The Executive Board of the Riksbank discussed the Financial Stability Report on two occasions – 10 and 23 May 2012. The report uses data available as of 23 May 2012. The report is available on the Riksbank’s website www.riksbank.se, where a printed version of the report can be ordered free of charge, or downloaded as a PDF.
The Riksbank and financial stability

- The Riksbank has the Riksdag’s mandate to promote a safe and efficient payment mechanism. Achieving this requires a stable financial system so that payments and the supply of capital function well. In practice, the task thus means that the Riksbank is responsible for promoting financial stability. The Riksbank defines financial stability as meaning that the financial system can maintain its basic functions – the mediation of payments, the conversion of savings into funding and risk management – and also has resilience to disruptions that threaten these functions.

- The financial system plays a vital role in the economy. It is necessary to have a stable and smoothly-running financial system for the economy to function and grow. A serious crisis in the financial system is liable to entail extensive economic and social costs.

- The financial system is sensitive. This sensitivity is due to central parts of the system, such as banks and markets, being vulnerable. Banks are vulnerable mainly because they fund themselves at short maturities but lend at longer maturities. This imbalance makes the banks dependent on the general public and the market having confidence in them. If the market participants’ confidence in their counterparties or for the financial instruments traded in the market declines, trading may suddenly come to a halt. The various parts of the financial system are also closely interconnected, for instance in that financial institutions borrow from and trade with one another to such a large extent. This means that problems arising in one institution, market or within the infrastructure can rapidly spread throughout the system. Contagion effects may also arise through a general decrease in confidence for similar activities.

- The combination of the sensitivity of the financial system and the large potential costs of a financial crisis mean that the state has a particular interest in preventing threats to financial stability. Banks and other market participants do not have an incentive to give full consideration to the risks to financial stability to which they are contributing. This is because a large percentage of the costs of a financial crisis fall on others, both within and outside of the financial system. If a crisis occurs, the government also needs to be able to manage it at the lowest possible cost.

- The Riksbank analyses the financial system’s stability on a continuous basis for the early detection of changes and vulnerabilities that could lead to a crisis. The main focus of the analysis is on the four major banks (Handelsbanken, Nordea, SEB and Swedbank) and on the markets and infrastructure that are important for their funding and risk management. These banks together account for around 75 per cent of the market and thus have decisive significance for financial stability in Sweden. The Financial Stability Report, published twice a year, presents the Riksbank’s view of the risks and the banks’ capacity to cope with any shocks.
In some cases the Riksbank recommends specific measures to counteract risks. These recommendations may be based on the current economic situation. But they may also relate to more structural circumstances and stem from current regulatory issues. The recommendations can be aimed at banks as well as other market participants, or at legislators and other authorities. Moreover, the Riksbank has the possibility to influence the framing of laws and regulations that relate to supervision and crisis management, for instance by commenting on draft legislation and by participating actively in several international organisations.

The Riksbank is the authority that has the capacity to grant emergency liquidity assistance to individual institutions if problems arise that threatens financial stability. To be able to use this possibility in the best possible way, the Riksbank needs to have good preparedness for crises in the form of an efficient crisis organisation with good information channels and tools for analysis, as well as well-developed cooperation with other authorities.

The Riksbank does not have the sole responsibility for promoting financial stability. It shares this responsibility with Finansinspektionen (the Swedish financial supervisory authority), the Ministry of Finance and the Swedish National Debt Office. The Ministry of Finance is responsible for the regulation of financial enterprises and Finansinspektionen is responsible for the supervision. The authorities’ interaction is important both in the preventive work and in the event of crisis management. The same also applies internationally as financial enterprises increasingly operate across national borders.

Further information on the Riksbank’s role and tasks in the work on promoting financial stability can be found in the brochure *The Riksbank and financial stability*, 2010, Sveriges Riksbank.
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Summary

The major Swedish banks are financially strong at present – their earnings are expected to increase in the period ahead and their loan losses are expected to be limited. However, the sovereign debt crisis in the euro area remains the largest single risk to financial stability in Sweden. The Riksbank’s analysis shows that the major Swedish banks’ resilience is good, but that there are weaknesses of a more structural nature in the Swedish banking system which could have a negative effect on financial stability in the longer run. Moreover, the situation on the international financial markets is uncertain, which justifies additional safety margins at present. The Riksbank therefore recommends that the major banks ensure that they can meet the proposed stricter capital adequacy requirements, reduce their liquidity risks and improve the public reporting of their liquidity risks.

The earnings of the major Swedish banks are expected to increase in the period ahead and their loan losses are expected to be limited

Economic developments in the euro area are still affected by the sovereign debt crisis and growth in the area is expected to be weak in the coming period. Concern about the debt crisis is also continuing to impact the financial markets to a large degree. The Riksbank’s analysis shows that the major Swedish banks (Handelsbanken, Nordea, SEB and Swedbank) are financially strong at present, despite the financial unease. The Riksbank’s assessment is that the banks’ earnings will increase and that the overall debt servicing ability of the banks’ borrowers is good.

Developments in the euro area constitute the largest single risk to financial stability in Sweden

Despite the measures taken by central banks and governments to stabilise the situation, uncertainty over developments in several euro-area countries increased during the spring. To obtain a lasting improvement, it is therefore necessary for the countries with sovereign debt problems to manage their public finances in a credible and sustainable way and to implement necessary structural reforms. Many banks in the euro area also need to strengthen their capital adequacy.

The resilience of the major banks is good

The major Swedish banks are well capitalised in an international comparison and would, according to the Riksbank’s stress tests, be able to cope with much weaker economic development in the period ahead. The banks also have only limited exposures to the euro-area countries with sovereign debt problems. These factors have contributed to boosting market confidence in the major banks and to the banks thus having good access to wholesale funding. Despite the fact that the resilience of the banks is good at present, their access to funding could be affected if the situation in the euro area gets worse. This is because the major banks largely use wholesale funding, which has proved to be volatile during periods of financial stress.
The major banks should ensure that they have sufficient capital and liquidity buffers

The continued unease in the euro area means that the financial markets could be subjected to disruptions that might also affect the Swedish banks. Moreover, there are weaknesses of a more structural nature in the Swedish banking system that need to be remedied. The Riksbank therefore recommends that the major banks ensure that they have adequate capital and liquidity buffers to be able to deal with any disruptions without the need for public rescue measures.

The Riksbank, Finansinspektionen and the Ministry of Finance agree that the major Swedish banks need to have substantial capital buffers and that they should therefore be subject to capital adequacy requirements for CET 1 capital of at least 10 per cent from 1 January 2013 and at least 12 per cent from 1 January 2015. The Riksbank therefore recommends that the major Swedish banks ensure that they have sufficient CET 1 capital to meet the proposed requirements by a broad margin.

In order to maintain good resilience to liquidity problems, the major banks need to have sufficiently large liquidity buffers. The Riksbank therefore recommends that the banks meet the short term Liquidity Coverage Ratio (LCR) both on aggregate for all currencies and separately for the euro and the US dollar respectively.

In the long run, it is also important that the major banks increase their capacity to manage longer periods of stress and other more permanent changes that might affect their funding markets. The Riksbank therefore recommends that the major banks reduce their structural liquidity risks and approach the minimum level of 100 per cent in the Net Stable Funding Ratio (NSFR) – which measures a bank’s structural liquidity risks by setting its stable funding in relation to its illiquid assets during a stressed scenario that runs over a period of one year.

In addition, the Riksbank also believes that the major Swedish banks should improve the public reporting of their liquidity risks. Increased transparency will give both investors and the banks themselves better opportunities to correctly analyse and compare liquidity risks. This will contribute to a high level of confidence in the major banks.
At present the major Swedish banks are financially strong and have good access to market funding. The Riksbank’s main scenario assumes that their earnings will increase and that their loan losses will be minor. However, there are considerable risks. There are still substantial problems in countries with sovereign debt problems in the euro area and financial market unease could quickly increase. The results of the Riksbank’s stress tests show that the major Swedish banks are well-equipped to cope with a much less favourable development than in the main scenario. All in all, the major Swedish banks are assessed as having good resilience. But as the major Swedish banks largely use wholesale funding, which often is in foreign currencies, they are sensitive to disruptions on the financial markets. The Riksbank considers that there are also weaknesses of a more structural nature in the Swedish banking system that need to be remedied. Given the current assessment of financial stability and the need for structural changes that has been identified, the Riksbank recommends that the major banks ensure that they can meet, by a broad margin, the higher capital adequacy requirements that have been proposed. The Riksbank also considers that the major Swedish banks should fulfil the short-term Liquidity Coverage Ratio LCR both on aggregate in all currencies and separately for the euro and the US dollar. In addition, the banks should continue to reduce the difference in maturities between their liabilities and their assets, and also improve their public liquidity reporting.

The Riksbank is responsible for promoting financial stability in Sweden. This entails preventing risks to the financial system as a whole (what is known as macroprudential policy) and managing financial risks if and when they occur. The Riksbank shares this responsibility with Finansinspektionen (the Swedish Financial Supervisory Authority), the Swedish National Debt Office and the Government, through the Ministry of Finance.

The Riksbank regularly analyses the financial system for the purpose of assessing stability and detecting changes and vulnerabilities that may lead to the system functioning less efficiently or suffering a crisis. By publishing its analysis the Riksbank can make financial market participants and authorities aware of any risks and vulnerabilities that could threaten the stability of the system. However, experiences from the financial crisis 2008–2009 indicate that it is not always enough to point out the risks, and that the Riksbank may also need to make clear suggestions for appropriate measures to counteract potential risks. The Riksbank may therefore recommend specific measures that are assessed to be significant for the stability of the financial system. These recommendations, which are published in the Financial Stability Report, may be based on current economic developments. But they may also relate to structural circumstances and stem from regulatory issues. The recommendations can be aimed at both banks and other market participants, as well as legislators and other authorities.

**The Riksbank’s stability assessment**

The financial system in Sweden currently has no problem in supplying all of the essential functions: the mediation of payments, the conversion of savings into funding and the management of risk.
However, the system also needs to have resilience to shocks that may threaten these functions. The Riksbank therefore analyses the resilience of the system in different scenarios with a more negative development than in the Riksbank’s main scenario. Below, first a summary of this main scenario is presented, followed by the Riksbank’s assessment of the main risks to a disruption arising in the Swedish financial system. This is followed by an assessment of the resilience of the major Swedish banks (Handelsbanken, Nordea, SEB and Swedbank). The Riksbank’s analysis shows that the banks currently have a good resilience. However, the Swedish banking system has weaknesses of a structural nature that need to be remedied to ensure the banks retain a good resilience in the future.

THE RIKSBANK’S MAIN SCENARIO

Concern over the sovereign debt crisis in the euro area is continuing to affect the financial markets. Central banks and governments have taken measures to stabilize the situation. The European Central Bank (ECB) for instance has offered banks operating in the euro area special loans with a three-year maturity. The ECB’s loans were expected to ensure the banks’ access to liquid funds and to provide support to the banks’ lending.

Despite measures taken, the uncertainty over political developments has increased in several countries in the euro area during the spring. The parties in Greece that had negotiated support packages with the EU and the International Monetary Fund (IMF) did not gain the support of the voters in the most recent parliamentary elections, which has again created speculations regarding a possible Greek exit from the monetary union. Spain is also continuing to struggle with problems in its banking sector and the finances in its regions, while concern has increased since this autumn that Portugal may need to restructure its sovereign debt.

The real economic developments in the euro area are still affected by the sovereign debt crisis and are expected to be weak in the coming period. This is partly because of tighter fiscal policy, cautious companies and households and restrained credit granting (see the box Deleveraging in the European banking sector – background and potential consequences).

\(^1\) For more information on the Riksbank’s work on financial stability, see The Riksbank and financial stability, in the introduction of this report.

\(^2\) The main scenario for the development of the real economy follows the Riksbank’s forecast from April. See Monetary Policy Update April 2012, Sveriges Riksbank.
The Swedish economy is expected to grow again after the unexpectedly large fall in GDP at the end of 2011. At the same time, monetary policy remains expansionary both in Sweden and abroad as a result of low inflationary pressures and low resource utilisation. During the final months of 2011, there was a rapid fall in housing prices in Sweden, but at the beginning of 2012 the housing market has recovered (see Chart 1:2 and Chapter 3). It is assumed in the main scenario that housing prices in Sweden will decline at a modest rate during 2012. Credit growth in the private non-financial sector has also fallen (see Chart 1:3). However, debt in relation to disposable income will not decline due to lower income growth.

The Riksbank assesses that the major Swedish banks’ profits before loan losses will increase during the forecast period 2012–2014 (see Chart 1:4). This is partly because of the increased lending margins and commission income, and partly because the volume of lending is increasing. The debt-servicing ability of the banks’ borrowers is on the whole assessed as good for the coming period. The Swedish banks’ loan losses should thus remain small, even if they are expected to be slightly higher than was assumed in the previous Financial Stability Report. It is primarily loan losses from lending to non-financial companies and to households in Denmark that are increasing. Loan losses in the shipping sector are also expected to increase, mainly in Denmark and Norway. In the Baltic countries, the major Swedish banks are expected to face somewhat higher loan losses.

**RISK OUTLOOK DOMINATED BY EURO AREA**

Development in the euro area remain the largest single risk to financial stability in Sweden. Towards the end of the spring, some of the earlier unease that affected the markets has returned, and developments in Greece, Portugal and Spain have come under particular focus. The problems in the euro area stem from the fact that competitiveness has worsened in several countries that also have faced problems with their public finances. Many banks also have a low capital adequacy.
The primary risk is that the euro area will suffer a financial shock that leads to a deep and prolonged recession. One potential factor that could trigger this is if several countries need support packages and investors begin to question the general economic development or budget discipline both in these countries and in countries that already have support packages. The unease on the financial markets would then probably increase and thus negatively affect access to funding for both governments and banks in the region. Such a scenario would probably lead to a large increase in risk premiums and reduced access to liquidity on the financial markets. The major Swedish banks would be vulnerable in such a situation as they are dependent on the international financial markets for their funding (see Chapters 2, 4 and 5).

A deep and prolonged recession in the euro area could lead to a rapid deterioration in economic activity in Sweden, which could also affect Swedish housing prices. If housing prices fall quickly at the same time as there is considerable unease on the financial markets, the Swedish banks’ access to wholesale funding could deteriorate. This is partly because the demand for covered bonds may decline, and partly because other market funding could become more expensive if investors in general want to reduce their exposures to the Swedish banking sector. But this would be a case of liquidity problems, and not a solidity problem (see Chapters 3 and 5). A severe fall in housing prices could also have a negative effect on macroeconomic stability. This is because households can choose to reduce their consumption, which would ultimately increase the banks’ loan losses from lending to the corporate sector, primarily from small and medium-sized enterprises. However, the Riksbank assesses that the debt-servicing ability of the Swedish household sector is good and Finansinspektionen’s Mortgage Report shows that Swedish mortgage borrowers can manage stringent stress tests. Nevertheless, international experience shows that rapid changes in housing prices when households have a high debt level have often been linked to increasing risks to macroeconomic stability. Moreover, Swedish market participants consider that a scenario where Swedish households are unable to service their debts is unlikely. However, if this were to occur, they believe that the consequences for the financial system would be very serious. It is therefore difficult to say with certainty what effects rapidly-falling housing prices in Sweden could have on the financial system.

The situation in Denmark and the Baltic countries is also affected by developments in the euro area. This is because Denmark’s economy has deteriorated again and several small Danish banks are experiencing substantial problems as a result of loan losses. This makes the Danish economy more vulnerable to further economic shocks. As the Nordic-Baltic banking systems are highly integrated, problems and reduced confidence in a banking system in one country

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3 See Risk survey spring 2012, Sveriges Riksbank.
can easily spread to other countries in the region. Moreover, it is important for Latvia and Lithuania, which have large funding needs over the coming year, that international investors continue to have confidence in them. As the major Swedish banks’ operations in the Baltic countries are extensive, developments there affect the Swedish financial system (see Chapters 3 and 5).

THE BANKS CURRENTLY HAVE GOOD RESILIENCE …

The major Swedish banks are well-capitalised in an international comparison (see Chart 1:5 and Chapter 4). The Riksbank has carried out a stress test where loan losses increase substantially compared with the main scenario (see Chapter 5). The stress scenario should be regarded as a possible development given that one or more of the above risks is realised. In the Riksbank’s stress test scenario for the period 2012–2014 the total loan losses amount to SEK 196 billion. However, the bank’s Common Equity Tier 1 (CET 1) capital ratios decline only to a limited extent as their earnings are greater than the loan losses (see Chart 1:6). The result of the stress test thus shows that the major banks are well-equipped to meet a much poorer economic development than is described in the main scenario. This contributes to the market having confidence in the major banks and the banks having good access to wholesale funding. The Riksbank’s analysis also shows that the major banks have strengthened their liquidity buffers (see Chart 1:12) and that they, compared with other European banks, that publish their LCR, have relatively good resilience to short-term liquidity risk (see Chart 1:7). This makes them better equipped to manage short-term stress on the funding markets than they were prior to the financial crisis 2008–2009. The Swedish banks also have limited exposures to the countries in the euro area with sovereign debt problems (see Chapter 4).

All in all, the Riksbank assesses that the major Swedish banks currently have good resilience to a deterioration in economic prospects. They are thus expected to be able to maintain their provision of credit to households and companies even in this type of scenario.

… BUT MORE RESILIENCE NEEDED IN THE LONG RUN

Although the major Swedish banks’ resilience in the short term is good, there are weaknesses of a more structural nature in the Swedish banking system, such as the relatively large difference in maturity between the major banks’ assets and liabilities, which could have a negative effect on financial stability in the longer run. The major banks therefore need to take measures to strengthen their long-term ability to resist shocks, primarily by holding more capital and reducing their liquidity risks (see Chapter 4 and the Riksbank’s recommendations in this chapter). These measures are necessary for the financial system to be able to manage serious shocks that might arise in the future on its own, that is, without rescue action from the public sector.
CHAPTER 1

There is also a need for similar measures to be taken internationally. One cornerstone of the on-going international reform work is the Basel III Accord that makes more stringent requirements regarding the banks’ capital and liquidity. Another cornerstone is the introduction of special requirements for systemically-important banks, that is, banks that because of their size or for some other reason are so important to the financial system that their failure would entail substantial costs to society. The Basel Committee and the Financial Stability Board (FSB) have agreed to establish a list of globally systemically-important banks. A bank that is put on this list will be subjected to additional capital requirements. Moreover, it has to draw up, together with the authorities concerned, a special plan stating both how the bank itself should be able to resolve problems that arise and how the systemically-important parts of a bank should be managed in relation to the non-systemically important parts.4

The Riksbank considers, in accordance with earlier assessments, that there are circumstances in the Swedish financial system that justify Sweden implementing the regulations earlier and in some cases implementing even stricter requirement than these international agreements. These circumstances include the size and concentration of the Swedish banking sector, its extensive operations abroad and its large-scale use of short-term wholesale funding. These circumstances also imply that the implicit government guarantees become large. Given this, the Riksbank, Finansinspektionen and the Ministry of Finance reached an agreement in November 2011 that additional capital adequacy requirements should be imposed on the major Swedish banks in the form of a systemic risk supplement.5

Sweden has so far been relatively unaffected by the financial unease in the euro area, and the major Swedish banks are currently financially strong. This means that there is now scope for the major banks to take measures that will strengthen their long-term resilience.

The Riksbank’s recommendations

Given the current assessment of financial stability and the need for more structural changes that has been identified, the Riksbank makes a number of recommendations regarding the capital, liquidity management and public liquidity reporting of the major banks (see Table 1:1).

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4 See Policy Measures to Address Systemically Important Financial Institutions, 4 November 2011, Financial Stability Board (FSB).
Table 1:1. The Riksbank’s current recommendations

<table>
<thead>
<tr>
<th>Current recommendations</th>
<th>Introduced</th>
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<tbody>
<tr>
<td>The major Swedish banks should ensure that they meet the proposed capital adequacy</td>
<td>FSR 2012:1</td>
</tr>
<tr>
<td>requirements for CET 1 capital ratios of at least 10 per cent on 1 January 2013 and</td>
<td></td>
</tr>
<tr>
<td>at least 12 per cent on 1 January 2015.</td>
<td></td>
</tr>
<tr>
<td>The major Swedish banks’ Liquidity Coverage Ratios (LCR) should amount to at least</td>
<td>FSR 2011:2</td>
</tr>
<tr>
<td>100 per cent.</td>
<td></td>
</tr>
<tr>
<td>The major Swedish banks’ Liquidity Coverage Ratios (LCR) should amount to at least</td>
<td>FSR 2011:2</td>
</tr>
<tr>
<td>100 per cent in euro and US dollars respectively.</td>
<td></td>
</tr>
<tr>
<td>The major Swedish banks should continue to reduce their structural liquidity risks and</td>
<td>FSR 2011:2</td>
</tr>
<tr>
<td>approach the minimum level of 100 per cent in the Net Stable Funding Ratio (NSFR).</td>
<td></td>
</tr>
<tr>
<td>The major Swedish banks should improve the transparency of their public reporting by</td>
<td>FSR 2011:1</td>
</tr>
<tr>
<td>reporting maturity information per type of asset and liability and per currency.</td>
<td></td>
</tr>
<tr>
<td>The major Swedish banks should report their Liquidity Coverage Ratio (LCR) at least</td>
<td>FSR 2011:2</td>
</tr>
<tr>
<td>once a quarter beginning no later than the interim reports published after 1 July 2012.</td>
<td></td>
</tr>
<tr>
<td>The major Swedish banks should agree on further comparable key figures for public</td>
<td>FSR 2011:1</td>
</tr>
<tr>
<td>reporting.</td>
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</tbody>
</table>

Compared with the previous Financial Stability Report published in November 2011, the Riksbank presents a new recommendation regarding the major banks’ capital in this report. This recommendation replaces the two recommendations on capital in the previous Report in that the Riksbank, Finansinspektionen and the Ministry of Finance reached an agreement in November 2011 on subjecting the major Swedish banks to higher capital adequacy requirements. Moreover, in the new recommendation the Riksbank has taken into consideration the fact that the major banks currently have different CET 1 capital ratios.

The other recommendations align with the recommendations made by the Riksbank in the previous Financial Stability Report.

THE RIKSBANK’S RECOMMENDATION ON THE MAJOR BANKS’ CAPITAL

Banks are dependent on the confidence of the general public and the markets to obtain funding. To safeguard this confidence the banks must hold sufficient capital to be able to manage potential losses without their ability to survive coming into question. More capital reduces not only the probability that a bank will suffer a crisis, but also the probability that a bank will have to reduce its lending in times of turbulence. In Sweden the four major banks play a decisive role in the financial system. If one of them is expected to make major losses, this would probably have a negative effect on confidence in the Swedish banking system – and thereby on the functioning of the financial system. The Riksbank therefore considers that the major banks need to hold more loss-absorbing capital (CET 1 capital) in the future.
The ongoing unease concerning the situation in the euro area means that the major Swedish banks may be exposed to disruptions on the financial markets in the period ahead. There are also weaknesses of a more structural nature in the Swedish banking system that need to be remedied. The Riksbank therefore recommends that the major banks ensure that they have more than enough CET 1 capital to meet the proposed capital adequacy requirements. The Ministry of Finance has begun a process to prepare a regulatory framework that will subject the major banks to new capital adequacy requirements. In parallel with this, work is underway in the EU to incorporate the Basel III Accord into EU law.

The authorities’ assessment is based on a number of structural factors that can lead to disproportionally large costs to society in the event of a crisis. For instance, the Swedish banking system is very concentrated and large in relation to the Swedish economy (see Chart 1:8). At the same time, the major Swedish banks have a large share of short-term market funding in foreign currencies. Market participants also expect that the Swedish government is implicitly guaranteeing the banks’ undertakings to the investors holding the securities issued by the banks.

The major Swedish banks are currently relatively well-capitalised in an international perspective and have begun to adapt their capital ratios to the proposed requirements. All of the four major banks report CET 1 capital ratios as defined in the Basel III Accord that are higher than 10 per cent, which is the proposed level with effect from 1 January 2013 (see Chart 1:9). Nordea’s CET 1 capital ratio was in March 2012 10.5 per cent, which is above the level proposed for 2013. SEB’s CET 1 capital ratio was 11.6 per cent in the first quarter of 2012. The other two banks, Handelsbanken and Swedbank, currently have CET 1 capital ratios above the level of at least 12 per cent that is proposed from 1 January 2015.
To ensure that the major banks will meet the proposed requirements, the Riksbank believes that each bank should consider that its capital adequacy may be negatively affected by several factors in the near term:\(^8\)

- The international situation is still uncertain. The situation in the euro area can rapidly deteriorate in a way similar to the Riksbank’s stress scenario (see Chapter 5). Such a situation could lead to the banks suffering problems in attaining the CET 1 capital ratios that are proposed for the coming period (see Table 1:2).

Table 1:2. CET 1 capital ratios according to Basel III in the Riksbank’s stress test

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>14.3</td>
<td>10.3</td>
<td>11.1</td>
<td>14.6</td>
</tr>
<tr>
<td>2013</td>
<td>13.5</td>
<td>9.8</td>
<td>10.1</td>
<td>14.4</td>
</tr>
<tr>
<td>2014</td>
<td>13.2</td>
<td>9.5</td>
<td>9.9</td>
<td>14.5</td>
</tr>
</tbody>
</table>

Note. The CET1 capital ratios are the Riksbank’s own calculations based on full implementation of the Basel III Accord. Changes in risk-weighted assets after the first quarter of 2012 are not included.
Source: The Riksbank

- As a result of the historically-low loan losses, the risk weights for Swedish mortgages are among the lowest in Europe (see Chart 1:10). Although the low loan losses in Sweden are due to factors such as the relatively well-developed social insurance system in Sweden and the fact that individuals cannot get rid of their debts by filing for personal bankruptcy, the low risk weights have recently been called into question, as they do not take into account the increased indebtedness among households (see Chapter 4). Given this, Finansinspektionen is currently investigating various possibilities to increase the capital adequacy requirement for mortgages in Sweden to reinforce the Swedish banks’ resilience to financial crises.\(^9\) This will probably lead to higher risk weights for Swedish mortgages. If the risk weights for mortgages are set higher than the weights the banks apply today, the banks will be forced to hold more capital, in absolute terms, for a given capital ratio.\(^10\) According to the Riksbank’s calculations, an increase in the average risk weight for mortgage lending in Sweden to a level of 10-20 per cent would lead to the major banks’ CET 1 capital ratios falling by up to 2.5 percentage points (see Table 1:3), all else being equal.

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\(^8\) Other factors that could have a negative effect on the banks’ CET 1 capital ratios include the changes in accounting regulations, such as how the calculation of the bank’s pension liabilities can affect its equity (IAS 19).


\(^10\) The banks’ capital ratios are determined by the size of the capital and assets and by risk weights used when calculating the risk-weighted assets.
### Table 1:3. CET 1 capital ratios according to Basel III with different risk weights for Swedish mortgages

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Current common equity Tier 1 capital ratio</td>
<td>14.6</td>
<td>10.5</td>
<td>11.6</td>
<td>14.8</td>
</tr>
<tr>
<td>B. CET 1 capital ratio with average risk weight 10%</td>
<td>13.8</td>
<td>10.4</td>
<td>11.6</td>
<td>13.9</td>
</tr>
<tr>
<td>C. Change (B-A)</td>
<td>-0.7</td>
<td>-0.1</td>
<td>0.0</td>
<td>-0.9</td>
</tr>
<tr>
<td>D. CET 1 capital ratio with average risk weight 20%</td>
<td>12.4</td>
<td>10.2</td>
<td>11.0</td>
<td>12.3</td>
</tr>
<tr>
<td>E. Change (D-A)</td>
<td>-2.1</td>
<td>-0.3</td>
<td>-0.5</td>
<td>-2.5</td>
</tr>
</tbody>
</table>

Notes: The CET1 capital ratios are the Riksbank’s own calculations based on full implementation of the Basel III Accord. Changes in risk weighted assets after the first quarter of 2012 are not included. Source: The Riksbank.

- In addition to the requirements agreed by the authorities, the Basel III Accord stipulates that banks may periodically be subjected to a further increase in the capital adequacy requirement in the form of countercyclical capital buffers. The level of the countercyclical capital buffers should be decided by the relevant authorities on the basis of quantitative and qualitative assessments. The Basel III Accord stipulates that the quantitative assessment should take into account the so-called credit gap, which is how far credit growth deviates from an estimated trend. The Riksbank has calculated the level of the countercyclical capital buffers for the major Swedish banks to be between 1.4 and 1.9 percentage points, based on the assumption that consideration is only given to the credit gap (see Chart 1:11). The Basel III Accord gives the relevant authorities the scope to impose countercyclical capital requirements no later than 1 January 2016.

### THE RIKSBANK’S RECOMMENDATIONS REGARDING THE MAJOR BANKS’ LIQUIDITY RISKS

The difference in maturity between the major Swedish banks’ assets and liabilities is currently relatively large. Moreover, a significant share of their funding comprises short-term market funding, which to a large extent is in foreign currencies. All in all, this means that the major Swedish banks are sensitive to disruptions to the financial markets, which could ultimately comprise a risk to the Swedish financial system.

It is therefore important that the major banks have sufficient liquidity buffers to be able to manage periods of short-term stress. In the long run, it is also important that the major banks increase their capacity to manage longer periods of stress and other more permanent changes that might affect their funding markets. For these reasons, the Riksbank recommends that the major Swedish banks should reduce their short-term liquidity risks and attain the short-term Liquidity Coverage Ratio (LCR) both on aggregate in all currencies and separately in euro and US dollars respectively. The Riksbank also recommends that the major Swedish banks should reduce their structural liquidity risks.

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11 The countercyclical capital buffers have two purposes. The first is to protect the banking sector against future losses that may follow a period of excessive credit growth. The second is to reduce the impact of the credit growth on economic activity. Other countries do not have to recognize countercyclical capital buffers above 2.5 per cent.
**Recommendation:**

The major Swedish banks’ Liquidity Coverage Ratios (LCR) should amount to at least 100 per cent.

In the previous Financial Stability Report the Riksbank recommended that the major Swedish banks should meet the LCR requirement earlier than was proposed by the Basel Committee. The recommendation entails the major banks’ liquidity buffers being at least as large as the net outflow of liquidity during 30 days in a predefined stress scenario.\(^{12}\) According to the Basel Committee’s proposal, the banks shall hold an LCR of at least 100 per cent in normal times. If a crisis occurs, on the other hand, they should be able to use their liquidity buffers and temporarily come under the minimum level of 100 per cent. Whether the circumstances are assessed as normal or stressed is determined by the relevant authorities.\(^{13}\)

The Basel Committee has agreed that the LCR requirement should be introduced in 2015. However, in its most recent Financial Stability Report the Riksbank found that there was reason to precede these plans and introduce the LCR requirement earlier in Sweden. The reason for this was that the major Swedish banks are particularly vulnerable to liquidity risk, as they use short-term wholesale funding to a relatively large extent. This entails refinancing risks in the form of the banks not being able to renew their debts as they fall due for payment.

The Riksbank can note that the banks have improved their LCRs over the past year, which has primarily been achieved in that they have increased the size of their liquidity buffers (see Chart 1:12). In March 2012, the banks that published information on their liquidity ratios had an LCR above 100 per cent and, moreover, the major banks’ average LCR was above 100 per cent (see Charts 1:13 and 1:14).

However, the major banks still use wholesale funding at short maturities to a relatively large extent. This means that it will still be very important for them to have sufficiently large liquidity buffers to be able to meet potential unexpected outflows of liquidity that may arise as a result of stress on the financial markets. The Riksbank therefore considers that the recommendation that the major Swedish banks’ LCRs should amount to at least 100 per cent is still appropriate.\(^{14}\)

Finansinspektionen has also noted that there are reasons to precede the Basel Committee’s timetable with regard to the implementation of LCRs. Finansinspektionen is therefore planning to introduce a binding requirement for the major Swedish banks to attain LCRs of at least 100 per cent with effect from January 2013.\(^{15}\)

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\(^{12}\) The recommendation is based on the Basel Committee’s definition, see Basel III: International framework for liquidity risk measurement, standards and monitoring, December 2010, Bank for International Settlements (BIS).


\(^{14}\) This recommendation is based on the Basel Committee’s current definition of the LCR. Some details of this measure are currently under review and the Riksbank will therefore update its recommendation in accordance with any changes made by the Basel Committee.

CHAPTER 1

Recommendation:
The major Swedish banks’ Liquidity Coverage Ratios (LCR) should amount to at least 100 per cent in euro and US dollars respectively.

In the previous Financial Stability Report the Riksbank recommended that the major Swedish banks should have LCRs of at least 100 per cent in both euro and US dollars. The reason for this recommendation was that the major Swedish banks’ market funding is to a large degree comprised of other currencies than the Swedish krona, primarily euro and dollars. A significant share of the major banks’ assets are in other currencies than the Swedish krona, too. This leads to liquidity risk in foreign currency that can often be more problematic than the liquidity risk in Swedish krona. There are several reasons for this. The banks’ funding in foreign currencies often has a shorter maturity than their funding in Swedish krona. In addition, funding in foreign currency tends to be more volatile during periods of financial stress. This can cause problems for the banks as they need to be able to fund their foreign assets in the same foreign currency. However, the Riksbank’s capacity to assist the Swedish banking system with liquidity in foreign currency is limited. The Riksbank therefore considers it important that the major banks reduce their liquidity risks and have sufficiently large liquidity buffers in foreign currency, in particular the euro and the US dollar.

The Riksbank can note that in March 2012 the average LCR for the four major Swedish banks exceeded 100 per cent in both euro and dollars (see Charts 1:15 and 1:16). However, there are considerable differences in the banks’ liquidity measures and not all banks attain an LCR of at least 100 per cent in the respective currencies. It is important that the major banks ensure they have sufficient resilience to the liquidity risks that are connected to wholesale funding in foreign currencies. The Riksbank therefore considers that the recommendation that the major Swedish banks’ LCRs should amount to at least 100 per cent in both euro and US dollars is still appropriate. It is important that the major banks that as yet do not attain an LCR of 100 per cent in the respective currencies take appropriate measures to attain this level as soon as possible.

As with the LCR aggregate for all currencies, Finansinspektionen is also planning to introduce a binding requirement for the major Swedish banks to attain the LCR separately for euro and for US dollars with effect from January 2013.16

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Recommendation:
The major Swedish banks should continue to reduce their structural liquidity risks and approach the minimum level of 100 per cent in the Net Stable Funding Ratio (NSFR).

In the previous Financial Stability Report the Riksbank recommended that the major Swedish banks should continue to reduce their structural liquidity risks and approach the minimum level of 100 per cent in the NSFR.

In its assessment the Riksbank took into account that the difference in maturity between the major Swedish banks’ assets and their liabilities is greater than in many other European banks. This entails structural liquidity risks and makes the major banks vulnerable to various types of change in the funding markets. Ultimately, this can have a negative effect on financial stability and entail costly public rescue actions if there is turbulence in the financial markets in the future.

As a step in drawing attention to and reducing the banks’ structural liquidity risks, the Basel Committee has produced a measure known as the Net Stable Funding Ratio (NSFR). The NSFR measures the banks’ structural liquidity risks by putting their stable funding in relation to their illiquid assets in a stress scenario that covers a period of one year. At present some of the details of this measure are being reviewed and thus its final design is not entirely clear. However, the Basel Committee has proposed that the measure should be implemented in 2018 and the intention is for the banks to then have an NSFR of at least 100 per cent.

The Riksbank’s follow-up shows that the major banks have continued to reduce their structural liquidity risks. This has been mainly achieved by increasing the share of long-term funding, which is also reflected in a somewhat higher average NSFR (see Chart 1:17). Despite this improvement, there remain considerable differences in maturities between the major banks’ assets and liabilities. This means that there is still a large structural liquidity risk in the Swedish banks and that their average NSFRs are still far below 100 per cent. The Riksbank therefore considers that the recommendation that the banks should continue to reduce their structural liquidity risks and approach the minimum level of 100 per cent in the NSFR is still appropriate.

The Riksbank’s recommendations on transparency in the major banks’ public liquidity reporting

The Riksbank has been recommending since autumn 2010 that the major Swedish banks should improve the public information regarding their liquidity risks. These recommendations were based on the banks having reported very little information on their liquidity risks. The information that has been provided, has seldom been comparable between banks. The Riksbank therefore has considered that greater

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17 The recommendation is based on the Basel Committee’s definition, see Basel III: International framework for liquidity risk measurement, standards and monitoring, December 2010, Bank for International Settlements (BIS).
insight would give better opportunities to correctly analyse and compare liquidity risks for both investors and the banks themselves.

In the previous Financial Stability Report, the Riksbank recommended that the banks should provide more detailed information about the types of liquid assets and currencies in their liquidity buffers and on the allocation of maturities and currencies for their assets and liabilities. The Riksbank also recommended that the banks should report their LCRs no later than the interim reports for the second quarter of 2012. Moreover, the Riksbank recommended that the banks should agree on further comparable key figures of liquidity risk for public reporting.

Since the previous Financial Stability Report was published, the banks' public reporting regarding liquidity risks has partly improved in line with the Riksbank’s recommendations. Table 1:4 shows the Riksbank’s assessment of how the respective major banks met the recommendations in March 2012. All of the banks then reported their liquidity buffers broken down into both the type of liquid asset and the currency. Their reporting is thus approved in this area.

Table 1:4 Public information on liquidity risks in the banks’ interim reports for the first quarter of 2012

<table>
<thead>
<tr>
<th>Information available per quarter</th>
<th>Liquidity buffer</th>
<th>Breakdown of maturities, assets and liabilities</th>
<th>Breakdown of maturities, assets and liabilities per currency</th>
<th>LCR</th>
<th>Comparable key ratios</th>
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<tr>
<td>Handelsbanken</td>
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<td>Swedbank</td>
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</table>

Meets minimum level according to the Riksbank’s recommendation.

Absent or only marginally reported.

Source: Bank Reports and the Riksbank
All of the banks also reported a breakdown into different maturities for their assets and liabilities, but no reports of the maturities breakdown together with a currency breakdown have been presented. The public reporting of the major banks’ LCRs has also improved, and in their interim reports for the first quarter of 2012, both Swedbank and SEB reported their LCRs. Several other European banks have also begun to publish the levels of their LCRs (see Chart 1:7).

However, there have been no changes in the banks’ public reports with regard to standardised key figures.

Even though the major banks’ public liquidity reporting has become more transparent to some extent, the Riksbank considers, given the follow-up in Table 1:4, that the major banks need to continue improving their public liquidity reporting.

Recommendation:
The major Swedish banks should improve the transparency of their public reporting by reporting maturity information per type of asset and liability and per currency.

This recommendation is based on the fact that a large share of the major Swedish banks’ wholesale funding still comprises other currencies than the Swedish krona and that a substantial portion of the major Swedish banks’ assets are in foreign currencies. The major banks also need to report the maturity breakdown of their assets and liabilities per the most important currencies in the banks’ operations, to enable an accurate analysis of the liquidity risks in different currencies.

Recommendation:
The major Swedish banks should report their Liquidity Coverage Ratio (LCR) at least once a quarter beginning no later than the interim reports published after 1 July 2012.

By publishing their LCRs, the major Swedish banks can provide a standardised and comparable view of their short-term liquidity risks. This improves the insight into liquidity risks in the banks. It is good that SEB and Swedbank have begun to report their LCRs in their interim reports. At the same time, it is important that the major banks that are not yet publishing their LCRs begin immediately in their interim reports for the second quarter of this year. The Riksbank also considers that in the long run there is reason for the banks to begin publishing their LCRs in euro and in US dollars to increase insight into the short-term liquidity risks in these currencies.

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18 In the fourth quarter of 2011 Handelsbanken also reported its LCR; however, no such report was made in the first quarter of 2012.
Recommendation:
The major Swedish banks should agree on further comparable key figures for public reporting.

The Riksbank considers that the banks should supplement the reporting of LCRs with other standardised and comparable key figures to enable investors, counterparties and the general public to obtain a better overview of the liquidity risk in the major Swedish banks. It is above all important that the banks begin to report key figures that can illustrate their structural liquidity risks, but there are also reasons for reporting other types of simpler key figures.19

The major Swedish banks need to agree jointly on which definitions to use so that the key figures are comparable. It should then be possible to publish key figures in the banks’ reports for the third quarter of 2012. Given the insight and knowledge that the banks have on their liquidity risks, it is preferable that they define these key figures themselves, rather than being subjected to measures by the authorities.

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19 One starting point for this could be, for instance, the key ratios proposed by the Basel Committee in connection with its framework for liquidity risks. It proposes, for instance, key ratios that illustrate the differences between contractual inflows and outflows of liquidity during predefined periods and the concentration of individual counterparties or individual currencies in the banks’ wholesale funding. See Basel III: International framework for liquidity risk measurement, standards and monitoring, December 2010, Bank for International Settlements (BIS).
The turmoil on the financial markets remains high. The turmoil temporarily decreased in late 2011 and at the beginning of 2012. One reason for this was the three-year loans offered on two occasions by the European Central Bank (ECB) to banks with operations in the euro area. However, the situation has deteriorated again during the spring. The main reason is that political uncertainty in the euro area has increased. In addition, the fundamental problems of low competitiveness, weak public finances and weak banks still remain in several euro-area countries. Unless these problems are solved, there is a large risk that these countries become dependent on various kinds of support measures for a long time.

As Swedish banks and firms are highly active on global financial markets and are dependent on them for their funding, this chapter takes international and financial market developments as its starting point. This is followed by a section analysing those markets with direct significance for the funding of the Swedish banks. The final section analyses the markets that are important for Swedish companies’ supply of capital. This chapter also identifies the risks associated with the development on the financial markets. A more detailed discussion of how these risks can affect Swedish banks is given in Chapter 5.

The situation on the financial markets

MEASURES BY CENTRAL BANKS AND GOVERNMENTS

On two occasions the ECB has offered banks in the euro area unlimited access to euro in two three-year loans. All in all, the ECB has granted loans of more than EUR 1000 billion to a large number of banks operating in the euro area (see Chart 2:1).20 The ECB loans were intended to ensure the banks’ access to liquidity. At the end of 2011, there was widespread concern on the financial markets that many of the banks in the euro area would have problems funding their operations. Many of them faced large amounts of their own bonds maturing in early 2012. The ECB’s loans helped to reduce the risk that banks’ would not be able to fund these maturities (see Chart 2:2). These loans were also expected to support the banks’ lending.21 The three-year loans were also needed to maintain confidence on the financial markets. The ECB has moreover cut its policy rate to 1 per cent and has, together with other central banks, reduced the cost of borrowing US dollars.

A large proportion of the ECB:s loans have been used to buy sovereign bonds in the euro area. Spain’s and Italy’s banks are among those that have increased their borrowing in the three-year loans the most in relation to their size (see Chart 2:3). It is also the banks

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20 In the first loan of 21 December 2011, 523 banks borrowed EUR 489 billion and in the second loan of 29 February 2012, 800 banks borrowed EUR 529.5 billion. Since 2008 the ECB offers unlimited access to euro in short-term loans.

in these countries that increased their holdings of sovereign bonds in the euro area the most (see Chart 2:4). Consequently, the banks are at risk of being hit harder if the crisis escalates and the value of sovereign bonds falls. Another negative consequence of the loans is that the possibility to get wholesale funding is smaller for those banks that have put up a large proportion of securities as collateral for ECB loans. Large amounts of tied-up assets mean higher uncertainty for investors in unsecured bonds as it decreases the likelihood of getting paid back in full. The three-year loans have thus decreased the banks’ short-term funding risk but at the same time they have contributed to reducing the functioning of the markets during the duration of the loans. There is also a risk that the weak banks will face difficulties coping on their own, when the ECB stops supplying the banks with loans, unless they increase their capital ratios.

Other central banks have also continued their support measures to stimulate the economy. For example, the Federal Reserve has continued its programme to hold down long-term interest rates in the USA, and the Bank of England has increased its purchases of securities. Danmarks Nationalbank offered a three-year loan to the country’s banks in March.

The financial resources available to prevent possible contagion effects from the sovereign debt crisis have been boosted. The finance ministers of the euro-area countries have decided to retain the temporary European Financial Stability Facility (EFSF) even after the permanent European Stability Mechanism (ESM) comes into force in mid-2012. By means of these rescue funds the countries of the euro area can assist each other with funding when necessary. In parallel with this, the IMF’s (International Monetary Fund) lending capacity for providing financial support to crisis-hit countries is also being increased.

Work on reforms designed to address the crisis in public finances is underway in several countries. In Italy, for example, labour market reforms and changes to the pension system are being implemented. Most of the EU countries have also adopted a fiscal pact, which in the future will aim to keep public finances in better balance and prevent fiscal crises.

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22 See for example Collateral fears from ECB’s shot in the arm, 19 March 2012, Financial Times.
23 By June 2012, the Federal Reserve plans to have bought government securities with maturities of between six and thirty years for a total amount of USD 400 billion. At the same time, it will sell government securities with maturities of up to three years for the same amount.
24 The IMF membership agreed in April 2012 on pledges to boost the institution’s lending capacity by more than USD 430 billion.
25 The Riksbank is prepared to increase its lending to the IMF by at least USD 10 billion.
26 With the exception of the UK and the Czech Republic.
27 Treaty on Stability, Coordination and Governance in the Economic and Monetary Union will come into force on 1 January 2013 providing that at least 12 euro countries ratify the proposal. The treaty is binding only for the euro area countries and those participating non-euro area countries that choose to be bound by it.
Measures taken by central banks and governments helped to reduce turmoil on the financial markets in late 2011 and early 2012. Yields on sovereign bonds in several of the highly-indebted countries in the euro area fell after the ECB’s three-year loans (see Chart 2:5). At the same time demand for other high risk assets increased. This was reflected by the fact that investors with a more long-term investment horizon, such as pension fund managers, decided to invest in assets with higher risk, such as shares, rather than in short-term debt securities (see Chart 2:6). However, unease has begun to increase again during the spring due to uncertainty about the political situation in several euro area countries (see Chart 2:7).

UNCERTAINTY HAS INCREASED DURING THE SPRING AND MAJOR CHALLENGES REMAIN

To prevent turbulence on the financial markets from increasing further, banks need to recapitalise and the countries with sovereign debt problems in the euro area must tackle the fundamental causes of the crisis.28 This section describes some of the challenges that the Riksbank sees as the most important.

The fundamental causes of the sovereign debt crisis in the euro area remain. The loans from the ECB solved the liquidity problems in the banking sector in the near term and contributed to maintaining confidence on the financial markets. But in order to stabilise the situation in the euro area in the longer term the work to implement fiscal-policy and structural reforms in several euro-area countries needs to continue (see Charts 2:8 and 2:9). For example, the competitiveness of several of the highly-indebted countries needs to be strengthened (see Chart 3:20). Unless these measures are implemented there is a risk that those countries will become dependent on support packages for longer than planned since the demand for their sovereign bonds remains low. Additionally, weak banks need to bolster their financial situation. In parallel with this the banks in Europe need to conduct deleveraging (see the box on Deleveraging in the European banking sector – background and potential consequences). At the same time the challenge of improving growth in the entire euro area remains.

Uncertainty concerning political developments has increased in several euro-area countries. Voters have, for instance, begun to demonstrate their dissatisfaction with the fiscal consolidation measures. For example, the parties in Greece that had negotiated support packages with the EU and the IMF did not gain the support of the voters in the parliamentary elections the May, which once again creates speculation regarding a possible Greek exit from the monetary union. New elections will be held in June. In Ireland, there is a risk that

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uncertainty will increase in connection with the referendum on the EU fiscal pact. A possible no to the pact would make it impossible for Ireland to apply for support from the European Stability Mechanism (ESM) in the future, which in turn is likely to make it more difficult for Ireland to return to the financial markets. Even in core countries in the euro area such as Germany and France, the parties and politicians most in favour of fiscal consolidation have suffered defeats in regional and national elections.

Concern over the need for debt restructuring in Portugal has increased since the previous Financial Stability Report was published. It is also feared that Portugal may need a second support package as it is doubtful whether the country will be able to return to issuing bonds in the second half of 2013 – which is assumed under the current support package. Uncertainty about Portugal’s public finances resulted in a substantial increase in yields on Portuguese sovereign bonds in the beginning of 2012.

Spain continues to wrestle with problems in the banking sector and regional-government finances. The Spanish government has been forced to help regional governments that are finding it difficult to pay their debts, which has increased the country’s budget deficit and central government debt. There is also a risk that interest in buying Spanish sovereign bonds will fall when the effect of the ECB’s three year loans has subsided. Restructuring in the banking sector continues. For example, the Spanish government recently decided to acquire a holding in the country’s third largest bank. However, the Spanish banking sector is still deemed to be weak. It also risks being threatened by increased concern over public finances in Portugal. Spanish banks have large exposures in Portugal and loan losses would increase if Portuguese banks have difficulties paying back their loans.

Markets that are important for Swedish banks’ funding

About half of the Swedish bank groups’ borrowing consists of market funding. About two thirds of this is in currencies other than Swedish kronor. The currency risk, to the extent it arises, is managed by the banks via various types of currency derivatives. This section discusses developments on the markets that are important for Swedish banks’ funding.

MARKETS FOR BANKS’ LONG-TERM FUNDING

The major Swedish banks generate long-term funding by issuing covered and unsecured bonds. These bonds are mainly issued on the Swedish and European markets. The functioning of these markets affects the banks’ funding costs. Developments on the markets that

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29 The Irish constitution requires a referendum, scheduled for 31 May 2012.
30 The Report takes into account data available as of 23 May 2012.
are important to the banks’ long-term funding are therefore described below.

Since the turn of the year funding conditions have improved for many banks in European countries without fiscal problems. This is above all illustrated by a substantial increase in issuance volumes for European banks in the first quarter 2012 (see Chart 2:10). Both covered and unsecured bonds have been issued, but it is primarily banks that are considered to have high creditworthiness that have issued unsecured bonds. Issuance volumes have slowed down during the second quarter though and credit ratings of a large number of European banks have been cut or been put on negative watch list.31

Weak banks in the highly-indebted countries in the euro area are still dependent on ECB loans. Their share of the total issuance volumes in the market has fallen and the maturities of newly-issued bonds have been shortened. For example the average maturity of French, Spanish and Italian banks’ newly issued unsecured bonds is now three years compared with five years when the financial crisis started in 2008. The average maturity thus coincides with the ECB’s three-year loans (see Chart 2:11). It is worth noting that new loans from the ECB’s three-year loans cover two thirds of the bank debt maturing in 2012 (see Chart 2:2).32 However, it is not given that the banks with large amounts of maturing debt are also the banks that have borrowed from the ECB. For example it is only banks that have securities left to provide as collateral that can borrow from the ECB.

The Swedish covered-bond market is relatively efficient. This applies to covered bonds issued in Swedish kronor and to those issued in other currencies, mainly the euro.33 The funding cost is only marginally different between the Swedish banks. On the other hand, the banks’ costs for issuing covered bonds with longer maturities continue to be considerably higher than the cost of issuing bonds with short maturities (see Chart 2:12). One explanation is that after the financial crisis investors have been less willing to assume the liquidity and credit risks associated with owning securities with long maturities.

Since the turn of the year Swedish banks have increased their issuance of unsecured bonds. On the other hand, during the second half of 2011 activity was very low on this market. An estimate of the funding cost via unsecured bonds is provided by CDS premiums. These fell for Swedish banks in early 2012 as a result of reduced

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31 For example Moody’s cut Handelsbanken’s and Nordea’s credit ratings by one notch at the end of May 2012.
32 Of the more than EUR 1 000 billion in loans, just over EUR 500 billion are new loans. The rest has been used to roll over previous loans from the ECB.
33 When a Swedish bank issues a covered bond in euro to fund assets in Swedish kronor the bank must purchase Swedish kronor during the life of the bond. Since uncertainty in the financial markets has fallen since the turn of the year the cost of exchanging euros to Swedish kronor has fallen substantially. Thus it has become cheaper for Swedish banks to fund themselves via covered bonds issued in euro. This development could also be the reason for the reduction in the cost to banks of funding themselves via covered bonds in the Swedish market.
turmoil in the financial markets but have risen during the spring due to increased turmoil (see Charts 2:13 and 2:14). In an international perspective the Swedish banks have a good credit rating though and they have therefore been able to increase the maturities of their unsecured bonds in recent years (see Chart 2:11). There are, however, some differences in funding costs among the Swedish banks (see Chart 2:14).

MARKETS OF IMPORTANCE FOR LIQUIDITY MANAGEMENT

It is often difficult for banks to determine exactly how much liquidity they will need from one day to the next. This leads them to redistribute liquidity among themselves on a daily basis. The largest part of these transactions takes place on the domestic interbank market, either via direct loans, repo transactions or currency swaps. This section describes the development of these markets. As the development on the Swedish market depends on the global markets, this section starts with an analysis of the market situation in the euro area.

Risk premiums on global interbank markets have fallen (see Chart 2:15). The decline has been most obvious in the euro area, which reflects the fact that market uncertainty decreased after the ECB euro loans were introduced and after the cost of borrowing in US dollars decreased for the banks in the euro system (see the section Measures by central banks and governments). The loans have made it easier for the banks in the euro system to gain access to funding, thus reducing the uncertainty of the liquidity situation of these banks. A breakdown of the Eurosystem risk premium shows that the ECB’s measures are regarded as having reduced the liquidity risk (see Chart 2:16).

It has become cheaper for European banks to borrow in US dollars. An important reason for this is that the ECB cut the interest rate on its dollar lending at the end of November 2011. Thereafter the market price adapted partially to the lower cost (see Chart 2:17). American money market funds have in addition increased their lending to banks in the euro area from about 10 per cent of total lending at the year-end to a little more than 13 per cent in April 2012. Nevertheless, this lending still only accounts for about half of the levels in 2007 and the beginning of 2008, before the outbreak of the financial crisis.34

However, there are major regional differences in the euro area regarding banks’ access to short-term market funding. The banks in the most indebted countries have had limited access to short-term funding, either in euro or US dollars. The fact is that investors often consider it too risky to lend to these banks. Several banks in the euro area have therefore borrowed from the ECB to meet their funding needs. At the same time the banks’ use of funding via the repo

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market has periodically been limited. This could be a consequence of banks’ unwillingness to give up unutilised collateral. It could also be a result of the fact that surplus liquidity in euro, generated by the ECB’s loans, may have reduced the need for short-term market funding for more banks.

The risk premium on the interbank market has also declined in Sweden. This is partly because Swedish banks have become more willing to lend to each other in Swedish kronor at short maturities. The fact that the Swedish risk premium is higher than in the euro area and in the US is partly due to the fact that the Swedish banks largely use funding in foreign currencies. A large part of the risk premium therefore consists of a liquidity premium.

The Swedish repo market has functioned well. A sign of this is that turnover on the repo market was higher in early 2012 than in the same period in previous years (see Chart 2:18). This is also confirmed by the responses in the risk survey conducted by the Riksbank in April.\(^\text{35}\) However, some uncertainty remains in the pricing of short-term unsecured interbank loans in Swedish kronor (see the box Reference rates under the magnifying glass). The price of these loans has therefore fluctuated, particularly around the turn of the year and around the maturity dates of large volumes of standardised derivatives – in other words in periods of large cash flows in the Swedish banking system.

Markets that are important for the credit supply of Swedish firms

The loan-based funding of Swedish non-financial companies primarily takes place through bank loans.\(^\text{36}\) The remaining part, 20 per cent, is made up of market funding. Half of the market funding is in Swedish kronor, 40 per cent is in euros, 5 per cent is in US dollars and the rest is in other currencies. Market funding takes place on both the money and bond markets and therefore a description of the development in these markets is given below.

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\(^{35}\) See Risk survey spring 2012, Sveriges Riksbank.

\(^{36}\) According to Statistics Sweden. These statistics do not include direct investments. According to calculations made by the Riksbank foreign direct investments amount to about a fourth of the non-financial companies loan-based financing.
Issuance volumes of corporate bonds in Europe has increased (see Chart 2:19). One of the reasons for this is that the reduced uncertainty on the financial markets at the beginning of 2012 led to an increased investor appetite for corporate bonds. There is also anecdotal evidence that companies are to a greater extent choosing market funding rather than bank loans in the European market. The latter is due to the banks having become more restrictive in their corporate lending and from market funding being cheaper for some companies than for banks (see Chart 2:20). The increased interest among investors has also meant that corporate-bond yields have fallen. This mainly applies to high-yield bonds.

Issuance of corporate bonds by Swedish companies has also increased (see Chart 2:21). Whether this is due to increased investor interest or to companies needing new funding is difficult to determine. The majority of issuances, however, are done by large Swedish companies that have previously obtained funding in the corporate bond market, but there are also bonds issued by some smaller companies that have not issued bonds before. The Riksbank has noted earlier that Swedish companies have a major refunding need in 2012 and 2013 as a result of a large amount of maturing corporate bonds and syndicated loans.37

Reference rates under the magnifying glass

Reference rates on the interbank market are the interest rates the banks say they demand for unsecured loans to each other. Since the financial crisis broke out in 2008, discussions and examinations have taken place around the world regarding the reliability of reference rates. The general problems surrounding reference rates give cause to review the Stibor, the most important reference rate on the interbank market for Swedish kronor. The banks are responsible for the Stibor and the Riksbank follows their work in the area.

Discussion and examination of reference rates during the crisis

When the financial crisis broke out in the autumn of 2008, the banks realised that the risk associated with lending to each other had increased and that the liquidity risk on the money markets was higher than before. The risk premiums for interbank loans have subsequently become established on a significantly higher level compared with the period before the financial crisis (see Chart B2:1).

The new pricing of risk raised questions as to the extent to which the reference rates for interbank loans reflected the actual risk. This led to a general increase of focus around the world as to how reference rates are determined. Suspicions of manipulation have led authorities abroad to examine how the banks determine reference rates. Moreover, there have been indications of manipulations in certain cases.

The Stibor is the most important reference rate in Swedish kronor

There are no indications of manipulation of the most important Swedish reference rate, the Stibor or Stockholm Interbank Offered Rate. However, many market participants state in the Riksbank’s latest risk survey that there are problems with the Stibor. This refers to incentives for the banks to set the Stibor at fair levels, the opinion that too few banks determine the Stibor and the insufficient transparency of the Stibor and its framework.\(^3^8\)

The Stibor is the reference rate for loans and financial contracts in Swedish kronor to an outstanding amount equivalent to just over SEK 40 000 billion. This includes both mortgages and corporate loans with variable interest rates and the derivatives used by banks and others to manage their risks.\(^3^9\) The Stibor is therefore of great significance to interest rates and the allocation of capital in society.

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39 This amount includes mortgage and corporate loans at variable interest rates, as well as interest rate swaps, interest-rate forwards and currency swaps. Source: Financial Market Statistics, February 2012, Statistics Sweden and Detailed tables on semiannual OTC derivatives statistics at end-June 2011, November 2011, Bank for International Settlements (BIS).
Stibor is a designation for the interest rates that the banks state that they can offer when lending Swedish kronor without collateral to each other at various maturities. The banks that determine the Stibor are included in what is known as the Stibor panel. This consists of Danske Bank, Handelsbanken, Nordea, SEB and Swedbank. The panel itself drew up the 2006 agreement forming the basis of the banks’ undertaking to price the Stibor. Table B2:1 presents an overall comparison of the Stibor and two of the most important foreign reference rates, the Libor and the Euribor.

Every morning at 10.45 am, the banks present bids for the Stibor rates. After the first bidding bank has bid on all maturities, the other banks are able to present their bids. These bids are to refer to loans of SEK 500 million for all maturities up to 6 months and SEK 200 million for maturities of 9 and 12 months.

During the bidding process, the information system Thomson Reuters allows the banks in the panel to see one another’s bids. According to the original agreement, the banks have the opportunity to borrow or invest at one another’s bids during the bidding process. The aim of this is to create an incentive for the banks to enter bids that are neither too high nor too low.

However, in conjunction with the start of the financial crisis in 2008, the banks agreed to no longer take the opportunity to trade at one another’s Stibor bids. Consequently, the banks today enter open bids without being obliged to trade at them. The Stibor thus consists of purely indicative rates, as they are not based on actual transactions.

Despite this, the banks have the possibility of adjusting their bids until 11.00 am, when bidding is to be closed. The bids are then reported to Nasdaq OMX, which estimates the Stibor rate for each maturity. The rates are calculated as the arithmetical mean value of the bids. If the highest or lowest bid deviates by more than 25 basis points from the next highest or next lowest bid, it is excluded before calculation of the mean value. After this, the rates are published in Thomson Reuters by no later than 11.05 am.

The banks are responsible for the Stibor

The examination of reference rates abroad shows that there can be significant problems in how these are determined. The Stibor is of great significance to the Swedish economy at the same time as it is not based on pricing from actual trade.

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40 The Stibor is determined for the maturities tomorrow next, 1 week and 1, 2, 3, 6, 9 and 12 months.
41 The Royal Bank of Scotland was previously included in the panel, but left with effect from 30 April 2012.
42 The first written Stibor agreement was prepared in 1997.
43 Libor stands for the London Interbank Offered Rate and Euribor stands for the European Interbank Offered Rate.
44 However, if a bank wishes to invest at a certain bid, the bid is adjusted downwards by 12 basis points to take account of the fact that this is supposed to reflect the interest rate on a loan and not an investment rate.
45 Previously, the highest and lowest bids were always excluded before the mean value was calculated. This was changed when the Royal Bank of Scotland left the Stibor panel.
The Swedish banks in the Stibor panel have themselves taken the initiative to review the framework of how the Stibor is determined and examined. The aim of this work is to draw up a new agreement between the banks on the Stibor panel. Given the importance of Stibor to the Swedish economy, Stibor is of interest to the Riksbank. Therefore, the Riksbank observes the banks’ work and conducts internal analysis of Stibor.

Table B2:1. Comparison of the Stibor and other reference rates

<table>
<thead>
<tr>
<th></th>
<th>Stibor</th>
<th>Libor</th>
<th>Euribor</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of loan</strong></td>
<td>Unsecured</td>
<td>Unsecured</td>
<td>Unsecured</td>
</tr>
<tr>
<td><strong>Type of interest rate</strong></td>
<td>The interest rate the bank can offer another bank in the panel for a loan.</td>
<td>The interest rate the bank believes it can be offered for a loan from another bank in the panel.</td>
<td>The interest rate the bank assesses that banks in the euro area offer each other for loans.</td>
</tr>
<tr>
<td><strong>Number of banks in the panel</strong></td>
<td>5</td>
<td>At least 7</td>
<td>43</td>
</tr>
<tr>
<td><strong>Process for setting the interest rate</strong></td>
<td>Public bids, possible to trade at other banks’ bids until crisis.</td>
<td>Secret bids, made public when the interbank rate is published.</td>
<td>Secret bids, made public when the interbank rate is published.</td>
</tr>
<tr>
<td><strong>Calculation</strong></td>
<td>Nasdaq/OMX calculates arithmetical mean value. Highest or lowest bid that deviates by more than 25 basis points from the next highest or next lowest bid is excluded.</td>
<td>Thomson Reuters calculates arithmetical mean value after the 25 per cent highest and lowest bids have been excluded.</td>
<td>EBF calculates arithmetical mean value after the 15 per cent highest and lowest bids have been excluded.</td>
</tr>
<tr>
<td><strong>Ownership</strong></td>
<td>The banks on the Stibor panel</td>
<td>British Banks’ Association (BBA)</td>
<td>European Banking Federation (EBF)</td>
</tr>
</tbody>
</table>

Sources: British Bankers’ Association (BBA), European Banking Federation (EBF) and the Riksbank
3. The Swedish banks’ borrowers

Economic development in the euro area is expected to be weak as a result of the sovereign debt crisis, which will in turn weaken the economic prospects of the borrowers of the Swedish banking groups. The Riksbank’s assessment is that weaker growth will reduce corporate investment and the demand for loans, and also undermine the creditworthiness of the companies. Growth in Sweden is nevertheless expected to be positive and as the repo rate is expected to be relatively low it is probable that loan losses from the corporate sector will also continue to be low.

The financial unease in the euro area, increased interest expenses and tighter lending standards contributed to a slowdown in the rate of growth in household borrowing in Sweden and to a fall in housing prices in 2011. Borrowing will probably continue to grow at a somewhat slower rate in 2012. However, the debt-servicing ability of the Swedish households is expected to remain good. In Denmark, the economy continues to develop slowly. Housing prices have begun to fall once again and there are still significant problems in the banking sector. The Riksbank’s assessment is that the debt-servicing ability of the Danish borrowers is weaker than in the other Nordic countries. Growth in the Baltic countries has also slowed down as a result of lower growth in the euro area. The creditworthiness of the Baltic borrowers therefore remains weak.

This chapter discusses the situation of the borrowers of the Swedish banking groups. An analysis of the banks’ borrowers is important as the banks’ earnings and profits are directly affected by how much they lend. Furthermore, the credit risk that arises in the banks’ lending is linked to the debt-servicing ability of the borrowers and the size of their debts. This means that the banks’ borrowers form an important part of the analysis of the risks in the financial system. Just over half of the lending of the major Swedish banks is to households and companies in Sweden, but households and companies in the other Nordic countries and in the Baltic countries are also important groups of borrowers (see Charts 3:1 and 3:2).46

The Swedish household sector

In 2011 and during the early months of 2012, household borrowing increased at a slower rate than previously (see Chart 3:3). Several factors contributed to this. The two most important factors are probably that mortgage rates increased and that the banks’ lending has become more restrained as a result of Finansinspektionen’s mortgage cap (see Chart 3:4).47 However, it is likely that the unease concerning public finances in the euro area and the low level of consumer confidence have also contributed to the slower rate of increase in household borrowing.

The mortgage cap has contributed to a fall in the households’ loan-to-value ratio, which has declined for the first time since the early 2000s. It is also probable that a loss of confidence in economic conditions has contributed to a slowdown in the rate of growth in household borrowing.

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46 The four major banks are Handelsbanken, Nordea, SEB and Swedbank.
47 The mortgage cap sets a limit for mortgages equivalent to a maximum loan-to-value ratio of 85 per cent of the property’s value. This limit was introduced in accordance with Finansinspektionen’s general guidelines in October 2010.
growth and expectations of a weaker housing market have had an impact. Finansinspektionen’s report on the Swedish mortgage market reveals that 14 per cent of new borrowers have a loan-to-value ratio of exactly 85 per cent. This indicates that the mortgage cap has acted as a binding restriction for these borrowers.48

The mortgage cap has probably also affected housing prices. The reason for this is that the mortgage cap restricts the extent to which households can borrow, which means that first-time buyers must save more capital before they are able to buy a dwelling. It can also restrict the possibility of households that are already established on the housing market to move to a larger dwelling. The mortgage cap can thus reduce the opportunities of the households to climb the property ladder and there are studies that indicate that this can reduce housing turnover and lead to lower housing prices (see Chart 3:5).49

The use of unsecured loans has increased somewhat following the introduction of the mortgage cap, although from low levels (see Chart 3:6).50 When the cap was introduced there was some concern that house buyers would use unsecured loans to circumvent it. However, there are no indications that this has happened to any great extent. The fact that there has not been a greater increase in unsecured loans may be because the banks impose higher demands than previously on borrowers that want to use unsecured loans to finance mortgages amounting to more than 85 per cent of the value of the dwelling. Unsecured loans are also usually associated with amortisation requirements and higher interest rates than regular mortgages.51

Housing prices increased in early 2012 but are expected to fall at a moderate rate throughout the rest of the year (see Chart 3:7). One of the reasons for this is that growth in the euro area and in the Swedish economy is expected to decline in 2012, which will have a negative impact on employment and household incomes. There is also little to indicate that the banks will become less cautious in their lending, and the repo rate is already relatively low. On the other hand, there are also signs that housing prices may continue to rise. The number of newly-constructed homes has fallen and it will probably be some time before construction increases (see Chart 3:8). The percentage of households that believe that housing prices will increase over the next 12 months has also increased rapidly. During the first few months of 2012 the households have also become more positive about their

48 See also The Swedish mortgage market, March 2011, Finansinspektionen.
50 See The Swedish mortgage market, March 2011, Finansinspektionen.
51 The cost increases that arise when 15 per cent of the mortgage consists of unsecured loans are described in Soultanaeva, Albina and Nordberg, Anders. “The impact of a maximum loan-to-value ratio on the borrowers’ expenditure”, Economic Commentary no. 5, 2010, Sveriges Riksbank.
It is likely that household borrowing will continue to increase more slowly in 2012 (see Chart 3:9). This is mainly due to the same factors that may have a dampening effect on housing prices. Although it is expected that the repo rate will be relatively low in the period ahead, it is likely that the mortgage cap and tighter lending on the part of the banks will continue to have a dampening effect on the growth of borrowing. In this case, the households’ interest expenditure is also expected to level out (see Chart 3:9). The current levels of indebtedness and housing prices can be explained in terms of fundamental factors such as higher incomes, lower real interest rates, tax cuts and a lack of new construction. However, this does not rule out the risk of negative effects on the real economy if these fundamental factors were to change considerably and rapidly.

Although economic prospects look weak in the period ahead, it is expected that the debt-servicing ability of the households will remain good. This is because the total wealth of the households is still five times greater than their disposable income. It is also much greater than the households’ debts, which amount to just over 1.7 times their disposable income (see Chart 3:10). Finansinspektionen’s stress tests have also shown that the debt-servicing ability of the households is good even in scenarios with significant increases in both interest rates and unemployment. However, stress tests of this type do not show the real economic effects that would arise if the households in such a situation chose to reduce their consumption and it is unclear how large these effects would be.

The Swedish corporate sector and the property companies

The Swedish companies’ demand for loans has declined in line with the slowdown in the economy. This is mainly because the companies are waiting to see how the situation develops before making new investments. The slowdown in the Swedish economy is also expected to be more prolonged than predicted in the previous Financial Stability Report. Investment and the associated credit growth are therefore not expected to pick up until towards the end of 2014 (see Chart 3:11). There are also signs that some bank branches are tightening their terms and conditions for credit for both existing and new

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53 See Mäklarbarometern kvartal 1, (Estate agent’s survey quarter 1), April 2012, SBAB Bank.
54 See The Riksbank’s commission of inquiry into risks on the Swedish housing market, 2011, Sveriges Riksbank.
55 See Sverige och obalansförfarandet (Sweden and the Excessive Imbalance Procedure), article in the 2012 spring Fiscal Policy Bill, April 2012, Government of Sweden, which is a response to the Alert Mechanism Report, February 2012, the European Commission.
56 See The Swedish mortgage market, March 2011, Finansinspektionen.
corporate customers, which may restrict credit growth somewhat.57 The companies themselves feel that it has become somewhat more difficult than normal to fund their operations, but that it is still much easier to borrow than it was during the acute phase of the crisis in 2008 and 2009.58 As is the case with the banks’ mortgage rates, the assessment is that the banks’ lending rates for companies have increased relative to Stibor in recent years, which has contributed to increasing the companies’ borrowing costs (see Chart 3:12).

The creditworthiness of the companies is expected to decline in the period ahead, but to a lesser extent than was previously forecasted (see Chart 3:13). This is mainly because the companies’ interest expenses during the forecast period 2012–2014 are expected to be lower than previously predicted. However, the default rate is still expected to increase during 2012 due to a lower level of demand. On the other hand, the repo rate is still relatively low and is expected to remain so throughout 2012, and the economy is still expected to grow. This indicates that the Swedish companies will not generate any substantial losses for the Swedish banks during the forecast period 2012–2014.

Activity on the commercial property market is declining in line with the slowdown in the economy. The decline in activity was particularly tangible in the fourth quarter of 2011 when, for example, transaction volumes fell by almost 40 per cent compared to the same period in 2010. Weaker growth is also expected to lead to a slight fall in transaction volumes in 2012 compared to the previous year. It is mainly foreign investors that continue to sell more properties in Sweden than they buy. This has been a persistent trend since 2009 and, consequently, foreign investors accounted for a much smaller proportion of the transaction volumes in early 2012 than has been the case previously. The fact that the Swedish property market has developed well despite the shrinking of the foreign investor base indicates that demand from domestic investors is strong. As there has been a stable development of the direct yield on commercial properties, this also indicates that risk taking has not increased (see Chart 3:14). If the direct yield on property is lower than the interest on treasury bills, then investors accept a lower yield on property than on loans to governments, which is normally a sign of high risk taking. That is not the case here, however. Nevertheless, the property companies are still experiencing difficulties in funding their operations because the banks are setting stricter loan conditions for the property projects they will finance. This may lead to a fall in investment in the period ahead.

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57 See Låneindikatorn (Loan Indicator) March 2012, ALMI.
58 See Economic Tendency Survey April 2012, National Institute of Economic Research.
The Swedish banking groups’ borrowers abroad

DENMARK

Weak domestic demand and exports mean that the Danish economy is continuing to develop slowly. There are several reasons why domestic demand is expected to remain weak – unemployment is still high, housing prices have begun to fall again and consumer confidence is still low, although it increased somewhat in the first quarter of 2012. The Danish economy is still suffering from the effects of the banking and property crisis of recent years. In 2010–2011, Danish growth was driven by exports, but as growth prospects in the euro area have weakened the growth of Danish exports has begun to slow down. In 2012, the economy is expected to grow by less than 1 per cent. Consequently, the budget deficit is expected to increase to 5.5 per cent of GDP. However, the Danish sovereign debt is relatively low, which has a positive effect on investor confidence in the Danish economy. This is reflected, for example, in the substantial fall in yields for Danish government bonds. However, Danish households and companies are highly indebted and need to amortise their debts, which will reduce the scope for consumption and investment. This indicates that the recovery will be prolonged.

Since 2007, the Danish banking sector has been marked by major problems as a result of the downturn in the Danish economy. The problems have mainly arisen as a result of large loan losses, above all in the property and agricultural sectors. This has contributed to a situation in which many smaller banks have found it difficult to fund their operations and several small Danish banks have collapsed. Since October 2008, the Danish authorities have introduced five so-called Bankpakke, packages of measures that aim to reduce the problems in the banking sector. As the Danish economy has weakened once again and there is still unease on the financial markets, the Danish central bank is now offering three-year loans to ease the banks’ funding. This has helped to reduce the liquidity risks. However, the weak development of the economy indicates that the banks’ loan losses will continue to increase.

New borrowing by households and companies is expected to continue to be low in Denmark (see Charts 3:15 and 3:16). In the household sector, the reasons for this are that the housing market is expected to be weak while the recovery of the labour market is likely to be slow. Among the companies, it is due to the fact that they will probably wait until the economic prospects look brighter before they invest. In addition, both households and companies are highly indebted and have a great need to amortise their loans. Credit growth is also being held back because banks in a vulnerable capital situation...
need to adjust their balance sheets by reducing the supply of loans to households and companies. The unwillingness to lend is probably also due to the increase in loan losses from lending to companies. The difficulty for companies in the agricultural and property sectors to get bank funding has led Danish politicians to decide to ease access to funding for such operations.61

The debt servicing ability of the Danish households is weak and will probably continue to deteriorate. This is mainly due to the weak housing market and poorer growth prospects. The housing market seemed to have stabilised following an extended period of falling prices, but prices fell sharply again in late 2011 (see Chart 3:17). Falling housing prices and high loan-to-value ratios mean that more households can end up in a situation in which their loans exceed the value of their homes.

The creditworthiness of the companies is also weak and poorer growth in the period ahead indicates that it will weaken further. Weak growth has led to an increase in bankruptcies in the corporate sector, above all in the construction sector. However, bankruptcies have also increased in the retail and agricultural sectors. Continuing weak domestic demand and declining exports indicate that bankruptcies will continue to increase in the corporate sector.

FINLAND AND NORWAY

The Finnish economy is slowing down, but the Norwegian economy is showing stronger growth than many other European economies. The reasons for the strong growth of the Norwegian economy are that activity in the oil-related industries and in the construction sector is high and that monetary and fiscal policy are relatively expansionary. Domestic demand in Norway is also supported by a low rate of unemployment and the fact that housing prices are continuing to rise (see Chart 3:17). Consequently, both household and corporate borrowing continue to grow strongly in Norway (see Charts 3:15 and 3:16). The rate of growth in Norway is expected to continue to be relatively rapid and the debt servicing ability of the Norwegian borrowers is expected to be good. Finnish growth, on the other hand, has slowed down in line with the decline in exports, which is a result of the crisis in the euro area. Borrowing by Finnish households and companies has continued to increase (see Charts 3:15 and 3:16). However, weaker economic prospects indicate that there will be a decline in the demand for loans. The slowdown in economic growth will probably weaken the creditworthiness of the Finnish companies somewhat, while a relatively low rate of unemployment and the fact that the policy rate will continue to be low means that the debt servicing ability of the Finnish households will remain good.

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61 See Udviklingspakken – Initiativer til fremme af især små og mellemstore virksomheders finansiering, March 2012, Erhvervs- og Vækstministeriet, Denmark. Udviklingspakken is also called Bankpakke 5.
THE BALTIC COUNTRIES

Following a rapid recovery, economic growth in the Baltic countries is expected to continue at a more subdued rate (see Chart 3:18). This was an expected development for these three export-dependent countries, although the Latvian economy grew at a faster rate than expected at the start of the year. The slower rate of growth is explained by the fact that the countries’ most important trading partners, including the Nordic countries, are affected by the debt crisis in the euro area. Household consumption and investment are so far helping to stimulate growth, but if exports decline more than expected then the strength of these domestic driving forces will also decline. An important factor that has helped the Baltic countries to recover so quickly is that they implemented much-needed reforms and tightened their public finances when the crisis hit. The countries have also increased their competitiveness, for example by reducing real wages (see Chart 3:19). However, there are matching problems on the labour market and real wages are increasing again despite the fact that unemployment is still high. Competitiveness may be undermined if these problems remain. More structural reforms are also required to create sustainable growth.

Latvia and Lithuania hope to be able to introduce the euro in 2014, but must in this case meet all of the Maastricht criteria in 2012. Inflation in the two countries still exceeds the Maastricht criteria, but is expected to fall in the years immediately ahead. The rate of inflation is, however, sensitive to changes in energy and food prices and these, together with rising wages, may increase inflation. The introduction of the euro is also dependent on the countries successfully consolidating their public finances so that their budget deficits are below three per cent by the end of 2012. According to the assessments of the International Monetary Fund (IMF) both of these countries are expected to achieve this objective, but probably only by a relatively small margin.

If Latvia and Lithuania introduce the euro, this will reduce the currency risk that borrowers in Latvia and Lithuania, and indirectly the banks as well, are exposed to. The currency risk among the Latvian and Lithuanian households and companies is currently high as the majority of their loans are in euro while their incomes are usually in domestic currencies. Both Latvia and Lithuania have pegged their currencies to the euro, however in general loans in a foreign

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**Chart 3:18. GDP**

Annual percentage change

**Chart 3:19. Real exchange rates**

Index January 2009 = 100

**Source:** Reuters EcoWin

**Note:** The comparison group refers to Greece, Italy, Portugal and Spain. Data for the Baltic countries and the comparison group are unweighted averages. The exchange rates are corrected for the price level (CPI). The scale is inverted so that lower values indicate weaker exchange rates.

Source: Bank for International Settlements (BIS)

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62 According to the IMF, both Latvia and Lithuania should reform their pension and healthcare systems and improve tax discipline. See for example Republic of Lithuania 2011 Article IV Consultation, November 2011 and Republic of Latvia – Fifth Review Under the Stand-By Arrangement and Financing Assurances Review, Request for Waiver of Non-observance of a Performance Criterion and Proposal for Post-Program Monitoring, February 2012, IMF.

63 The Maastricht criteria, or convergence criteria, are five requirements that the EU member states must fulfill to be able to introduce the euro. The economic criteria include a country having low and stable inflation, a stable exchange rate, sound public finances, (the sovereign debt may not exceed 60 per cent of GDP and any deficit in public finances should not be greater than three per cent of GDP) and low interest rates. In addition, the countries’ legislation should be compatible with the EU treaties and the Statute of the European System of Central Banks.
currency means that if the domestic currency weakens against the currency the loan was taken in, the borrowers’ burden of debt and interest payments will increase. The borrowers are thus vulnerable to exchange rate fluctuations.

Credit growth is expected to continue to be weak despite the fact that the Baltic countries’ economies are in a recovery phase. This is partly because households and companies in some areas of the region are now more pessimistic about the future. According to the central banks’ lending surveys, the households and companies are also now more cautious about taking loans than they were in the years before the crisis, and they finance a larger part of their investments using their own savings. The households and companies also need to reduce their debts over the next few years (see Chart 3:20). In addition, the Swedish banks, which account for a large proportion of the lending in the Baltic countries, have indicated that their lending should primarily be covered by deposits and not via the wholesale funding of the parent banks. At the same time, the Lithuanian central bank, for example, has introduced regulations on responsible lending. Although competition for certain groups of customers has increased, which has led to higher credit limits for these customers, the demand for loans is not expected to increase significantly as write-downs of impaired loans still exceed the issue of new loans. If investment is to increase, both the households and the companies must become more optimistic about the future development of the economy, and the households’ incomes and the companies’ earnings must increase more persistently.

It is expected that the creditworthiness and debt servicing ability of the borrowers in the Baltic countries will continue to be weak. The reason for this is that growth prospects for the period ahead have declined as a result of the sovereign debt crisis in the euro area. Although the figure for late payments as a percentage of total borrowing has fallen somewhat, it is still high in all three countries compared to the years before the crisis (see Chart 3:21). However, the borrowers in the Baltic countries are supported by the low level of interest rates and interest rates are not expected to rise significantly in the period immediately ahead, which means that the borrowers’ debt servicing ability may gradually improve. However, there is a risk that the real economy will be hit harder than expected by the downturn abroad, which would have a negative impact on the ability of the borrowers to service their debts.

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64 See Lending Review, December 2011, Eesti Pank; Bank Lending Survey, January 2012, Latvijas Banka; Lending survey, October 2011, Lietuvos bankas.
It is important that Latvia and Lithuania retain market confidence so that they are able to continue to get funding on the international capital markets. Both of these countries have major loans that will fall due over the next few years and that must be refinanced. However, since the summer of 2011 market conditions have been relatively favourable for the two countries, and both Latvia and Lithuania have issued long-term government bonds since the turn of the year. This can be compared to the difficult funding conditions that countries with weak public finances have faced during the same period.

**POLAND**

The risk of loan losses stemming from lending to Polish households is expected to decline as a result of the European Systemic Risk Board’s (ESRB) recommendation to reduce the banks’ lending in foreign currencies. The ESRB issued the recommendation in the autumn of 2011 to reduce the currency risks associated with this type of lending in countries where the borrowers have substantial loans in foreign currencies but incomes in the domestic currency. As a result of this recommendation, the banks’ interest rate margins for lending to small and medium-sized companies in Poland have increased and the Polish households are subject to stricter conditions now that they can no longer borrow in foreign currencies. This is probably one of the reasons to why Polish households’ borrowing in foreign currencies, as a share of total borrowing, has declined somewhat since the autumn of 2011 (see Chart 3:22).

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65 Latvia was upgraded to BBB- by Standard & Poor’s on 2 May 2012.
67 In 2011, approximately 85 per cent of the lending in foreign currencies to Polish households was in Swiss francs. Among the Swedish banks it is mainly Nordia which is active in Poland.
Deleveraging in the European banking sector  – background and potential consequences

Deleveraging in the European banking sector is a matter that has recently come increasingly into focus now that banks around the world are to increase their equity to fulfil new capital adequacy requirements. The reduction of risk-taking by the banks in this way is a necessary development and a condition for increased stability in the financial system. At the same time, there is concern in several quarters that deleveraging may be too fast and uncontrolled and that this in turn may threaten the economic recovery of Europe. Experiences of other crises show, however, that deleveraging need not have such great consequences for the economy if the underlying problems in the banking sector are dealt with at the same time.

This box focuses on deleveraging in the banking sector68: how it is done, the factors that drive ongoing deleveraging in Europe and the consequences this may have.

Substantial build-up of debt before the crisis

In the years before the start of the global financial crisis in 2008, there was a substantial increase in banks’ corporate and retail lending in Europe. Development was driven partly by low interest rates, generous credit terms and a good economic climate. The increased lending meant a rise in banks’ assets. Equity, however, did not increase to the same extent. Instead, assets were mainly funded by wholesale funding. This meant that bank debt in relation to equity, leverage, rose and equity in relation to assets, capital adequacy69, deteriorated.

Since market funding is a relatively cheap source of funding, the banks could increase their profitability more than would have been possible if they had only used equity and retained profits. However, this meant that they were exposed to greater risk. At the outbreak of the global financial crisis the banks lacked sufficient capital to cope with the losses that arose.

What is deleveraging and how is it done?

There is no unequivocal definition of deleveraging. But in somewhat simplified terms it is a matter of reducing leverage and increasing capital adequacy in a bank. Another way of describing deleveraging is that the share of loan-funded assets is to decrease and the share of equity-funded assets is to increase. To strengthen capital adequacy the bank must acquire more capital, either through a new issue or by reducing its assets. In principle a bank can reduce its assets by reducing its retail and corporate lending or by selling other assets.

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68 Deleveraging can also be implemented by non-financial companies, households and states.
69 Capital adequacy means the size of the banks’ capital in relation to risk-weighted assets. However, the definitions of capital and risk-weighted assets vary. Having a large share of funding through loans means, by definition, that the share of capital is low.
The consequences of deleveraging depend on which of these strategies the bank decides on. If it decides to increase capital adequacy by increasing capital, this will have minor consequences for the real economy. If, on the other hand, the bank rapidly reduces its lending to creditworthy households and firms, carrying out credit tightening, this could have a negative impact on GDP. A negative effect on GDP is particularly likely if a majority of banks carry out credit tightening simultaneously. If a bank with cross border operations also restricts its operations in other countries to focus on its domestic market, those other countries can also be affected. Deleveraging can also have negative effects if the bank is forced to sell assets at an undervalued price. In such a case, major losses can be incurred, which will impair the bank’s capital adequacy instead of improving it.

Deleveraging in Europe

Many people have expressed concern that the European Banking Authority (EBA) recommendation will mean that the European banks will strengthen their capital adequacy by reducing their assets at a rate that is too fast and uncontrolled – which would have negative consequences for economic recovery.70 A sign that this is happening could be that banks’ lending to the private sector was considerably dampened in 2011 and that lending is now falling in the countries with the most serious sovereign debt problems (see Chart B3:1). In its latest Global Financial Stability Report, the International Monetary Fund (IMF) has pointed out that there is a risk that deleveraging will be greater than expected, given the uncertain economic development in Europe.71 In addition, there is concern that the European banks will reduce their exposures to countries in Central and Eastern Europe. This could entail negative consequences for economic development in these countries. The fears that deleveraging will take place too quickly have also been supported by the fact that the European banks’ access to funding deteriorated in 2011. Lack of funding could lead to a rapid reduction in lending by the banks, so that not even creditworthy households and firms would be able to obtain credit. To facilitate the banks’ funding and provide support for banks’ lending to the real economy, the ECB offered three-year loans to banks operating in the euro area (see Chapter 2).

It is likely that these loans have made the credit crunch less severe than would otherwise have been the case. One factor indicating that concern for too rapid deleveraging through a credit crunch is exaggerated is the capital plans the banks have sent to the national supervisory authorities and the EBA. In the capital plans, the 31 banks that need to strengthen their capital adequacy present an account of how they plan

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70 To strengthen the European banking sector, the European Banking Authority (EBA) has issued a recommendation that all banks in the EU need to have capital adequacy of at least nine per cent by 30 June 2012. The capital requirement refers to core Tier 1 capital calculated in accordance with the transitional regulations in Basel I. To achieve nine per cent, the capital adequacy in the European banking sector needs to be strengthened by EUR 115 billion, according to EBA calculations.

to fulfil the capital adequacy requirement by no later than 30 June 2012. The plans make clear that the banks only have a very limited intention of strengthening capital adequacy by reducing lending.\textsuperscript{72} Furthermore, demand for credit is low in the euro area. Both households and companies were highly indebted when they entered the crisis and have a greater need to repay their debts than to increase their borrowing. This process may take many years.

**Deleveraging is a condition for a more stable financial system**

In many cases, deleveraging could be a prolonged and painful process with many years of weak growth, high unemployment and poor public finances. This can be seen, for example, from Japan’s experiences in the crisis of the 1990s. There are several reasons for the protracted economic recovery in Japan, but one strong contributing factor was the Japanese authorities’ unwillingness to manage the banks’ problem loans. If the assets had instead been valued at their real, lower value, it would have been obvious that the Japanese banks were undercapitalised. However, there was a widespread awareness of this problem, which meant that investor confidence in the Japanese banks was low and the banks found it difficult to obtain funding. This meant that the banks’ possibilities of increasing lending to households and companies were limited.\textsuperscript{73}

In contrast, deleveraging in Sweden in conjunction with the banking crisis of the 1990s was a relatively rapid process (see Chart B3:2), which was largely due to the fact that the authorities were swift to acknowledge and manage the problems in the banking sector.\textsuperscript{74} In the same way, an unwanted credit crunch could be avoided in the Baltic countries in conjunction with the financial crisis of 2008, even if the banks’ lending in these countries is undoubtedly still falling (see Chart B3:3). However, this is because demand from households and companies in the region is still weak, rather than because the banks are tightening their lending. The Riksbank’s provision of liquidity to the Swedish banks active in the Baltic countries gave Nordea, SEB and Swedbank time to manage the situation. The banks acquired more capital via new issues and made the write-downs of loans necessary to maintain credibility in the Baltic countries. These measures meant that they received access to wholesale funding within a relatively short time. The banks could thereby maintain lending to their Baltic subsidiaries and the Riksbank could start to wind up its extraordinary loans in the autumn of 2010.

The European banks’ access to funding was similarly eased, at least temporarily, by the ECB’s three-year loan. This has augmented the banks’ ability to provide the private sector with credit and given them some time to strengthen their own balance sheets. In short, the banks can use this

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\textsuperscript{72} Only one per cent of the planned measures for the strengthening of capital adequacy are calculated to come from reduced lending.

\textsuperscript{73} See “Global recession”, Financial Stability Report 2009:1, Sveriges Riksbank.

opportunity to strengthen capital adequacy, increase the transparency of the assets held and bear any losses. They will not be able to regain the confidence of the financial markets until their debts have been reduced, their capital has increased and investors are able to make a reasonable assessment of their assets. This, in turn, forms a prerequisite for a more stable financial system and the basis for a sustainable recovery of the real economy in Europe.
4. Developments at the Swedish banking groups

The Riksbank’s assessment is that the major Swedish banks are financially strong at present. They have stable earnings and low loan losses. From an international perspective, the major Swedish banks are also well-capitalised. This has been one of the reasons why their access to market funding has been good despite the financial unease in the euro area. The fact that the Swedish banks only have limited exposures to the euro-area countries with sovereign debt problems has also contributed to this.

The major Swedish banks have also worked actively to reduce their liquidity risks and have thus strengthened their resilience to stress on the financial markets. However, the major banks still use wholesale funding to a great extent – funding which, in addition, is often in foreign currencies. This makes them vulnerable to disruptions on the financial markets.

The Swedish banking sector is dominated by the four major banks Handelsbanken, Nordea, SEB and Swedbank. Together the four banks account for about three-quarters of the lending to the Swedish public and for approximately the same proportion of deposits. This means that these banks play a decisive role with regard to the supply of credit and other important functions in the Swedish financial system.

The total assets of the major Swedish banks at home and abroad are four times Sweden’s GDP. Compared to other countries, Sweden thus has a large banking sector in relation to the size of the national economy (see Chart 4:1). This is partly because a considerable proportion of the major banks’ operations are conducted abroad (see Chart 4:2). For example, Nordea’s assets abroad constitute a large part of Sweden’s total banking assets.

As the domestic and foreign operations of the banks are closely interlinked problems in a subsidiary abroad can easily spread to the Swedish parent company. The Riksbank’s analysis thus covers the banking groups, which include both domestic and foreign operations.75

The chapter begins with a review of the major banks’ earnings and profitability. This is followed by a description of their lending and their credit risks and a section on the banks’ capital. The chapter concludes with a description of the banks’ funding and their liquidity risks.

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75 Hereinafter, the term Swedish banks refers to Handelsbanken, Nordea, SEB and Swedbank banking groups unless otherwise specified.
Earnings and profitability

The major Swedish bank’s earnings, that is profits before loan losses, have been stable over the last 12 months (see Chart 4:3). The low interest rates recently have squeezed the part of the banks’ net interest income that stems from their deposits, but this has been counteracted by higher lending margins and increased volumes for both deposits and lending (see Chart 4:4). All-in-all, this has resulted in a slight increase in net interest income, which is the most important income item for the banks.

The banks’ profitability measured as return on equity has declined in recent quarters (see Chart 4:5). Profitability is still higher than in 2009 and 2010, but lower than the average measured since 2001, which is just under 15 per cent. Return on equity can be divided up as follows:

\[
\text{Return on equity} = \frac{\text{Net profit}}{\text{Equity}} = \left( \frac{\text{Profit before loan losses}}{\text{Liabilities}} \times \frac{\text{Liabilities}}{\text{Equity}} - \frac{\text{Loan losses}}{\text{Equity}} \right) \times (1 - \text{Tax rate})
\]

The breakdown above and Table 4:1 show that one of the reasons for the decline in return on equity is that since 2009 the banks have had lower leverage than before the financial crisis of 2008. The explanation for this is that the banks have increased the proportion of equity in relation to their liabilities, partly through capital injections. This is in order to adapt to demands for higher capital levels from the authorities as well as from the banks’ investors.
Table 4.1. The major Swedish banks’ return on equity

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>ROE at CET 1 ratio of 12 per cent</th>
<th>ROE at CET 1 ratio of 14.5 per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Profit margin (Profit before loan losses /Liabilities)</td>
<td>1.0%</td>
<td>1.0%</td>
<td>0.9%</td>
<td>0.9%</td>
<td>0.8%</td>
<td>0.8%</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>B. Leverage (Liabilities/equity)</td>
<td>25</td>
<td>25</td>
<td>25</td>
<td>23</td>
<td>23</td>
<td>22</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>C. ROE before loan losses and tax (A*B)</td>
<td>26%</td>
<td>25%</td>
<td>22%</td>
<td>20%</td>
<td>17%</td>
<td>18%</td>
<td>21%</td>
<td>18%</td>
</tr>
<tr>
<td>D. Loan losses/Equity</td>
<td>0.4%</td>
<td>-0.3%</td>
<td>-3.1%</td>
<td>-11.6%</td>
<td>-3.0%</td>
<td>-0.9%</td>
<td>-3.2%</td>
<td>-2.8%</td>
</tr>
<tr>
<td>E. ROE before tax (C+D)</td>
<td>26%</td>
<td>25%</td>
<td>19%</td>
<td>8%</td>
<td>14%</td>
<td>17%</td>
<td>18%</td>
<td>15%</td>
</tr>
<tr>
<td>F. 1-Tax rate</td>
<td>80%</td>
<td>80%</td>
<td>79%</td>
<td>60%</td>
<td>74%</td>
<td>76%</td>
<td>75%</td>
<td>75%</td>
</tr>
<tr>
<td>ROE (E*F)</td>
<td>21%</td>
<td>20%</td>
<td>15%</td>
<td>5%</td>
<td>11%</td>
<td>13%</td>
<td>14%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Note: The estimates of ROE at CET 1 ratios of 12 and 14.5 per cent respectively are based on the assumptions that the return on total assets will be the same as the average for the last 10 years, i.e. almost 0.6 per cent, that the normalised loan-loss level is 0.25 per cent, that the tax rate is 25 per cent and that the risk weights for mortgages are higher than today.

Sources: Bank reports and the Riksbank

Higher capital ratios mean, all else being equal, that the banks’ profitability measured as return on equity will be lower. This relation has affected the profitability of the Swedish banks in recent years. Since the previous Financial Stability Report was published, the Riksbank has recommended that the major Swedish banks should be imposed additional capital requirements. To avoid restrictions on dividend payments, banks must have Common Equity Tier 1 (CET 1) ratios of at least 10 per cent from 2013 and 12 per cent from 2015. The banks may also be periodically required to have a countercyclical capital buffer of up to 2.5 percentage points. These requirements mean that the banks will need to have a larger proportion of equity than previously, which in turn may affect the banks return on equity.

The last columns of Table 4.1 present an estimate of the major Swedish banks return on equity at CET1 levels of 12 and 14.5 per cent. The figures in the table have been calculated on the basis of the assumption that the banks’ average return on total assets is just under 0.6 per cent, which is the average level over the last 10 years (see Chart 4.6). In addition, it has been assumed that loan losses will amount to a normalised level of 0.25 per cent of the lending and that the risk weights for mortgages will be higher than today. The results of this simple arithmetic exercise show that the banks’ return on equity would be between 12 and 14 per cent at the recommended capital ratios.

76 There is flexibility here, however, in that the authorities may set the countercyclical capital buffer at a level higher than 2.5 percentage points.
The banks have increasingly focused on increasing their earnings recently. The earnings can be increased either by reducing costs or by increasing income. In recent quarters, the banks’ costs have fallen somewhat, while their income has increased. The banks’ costs have thus fallen in relation to their income (see Chart 4:7). This is partly a result of the cost cuts that several banks have made recently to improve their profitability and thus meet the demands of the shareholders for higher returns. They have, for example, made staff cuts. The banks can also improve earnings by increasing their lending and deposit margins and charging more for products and services. However, as the resilience of the banks increases as their equity increases, it is reasonable that, in the longer run, the shareholders should reduce their required rate of return on equity. It is thus likely that the costs of the new regulatory requirements will be shared between the banks’ employees, customers and shareholders.

The fact that customers bear some of the costs for the new regulations is partly reflected in the banks’ mortgage rates. It is clear that the differences between the repo rate and the banks’ variable mortgage rates have been greater over the last 12 months than previously (see Chart 4:8). However, this change can partly be explained by the increase in the banks’ funding costs. It is a common misconception that the banks borrow money at a cost equivalent to the repo rate. However, Chart 4:8 shows that additional costs arise when the banks acquire funding. These costs can be divided into two components: costs up to the interbank rate and costs in excess of the interbank rate.

The banks’ funding costs are affected by how they choose to fund their lending. An average variable mortgage is mainly funded by covered bonds. However, covered bonds are not sufficient to fund all lending but are estimated to be enough for approximately 75 per cent. The remaining 25 per cent is provided by other funding, for example deposits from customers or senior unsecured bonds. It is assumed that the covered bonds that the banks use to fund mortgages have a maturity of four years and that just over three-quarters of the bonds are issued in Swedish kronor (see Figure 4:1). How the changes to the funding markets have affected the banks’ funding costs is discussed in the next section.

77 This relation is often explained using the so-called Modigliani-Miller theorem.
78 Variable mortgage rates refer here to rates fixed for three months.
79 According to the Association of Swedish Covered Bond Issuers (ASCB) the average maturity of new covered bonds issued by the Swedish banks in 2011 was 4.1 years.
The difference between the repo rate and the interbank rate is greater today than it was in 2008 before the financial crisis. When the crisis began the banks lost confidence in each other and risk premiums increased. As a result, interbank rates increased in Sweden and abroad. Due to the ongoing unease in the euro area, but also as a result of increased risk awareness, the difference between the repo rate and the interbank rate is still greater than it was before the crisis. This in turn has affected the banks’ funding costs, which is illustrated by the yellow field in Chart 4:8. Together with the repo rate this field constitutes the three-month interbank rate (Stibor).

Increased risk premiums are also a factor behind the increase in bond yields in relation to interbank rates. This also affects the banks’ funding costs as the banks usually finance variable mortgages with covered bonds with a fixed interest rate. This means that the fixed yield for the bonds needs to be converted into a three-month rate so that the fixed-interest reset is in line with the mortgage rate. The banks use so-called interest-rate swaps to perform this conversion. In the interest-rate swaps, the banks pay a three-month interbank rate and receive a fixed interest rate with the same period to maturity as the period the bonds are issued for. The fixed rate that the banks receive in the interest-rate swaps is usually lower than the rate they pay on the bonds. The difference between these rates constitutes a funding cost in excess of the interbank rate (see the grey field in Chart 4:8). This part of the funding cost first arose in 2008 when liquidity-risk and credit-risk premiums increased. The developments outlined in the red, yellow and grey fields in Chart 4:8 have thus together contributed to an increase in the banks’ total funding costs since 2008. Since the previous Financial Stability Report was published, the banks’ funding costs, however, have dropped slightly.

Increased gross margins on mortgages have also contributed to an increase in lending rates in relation to the repo rate (see Chart 4:9 and the blue field in Chart 4:8). The gross margin constitutes the difference between a bank’s lending rate and its funding costs. However, the gross margin is not the same as the bank’s profit on mortgages as there are other costs in addition to the funding costs.
These include, for example, administration costs and tax. There is also the cost of holding a liquidity reserve, which is a cost that has increased as the banks have begun to adapt to the approaching introduction of new international regulations (Basel III). The increased liquidity costs have partly been passed on to the banks’ customers. In order to monitor developments in this field, Finansinspektionsen has been commissioned by the government to investigate to what extent the banks have adjusted to the new requirements and what impact this has had on households and companies. This assignment also includes investigating the banks’ profit margins on mortgages.80

The net margin can be equated to the banks’ profits on mortgages. This margin is what remains of the gross margin once the other costs, including costs for the liquidity reserve, have been taken into account. The Riksbank has estimated the banks’ net margins by calculating the banks’ borrowing costs for new variable mortgages and estimating the other costs associated with this lending (see Table 4:2). In this estimate, the banks’ costs for the other funding are assumed to correspond to the three-month interbank rate (Stibor).81 If the average level of the banks’ lending rates, i.e. 3.8 per cent, is set against the current borrowing costs of 2.7 per cent, this gives a gross margin of approximately 1.1 per cent. That which remains after the other costs have been taken into account is the net margin. In Table 4:2, the banks’ net margins on new mortgages are estimated to be approximately 0.4 per cent at present. This means that a bank that lends SEK 1 million earns around SEK 4,000 on the mortgage during the course of a year. This corresponds to a return on equity of 22 per cent, which can be related to the return on equity on the banks’ total operations, that on average amounted to just under 15 per cent since 2001.82

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80 See Bankers räntor och utlåning (The banks’ interest rates and lending), 24 May 2012, Finansinspektionsen.

81 The banks may choose to internally allocate their borrowing in different ways. Other funding may consist of deposits from customers, which is a relatively inexpensive source of funding, and of unsecured bonds, which are a relatively expensive source of funding. In the Riksbank’s calculations it is assumed that the costs for other funding correspond to the three-month Stibor rate.

82 This is according to calculations made by Finansinspektionsen that are based on risk weights at 15 per cent and capital requirements of 12 per cent. See page 15, Bankers räntor och utlåning, 24 May 2012, Finansinspektionsen.
### Table 4.2. Estimate of costs and net margin for new mortgages with three-month fixed rate
May 2012, per cent

<table>
<thead>
<tr>
<th>A</th>
<th>Lending rate</th>
<th>3.8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Calculated funding cost for a mortgage</strong></td>
<td><strong>Share of funding</strong></td>
<td><strong>The banks’ cost of funding</strong></td>
</tr>
<tr>
<td>Covered bonds in SEK</td>
<td>60</td>
<td>x</td>
</tr>
<tr>
<td>Covered bonds in EUR</td>
<td>15</td>
<td>x</td>
</tr>
<tr>
<td>Other funding</td>
<td>25</td>
<td>x</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td><strong>Funding cost</strong></td>
<td>2.7</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td><strong>Gross margin (A-B)</strong></td>
<td>1.1</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>Overheads</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>E</strong></td>
<td>Tax cost</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Net margin (C-D-E)</strong></td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

Note: The lending rate in Table 4.2 does not correspond to the list price but is the actual interest rate that the banks’ customers have paid for new mortgages in May 2012. The covered bonds that fund the mortgage are assumed to have a maturity of four years and the cost of other funding corresponds to the three-month Stibor. The overheads consist of costs for holding liquidity (0.15%), administrative costs (0.30%) and costs for expected loan losses (0.05%). The funding cost is illustrated by the red, yellow and grey fields in Chart 4:8 and the gross margin by the blue field.

Source: The Riksbank

The banks’ earnings on mortgages can also be seen in terms of net interest income. The net interest income from the major Swedish banks’ mortgage operations currently accounts for just over 10 per cent of their total net interest income (see Chart 4:10). This can be seen in relation to the fact that Swedish mortgages make up around one quarter of the major banks’ lending to the public. The banks thus probably earn more from many other types of loan than from mortgages. However, other types of loan also entail higher costs and larger loan losses for the banks than mortgages do (see Chart 4:15). In addition, other types of loans have higher risk weights, which means that they require a larger proportion of equity. However, it is difficult to estimate the banks’ profitability by taking only a single product into account. In order to make a correct estimate one should instead include all of the products and services the banks provide to a customer and take the pricing of all of these products and services into account. Using earnings from deposits, mutual funds or debit cards banks can for example give a mortgage rate discount.

### Chart 4:10. The Swedish major banks’ volumes and earnings on mortgages
Per cent

<table>
<thead>
<tr>
<th>Swedish mortgage lending as percentage of banks’ total lending to the public</th>
<th>Net interest income from Swedish mortgage lending as percentage of total net interest income</th>
<th>Net interest income from Swedish mortgage lending as percentage of total income</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

Sources: Banks reports, Statistics Sweden and the Riksbank.
Lending and credit risk

The credit risk is the greatest risk on the asset side for the major Swedish banks. This is because three-quarters of the assets consist of lending to the public and credit institutions and of interest-bearing securities. The banks also have assets that are exposed to market risk. However, this risk constitutes a significantly smaller part of the total risk.

LENDING

The major part of the banks’ lending relates to loans in the Nordic countries. The geographical distribution of the lending differs, however, from bank to bank. Nordea has a relatively small proportion of its total lending in Sweden but is the bank that has the largest proportion of its lending in the other Nordic countries (see Table 4:3). Swedbank and SEB are the two banks that have the largest proportion of their lending in the Baltic countries, but Nordea also has part of its lending there. In the case of Swedbank and SEB, lending in the Baltic countries accounts for 9–10 per cent of their total lending.

Table 4:3. The geographical distribution of the major Swedish banks’ lending, March 2012
Per cent of the respective banks’ lending to the public and SEK billion

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>66</td>
<td>24</td>
<td>71</td>
<td>87</td>
<td>51</td>
</tr>
<tr>
<td>Norway</td>
<td>12</td>
<td>17</td>
<td>2</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Denmark</td>
<td>4</td>
<td>22</td>
<td>1</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Finland</td>
<td>6</td>
<td>24</td>
<td>1</td>
<td>&lt;1</td>
<td>12</td>
</tr>
<tr>
<td>The Baltic countries</td>
<td>0</td>
<td>2</td>
<td>9</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>- Estonia</td>
<td>0</td>
<td>&lt;1</td>
<td>3</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>- Latvia</td>
<td>0</td>
<td>&lt;1</td>
<td>2</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>- Lithuania</td>
<td>0</td>
<td>&lt;1</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Poland</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>&lt;1</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Other countries</td>
<td>5</td>
<td>10</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Lending to the public, SEK billion</td>
<td>1,627</td>
<td>3,014</td>
<td>1,201</td>
<td>1,213</td>
<td>7,055</td>
</tr>
</tbody>
</table>

Note. Lending to other countries also includes lending that cannot be related to any specific country.
Sources: Bank reports and the Riksbank
The major Swedish banks' have only limited exposures to countries in the euro area with sovereign debt problems. In total, the four major Swedish banks' exposures to the central governments and public sectors in Greece, Italy, Ireland, Portugal and Spain amount to SEK 1.7 billion. The respective banks' exposures to the central governments and public sectors in these countries constitute 0-0.7 per cent of each bank's Core Tier 1 capital (see Table 4:4).

<table>
<thead>
<tr>
<th>Country</th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greece</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Italy</td>
<td>0</td>
<td>1,017</td>
<td>298</td>
<td>144</td>
<td>1,459</td>
</tr>
<tr>
<td>Ireland</td>
<td>0</td>
<td>72</td>
<td>0</td>
<td>0</td>
<td>72</td>
</tr>
<tr>
<td>Portugal</td>
<td>0</td>
<td>0</td>
<td>27</td>
<td>27</td>
<td>54</td>
</tr>
<tr>
<td>Spain</td>
<td>0</td>
<td>126</td>
<td>0</td>
<td>15</td>
<td>141</td>
</tr>
<tr>
<td>Total</td>
<td>0</td>
<td>1,215</td>
<td>298</td>
<td>190</td>
<td>1,703</td>
</tr>
</tbody>
</table>

Note 1. Net exposures after any deductions for export credit guarantees, netting agreements and collateral agreements (credit support annex, CSA).
Note 2. The record days for exposures are 30 April 2012 for Handelsbanken and SEB, 31 March 2012 for Nordea and 16 May 2012 for Swedbank.
Sources: Finansinspektionen and the Riksbank

The Swedish banks' lending in the Baltic countries has declined since the autumn of 2008 (see Chart 4:11). At the end of the third quarter 2008 it totalled approximately SEK 420 billion. Lending has fallen by almost one third since then. At the end of the first quarter of 2012 lending amounted to SEK 295 billion, of which SEK 111 billion was in Estonia, SEK 81 billion in Latvia and SEK 102 billion in Lithuania. The fall in lending is partly because some of the loans have led to loan losses. But the main reason is that the demand for loans has declined because the economic situation is still weak in the Baltic countries. Despite the fact that the Swedish banks have reduced their lending since the autumn of 2008, their total market share of lending has remained largely unchanged in the Baltic countries (see Chart 4:12).
CHAPTER 4

Chapter 4: The major Swedish banks’ loan losses
Percentage of lending at the start of the respective quarters

CREDIT RISK

The loan losses of the Swedish banks are still at a low level (see chart 4:13). The banks have been able to limit their loan losses thanks to major recoveries and reversals of earlier provisions over recent quarters. Total credit losses amounted to just over SEK 6 billion over the last four quarters, which corresponds to 0.09 per cent of the banks’ total lending to the public.

However, loan losses increased somewhat during the last two quarters due to loan losses from the shipping industry and lending in Denmark (see Chart 4:14). This mainly affected Nordea which presented relatively large loan losses from the shipping industry, equivalent to a loan-loss level of almost 2 per cent. In Denmark, the loan losses stem from lending to households and to small and medium-sized companies. Loan losses from the Baltic countries remain low. Reversals and recoveries in the Baltic countries have been greater than new provisions for loan losses and actual loan losses, which have had a positive impact on the banks’ profits in recent quarters.

Loan losses from the banks’ operations in the Nordic countries, with the exception of Denmark, have remained relatively stable over the last four quarters. In Sweden, loan losses from mortgage lending are largely non-existent – loan losses from mortgages were not particularly high even during the Swedish banking crisis of the 1990s (see Chart 4:15).

The proportion of impaired loans has continued to decline (see Chart 4:16). In total, impaired loans amounted to 1.4 per cent of the major banks’ gross lending. Almost half of the impaired loans stem from the Baltic countries where above all SEB and Swedbank have part of their lending. Debt servicing ability has, however, improved somewhat in the Baltic countries recently, primarily in the corporate sector. The inflow of new impaired loans has thus decreased. In addition, an increasing number of borrowers have once again begun to make interest and amortisation payments on their loans. Some of the impaired loans have thus become performing loans for which the customers are now able to meet their commitments.
Swedish banks are well capitalised in an international comparison (see Chart 4:17). Since the autumn of 2008, the Swedish banks have taken several measures to increase their capital ratios (see Chart 4:18). They have, for example, increased their capital with the help of retained earnings. Three of the banks also conducted rights issues in 2008 and 2009. The banks have also reduced their risk-weighted assets in several ways. For instance, the proportion of corporate loans, which have a relatively high risk weight, has declined in favour of mortgages, which have a much lower risk weight. In addition, lending in countries with a higher credit risk and thus a higher risk weight, for example the Baltic countries, has declined. The banks have also reclassified parts of their loan portfolios so that a larger proportion of the assets are risk classified on the basis of the banks’ own internal ratings-based models instead of on the basis of predetermined standardised methods. This has led to a reduction in risk weights despite the fact that the actual credit risk remains unchanged.

Although the increase in Core Tier 1 ratios is due both to an increase in capital and a decrease in the risk-weighted assets, the proportion of capital in relation to total assets has in general increased or remained unchanged over time (see Chart 4:19).

As a result of the historically-low loan losses, the risk weights for Swedish mortgages are among the lowest in Europe (see Chart 4:20). There are a number of explanations for the low loan losses. The first is that the Swedish social insurance system is relatively extensive. This means that most people will be able to continue paying the interest on their mortgages even if they become unemployed or sicklisted. Secondly, most households with mortgages have two incomes – if one member of the household becomes unemployed there is still one income to fall back on. Thirdly, it is unusual to buy a house or flat with the intention of renting it out – people own their houses to live in them, not for the purposes of speculation. Fourthly, private individuals have a considerable responsibility to make the interest and amortisation payments on their loans, which means that bankruptcy is not a viable option for individuals to get rid of their debts.

However, there is reason to question the low risk weights for Swedish mortgages. As mentioned above, the social insurance system is one of the reasons why the debt servicing ability of the household sector has been relatively good. This may mean that the banks lack incentives to fully take into account the risks associated with a substantial expansion of credit and high loan-to-value ratios. The risk weights may therefore be too low in a broader economic perspective. Another reason for questioning the risk weights is that they are retrospective, and therefore do not fully take into account any risks that may have developed recently, such as the increased indebtedness of the households. Finansinspektionen is currently investigating...
various possibilities to increase the capital adequacy requirement for mortgages in Sweden in order to improve the Swedish banks’ resilience to financial crises. This will probably lead to higher risk weights for Swedish mortgages.

The implementation of new capital adequacy regulations will begin in Sweden on 1 January 2013. Under these regulations, the capital requirements governing the major Swedish banks will be tightened compared to previous regulatory frameworks and the levels in the Basel III Accord. In order for the banks to avoid restrictions on their share dividends, they must also have a buffer of CET 1 capital over and above the minimum capital requirement. The size of this buffer is partly determined by the countercyclical capital buffer, which in turn depends on how the aggregated risks in the financial system develop over time. The level of the countercyclical capital buffer should be stipulated by the relevant authorities on the basis of both quantitative and qualitative assessments. Without qualitative assessments, the countercyclical capital buffer for the major Swedish banks would have amounted to between 1.4 and 1.9 percentage points at the turn of the year 2011/2012 according to the Riksbank’s calculations (see Chart 1:11). Under the Basel III Accord, the possibility for the relevant authorities to impose countercyclical capital requirements should be implemented no later than 1 January 2016.

**Funding**

The Swedish banks have continuously reduced their liquidity risks in recent years. The reduced risks can be seen, for example in the Riksbank’s structural liquidity measure, which is similar to the Basel III measure the Net Stable Funding Ratio (NSFR) (see Chart 4:21). The improvement in the structural liquidity measure is explained by the fact that the banks have actively increased the proportion of long-term wholesale funding, that is funding at a maturity of more than one year. The Swedish banks have also increased their resilience against temporary disruptions on the financial markets by gradually increasing their liquidity buffers.

Half of the Swedish banks’ funding consists of deposits and half of wholesale funding (see Chart 4:22). Wholesale funding consists mainly of issued securities. The long-term component of wholesale funding consists of bonds, primarily covered bonds, while the short-term component mainly consists of certificates of deposits and commercial papers in foreign currencies. Borrowing on the interbank market is primarily to be regarded as a part of the banks’ short-term liquidity management, but it is also a part of short-term wholesale funding.

**Chart 4:21. The Riksbank’s structural liquidity measure for the major Swedish banks**

Stable funding in relation to illiquid assets, per cent

Note. Refers to December every year.

Sources: Liquidatum and the Riksbank

**Chart 4:22. The major Swedish banks’ funding**

March 2012, per cent

- Government-guaranteed borrowing via the Swedish National Debt Office
- Interbank, net
- Swedish covered bonds in SEK
- Swedish covered bonds in foreign currencies
- Foreign covered bonds
- Unsecured bonds
- Certificates
- Deposits

Note. The funding of the major banks amounts to approximately SEK 8,300 billion.

Sources: Bank reports and the Riksbank
In an international perspective the major Swedish banks have a relatively small proportion of deposits in relation to their lending. One explanation for this is that private mutual fund investments and savings in pension funds are widespread in Sweden. That means that a smaller proportion of household savings enter the banks directly in the form of deposits. As a result, deposits amount to only half of the lending of the major Swedish banks and therefore the banks need to use wholesale funding both with remaining maturity below and above one year to fund a large part of their lending (see Figure 4:2). As the issued debt typically has shorter maturities than the lending, this means that the mismatch between the maturity of the major Swedish banks’ assets and liabilities is relatively large.

The banks have increased their liquidity buffers as a protection against liquidity risks (see Chart 4:23). The buffers consist of deposits with central banks and of different types of securities that are expected to remain liquid even in stressed situations. These buffers are largely funded by certificates of deposits and commercial papers and most of the banks’ short-term funding is thus used to fund the buffers.

The banks’ short-term market funding is mainly in foreign currencies, primarily in US dollars. This means that the banks’ liquidity buffers are also largely funded in foreign currencies (see Chart 4:23). A large part of the short-term funding in US dollars comes from US money market funds. These money market funds have reduced their lending to European banks due to the sovereign debt problems in the euro area (see Chart 4:24). However, this has mainly affected the banks that have substantial exposures to the
countries with sovereign debt problems in the euro area. The Swedish banks, which have only limited direct exposures to these countries (see Table 4:4) have not been affected to the same extent. Overall, the Swedish banks have in fact increased their volumes of issued short term-debt in foreign currencies over the last 12 months (see Chart 4:23).

The market for covered bonds is important to the banks’ long-term wholesale funding. Approximately half of the banks’ total wholesale funding consists of covered bond issuance and the majority of these bonds are Swedish. The outstanding stock of Swedish covered bonds amounts to almost SEK 1,700 billion. Approximately 75 per cent of this sum is denominated in Swedish kronor, 20 per cent in euros and the remainder in other foreign currencies such as US dollars and Swiss francs.

Foreign investors comprise one of the largest groups of investors in Swedish covered bonds (see Chart 4:25). This can be a problem as foreign investors are typically more fickle than domestic investors in periods of financial stress. This was noticeable during the turbulent period 2008-2009 when foreign investors reduced their holdings in Swedish covered bonds by approximately SEK 120 billion. While interest in European covered bonds was low at that time, the Swedish market for covered bonds did, however, still function relatively well. As in 2008 and 2009, the Swedish covered bond market has, so far, been less affected by the ongoing financial unease compared to the European market. In some cases, the Swedish banks have even benefited as they have been seen as less risky than many other banks and have thus attracted investors.

A smaller part of the banks’ long-term wholesale funding consists of senior unsecured bonds (see Chart 4:22). These bonds are largely issued in foreign currencies and are used above all to fund lending to companies. During the final months of 2011, the market for senior unsecured bonds was more or less closed down in Europe as a result of the unease on the financial markets. However, the funding opportunities of the European banks improved at the turn of the year after the ECB increased the supply of liquidity by offering three-year loans. It therefore became possible for banks to issue senior unsecured bonds once again and all of the major Swedish banks issued such bonds during the early months of this year. During the second quarter of 2012, bond issues, however, again declined in Europe (see Chart 4:10).
In the euro area, economic developments are expected to be weak as a result of the sovereign debt crisis. The Riksbank’s assessment however is that the earnings of the major Swedish banks will increase over the forecast period 2012–2014 as a consequence of higher margins and continued growth in lending. Furthermore, the Riksbank’s main scenario assumes that the banks’ loan losses will be minor. However, there are risks that may counteract this scenario, most notably the risks arising from the debt problems marking both governments and banks in the euro area. A significant deterioration of the development of the euro area may also have an impact on existing domestic factors. For example, the banks could encounter problems with their wholesale funding if Swedish house prices were to fall rapidly and heavily as a consequence of a weakening of economic activity. However, the Riksbank’s stress tests show that the banks can cope with significantly higher loan losses than are expected in the main scenario. All in all, the major Swedish banks are assessed as having good resilience. However, they still tend to take slightly higher structural liquidity risks than many other banks in Europe.

In this chapter, the Riksbank presents its overall assessment of the development of financial stability in Sweden. On the basis of the expected development of the real economy, the financial markets and the major Swedish banks’ borrowers, the Riksbank makes a forecast for the banks’ earnings in 2012–2014.84 Following this, the risks that may lead to a weaker development are discussed. The Riksbank then uses stress tests to assess the major Swedish banks’ resilience to credit and liquidity risks.

Main scenario

Unease in the financial markets remains high. The three-year loans offered by the European Central Bank (ECB) to banks active in the euro area initially contributed somewhat to reducing the unease in the financial markets. The government bond yields of certain countries with sovereign debt problems also fell as a result of these loans. The loans were expected to ensure the banks access to liquid assets and provide support to the banks’ lending. However, despite the loans from the ECB and other measures that central banks and governments have taken, uncertainty surrounding the developments increased in several countries in the euro area during the spring (see Chapter 2).85

Economic developments in the euro area continue to be marked by the sovereign debt crisis and are expected to be weak in the coming period.86 This is partly because of necessary fiscal policy tightening, cautious companies and households, and restrained credit granting. There is an underlying need for continued deleveraging in Europe (see the box Deleveraging in the European banking sector – background and potential consequences). The weakening in the emerging economies is expected to be limited, and the forecast is for the global economy, as a whole, to

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84 The major Swedish banks are Handelsbanken, Nordea, SEB and Swedbank.
85 Risk survey spring 2012, Sveriges Riksbank, the sovereign debt problems in the euro area are cited as an important reason for why the functioning of the financial markets over the coming six months will remain unchanged.
86 The main scenario for the development of the real economy, both in Sweden and abroad, follows the Riksbank’s forecast from April. See Monetary Policy Update April 2012, Sveriges Riksbank.
The Swedish economy is now expected to grow again after the unexpectedly large GDP fall at the end of 2011. However, during the forecast period, growth is expected to be lower than was expected in the previous Financial Stability Report. Monetary policy remains expansionary both in Sweden and abroad as a result of low inflationary pressures and low resource utilisation. In the last months of 2011, housing prices fell at a faster rate than had been expected in the previous Financial Stability Report. However, in the first months of 2012, the housing market has recovered. In the main scenario, it is assumed that housing prices in Sweden will decline at a modest rate during 2012.

The major Swedish banks’ profit before loan losses is expected to increase in the period ahead. Commission income and other income are expected to increase at the same rate as the economy in general. Net interest income, which is the banks’ largest income item, is expected to increase, partly because lending to both companies and households is expected to continue to increase, and partly because the banks’ deposit margins are expected to increase at the end of the forecast period due to higher interest rates. In addition, all of the major banks have announced that costs, for example wages, are to be kept down. Lower costs in relation to income are also contributing towards the expected increase of the banks’ profits before loan losses.

In addition, the banks’ profits have been improved by the higher margins they now have in lending. This is a result of the increase in net interest income when existing home loans are renegotiated to higher interest levels, which gives the banks greater margins than previously. The margins on new mortgages, measured as net interest income in relation to the amount of the loan, have also increased recently. Compared with the margins in the existing mortgage stock, the margins on new mortgages are higher. The mortgage margin on the mortgage stock is expected to gradually approach the margin for new mortgages. All in all, both existing and new mortgages are thus expected to contribute to increased net interest income.

However, loan losses in the major Swedish banks are expected to be slightly higher in the main scenario than in the previous Financial Stability Report (see Chart 5:1). It is primarily loan losses from lending

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87 The Swedish economy is expected to grow by 0.8 per cent in 2012, by 1.9 per cent in 2013 and by 2.9 per cent in 2014 (calendar-adjusted). See Monetary Policy Update April 2012, Sveriges Riksbank.

88 Simplifying somewhat, the deposit margin is the difference between the interest a bank can earn if it invests money on the market and the interest the bank pays to a customer who has money in an account at the bank. If market rates fall, the bank will receive less interest when it invests money on the market and so the bank will also lower the deposit rate for its customers. However, interest is very low or even zero for many deposit accounts. As the bank cannot set its deposit rate for customers below zero, lower market rates will also mean lower deposit margins for the bank.
to non-financial companies and to households in Denmark that are increasing. Loan losses in the shipping sector are also expected to increase, mainly in Norway. In the Baltic countries the banks are expected to face somewhat higher loan losses (see Charts 5:2 and 5:3 and Tables 5:1 and 5:2).

Table 5:1. Loan losses in the main scenario

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
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<tr>
<td>Handelsbanken</td>
<td>0.8</td>
<td>1.5</td>
<td>1.6</td>
<td>1.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Nordea</td>
<td>6.6</td>
<td>8.3</td>
<td>7.0</td>
<td>5.7</td>
<td>21.1</td>
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<tr>
<td>SEB</td>
<td>-1.0</td>
<td>1.6</td>
<td>1.8</td>
<td>1.9</td>
<td>5.3</td>
</tr>
<tr>
<td>Swedbank</td>
<td>-1.9</td>
<td>0.5</td>
<td>1.5</td>
<td>1.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Total</td>
<td>4.6</td>
<td>11.9</td>
<td>11.9</td>
<td>10.9</td>
<td>34.8</td>
</tr>
</tbody>
</table>

Source: The Riksbank

Table 5:2. Loan losses as a percentage of lending and loan losses per year in the main scenario for the major Swedish banks

<table>
<thead>
<tr>
<th>Per cent of lending</th>
<th>SEK billion</th>
<th>Outcome 2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>0.02</td>
<td>0.07</td>
<td>0.08</td>
<td>0.08</td>
<td></td>
</tr>
<tr>
<td>Non-financial firms</td>
<td>0.16</td>
<td>0.17</td>
<td>0.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households</td>
<td>0.03</td>
<td>0.03</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Nordic countries</td>
<td>0.19</td>
<td>0.29</td>
<td>0.24</td>
<td>0.19</td>
<td></td>
</tr>
<tr>
<td>Baltic countries</td>
<td>-0.79</td>
<td>0.02</td>
<td>0.39</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>Other countries</td>
<td>0.28</td>
<td>0.26</td>
<td>0.26</td>
<td>0.26</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.06</td>
<td>0.16</td>
<td>0.16</td>
<td>0.14</td>
<td></td>
</tr>
<tr>
<td>Total loan losses</td>
<td>4.6</td>
<td>11.9</td>
<td>11.9</td>
<td>10.9</td>
<td></td>
</tr>
</tbody>
</table>

Note. A negative figure means that recoveries and reversals of earlier provisions are greater than new provisions for loan losses and realised loan losses.

Source: The Riksbank

Risks

This section presents an account of the factors that could lead to significantly less favourable developments than those described in the main scenario. The main risk comes from developments in the euro area. The problems in the euro area stem from the fact that competitiveness has worsened in several countries that at the same time have faced problems with their public finances. Many banks also have a low capital adequacy. Significantly less favourable developments in the euro area could impact Sweden’s financial stability by causing problems with the banks’ wholesale funding and through a more negative phase of the economic cycle, which could ultimately lead to increased loan losses. There are also risks in Sweden, Denmark and the Baltic countries that could impact financial stability, but these are mainly deemed to be dependent on developments in the euro area.

89 In the Riksbank’s Risk Survey, Spring 2012, the participants consider that the greatest risk that economic policies abroad may have negative consequences for the Swedish financial system will be within the coming six months.
The primary risk is that the euro area will suffer a financial shock that leads to a deep and prolonged recession. One potential factor that could trigger this is for instance if several countries need support packages and investors begin to question the general economic development or budget discipline both in these countries and in countries that already have support packages. Unease in the financial markets would then probably increase. This, in turn, would make funding both expensive and difficult to obtain for both states and banks in the region. In this case, the Swedish banks would probably face both problems with wholesale funding and increased loan losses. In addition to the risk of a financial shock, the situation in the euro area may deteriorate from an already vulnerable position due to certain unwanted effects arising in conjunction with the provision of three-year loans by the ECB:

- **The incentive for euro area banks to increase their capital adequacy may have been weakened.** In that the ECB provides a large part of the banks’ funding requirements, their dependence on private investors is decreasing. These would probably have demanded greater transparency and higher capital adequacy to lend money. The banks have also, to a certain degree, used loans from the ECB to purchase high-interest bonds issued by other banks or states that, in turn, may face problems later. The connection between banks in a vulnerable capital situation and states with sovereign debt problems has thus become stronger. In turn, less favourable conditions for the states would mean less favourable conditions for the banks – and vice versa.

- **The conditions for a normally-functioning market for unsecured bonds in the euro area may have deteriorated slightly due to the ECB’s three-year loans.** When a bank pledges assets to the ECB as collateral, this reduces the assets that can be used to pay the holders of unsecured bonds in the event of default. Furthermore, as the investors are also unable to determine which assets have been pledged by the bank to the ECB, uncertainty over the change in risk in unsecured bonds increases. This can mean that, in the future, investors will be less willing to buy the banks’ unsecured bonds.

A deep and prolonged recession in the euro area could lead to a rapid deterioration in economic activity in Sweden, which could also affect Swedish housing prices. If housing prices fall quickly at the same time as there is considerable unease in the financial markets, the Swedish banks’ access to wholesale funding could deteriorate. This is partly because the demand for covered bonds may decline, and partly because other wholesale funding could become more expensive if investors in general want to reduce their exposures to the Swedish banking sector. But this would be a case of liquidity problems, and not a solidity problem (see Chapter 3). A severe fall in housing prices...
could also have a negative effect on macroeconomic stability. This is because households can choose to reduce their consumption, which would ultimately increase the banks’ loan losses from lending to the corporate sector, primarily from small and medium-sized enterprises. However, the Riksbank assesses that the debt-servicing ability of the Swedish household sector is good and Finansinspektionen’s Mortgage Report shows that Swedish mortgage borrowers can manage stringent stress tests.90 Nevertheless, international experience shows that rapid changes in housing prices when households have a high debt level have often been linked to increasing risks to macroeconomic instability.91 Moreover, participants in the Swedish fixed-income and foreign-exchange markets consider that a scenario where Swedish households are unable to service their debts is unlikely. However, they believe that if this were to occur the consequences for the financial system would be very serious.92 It is therefore not possible to say with certainty what effects falling house prices in Sweden could have on the financial system.

A deterioration of developments in the euro area may also impair Latvia’s and Lithuania’s chances of obtaining funding on the international capital markets. Both countries have a great need for funding to cover their deficits in sovereign debt and current accounts. In addition, Latvia must start to repay its loans from the IMF this year and repayments of loans from the EU are to start next year. So far, these countries have managed to obtain funding on the market; Latvia’s funding needs for 2012 have been covered, while Lithuania has covered about half of its funding needs for 2012. Low levels of sovereign debt and the fact that the Baltic countries have already demonstrated that they can reduce their budget deficits are factors that have probably contributed to the recovery of investor confidence for the countries. However, in recent years, growth has been driven by exports, while domestic demand has been weak. If domestic demand does not recover or if the crisis in the euro area deepens, growth in the Baltic countries may again weaken. In such a situation, it would be important that investors do not lose confidence in Latvia’s and Lithuania’s fiscal policies.

The Danish economy could also be affected by poorer developments in the euro area. This is because the Danish economy is already weak to begin with. For example, most indications are that loan losses will continue to increase in the Danish banks (see Chapter 3). Combined with significantly poorer developments in the euro area, this could, in turn, mean that the credit ratings for the banks could be lowered further and that more banks could encounter problems in obtaining funding on the markets. Higher funding costs would push up the interest rates quoted to customers and put further pressure on already weakened

91 See World Economic Outlook, April 2012, International Monetary Fund (IMF).
92 See Risk survey spring 2012, Sveriges Riksbank.
borrowers. Loan losses would then probably increase even more, as would the risk that the Danish government would have to inject more capital into the Danish banking sector. As the Nordic-Baltic banking systems are highly integrated, problems and reduced confidence in the banking system of one country can easily spread to other countries in the region.

**Stress tests of the banks’ resilience**

The Riksbank conducts regular stress tests to assess the banks’ resilience to unexpected serious negative events. This section deals first with a stress test of contagion risks associated with the major banks’ exposures to each other and other major market participants – these are known as counterparty exposures. It then describes the result of a stress test of the banks’ capital in a scenario in which loan losses increase substantially. Finally, the Riksbank presents two measures of how the banks’ liquidity situation is affected in stressed situations.

**COUNTERPARTY EXPOSURES – CONTAGION RISKS**

The major Swedish banks’ central role in the financial system means that they have considerable loans and commitments to each other, to other banks, and to individual firms. These are known as counterparty exposures. If a bank experiences problems and suspends payments, this can lead to significant losses for the bank’s counterparties. Counterparty exposures can in that way give rise to contagion risks. By limiting their counterparty exposures and requiring collateral for their loans, the banks can, however, reduce contagion risks. To assess the risk of contagion, the Riksbank investigates how much each major bank’s Tier 1 capital ratio would be changed if the bank were to lose one or more of its large exposures. The tests are based on data on the major banks’ 15 largest counterparty exposures, which the Riksbank compiles per quarter.93

The Riksbank’s stress test shows that the direct contagion risk via counterparty exposures in the Swedish banking system has decreased (see Chart 5:4). The banks cope with the test significantly better than they did in the period prior to 2008. This is primarily because the banks have increased their Tier 1 capital ratios at the same time as the largest counterparty exposures have decreased. However, the stress test is a static test that only looks at the consequences of an isolated event. Consequently, it does not consider the indirect contagion risks that may arise in the form of funding difficulties for other banks if a Swedish bank were to suspend its payments.

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93 See also “The Riksbank’s counterparty data” in the Financial Stability Report 2008:2, Sveriges Riksbank.
STRESS TEST OF THE BANKS’ RESILIENCE TO INCREASED LOAN LOSSES

The stress test of the banks’ resilience illustrates how the major Swedish banks’ capital adequacy could be affected if loan losses increased substantially compared with the loan losses in the main scenario.

The macroeconomic scenario in the stress test reflects significantly weaker development than in the main scenario. The scenario should be seen as a possible development, given that the sovereign debt crisis in the euro area deepens and triggers a severe setback to economic activity. In turn, this could lead to one or more of the risks identified so far in this chapter being realised. In Sweden and the countries in which the Swedish banks are operating in, growth is thus assumed to be negative for several years (see Table 5:3). The lower level of economic activity means both lower earnings for companies and lower incomes for households. In addition, it is assumed that unease in the financial markets will increase and that the risk premium will rise. This means that the banks’ borrowers will face higher interest rates (see Table 5:4). The higher interest rate situation means that both households and companies will find it more difficult to meet interest and amortisation payments, which, in turn, will lead to increasing loan losses for the banks (see Table 5:5). A scenario like that sketched in the stress test could become reality if the deepened fiscal crisis in the euro area were to lead to a period of serious financial unease. Chart 5:5 and Tables 5:3, 5:4, 5:5 and 5:6 describe how GDP, expected default frequency, interest rates and loan losses develop in the stress scenario.

Table 5:3. GDP growth in the stress test, main scenario in brackets

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<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
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</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>-0.8</td>
<td>-2.8</td>
<td>-2.7</td>
</tr>
<tr>
<td></td>
<td>(0.8)</td>
<td>(1.9)</td>
<td>(2.9)</td>
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<tr>
<td>Other Nordic Countries</td>
<td>-3.1</td>
<td>-3.9</td>
<td>-1.6</td>
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<tr>
<td></td>
<td>(1.1)</td>
<td>(1.4)</td>
<td>(2.0)</td>
</tr>
<tr>
<td>The Baltic countries</td>
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<td>-7.4</td>
<td>-6.5</td>
</tr>
<tr>
<td></td>
<td>(1.0)</td>
<td>(2.6)</td>
<td>(3.3)</td>
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</tbody>
</table>

Note. Other Nordic countries refers to Denmark, Finland and Norway.
Source: The Riksbank

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94 The macroeconomic scenarios forming the basis of the stress tests have been constructed by the European Banking Authority (EBA). Scenarios for nine countries (Sweden, Norway, Denmark, Finland, Germany, the United Kingdom and the Baltic countries) were used in the stress tests of the major Swedish banks. The variables included are GDP, unemployment, the interest rate on a 3-month treasury bill and a 10-year treasury bond rate, investments and disposable income. The EBA only formally provides macro scenarios for GDP, unemployment and a short-term nominal rate. Using these as a basis, the Riksbank then constructs scenarios for the long-term nominal rate, investments and disposable income. The stress tests are intended to assess the extent to which the Swedish banks could manage the increased loan losses that would be caused by the deterioration of economic prospects. In the scenarios, GDP falls while unemployment rises. The lower level of demand leads to investments and disposable income also falling. Both the short-term and long-term interest rates rise due to increased risk premiums.
Table 5.4. Interest-rate increase in the stress test compared with main scenario
Percentage points

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>1</td>
<td>1.4</td>
<td>1</td>
</tr>
<tr>
<td>Other Nordic countries</td>
<td>0.9</td>
<td>1.3</td>
<td>1</td>
</tr>
<tr>
<td>Baltic countries</td>
<td>1.1</td>
<td>1.4</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Note. Other Nordic countries refers to Denmark, Finland and Norway. The stress test assumes that the banks’ customers will face a higher interest rate than in the main scenario. This leads to higher loan losses for the banks. To investigate the extent of the impact a higher interest rate would have on loan losses, a model in which loan losses are linked to the rate on a three-month treasury bill is used. The result from the model is then used as a starting point from which to calculate the loan losses in the stress scenario.

Source: The Riksbank

To assess how the economic scenario in the stress test affects the banks’ loan losses, the Riksbank uses econometric models and assessments. With the aid of these, it can be seen how the probability of default develops for different borrower categories in relation to the development of GDP and interest rates. These expected default frequencies are then combined with the size of the banks’ lending and loss given defaults, making it possible to calculate the expected loan (credit) losses in the stress scenario.

The stress scenario plays out in the period 2012–2014. To calculate its effect on the banks’ capital ratios, the Riksbank also makes the following assumptions:

- The banks’ earnings before loan losses decrease due to weaker economic developments and rising funding costs. Profit before loan losses is 15 per cent lower than the market participants’ forecast for the respective bank in the same period.
- The banks’ risk-weighted assets increase by 5 per cent per year, as the risk in the credit portfolio is increasing.
- To ensure that the banks meet the forthcoming capital requirements, they pay no dividends in the stress test. The banks do not make any repurchases of their own equity in the scenario.
- The banks are passive in the sense that they do not try to reduce their risk-weighted assets, take in new capital or change their operations.
- One of each bank’s largest counterparties, measured as amount lent without collateral, defaults on payment. 75 per cent of the loan is lost, while 25 per cent can be recovered.

The stress test shows that the banks’ earnings and capital are sufficiently large to cope with the loan losses arising. These are about five times as large as in the main scenario and amount to SEK 196 billion in total (see Table 5:5). About SEK 9 billion of this, equivalent to about 5 per cent of the total loan losses, derives from the suspension of payments by the counterparty with the largest unsecured loan for each bank. In the stress test, the banks’ Common Equity Tier 1 capital ratios (CET 1), decreases by between 0.3 and 1.7 percentage points and amounts, at the lowest, to 9.5 per cent (see Chart 5:6). The loan losses’ effect on the banks’ capital adequacy is so
small because the banks’ earnings are greater than their loan losses, even though earnings are assumed to decrease significantly. However, the CET 1 capital ratios are worsened by the increase of risk-weighted assets (see Chart 5:7).

Even if the increased loan losses do not significantly affect the banks’ capital ratios, the banks’ access to market funding may be impaired. When large parts of the banks’ earnings go to managing loan losses in the stress test, their profits also decline. Lower profits mean that the banks will find it difficult to build up their capital bases by restoring profits from their operations. In turn, this leads to an increased risk that the banks’ credit ratings will be lowered.

The stress tests of counterparties and loan losses focus on individual institutions, rather than on the banking system as a whole. This means that interactions and correlations between the banks are not necessarily captured by these tests and that the risks in the banking system as a whole may be greater than appears from the results for the individual banks. For example, it is likely that, if a bank in a tightly-interlinked banking system is impacted by large loan losses, this will affect confidence in all banks in the system. Another aspect is that the tests only show how higher loan losses impact the banks’ capital, i.e. credit risk. But the banks are also naturally exposed to liquidity risk, as the conversion of short-term loans to long-term lending forms an important part of the banks’ operations. This means, in turn, that liquidity stress tests are becoming an important part of the financial stability assessment.

Table 5:5. Loan loss level and total loan losses per year in the main scenario for the major Swedish banks in the stress test

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Non-financial companies</td>
<td>1.2</td>
<td>1.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Property companies</td>
<td>1.1</td>
<td>1.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Financial companies</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Households</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Other Nordic countries</td>
<td>0.9</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Baltic countries</td>
<td>2.8</td>
<td>3.2</td>
<td>2.9</td>
</tr>
<tr>
<td>Other countries</td>
<td>0.9</td>
<td>1.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>0.8</td>
<td>0.8</td>
<td>0.9</td>
</tr>
<tr>
<td>Total loan losses, SEK billion</td>
<td>59.7</td>
<td>67.3</td>
<td>69.4</td>
</tr>
</tbody>
</table>

Note. Other countries include Germany, Poland, Russia and the United Kingdom. Loan losses caused by a large counterparty defaulting on its payments have not been included in the level of loan losses, but are included in total loan losses.

Source: The Riksbank
Table 5.6: Profits and capital ratios in the stress
SEK billion and per cent

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit before loan losses</td>
<td>16.0</td>
<td>16.9</td>
<td>17.6</td>
<td>36.8</td>
</tr>
<tr>
<td>Loan losses</td>
<td>-11.8</td>
<td>-12.9</td>
<td>-13.7</td>
<td>-27.3</td>
</tr>
<tr>
<td>Profit after loan losses</td>
<td>4.3</td>
<td>3.9</td>
<td>3.8</td>
<td>9.4</td>
</tr>
<tr>
<td>Taxes</td>
<td>-1.1</td>
<td>-1.0</td>
<td>-1.0</td>
<td>-2.5</td>
</tr>
<tr>
<td>Profits after tax</td>
<td>3.2</td>
<td>2.9</td>
<td>2.8</td>
<td>7.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 capital at start of year (Basel II)</td>
<td>82</td>
<td>81</td>
<td>84</td>
<td>188</td>
</tr>
<tr>
<td>Tier 1 capital at year-end (Basel II)</td>
<td>85</td>
<td>84</td>
<td>87</td>
<td>195</td>
</tr>
<tr>
<td>Risk-weighted assets at year-end (Basel II)</td>
<td>529</td>
<td>552</td>
<td>580</td>
<td>1730</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core Tier 1 capital ratio at year-end (Basel II)</td>
<td>16.1%</td>
<td>15.2%</td>
<td>14.9%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Tier 1 capital ratio at year-end (Basel II)</td>
<td>18.8%</td>
<td>17.8%</td>
<td>17.4%</td>
<td>12.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>CET 1 capital ratio (Basel II)</td>
<td>14.3%</td>
<td>13.5%</td>
<td>13.2%</td>
<td>10.3%</td>
</tr>
<tr>
<td>CET 1 capital/total assets on- and off-balance (Basel II)</td>
<td>3.0%</td>
<td>3.0%</td>
<td>3.0%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

Note 1. The opening value of the banks’ capital and risk-weighted assets is based on the banks’ reported positions in the first quarter of 2012. Earnings before loan losses are based on SME Direkt’s consensus estimate from March 2012.

Note 2. Each bank’s loan losses arising from the expected default of a major counterparty have been divided up between 2013 and 2014.

Note 3. Equity has been adjusted for 2013 for planned changes in IAS 19, compensation to employees. Any deficit in the banks’ pension commitments will have a negative impact on the banks’ capital. These values have been taken from the banks’ annual reports for 2011.

Note 4. Gross solvency is defined as Tier 1 capital/assets including off-balance-sheet items according to the Basel III Accord. In the Riksbank’s calculations in the table above, the CET 1 capital is set in relation to the total assets, including off-balance sheet items. Consequently, the banks have not been allowed to include the hybrid instruments currently included in their Tier 1 capital.

Source: The Riksbank
STRESS TEST OF THE LIQUIDITY IN THE SWEDISH BANKS

In the first chapter of this report, the Riksbank presents recommendations related to the banks’ liquidity risks. These recommendations are largely based on the measures known as the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), which have been developed by the Basel Committee to measure short-term and structural liquidity risks in banks. However, at present, information on the individual banks’ LCR and NSFR results is not public and only a few banks in Sweden and in the rest of Europe publish these measures in their public reports. Consequently, to communicate a view of the liquidity risks in individual banks, the Riksbank uses two liquidity measures that are based on public data. These measures are used in this chapter.

The first liquidity measure used by the Riksbank measures the banks’ short-term liquidity risks. This measure has certain principal similarities with the LCR, but the assumptions forming the basis for the measure differ from the LCR in several ways. Among other differences, the Riksbank’s measure entails the banks being subjected to a stress for three months, while the LCR entails the stress lasting for one month. In addition, the LCR includes the inflow of assets during the stressed period, which is not included in the Riksbank’s measure.

The Riksbank’s structural measure resembles the NSFR to a greater extent, and the banks’ result in the structural measure can thus be seen as a relatively good estimate of their levels in the NSFR.

The Riksbank’s short-term liquidity measure
– stressed liquidity buffer

The Riksbank’s short-term liquidity measure tests the banks’ ability to handle liquidity problems that may arise in the short term. The measure compares the banks’ liquidity buffers to an estimated stressed cash outflow.96 This stress is assumed to last for three months and, among other results, involves the banks’ customers withdrawing money from their accounts and the banks finding it difficult to refinance wholesale funding maturing during this period. Using the simplified assumption that the stressed outflow is evenly distributed over the period, the measure shows how long the banks’ liquidity buffers can cope with the outflow.

The major Swedish banks have reduced their liquidity risk measured in terms of the Riksbank’s short-term liquidity measure (see Chart 5:8). The improvement has been clear for several banks over the last year and is primarily due to the banks’ increase of their liquidity buffers (see Chart 5:9). This is also reflected in the average LCR measure, that the banks report to Finansinspektionen (see Chart 5:10). This means that the major Swedish banks have become better

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96 For more information on the method and data, see “Method for stress testing the banks’ liquidity risks”, Financial Stability Report 2010:2, Sveriges Riksbank.
Furthermore, three of the four major Swedish banks’ results in the short-term liquidity measure exceeded the mean value of the European reference group in December 2011 (see Chart 5:11). However, it should be pointed out that the Riksbank’s short-term liquidity measure is volatile and can vary over the year. The measure can be influenced by extensive bond maturities, among other developments.

During 2011, the Swedish banks started to publish more detailed information on their liquidity buffers. However, the Riksbank’s short-term liquidity measure does not consider the composition of the banks’ liquidity buffers in terms of how much highly-liquid (level 1) assets are included. Instead, as a conservative assumption, a standard reduction of 50 per cent is made to all banks’ buffers. This is primarily to make it possible to compare the Swedish banks with other European banks that have not yet reported detailed information on their liquidity buffers. As shown in Table 5:7, the Swedish banks have different proportions of highly-liquid assets in their liquidity buffers. It should be pointed out that this standardised adjustment means that banks with a large proportion of highly-liquid assets are disadvantaged by the Riksbank’s short-term liquidity measure.

Table 5:7. The major banks’ liquidity buffers, March 2012

<table>
<thead>
<tr>
<th></th>
<th>Handelsbanken</th>
<th>Nordea</th>
<th>SEB</th>
<th>Swedbank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly liquid assets (level 1)</td>
<td>82 %</td>
<td>53 %</td>
<td>59 %</td>
<td>76 %</td>
</tr>
<tr>
<td>Other liquid assets</td>
<td>18 %</td>
<td>47 %</td>
<td>41 %</td>
<td>24 %</td>
</tr>
</tbody>
</table>

The Riksbank’s structural liquidity measure – stable funding in relation to illiquid assets

The Riksbank’s structural liquidity measure examines the banks’ ability to manage a stressed situation that persists over one year. This sets their stable funding in relation to their illiquid assets. Stable funding sources include issued bonds with remaining time to maturity of over one year, as well as a large part of the deposits from private individuals and smaller companies, while the illiquid assets primarily consist of lending to households and companies. According to the assumptions applied to the test, a bank with a structural liquidity measure of at least 100 per cent has enough funding for those assets remaining on the balance sheet after one year.97

In general, the structural liquidity risks in the major Swedish banks has decreased. This is reflected by the improvement of the banks’ result in the Riksbank’s structural liquidity measure (see Chart 5:12). For Nordea and Swedbank, which have published enough maturity information in order to calculate the structural liquidity measure over

97 For more information on the method and data, see “Method for stress testing the banks’ liquidity risks”, Financial Stability Report 2010:2, Sveriges Riksbank.
the last four quarters, the positive trend is clear. The major Swedish banks also report the NSFR to Finansinspektionen once per month. These reports also indicate that the four major banks together have reduced their structural liquidity risks over the last year (see Chart 5:13).

**One reason for the improvement of the banks’ results in the structural liquidity measure is that they have increased their proportion of long-term funding.** This has also increased their proportion of stable funding in the liquidity measure. One indication of this is that the banks in 2011 issued bonds to a greater total value than those maturing during the year (see Chart 5:14). Furthermore, the Swedish banks have extended the maturities of their covered bonds. The covered bonds issued by the Swedish banks in the fourth quarter of 2011 had an average maturity of 4.3 years. In the same quarter of 2010, the average maturity was 3.7 years.98

Furthermore, over the last year, the major Swedish banks’ deposits from customers have increased more than their lending. This is also contributing to the improvement of the structural liquidity measure, as the stable funding in the form of deposits has increased more than the illiquid assets in the form of lending. The improvement to the structural liquidity measure is primarily due to increased deposits from households and smaller companies, as this is deemed to be a more stable funding source than deposits from larger companies in the measure. The overall increase of the banks’ deposits from customers above their lending is illustrated in Chart 5:15, which illustrates how the ratio of the banks’ lending to deposits has changed over the last four quarters.

Despite these improvements, the major Swedish banks still take a greater structural liquidity risk than many other European banks (see Chart 5:15). The main explanation of this is that the Swedish banks are using a larger proportion of short-term market funding than many other banks. This means that they are funding a relatively large part of their assets with securities with remaining maturities of less than one year. The reason that the Swedish banks need to use so much market funding is that they have a relatively low proportion of deposits from the general public. Although the major Swedish banks have recently increased their deposits more than their lending and, furthermore, have increased their proportion of long-term market funding, the difference in maturities between their assets and liabilities still remains relatively large.

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98 Due to the Association of Swedish Covered Bonds Issuers (ASCB).
The different business models employed by Swedish and other European banks may also contribute towards the differences in the outcome of the structural liquidity measure. The Swedish banks have roughly equal proportions of lending in relation to their total assets as the average of the European banks in the peer group in Chart 5:16. The Swedish banks’ large proportion of short-term market funding should thus provide the main explanation of why they have a lower structural liquidity measure. However, it is important to remember that many European banks securitise their lending to a greater extent than the Swedish banks. The loans are then excluded from the balance sheets, thereby reducing the proportion of illiquid assets. This kind of securitisation can lead to liquidity risks that are not captured by the Riksbank’s liquidity measure or by the NSFR.
Glossary

**Arithmetic mean value**: The sum of all values divided by the number of values (also known as simple average).

**Balance of payments**: Statistical report of a country’s economic transactions with the rest of the world. It consists of the current account, capital account and financial account.

**Banking book**: Assets that the bank intends to hold until they mature. In the Swedish banks these consist of the bank’s lending. Such assets should be distinguished from those that the bank uses in frequent trading, which are part of the bank’s trading book. Assets in the banking book are accounted at the accrued acquisition value with any deductions for write-downs, while assets in the trading book are accounted at market value.

**Basel II**: International regulatory framework for financial institutions that mainly regulates banks’ capital adequacy, i.e. how much capital a bank must hold in relation to the risk it takes. The regulations also stipulate requirements concerning the banks’ risk management and the disclosure of public information. Basel II was implemented in Sweden in 2007.

**Basel III**: International regulations for financial institutions that replace the Basel II regulations on the bank’s capital adequacy. Compared to Basel II, Basel III entails increased capital requirements and regulations on capital buffers. Basel III also regulates the bank’s liquidity management. The Basel III Accord will be progressively phased in by 2019.

**Basel Committee**: Global forum for cooperation on bank supervision issues. Includes supervisory authorities and other bodies responsible for financial stability work in Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. Among other things, the Basel Committee draws up international standards, guidelines and recommendations for the regulation of banks.

**Basis spread**: The difference between the three-month interbank rate and the average expected overnight rate (tomorrow next rate).

**BIS, Bank for International Settlements**: Collaboration body for central banks with its headquarters in Basel. Carries out inquiries and formulates standards for financial activities. BIS also takes deposits from and lends to central banks.

**Bond**: A fixed-interest debt instrument that can be issued by a government, municipality, credit market company, mortgage institution or large company. A bond has a long maturity, at least one year. The nominal amount of the bond is repaid when the bond matures, and during its term the holder of the bond receives periodic interest payments.

**Capital adequacy regulations**: Regulations on the capital adequacy of banks. See Basel II and Basel III.

**Capital conservation buffer**: A capital buffer requirement consisting of a bank’s common equity Tier 1 capital. If the buffer is not completely full, the bank has to retain a portion of the profits in order to increase the capital ratio. The buffer requirement must be fully implemented by January 2019.

**Capital market**: Generic term for the stock market, credit market and derivatives market.

**CDS, Credit Default Swap**: A contract between agents on the credit market aimed at transferring the credit risk of an asset, such as a bond, from one agent to another. The buyer of a CDS contract buys credit protection from the seller of the CDS contract by paying a premium over the contract’s duration or until a credit event occurs. If a credit event occurs, the buyer transfers the insured asset to the seller in exchange for the nominal value of the asset.

**CDS premium**: Annual cost in basis points for buying a CDS contract.
Certificate: A security for trading in the money market. A certificate is a debt instrument issued for example by a bank or a company with the purpose of borrowing money. Maturity is a maximum of one year.

CET 1, Common Equity Tier 1 capital: Stricter version of the Core Tier 1 capital, in accordance with the new Basel III regulatory framework.

Core Tier 1 capital: Tier 1 capital with a deduction for capital supplements and reserves that may be included in the capital base as Tier 1 capital in accordance with chapter 3, section 4 of the capital Adequacy and Large Exposures (Credit Institutions and Securities Companies) Act (2006:1371).

Core Tier 1 capital ratio: Core Tier 1 capital in relation to risk-weighted assets.

Council for Cooperation on Macroprudential Policy: A council between the Riksbank and Finansinspektionen set up for discussing macroprudential issues in order to prevent risks in the financial system. The council meets twice a year.

Covered bond: A bond whose holder has a special priority in the event of a bankruptcy. Covered bonds normally entail a lower credit risk than unsecured bonds, which means that the borrowing costs are lower.

Credit gap: The deviation from the trend in lending by monetary financial institutions to companies and households in relation to GDP.

Credit risk: The risk of a borrower failing to meet commitments.

Credit terms: The terms and conditions laid down in a loan agreement covering, for example, the interest rate and the repayment schedule. Credit terms can also include the maximum loan-to-value ratio allowed for a mortgage.

CRR/CRDIV, Capital Requirements Regulation/Capital Requirements Directive IV: Proposed EU regulation with directives that implement the Basel III Accord. The regulations include stipulations on the banks’ capital adequacy, leverage and liquidity.

CSA, Credit Supply Annex: Complementary agreement that the parties in, for example, derivative transactions use to reduce the counterparty risk.

Currency swap: An agreement to buy or sell a currency at the daily rate and then sell or buy back the same currency on a later date at a pre-determined rate.

Debt security: A security that gives the buyer the right to a fixed rate of return in the form of an interest rate.

Debt/equity ratio (leverage): A company’s liabilities in relation to its total assets.

Debt-servicing ability: A borrower’s ability to fulfil its commitments under the loan agreement.

Default rate: The number of bankruptcies divided by the number of companies.

Depreciation: When the value of an asset decreases or when the value of a currency decreases relative to other currencies.

Derivative instrument: Financial instrument that entails agreements on commitments or rights at a given future point in time. The value of a derivative instrument is linked to an underlying asset. The most common derivative instruments are options, futures and swaps.

Direct yield: The difference between rental income and operating and maintenance costs for a property or real estate company, in relation to the price an investor paid for the property.

EBA, The European Banking Authority: Establishes joint standards for regulation and supervision within the EU and carries out stress tests on European banks.

ECB, European Central Bank: Common central bank for euro area countries.

EFSF, European Financial Stability Facility: A rescue fund set up to safeguard financial stability in Europe by offering financial support to euro-area countries.
Equity: Item on a company’s balance sheet that shows the difference between assets and liabilities. It includes, for example, capital injections from the owner, retained profits and reserves. For a household, equity can be the difference between the value of its home and the amount of the loan on the property.

Equity/assets ratio: A financial measure defined as equity divided by total assets.

ESM, European Stability Mechanism: A permanent international financial institution founded by the euro-area countries to safeguard stability in the euro area.

ESRB, European Systemic Risk Board: Responsible for macroprudential oversight of the financial system within the EU.

Foreign exchange risk: The risk of a loss as a result of unfavourable movements in exchange rates.

FSB, Financial Stability Board: Coordinates the work of national authorities and international regulatory bodies in the field of financial stability. Also identifies vulnerabilities and develops, coordinates and implements international regulations and supervision.

FX swap: See Currency swap.

GDP, Gross Domestic Product: The value of all goods and services produced in a country to be used for consumption, exports and investment during a period, usually one year or one quarter.

Government bond: A fixed-interest debt instrument issued by the government. A bond has a long maturity, at least one year. The nominal amount of the bond is repaid when the bond matures, and during its term the holder of the bond receives periodic interest payments.

Gross margin on mortgage: Difference between a credit institution’s lending rate and the cost of borrowing for a mortgage in relation to the amount lent.

IMF, International Monetary Fund: Works to ensure the stability of the global financial system and to prevent financial crises. Monitors and analyses the economic development of the 188 member countries and can provide support programs to countries facing balance of payments problems.

IMM day, International Monetary Market day: A day each quarter that constitutes the planned due date for many financial instruments such as forwards and options. The day falls on the third Wednesday in March, June, September and December.

Impaired loans: Loans that will probably not be repaid in accordance with the terms of the loan contract. Impaired loans are listed on the balance sheet at their full amount, even if parts of the loans are covered by collateral.

Interbank market: Financial market where banks trade interest and currencies with each other.

Interbank rate: Interest rates for unsecured loans that banks offer to one another. Stibor (Stockholm Interbank Offered Rate) is often used as a measure for the Swedish interbank rate. Stibor is used as a reference for rate setting or pricing of derivative contracts.

Interest rate swap: A bilateral agreement to exchange a specific interest rate in return for another interest rate for a predetermined period according to specific conditions.

Issuance: When a company issues a bond, or other type of security, with the intention of borrowing money on the market.

Issuer: Financial institution that issues securities.

LCR, Liquidity Coverage Ratio: Liquidity measurement defined by the Basel Committee that measures a bank’s ability to deal with a stressed net outflow of liquidity for 30 days. In simple terms, an LCR of 100 per cent means that a bank’s liquidity reserves are adequate to enable the bank to manage an unexpected liquidity outflow for 30 days.
Level 1 assets: Highly-liquid assets that in principle consists of securities issued by governments and central bank holdings. Used when calculating the LCR.

Liquidity: Measure of the ability of a company or organisation to meet its payment obligations in the short term. Can also describe how quickly it is possible to convert an asset into money.

Liquidity assistance: Measures that a central bank may take to support the ability of one or more financial institutions to meet payment obligations in the short term with the purpose of avoiding a serious disruption in the financial system and strengthening confidence in the payment mechanism.

Liquidity reserve: Funds an institution holds to ensure its short-term debt-serving ability.

Liquidity risk: The risk of not being able to meet payment commitments due to a lack of liquidity. Liquidity risk in a financial instrument means that an investment cannot be immediately liquidated at all or without falling sharply in value.

Loan-to-value ratio: A borrower’s debt in relation to the market value of the collateral for the loan. For example, a household’s loan-to-value ratio for its home corresponds to the household’s debt collateralised by the home divided by the market value of the home.

Macroprudential policy: Measures to uncover, monitor and prevent risks in the financial system that threaten financial stability.

Market risk: The risk that unfavourable fluctuations on the financial markets, mainly for interest rates, shares and currencies, will result in losses.

MFI, Monetary Financial Institution: A generic term for banks, mortgage institutions, financial companies, municipal and corporate-financed institutions, monetary securities companies and monetary investment funds (money market funds).

Mortgage cap: Finansinspektionen’s general guideline for a maximum loan-to-value ratio of 85 per cent of a property’s value.

Mortgage institution: A financial institution that lends money against collateral in residential property.

Net commission income: Income less cost of financial services sold (apart from interest), e.g. services related to payments, share trading, asset management and card operations.

Net interest income: Interest income from lending less interest expenditure for funding and deposits.

Net margin on mortgages: A credit institution’s profit after tax on a mortgage, that is gross margin minus overheads, in relation to the amount lent.

NSFR, Net Stable Funding Ratio: Liquidity measurement defined by the Basel Committee. The measurement puts a bank’s stable funding in relation to its illiquid assets in a stress scenario that covers a period of one year.

OECD, Organisation for Economic Co-operation and Development: A policy forum in which governments collaborate on economic, social and environmental issues.

Overnight loan: Loan from one banking day to the next, provided by one bank or financial institution to another. The banks can also borrow from or deposit funds at the Riksbank over just one day.

Policy rates: Interest rates that a central bank sets for monetary policy purposes. In Sweden, they are the repo rate and the deposit and lending rates offered to the banking system. The repo rate is the Riksbank’s most important policy rate.

Repo rate: The Riksbank’s primary policy rate. The rate of interest at which banks can borrow or deposit funds at the Riksbank for a period of seven days.
Repo: A financial instrument resembling a short-term loan. The participant receiving the money (the seller) transfers the security to the purchaser. At the same time, the seller undertakes to repurchase the security from the purchaser, at a predetermined date, for a slightly larger sum of money. The difference between the sale and the repurchase sums is equivalent to the interest rate on a loan.

ROE, Return on equity: Common measure of profitability that indicates a company’s profit after tax in relation to its equity.

Risk premium: The additional return an investor requires as compensation for an additional risk.

Risk weight: In simplified terms, to calculate a bank’s risk-weighted assets, the amount lent is multiplied by a risk weight. The risk weights are determined on the basis of how likely it is that the borrower will be unable to fulfil its loan commitment and thus varies from borrower to borrower – a high risk weight implies a greater risk than a low risk weight.

Risk-weighted assets: Assets recorded in the balance sheet and off-balance sheet commitments valued by credit, market and operational risk in accordance with the capital adequacy regulations (see Basel II and Basel III).

RIX system: Central payment system that processes payments to and from the banks’ accounts with the Riksbank. The Riksbank functions as the banks’ bank for payments in Swedish krona.

Solvency: Financial measure of a company’s ability to meet their payment obligations.

Spread: Usually the difference between two interest rates on a financial market. On the bond market the spread is measured in basis points.

Stibor: See Interbank rate.

Stress test: Analysis of various scenarios to assess the resilience of banks and households or other entities to unexpected and negative events.

Survival period: Expression used in connection with the Riksbank’s short-term liquidity measure. The survival period indicates how many days a bank’s liquidity buffer will be adequate to cover the cash outflows generated in the stressed scenario that is assumed to arise in the short-term liquidity measure.

Syndicated loan: A loan in which the bank sells a part of the loan to another bank, often internationally.

Systemically important: An actor, market or part of the financial infrastructure is regarded as being systemically important if problems that arise there could lead to disruptions in the financial system that would result in potentially large costs to society.

Tier 1 capital: Equity less proposed dividends, deferred tax assets and intangible assets such as goodwill. Tier 1 capital may also include certain types of subordinated debt, so-called Tier 1 capital supplements or hybrid capital.

Tier 1 capital ratio: Tier 1 capital in relation to risk-weighted assets.

Unsecured bond: A bond whose holder does not have a special priority in the event of a bankruptcy. Unsecured bonds normally entail a higher credit risk than covered bonds, which means that the borrowing costs are higher.

Unsecured loan: A loan that is granted without any collateral or guarantees.

Wholesale funding: When a country, bank or company funds its activities by issuing various types of security. Long-term wholesale funding consists of covered and unsecured bonds, while short-term wholesale funding consists of certificates and interbank borrowing.