



FINANSINSPEKTIONEN

Bank interest rates and lending

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Summary

The growth rate of lending to households and corporations is decreasing, but remains positive and is clearly higher than the corresponding figure for the euro-zone. Banks' margins on mortgages increased in the same period, according to the second quarterly report.

Swedish banks have already to a great extent adapted to forthcoming capital adequacy regulations and liquidity buffer requirements. Despite this adaptation to the tougher requirements, lending to corporations and households is increasing. While the growth rate of lending to non-financial corporations indeed decreased in the last quarter, it remains positive, unlike lending to non-financial corporations in the Eurozone, which is decreasing. Lending to households is still increasing, but at a lower rate than before due to factors including the mortgage cap introduced by FI in 2010. The growth rate for loans to households is at its lowest level since 1997.

FI has continued to monitor the mortgage margins trend. FI has used the same model as in the first report, and calculated an average funding cost and margin for mortgages. FI's calculations show that the funding cost decreased in the second quarter compared with the first quarter this year. This is mainly because interest rates on covered bonds have decreased. The lending rate to households has decreased at the same time, but not to the same extent.

The banks also have other costs apart from the funding cost. Once these too are deducted from the lending rate, the margin for the second quarter amounted to 0,46 percentage points on average, compared to 0,40 percentage points for the first quarter. FI calls this margin the net margin which could, somewhat simplified, be viewed as the banks' profit on mortgages. The reason why the net margin rose in the second quarter is that the funding cost decreased more than the lending rate to households. The net margin is now at the highest level since 2002, which is when FI's calculations commenced.

Besides mortgages the banks also offer other services and products to their customers. When negotiating the terms for the mortgage, the bank considers all banking services of the customer. It is important that customers are aware of what they are paying for these services, and not only aware of the interest rate on their mortgages.

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 will be published on a quarterly basis.

Since the financial crisis, conditions on the financial market have changed. During the crisis, the Government was obliged to take 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. EU decisions regarding a great deal of the regulations in the form of a new capital adequacy regulation and a capital adequacy directive (CRR/CRD 4) are planned in 2012. Besides these requirements, the Swedish Ministry of Finance, the Riksbank and FI have announced that Sweden will introduce further capital requirements on systemically important banks,² and FI has prepared a proposal for new quantitative requirements regarding the liquidity coverage ratio (LCR).³ Although the rules have largely not yet come into force, it is clear that credit institutions in Sweden have already adapted to the forthcoming requirements to a great extent (see diagrams 15 and 16 in appendix 2). This is occurring partly because of the new regulations, and partly because their financiers and other participants (such as credit rating agency) require that credit institutions maintain more capital and better liquidity reserves. Appendix 2 contains a brief description of the new regulations.

In addition to adding to the resilience of credit institutions, the new regulations and changed conditions on the financial market also involve a greater cost for them. 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 funding lead to less risk in credit institutions. Consequently, this ought to mean that shareholders could accept lower return on their invested capital. The credit institutions have the possibility of increasing the prices of their services and lending, thus transferring the costs onto

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/Folder-EN/Startpage/Press/Press-releases/Listan/New-capital-requirements-for-Swedish-banks/>

3 See <http://www.fi.se/Folder-EN/Startpage/Publications/Miscellaneous/Listan/FI-proposes-higher-requirements-for-the-banks-liquidity-buffers/>

their customers. FI has been assigned by the Government to review how credit institutions' adaptation is affecting the terms for corporations and households.

Assignment in the Letter of Appropriation

The assignment is to monitor the adaptation of credit institutions to higher capital adequacy requirements, and their effect on 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 this second report, FI reports on the lending trend to households and corporations, and presents its calculation of the mortgage margin for Q2 2012. FI has also calculated the banks' overall costs for conducting mortgage lending from 2002 onwards. FI can therefore report the historical gross and net margins. In the section on all the banking services of customers, we expand on the concept of taking an overall view of the customer, which was introduced in the first report by exemplifying deposit rates and fund fees.

In the next report, the effects of the forthcoming regulations on the issuing of loans will be reviewed in more detail. The report will also address how credit institutions have adapted to new capital adequacy and liquidity requirements, and analyse their effects on corporations and households.

Lending, deposits and interest rates

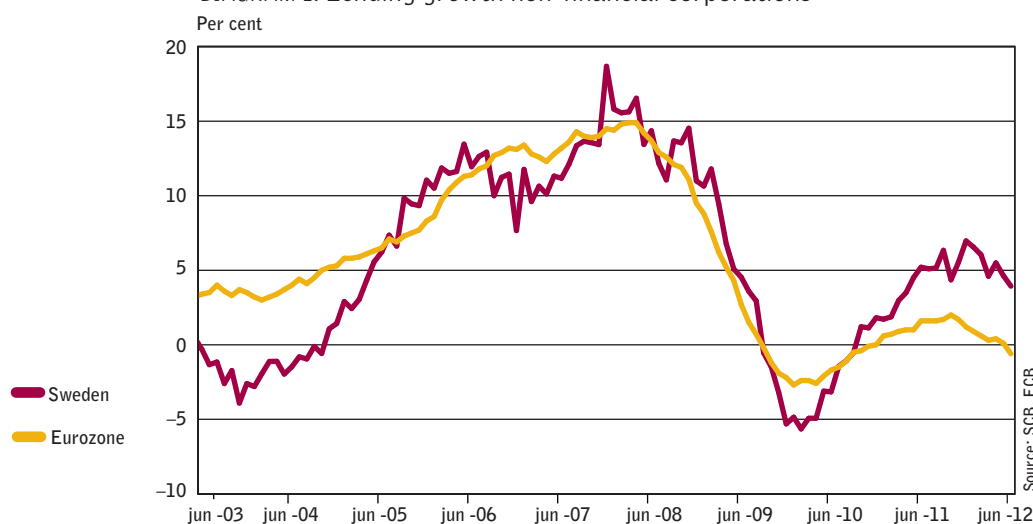
The growth rate of lending to corporations declined compared with the first quarter this year, but remained positive at 3.9 per cent at the end of the second quarter. This is clearly higher than the corresponding figure for the eurozone. Lending to households also continued to rise in the second quarter. However, the annual growth rate was at its lowest level in 15 years. On an annual basis, mortgage lending grew 4.8 per cent at the end of the second quarter of 2012. Both short-term and long-term mortgage rates decreased in the quarter.

Although the banks have largely adapted to the forthcoming regulations, lending to corporations and households is on the rise. However, it is increasing at a lower rate than before. As a comparison, growth in lending to corporations and households in the eurozone is close to zero. The mortgage cap introduced by FI is one contributory reason for the decline in the growth rate of lending to households. Later on in the autumn, FI will further expand on the analysis of the effects of the adaptation to the new requirements. Several different factors contribute to the lending trend, including market rates, regulation costs, margins and, not least, demand for loans.

LENDING TO CORPORATIONS AND HOUSEHOLDS

At the end of the second quarter of 2012, outstanding loans⁴ of Swedish credit institutions to non-financial corporations amounted to SEK 1,863 billion.⁵ At the same time, the annual growth rate of lending was 3.9 per cent (diagram 1). The growth rate has come down from the first quarter, when it stood at 4.6 per cent. However, unlike in the eurozone, Swedish lending is still growing. Lending to non-financial corporations in the eurozone fell 0.6 per cent in June.

DIAGRAM 1. Lending growth non-financial corporations

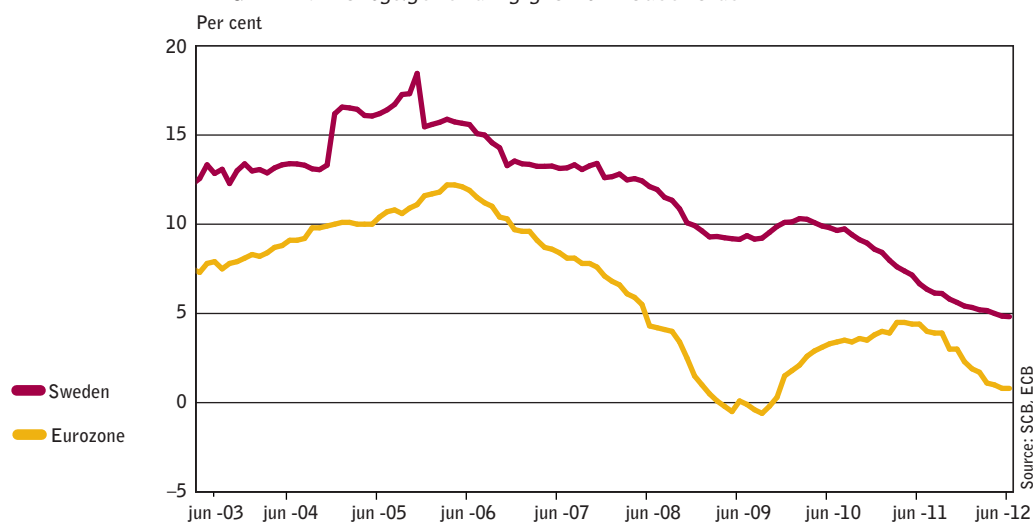


4 Regards lending from Monetary financial institutions (MFI), which is a definition according to Statistics Sweden (SCB) and includes banks, housing credit institutions, financing companies and other MFIs (municipal and corporate funding institutions, monetary investment funds, monetary investment firms and brokerages and other monetary financial institutions).

5 All deposit and lending rates and deposit and lending volumes in this section were obtained from SCB, Financial Market Statistics, 27 July 2012.

Growth in lending to households continued to decline slightly in the second quarter of 2012, amounting to 4.5 per cent annually. The rate of increase is the lowest in 15 years. The rate of increase for mortgage lending was also lower than in the previous quarter, standing at 4.8 per cent in the second quarter. This is the lowest growth rate since 2002, which is as far back as comparable statistics are available, and a clear reduction can be seen following the introduction of the mortgage cap in 2010. The rate of increase in mortgage lending in the eurozone is lower as a consequence of the economic turbulence, amounting to 0.8 per cent annually in June (diagram 2). Total mortgage lending to households was at around SEK 2,171 billion in June 2012.

DIAGRAM 2. Mortgage lending growth households



FUNDING FOR CORPORATIONS

Non-financial corporations can obtain funding in different ways. They can use equity capital or other internal means on the one hand, and different types of loan financing on the other.⁶ Most (almost half) of the loan financing of Swedish non-financial corporations comprises loans from credit institutions. Large corporations can also obtain funding by issuing interest-bearing securities on the bond or money market.⁷ Corporations that form part of an international group can obtain funding through loans from a group company operating abroad.⁸ Corporations also obtain funding through commercial loans.⁹

Since the most acute stage of the crisis, the funding situation of corporations has improved¹⁰. Nevertheless, there are certain indications that, in

6 Loan financing refers here to borrowing from Swedish and foreign credit institutions, intragroup loans from abroad and borrowing through issuing corporate bonds and commercial papers.

7 Corporate bonds are issued on the bond market, and commercial papers on the money market. The maturity of commercial papers is less than a year, and bonds have longer maturities.

8 The foreign company can, in turn, either have borrowed money or issued securities.

9 Commercial loans consist of accounts receivable and accounts payable, and only constitute a minor part of financing.

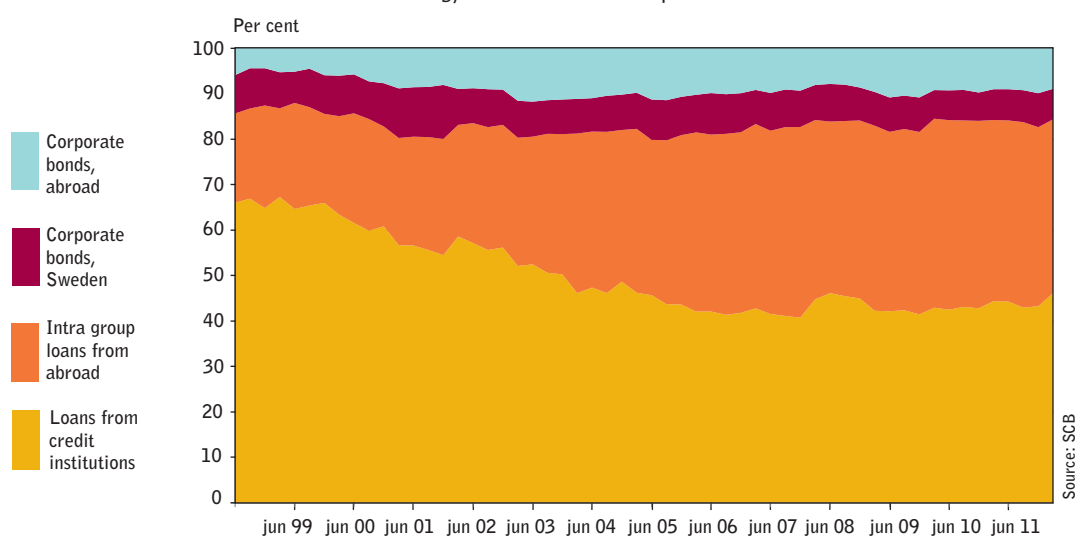
10 Loan indicator June 2012, ALMI Företagspartner. In June 2012, 16 per cent of the queried bank managers stated that it has become more difficult for existing corporate customers to obtain loans compared with the previous quarter. This can be compared to the corresponding figure in June 2009, which was 37 per cent.

the past year, obtaining bank loans has become more expensive and more difficult for both existing and new corporate customers alike. In the Riksbank's company interviews in January and May this year, several large corporations stated that the more expensive borrowing from banks has led them to start looking for other sources of funding, such as corporate bonds.¹¹ However, this is not yet visible in the statistics.

Because issuing securities involves major administrative costs, small and medium sized corporations do not have the same fundamentals to use this type of borrowing as a source of funding. In Sweden, there are around 70 corporations that obtain funding through the securities markets. Most of these corporations are global, and many of the major corporations have ties with the public sector.¹² The five largest issuers account for over half of the issues.

The majority of the securities funding of non-financial corporations comprises bonds, i.e. securities with a maturity exceeding one year. Almost 40 per cent of the outstanding stock of corporate bonds is issued in Swedish kronor today. The corresponding figure for commercial papers is almost 90 per cent. The proportion of corporate bonds issued in kronor is today about the same as it was fifteen years ago. However, the proportion of bonds issued in foreign currencies increased between the end of the 1990s and the beginning of the 2000s (diagram 3).

DIAGRAM 3. Funding, non-financial corporations



In the next few years, a large proportion of Swedish corporations' outstanding securities and loans from credit institutions will fall due. There is speculation that a change in the funding structure of corporations is in store, and that securities funding will become increasingly common. Such a change is not yet visible in available statistics. Swedish corporations' outstanding stock of corporate bonds is certainly on the rise, but not in relation to other loan financing. The proportion of corporate bonds has been at around one seventh of total loan financing since the beginning of 2004 (diagram 3).

Foreign intragroup loans constitute an increasingly large share of Swedish non-financial corporations' funding. From having constituted

11 The Riksbank's company interviews, January 2012 and May 2012

12 Many of the corporations are or have been state-owned in whole or in part, e.g. Vattenfall and TeliaSonera.

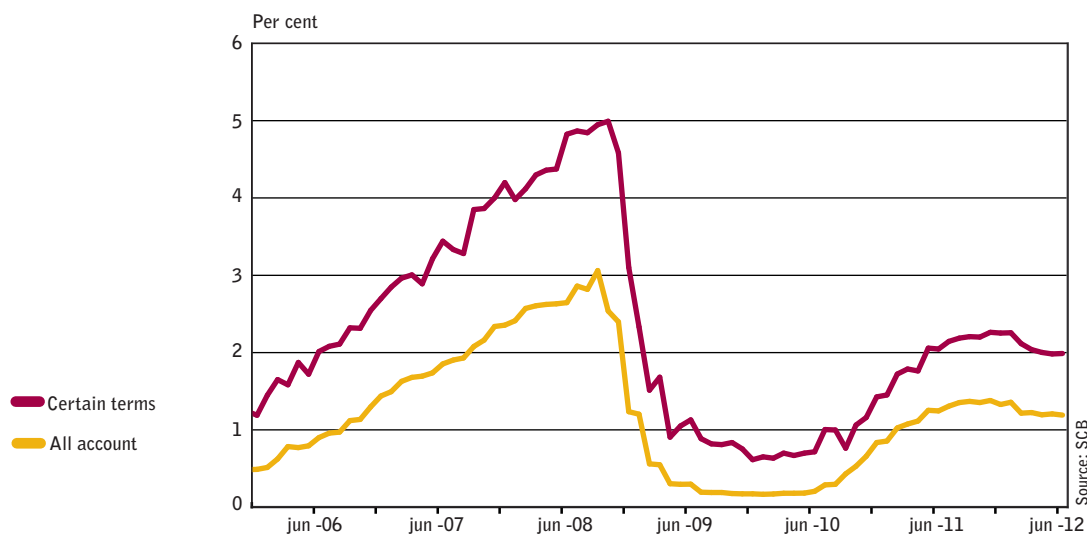
around 20 per cent at the end of the 1990s, intragroup loans currently account for around 40 per cent of Swedish non-financial corporations' loan financing. This is almost as much as borrowing from Swedish and foreign credit institutions combined (diagram 3).

DEPOSITS FROM HOUSEHOLDS AND CORPORATIONS

At the end of the second quarter of 2012, deposits from households at Swedish credit institutions stood at SEK 1,258 billion. Deposits from households have continued to rise, climbing 11 per cent annually in the last quarter. Swedish non-financial corporations' deposits at Swedish credit institutions amounted to SEK 2,251 billion at the end of the second quarter of this year. The annual growth rate of deposits was 9.7 per cent.

The average interest rate on new agreements for households' total deposit accounts also declined in the second quarter of 2012. At the end of the quarter, it stood at 1.19 per cent. The deposit rate on new agreements associated with certain terms, usually restrictions on withdrawals, also declined slightly in the quarter, amounting to 1.99 per cent (diagram 4).¹³ The average deposit rate on non-financial corporations' total deposit accounts was 1.42 per cent at the end of the second quarter.

DIAGRAM 4. Deposit rates for Swedish households (new agreements)

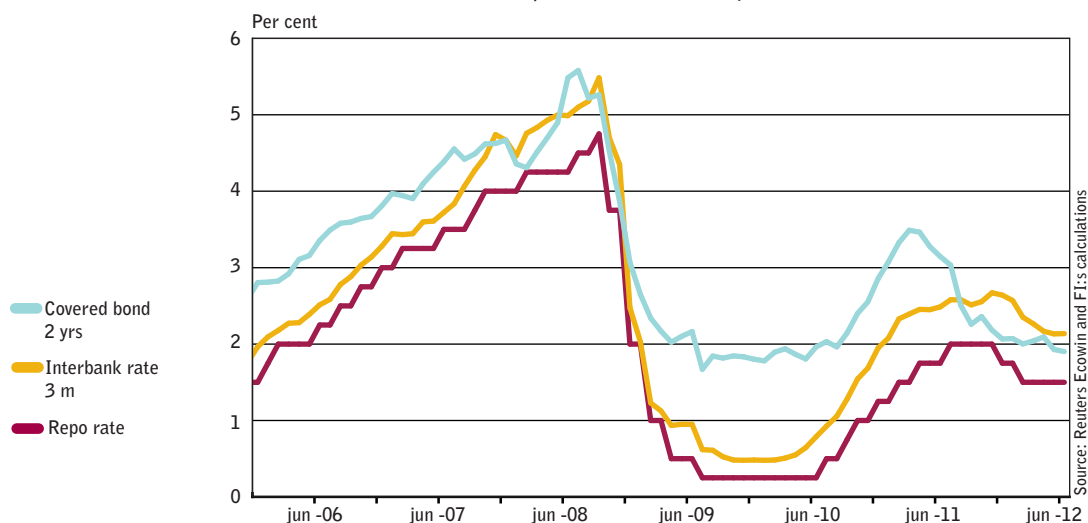


MARKET AND LENDING RATES

The level of market rates affects how much it costs households and corporations to borrow money. A higher interest rate generally entails lower economic activity. The difference between the repo rate and the inter-bank rate is still larger than it was before the financial crisis. Unease in the eurozone and increased risk awareness have contributed to this trend. In the second quarter, however, the difference between the rates decreased slightly compared to the first quarter. The covered bond rate declined in the last quarter (diagram 5).

¹³ 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 with terms and conditions that have changed during the period. All included accounts are covered by the deposit guarantee.

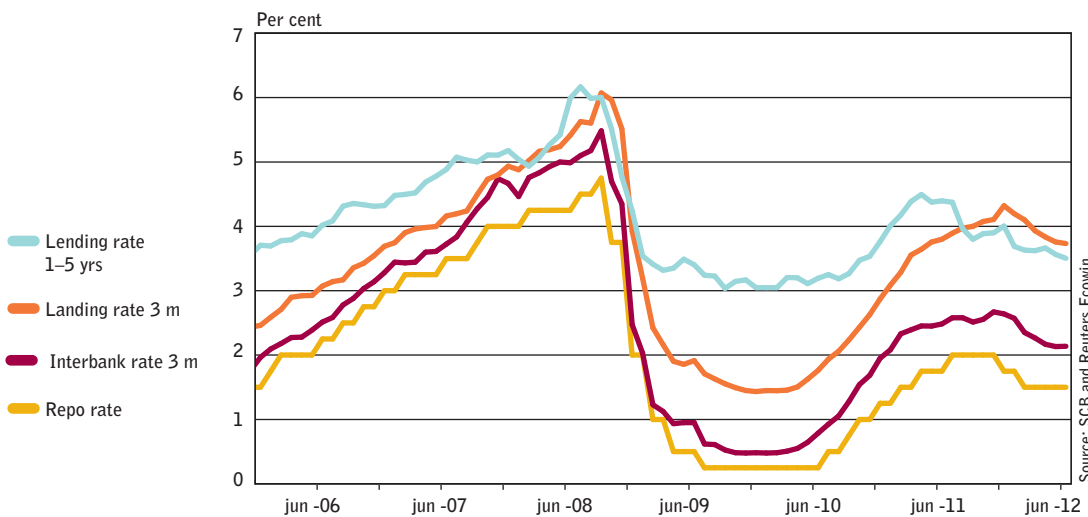
DIAGRAM 5. Covered bond, interbank and repo rate



The relationship between the repo rate and banks' lending rates has weakened since the financial crisis. The rate difference has decreased slightly since the first quarter this year, but is still high in a historical perspective. One reason for this is increased risk awareness on financial markets, resulting 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.

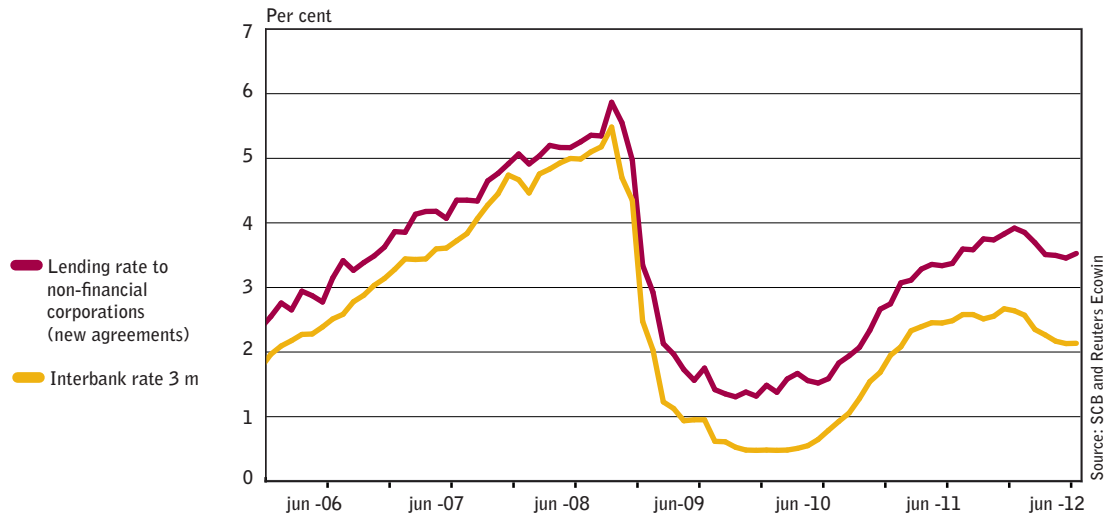
In the last quarter, both short-term and long-term mortgage rates dropped slightly. The three-month mortgage rate for households was at 3.73 per cent at the end of the second quarter of 2012 (diagram 6).

DIAGRAM 6. Mortgage rates for Swedish households (new agreements)



The average three-month rate on new loans to corporations has risen since the beginning of 2010. It amounted to 3.53 per cent at the end of the second quarter, which is on a par with the preceding quarter. Inter-bank rates declined in the second quarter, and the difference between the lending rate for corporations and the three-month interbank rate has thus increased. It is at a high level in a historical comparison (diagram 7).

DIAGRAM 7. Interest for non-financial corporations and interbank rate



To fund a mortgage, the banks cannot borrow money at a cost corresponding to the repo rate. The factors that affect the bank's costs for mortgages are described in the chapter The banks' mortgage margins.

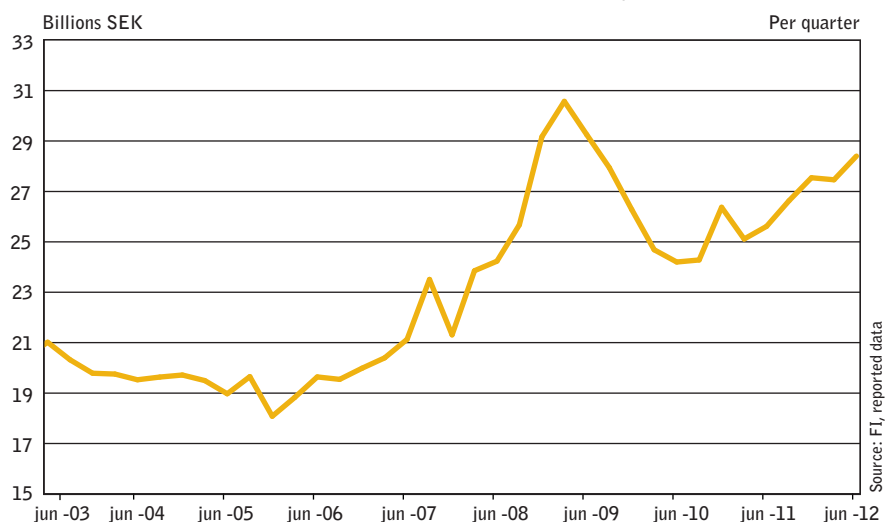
NET INTEREST INCOME

The banks' net interest income is the difference between interest income and interest expense. In other words, the difference between what the bank earns on its interest-bearing assets (e.g. mortgage lending) and what it pays for its interest-bearing liabilities (deposits and borrowing).

A positive deposit margin means that the banks pay less in interest to their customers than what they earn on investing in the market. Similarly, the lending margin is positive if the bank can lend out money at a higher rate than that at which it borrows. The higher the margins, the greater the net interest income.

Since the second quarter of last year, the total quarterly net interest income of the major banks has increased by 11 per cent, amounting to SEK 28 billion for the second quarter of this year. Since the end of the second quarter of 2003, the major banks' aggregate net interest income has increased by 35 per cent (diagram 8). The increase is due to both higher margins and greater volumes of interest-bearing liabilities and assets.

DIAGRAM 8. Total net interest income of the four major banks



The banks' mortgage margins

Using a model, FI has calculated a funding cost for a new loan with a fixed interest term of three months. This has then been compared with the lending rate to calculate a gross mortgage margin. The gross margin for a newly issued three-month mortgage also increased in the second quarter, amounting to 1.19 percentage points on average. The net margin, which is the margin after other costs have also been deducted, was 0.46 percentage points and this too increased in the last quarter.

Calculating the exact cost of mortgages is complicated and requires information about the individual bank. By creating a simple model, FI can illustrate the banks' costs associated with mortgages, and how they have developed over time. The model to calculate the funding cost, which was prepared in collaboration with the Riksbank, is based on certain assumptions and is a simplification of reality. This is partly in order to make the model easy to understand, and partly because statistics are not always available or possible to publish due to confidentiality reasons.¹⁴ By calculating all the banks' costs associated with mortgages, and comparing these with actual lending rates, the mortgage margin can be calculated.

The model is simple and general and can be used for calculating the mortgage margin of an individual bank. Transparency would be greater if the banks that conduct mortgage operations inserted their costs into FI's model themselves. The calculations of the banks' mortgage costs are identical to those presented in the first report.

THE BANKS' FUNDING COST

Information from the major banks and their housing credit institutions is used to calculate the costs associated with funding a mortgage.¹⁵ The funding cost calculated is an average of the last 90 days and corresponds to the cost of a new mortgage with a three-month fixed interest term.¹⁶

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 vary over time. The funding sources in the model are covered bonds and other funding. Other funding consists of unsecured market borrowing and deposits from the banks' customers.¹⁷ The

14 See appendix 1 for a detailed description of the model.

15 The model is based on statistics from Swedbank, Nordea and Handelsbanken and their housing credit institutions (Swedbank Hypotek, 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).

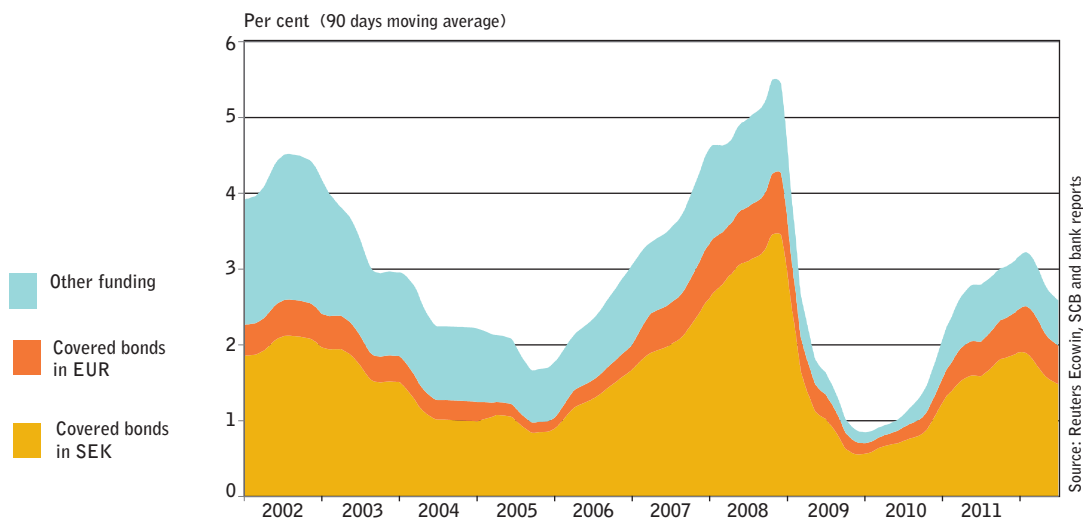
16 53 per cent of new mortgages are granted at the three-month rate. 48 per cent of the total mortgage stock carries the three-month rate. The fixed interest term is not the same as the loan maturity, which is usually much longer.

17 For a description of the various funding sources, see "Bank interest rates and lending, Q1 2012", <http://www.fi.se/Folder-EN/Startpage/Publications/Reports--summaries/Listan/Bank-interest-rates-and-lending/>

average maturity of the bank's issued covered bonds is allowed to vary over time in the model.¹⁸

The funding cost of banks is calculated by allocating a cost to each funding source and then weighting these based on the distribution and estimated maturity of the funding (diagram 9).¹⁹ The funding cost has decreased from 2.97 per cent, which was the average in the first quarter of 2012, to 2.59 per cent in the second quarter.²⁰ The downturn is primarily due to the fact that the covered bond rate fell during the quarter.

DIAGRAM 9. The funding cost is divided into different types of funding



GROSS MARGIN ON MORTGAGES

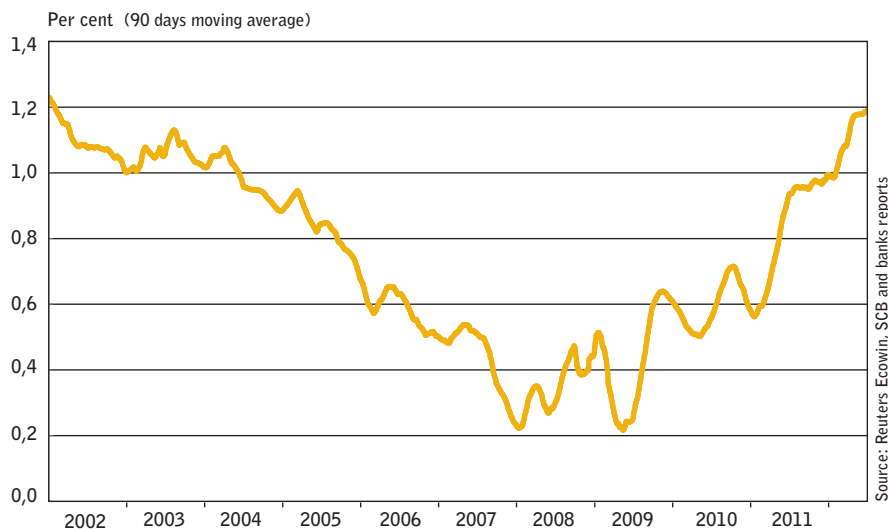
By comparing the average interest rate actually paid by consumers during the quarter with the average funding cost in the second quarter, a gross margin for a new mortgage can be calculated. This margin refers to a new loan with a three-month fixed interest term. FI chooses to call this margin a gross margin because it does not take into account the other costs, besides the funding cost, associated with mortgage lending. The gross margin therefore does not equal the banks' profit.

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

19 A more in-depth description of FI's calculations is provided in Appendix 1.

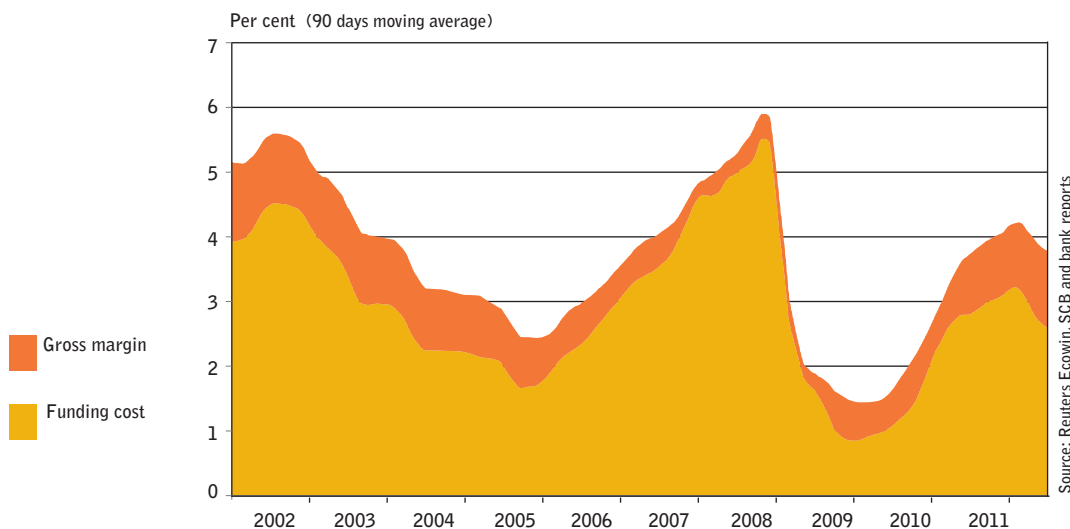
20 We have calculated the funding cost by using the quoted daily market values on the secondary market. However, this is a simplification because the banks do not obtain funding on the market each day.

DIAGRAM 10. Gross margin on newly issued three-month mortgages²¹



The gross margin continued to increase in the second quarter, averaging at 1.19 percentage points (diagram 10). This is because the funding cost decreased more than the lending rate did. Diagram 11 shows the lending rate broken down into gross margin and funding cost.

DIAGRAM 11. Actual lending rate for newly issued three-month mortgages



NET MARGIN ON MORTGAGES

In addition to the direct funding costs, there are also other costs associated with banking operations and hence mortgages. These costs must be distributed between the bank's different operational areas, and must therefore be taken into account when the bank determines its mortgage rate. When both the funding cost and other costs are compared with the average rate paid by customers, a net margin can be calculated. The net margin can be seen as the gross margin minus other costs, and can thus in somewhat simplified terms be seen as the banks' profit on mortgages.

²¹ The calculation uses the same funding cost that was divided into three parts in diagram 9.

Other costs for mortgages

The other costs vary from bank to bank and, in FI's model, consist of administrative costs, the cost of maintaining a liquidity reserve, the cost of anticipated credit losses and tax. FI has estimated an average for the four major Swedish banks. FI's calculations of the other costs are identical to those in the first report, amounting to a total of 0.73 percentage points.

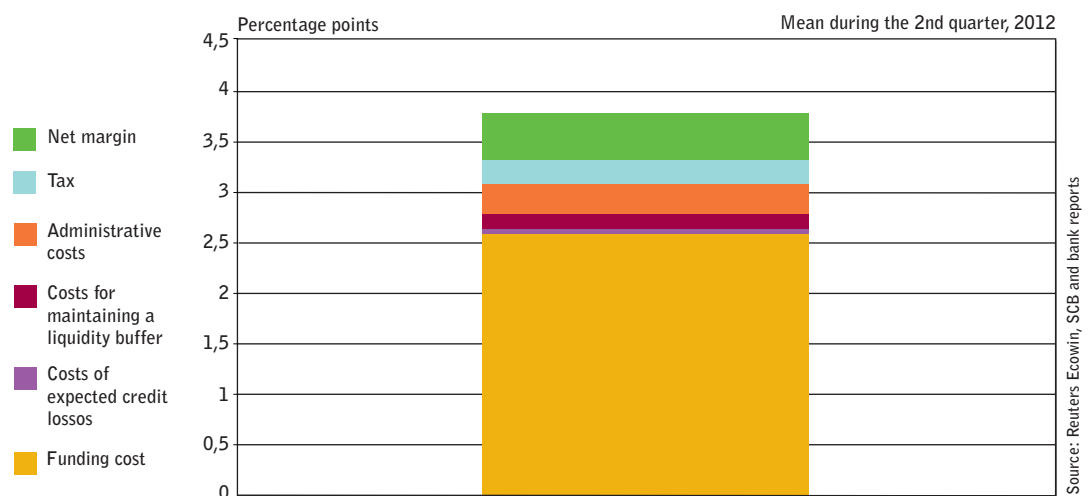
Administrative costs include costs for personnel, premises and computer systems. These costs are often common to the entire bank group and must therefore be distributed across the different operational areas. According to FI's estimation, administrative costs for mortgages amounted to 0.30 percentage points in the second quarter of 2012.

To ensure that the banks can continuously fund their mortgage stock, even in periods of financial stress, they maintain a reserve of liquid assets. These assets can be used in the event of the bank's normal funding sources becoming subject to disruption. Maintaining a liquidity reserve is associated with certain costs which, according to FI's calculations, amounted to 0.15 percentage points on average in the second quarter of 2012.

The banks must also allow for the event of certain mortgage holders not being fully able to pay their mortgage interest and instalments. When a bank grants a mortgage, it must take account of expected future credit losses. Based on the banks' current calculation models, FI assumes that the average costs for expected credit losses amount to 0.05 percentage points over time.

Finally, a cost is deducted for tax. According to FI's calculations, this amounted to 0.23 percentage points in the second quarter of 2012. When all costs including tax are deducted from the lending rate, a net margin remains. The net margin for a newly issued mortgage was, according to FI's model, 0.46 percentage points on average in the second quarter. This entails an increase of 0.06 percentage points from the first quarter this year. The increase is due to the fact that the funding cost declined more than the lending rate did. Diagram 12 shows the banks' average funding cost, other costs and net margin.

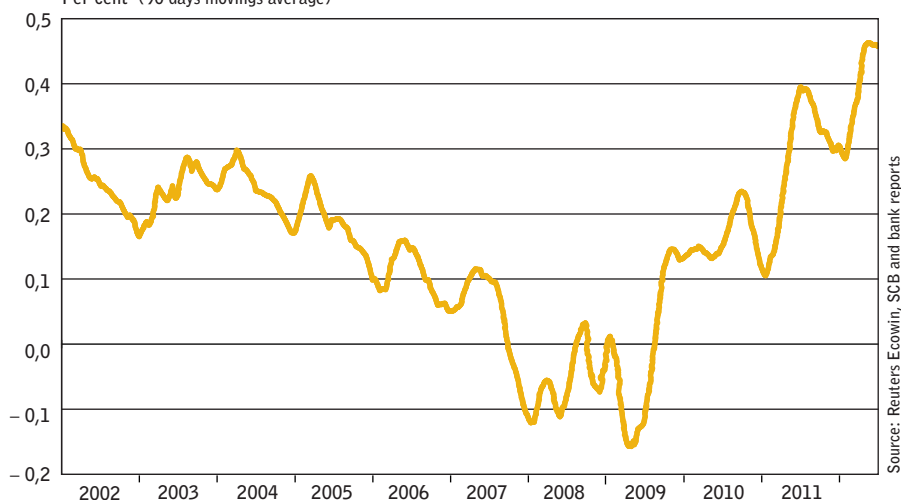
DIAGRAM 12. Estimation of costs and net margin for mortgages.



In this report, FI has also taken other costs historically into account, and can thus show the net margin trend. During the period until the financial

crisis, stiffening competition on the mortgage market led to pressure on mortgage margins. Following the financial crisis, the net margin increased and is now at its highest level since 2002, which is when FI's calculations commenced (diagram 13). Because the diagram shows the net margin for a new mortgage, the negative margin during the 2008–2010 crisis years need not mean that the margin for the entire mortgage stock was negative during that period.²²

DIAGRAM 13. Net margin on newly issued three-month mortgages
Per cent (90 days moving average)



According to FI's model, the net margin can, in simplified terms, be seen as the banks' profit on mortgages, and must cover the cost of capital including the expected return of shareholders. 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.²³ This should mean that, over time, the expected return of shareholders decreases.

A net margin of 0.46 percentage points entails a profit for the bank of SEK 6,900 annually for an average loan in Stockholm which, according to FI's 2011 mortgage survey, was at around SEK 1.5 million. This can be compared with SEK 6,000 for the first quarter.

22 During the financial crisis, the banks had access to support funding, and did not obtain funding through the market, which our model assumes and for which it has not been corrected.

23 More information about the forthcoming regulations is provided in appendix 2.

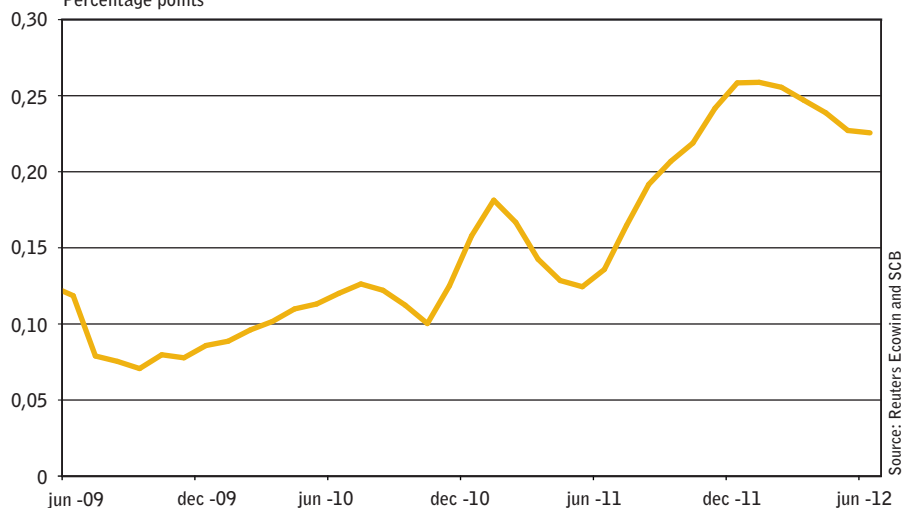
Customers' total banking services

Better transparency on mortgage margins can be useful in mortgage negotiations between customer and bank. Well-informed customers, customers who negotiate their terms and customers who are willing to change banks are required for functioning competition. It is important that customers understand all parts of their banking services and products. Also, 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 is to pay for his or her loan, but there is often a possibility to negotiate. In negotiation situations, the customer is often at a disadvantage in relation to the bank in terms of information. One of the purposes of this report is to increase understanding of the banks' costs. However, it is ultimately up to the customer to study the personal offer and compare it between several different banks.

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 around 0.2 percentage points higher than the actual average interest rate paid by customers on their variable loans²⁴ (diagram 14). This means that a bank can grant a certain discount on the interest rate presented on its website.²⁵

DIAGRAM 14. Difference between list price and actual three-month rate
Percentage points



However, negotiation skills alone do not determine the customer's mortgage rate. The financial circumstances of customers vary, which means that different borrowers constitute differently sized risks for the bank. Factors that affect negotiation scope include the borrower's income and size of other assets, as well as the proportion of the home the customer wants to mortgage. It is ultimately up to the bank whether the customer is granted a loan, and which interest rate applies.

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

25 The model, as described in a previous section, uses the average interest rate actually paid by the customer, i.e. after the discount.

Negotiations also include discussing different fixed interest terms for the loan. In the model presented by FI, the banks' margins based on the three-month rate only are discussed. Each customer must consider the advantages and disadvantages in the choice of fixed 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 with certainty what the loan will cost over a long period of time. Changing a fixed interest term or terminating the loan during the fixed interest term is often associated with a fee, called interest differential compensation.

It is also important that customers consider the scope they have for paying off a mortgage. The average repayment period for new mortgages was 70 years in 2011 according to FI's mortgage survey, and this has increased by four years since 2009. The proportion of repayment-free loans has increased, by just over 6 percentage points since 2009.²⁶ FI will analyse mortgage repayment in more depth in its mortgage survey, to be conducted later on in the autumn.

AN OVERALL VIEW IS TAKEN OF THE CUSTOMER

Because a mortgage is often the biggest banking transaction in a person's life, many customers 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 banking services with the bank. It is not unusual for a bank to offer a lower mortgage rate if the household commits to other services. It is important to bear in mind that these other services involve costs, in certain cases for many years to come. The fact that the banks present a holistic customer solution is practical for customers, but at the same time distinguishing the costs of different services is difficult.

Swedish households' savings in funds rose sharply in the first quarter of 2012, from having been negative throughout 2011.²⁷ It is important that fund savers are aware that it is often associated with fees. Fees for fund and pension saving are automatically deducted from the funds' return or from the deposited amount, and can thus be hard to estimate for customers. Paying attention to the fees associated with fund saving can have a major bearing on return. A customer who saves SEK 1,000 per month for ten years in an average fund portfolio pays around SEK 12,400 in fees.²⁸

Taking account of the deposit rate offered by the bank for different accounts is also an important parameter for a customer's personal finances. Deposit rates have a major bearing in the long run because of the

26 See the report The Swedish mortgage market from 13 March 2012. <http://www.fi.se/Folder-EN/Startpage/Publications/Reports--summaries/Listan/The-Swedish-Mortgage-Market/>

27 Source: SCB Savings Barometer

28 In the calculation it is assumed that the fund portfolio has the same distribution as Swedish households' total fund net asset value, consisting of 76 per cent equity funds, 18 per cent mixed funds, 5 per cent fixed income funds and 7 per cent other funds (source SCB). FI has used average management fees obtained from AMF's report "Fees on the fund market 2011" (Swedish only) and expected return obtained from www.amf.se. For Swedish funds, the difference between the management fee and TER (Total Expense Ratio) used in the so-called "Norman amount" is often negligible.

interest-on-interest effect²⁹, and customer passiveness might therefore cost them in the form of missed interest income. A customer who keeps his or her entire salary in a transaction account that pays no interest, instead of saving SEK 1,000 each month in a deposit account that pays interest, misses out on around SEK 7,500 over a ten-year period.³⁰

It is also important to be aware that other services such as cards, securities depositories and payment services are in most cases associated with a fee. It is therefore important to also renegotiate, or at least take account of, the terms and price of services besides mortgages.

29 Because the interest paid out remains in the deposit account, it also earns interest. This means that the amount on which interest is calculated increases next time.

30 The average interest rate on an unrestricted deposit account was 1.19 per cent at the end of the second quarter, and the transaction account rate was zero.

Appendix 1. Calculation of funding cost and other costs

DISTRIBUTION OF THE BANKS' FUNDING

The share of different funding sources of total funding has been estimated by studying the debt side of the balance sheets of the major Swedish banks' housing credit institutions. Shares of funding are calculated by an aggregate of the funding sources 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 and the mortgage institution can therefore not be distinguished from the bank.

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:
 - loan from the parent company in the form of deposits
 - certificates in SEK and EUR

TABLE 1. Distribution of funding at the end of the second quarter of 2012

Covered bonds in SEK	55.4 per cent
Covered bonds in EUR	17.6 per cent
Other funding	27.0 per cent

Covered bond volumes were obtained from statistics of issued securities from SCB. Other funding consists of certificates issued in SEK and EUR as well as loans from the parent company consisting largely of deposits. Certificate volumes in SEK and EUR have also been obtained from SCB. Loans from the parent company are estimated to equal the 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 covered bonds was obtained from statistics from SCB and the Association of Swedish Covered Bond Issuers. The maturity in the model varies over time. In order to reach the observed maturity, the calculations use the combination of two-year and five-year covered bonds that reach the actual maturity.

COSTS OF THE BANKS' FUNDING

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, chiefly comprising deposits, is priced with the

three-month interbank rate. Deposits can be addressed in different ways. FI has chosen to view deposits as a funding source. Conducting deposit operations is, however, associated with certain costs, which argues against pricing deposits using the deposit rate. Other funding also consists of unsecured borrowing to a certain extent, which is more expensive than deposits. In order to reflect these factors, FI has chosen to price other funding using the three-month interbank rate.

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 a new loan with a three-month fixed interest term.

OTHER COSTS

Administrative costs

Administrative costs chiefly comprise costs for personnel, premises and computer systems. In FI's model, the administrative costs of a mortgage are estimated based on data from the annual reports of the bank groups and mortgage institutions. According to FI's calculations, this increase amounts to 0.30 percentage points on average.³¹ In the historical calculations, the increase varies annually.

Costs for maintaining a liquidity reserve

In order to meet the sharper liquidity requirements, Swedish banks must extend the maturity of their funding and maintain a liquidity reserve of a certain size. The banks have already started to adapt to the forthcoming requirements. FI estimates the cost of maintaining a liquidity reserve at 0.15 percentage points. It arises out of the bank's need to invest part of its borrowing in assets with long maturities and relatively low return.

Costs of expected 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 default on payments. In this manner, the bank obtains the average expected loss associated with the mortgage. Expected credit losses can vary between consumers because their credit risks differ. FI's calculations use a cost of expected credit losses of 0.05 percentage points over time for an average mortgage holder.

³¹ Because the estimate is derived from the companies' annual reports, the most recent available data is from 2011.

Appendix 2. 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 Swedish Ministry of Finance, the Riksbank and Finansinspektionen (FI) are of the opinion that, in order to safeguard the stability of the Swedish financial system, Sweden needs to go further than the Basel Committee agreement from 2010³² and the EU Commission's proposal for a new regulation regarding capital adequacy and liquidity.³³ FI has also prepared a proposal for a new regulation regarding liquidity coverage ratio and liquidity risk reporting.³⁴ In this respect, Sweden is ahead 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

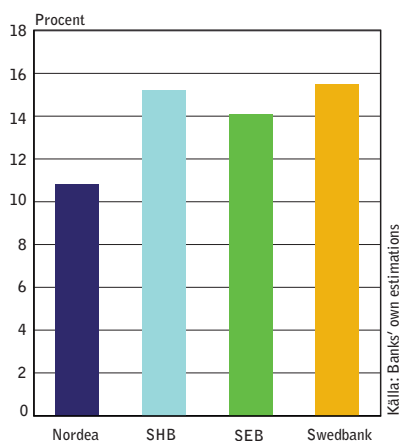
Compared with non-financial, the balance sheets of banks consist of relatively little equity. The purpose of equity is for the banks to be able to absorb losses, for instance as a consequence of borrowers not being able to fully meet their commitments. One of the lessons from the financial crisis is that higher requirements are needed on banks' capital. The Basel Committee on Banking Supervision³⁵ 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 for introduction for Swedish banks as of 1 January 2013. In the EU, the introduction of the Basel Committee's proposal is occurring through a new capital adequacy regulation and a new directive (CRR and CRD4).³⁶

In the proposal for CRR/CRD which has been presented by the EU Commission, it is required that banks, in somewhat simplified terms, shall have at least 7 per cent in core equity Tier 1 capital³⁷ from 2019. 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 Swedish bank groups Handelsbanken, Nordea, SEB and Swedbank shall also meet a higher level of requirements. The proposed level is that their core equity Tier 1 capital should amount to at least 10

Diagram 15:
CORE EQUITY TIER 1 CAPITAL
RELATION (Basel 3, Q2 2012)



32 To read more about the Basel Committee agreement, go to: <http://www.bis.org/publ/bcbs189.htm>

33 See: <http://www.fi.se/Folder-EN/Startpage/Press/Press-releases/Listan/New-capital-requirements-for-Swedish-banks/>

34 See <http://www.fi.se/Folder-EN/Startpage/Publications/Miscellaneous/Listan/FI-proposes-higher-requirements-for-the-banks-liquidity-buffers/> for more information.

35 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.

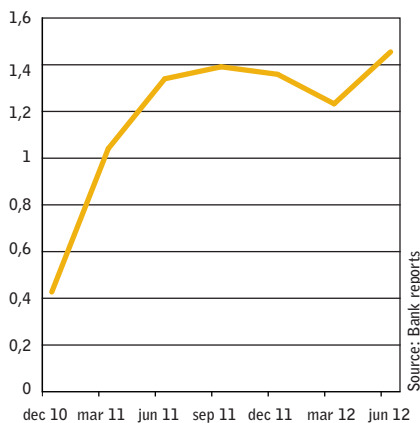
36 Capital Requirements Directive 4 (CRD) and Capital Requirements Regulation (CRR).

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

per cent as of 1 January 2013 and 12 per cent from 1 January 2015. All the major Swedish banks already meet the requirements, which will come into effect on 1 January 2013, according to the banks' own calculations (diagram 15).

There are several strong reasons for placing stringent requirements on the major Swedish banks. The major Swedish banks obtain a great extent of their funding by borrowing on international capital markets, which 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 would otherwise have been the case, and take greater risks.

Diagram 16:
AVERAGE LCR, LARGE BANKS
(all currencies)



LIQUIDITY REGULATION

What does liquidity risk involve?

In addition to capital adequacy regulations, the Basel Committee's agreement 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. 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 financial corporations' liquidity do not contain any quantitative liquidity requirements. However, FI has proposed the introduction of quantitative requirements regarding liquidity coverage ratio as of 1 January 2013.

The proposal is based on the guidelines of the Basel Committee on Banking Supervision regarding calculating liquidity coverage ratio, LCR, established in the autumn of 2010 and planned for introduction in the EU from 2015. LCR says, in brief, that banks should have sufficient liquid assets to cover their expected outflows of payment in a stressed situation during the next 30 days.³⁸ This involves a liquidity coverage ratio of 1. 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. FI proposes that the new requirement should apply to corporations and financial groups that greatly rely on market funding, and whose balance sheet total at 30 September the previous year exceeds SEK 100 billion. This currently means that the regulation will apply to eight

³⁸ Liquid assets in this context primarily include government securities and, to a certain extent, covered bonds.

financial groups. It is proposed that the requirement be applied at aggregate currency level, but also in individual currencies euro and US dollar. This is to ensure good liquidity management also in the foreign currencies in which Swedish corporations chiefly obtain funding, and where possibilities of liquidity support from the Riksbank are more limited.

In the EU Commission's proposal for the regulation regarding supervision requirements for credit institutions and investment firms³⁹, it is proposed that quantitative liquidity coverage ratio provisions be introduced from 2015. Since an EU regulation is in direct effect in all member states, FI's proposal for regulations will be replaced by the forthcoming EU regulation at a later stage.

In order to monitor the liquidity situation in Sweden, FI 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 corporations today provide an account of e.g. the size of the liquidity reserve, cash flows and data for calculating the liquidity coverage ratio. The companies proposed to come under the new requirements largely already have sufficient liquid assets to meet the proposed requirements today. The average liquidity coverage ratio of the major banks is shown in diagram 16.

As a complement to LCR, a more long-term structural measurement called NSFR (Net Stable Funding Ratio) has been discussed. This aims at banks funding long-term assets with long-term liabilities to a greater extent. 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.

39 Proposal for a regulation of the European parliament and of the Council on prudent requirements for credit institutions and investment firms (COM 2011:0452).

Glossary

Basel Committee/Basel regulations The Committee that negotiates the regulations for banks and credit institutions that are to apply internationally. 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 its introduction will commence 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 institutions, mortgage institutions or large corporations. Bonds generally have a long maturity, at least a year. The nominal amount of a bond is repaid upon maturity, and periodical 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 an institution must maintain to conduct operations.

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

Commercial paper Security issued by a corporation with a view to borrowing money. The maturity is one year maximum.

Corporate bond Security issued by a corporation with a view to borrowing money. The maturity is one year minimum.

Covered bonds A bond where the holder has a special right of priority in the issuing institution's cover pool 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. Only credit institutions may issue covered bonds pursuant to an authorisation granted by FI.

Credit institution Banks or credit market companies. Only credit institutions have Finansinspektionen's permission to lend and borrow 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. Swedish rate for euro rate) and, where applicable, capital amounts.

CRR/CRD 4 The EU's 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 corporation'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.

Gross margin The difference between the customer's actual three-month lending rate and the cost of the bank for funding a new three-month mortgage.

Housing credit institution Credit market institution specialised in long-term funding of real estate and tenant-owner properties. Also called mortgage institutions.

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). It 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, which measures how the value changes when 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 Involves a corporation issuing a bond, or another type of security, with the purpose of borrowing money on the market.

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

Liquidity Coverage Ratio – LCR Liquidity measurement defined by the Basel Committee which measures a bank's ability to manage a stressed net liquidity outflow for thirty days. An LCR of 100 per cent means, in somewhat simplified terms, that a bank's liquidity reserve is sufficient for the bank to cope with an unexpected liquidity outflow for 30 days.

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 marketed by credit institutions.

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, according to SCB's definition

Net margin The difference between the actual lending rate to customers and all costs associated with conducting mortgage operations, i.e. the gross margins minus costs besides the funding cost.

Net Stable Funding Ratio – NSFR Liquidity measurement defined by the Basel Committee. The measurement places a bank's stable funding in relation to its illiquid assets in a stressed scenario which lasts for a year.

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.

Risk weight A weight used in calculating risk-weighted assets. In simplified terms, to calculate a bank's risk-weighted assets, the loaned amount is multiplied by a risk weight. The risk weight is determined based on the extent of probability of the borrower being unable to meet his or her loan commitments, and thus varies between borrowers. A high risk weight involves a greater risk than a low risk weight.

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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