. One of the lessons from the financial crisis is that higher requirements are needed on banks' capital. The Basel Committee on Banking Supervision²¹ has therefore issued a new framework, the Basel 3, which includes higher capital adequacy requirements.

What do the new capital adequacy rules involve?

The new capital adequacy rules are planned to be introduced for Swedish banks as of 1 January 2013. In the EU, the introduction of Basel 3 is occurring through a new capital adequacy regulation and a new directive (CRR and CRD4).²²

In the proposal for CRR/CRD which is expected to be decided, it is required that banks shall have at least 4.5 per cent in common equity Tier 1 capital²³ from 2015. However, in November 2011, FI, the Ministry of Finance and the Riksbank agreed to recommend that this requirement shall apply in Sweden as of 1 January 2013. The Swedish authorities also recommend that the four major bank groups Handelsbanken, Nordea, SEB and Swedbank shall be subject to a higher level. The proposed level is that their common equity Tier 1 capital shall amount to at least 10 per cent as of 1 January 2013 and 12 per cent from 1 January 2015.

There are several strong reasons for placing strict requirements on the major Swedish banks. The major Swedish banks obtain a great extent of their funding by borrowing on international capital markets, which

18 To read more about the Basel 3 accord, go to the BIS website: www.bis.org

19 See: <http://www.fi.se/Press/Pressmeddelanden/Listan/Nya-kapitalkrav-pa-svenska-banker/>

20 See: <http://www.fi.se/Regler/Likviditet/>

21 The Basel Committee operates under the Bank for International Settlements (BIS), and develops, for instance, standards for regulation and supervision of banks. The Basel Committee's proposal is recommendations that must be implemented at a national level to be binding regulation.

22 Capital Requirements Directive 4 (CRD) and Capital Requirements Regulation (CRR).

23 The definition of common equity Tier 1 capital is what non-financial companies call equity, i.e. share capital, restricted reserves, profit for the year, profit brought forward, etc.

makes them sensitive to disruptions on these markets. The banks are also very large compared to the Swedish economy. If one or several of the major Swedish banks needed a bailout, this would involve tremendous costs for society and tax payers. The markets have also learned from history and often presuppose that the Government would step in to bail out major banks. The perception of an implicit guarantee from the Government means that the major banks can obtain funding more cheaply than what would otherwise have been the case, and take greater risks.

LIQUIDITY REGULATION

What does liquidity risk involve?

In addition to capital adequacy regulations, Basel 3 also contains guidelines aimed at reducing the liquidity risks of banks. In simplified terms, a bank encountering liquidity problems means that it does not have sufficient money (liquid assets) for the time being to pay its debts falling due. If a bank cannot pay debts falling due for payment, the bank is referred to as being illiquid. Liquidity risk and liquidity problems are the risk of encountering difficulties in meeting payment obligations. The reason for liquidity problems could be that a bank has issued a long-term loan, such as a mortgage, with the help of funding with a shorter maturity. The bank's short-term funding must therefore be repaid before it has received its money back for the mortgage. In normal circumstances it is easy for the bank to renew its short-term funding on the financial markets. However, in periods of financial stress, like during the last financial crisis, there is a risk of the bank ending up with liquidity problems and, at worst, becoming illiquid. In order to avoid the liquidity problems of Swedish banks intensifying in the financial crisis, the Riksbank provided support in the form of temporary funding. In addition to this, a government guarantee program for the banks' borrowing was also established.

What do the new liquidity regulations involve?

The current Swedish provisions for a company's liquidity do not contain any quantitative liquidity requirements. However, the Basel Committee has proposed two quantitative measurements for liquidity risks – the Liquidity Cover Ratio (LCR) and the Net Stable Funding Ratio (NSFR).

LCR says, in brief, that banks should have sufficient liquid assets for covering their expected outflows of payment during the next 30 days.²⁴ If a bank were to have liquidity problems, it could sell its liquid assets and in this way match the outflows that take place during the period.

In order to monitor the liquidity situation in Sweden, Finansinspektionen has, since the summer of 2011, required reporting on liquidity risks from all credit institutions and investment firms operating in Sweden with a balance sheet total of over SEK 5 billion. In the reports, the institutions today provide an account of e.g. the extent of their liquidity reserve, cash flows and data for calculating the liquidity cover ratio.

In Basel 3, the LCR is planned to be introduced as of 2015. Finansinspektionen intends to proceed earlier and introduce quantitative LCR requirements as of 1 January 2013. Tangible proposals and details about which companies are to be included will be in the proposal for regulations which is expected to be sent out for review by the summer of 2012.

²⁴ Liquid assets in this context primarily include government securities and, to a certain extent, covered bonds.

Because the market funding of Swedish banks also occurs in foreign currency, it will also be required that they maintain liquid assets in the same currency as the converted outflows in EUR and USD.

As a complement to LCR, a more long-term structural measurement called NSFR has been discussed. This means that banks should to a greater extent fund long-term assets with long-term liabilities. The banking system should thus better match the maturities in its funding and in so doing make it more stable. International discussions relating to NSFR have, however, not come as far as for LCR and its introduction is not expected to occur before 2018 after further evaluation has been performed.

Glossary

Alternative cost The return that would be received in the best alternative use of a certain resource.

Basel Committee/Basel regulations The Committee that negotiates the regulations for banks and credit institutions that will apply on a global level. Examples of accords include capital requirements for credit institutions, liquidity reserve requirements and requirements on credit institutions to publish information. The first regulatory framework was created in 1988 and was called Basel 1. Basel 3 is currently being discussed and designed and it will enter into force in 2013.

Basis point A basis point is one hundredth of a per cent, i.e. 0.01 per cent. 100 basis points thus equals 1 per cent.

Bond An interest-bearing ongoing debt commitment, or a debt instrument, issued by governments, municipalities, credit market companies, building societies or large companies. Bonds generally have a long maturity, at least a year. The nominal amount of a bond is repaid upon maturity, and periodical interest payments occur in between.

Capital adequacy A measurement of the amount of capital in relation to risk-weighted assets that banks have to manage future losses.

Capital buffer Capital to cover expected or unexpected losses.

Capital requirements Regulations about the minimum amount of capital a company must maintain to conduct operations.

Certificate A security for trading on the money market. A certificate is a debt instrument issued by e.g. a bank or a company with the purpose of borrowing money. The maturity is one year maximum.

Covered bonds A bond where the holder has a special right of priority in the event of bankruptcy. The purpose of covered bonds is that the credit risk is normally lower compared with non-covered bonds, which means a reduction in borrowing costs.

Credit institution An institution that operates in the credit market, e.g. banks, and thus lends money.

Credit risk The risk of a borrower failing to meet his or her obligations.

Cross-currency basis swap Instrument for exchanging rate flows between two currencies (e.g. SEK rate for EUR rate) and, where applicable, capital amounts.

CRR/CRD 4 The EU's capital adequacy regulation and capital cover directive (Capital Requirements Regulation and Capital Requirements Directive).

Currency risk The risk of being negatively affected by exchange rate fluctuations.

Derivative A financial instrument that involves agreements about obligations at a specified time in the future. The value of a derivative is linked to an underlying asset. The most common derivative instruments are options, futures and swaps.

Equity Item in the company's balance sheet that shows the difference between assets and liabilities, containing e.g. capital contributed by owners, profit brought forward and reserves.

Financial markets An umbrella term for markets on which financial instruments are traded. The four most important markets are the foreign exchange market, the fixed income market, the equity market and the derivative market.

Fixed interest term The period during which the interest rate on a loan is fixed. For treasury bills and most government bonds, the fixed interest term is equal to the remaining maturity of the loan.

Housing credit institution Credit institution specialised in long-term funding of real estate.

Interbank market The market on which banks trade interest rates and currencies with each other.

Interbank rate A daily reference rate based on the interest rates of unsecured loans offered by banks to other banks. In Sweden, the rate that banks offer to each other for lending in kronor is called STIBOR (Stockholm Interbank Offered Rate). STIBOR is used as a reference for setting interest rates or pricing derivative contracts.

Interest rate risk A measurement of the sensitivity of financial assets and liabilities. Interest rate risk measures how the value of financial assets and liabilities changes when the market rates rise and fall.

Interest rate swap Instrument for exchanging rate flows (variable for fixed rates and vice versa) to adapt interest payments.

Issue Means that a company issues a bond, or another type of security, with the purpose of borrowing money on the market.

LCR Liquidity Coverage Ratio

Liquidity Access to liquid assets, in relation to debts falling due. Often used to specify a company's short-term capacity to pay.

Liquidity reserve/liquidity buffer Liquid assets intended to counteract liquidity problems.

Liquidity risk The risk of experiencing difficulties in meeting payment commitments. See Appendix 2 for a more detailed description.

List price The lending rate presented by credit institutions on their websites or in newspapers.

Maturity The amount of time remaining until the payment of a liability or until a bond falls due. The longer the maturity, the larger the interest rate risk.

MFI Monetary financial institution

NSFR Net Stable Funding Ratio

Repo rate The Riksbank's key interest rate. The interest rate at which the banks can borrow or invest with the Riksbank for seven days.

Risk premium The extra return required by investors in compensation for taking a higher risk.

Spread Usually denotes the difference between two interest rates. On the bond market, the spread is usually measured in basis points (see basis point).

Stibor See interbank rate.

Swap An agreement between two parties to exchange a certain currency/interest rate for another currency/interest rate for a period of time determined in advance and in accordance with certain terms. See also interest rate swap and cross-currency basis swap.



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