Financial Stability Report 2010:1

SVERIGES RIKSBANK

Financial Stability Report 2010:1

1 June 2010

Contents

Foreword

The Riksbank has the Riksdag's mandate to promote safe and efficient payments. This entails safeguarding the stability of the financial system, which is also a prerequisite for an effective monetary policy.

An ongoing analysis of stability provides possibilities for the early detection of changes and vulnerabilities that together can lead to a serious crisis. A thorough analysis also facilitates the management of a crisis if one were to occur. The Financial Stability Report, which is published twice a year, presents the Riksbank's overall assessment of risks and threats to the financial system and an evaluation of the capacity for coping with them. The work on the analysis of stability is accordingly an instrument that is directly connected with the Riksbank's function of promoting safe and efficient payments.

By making the analysis available to financial market participants and other interested parties we can share our viewpoints and contribute to the debate on this subject. The Executive Board of the Riksbank discussed this Report at its meetings on 6 and 25 May. The Report uses data available as at 25 May.

Stockholm, June 2010
Stefan Ingves
GOVERNOR OF SVERIGES RIKSBANK

The Riksbank and financial stability

The Riksbank has the Riksdag's mandate to "promote safe and efficient payments". Payments are material to every economic activity and a central feature of the financial system. The government therefore has a particular interest in overseeing the functioning of payment systems. A serious crisis in the financial system is liable to entail extensive economic and social costs.

The commercial banks are responsible for the central components of payment systems. At the same time, banking has a number of special characteristics. Liquidity risk is a natural part of banks' activities since they normally obtain short-term funding and provide long-term loans. Moreover, the similarity of the operations in different banks entails a risk of problems elsewhere hitting many banks simultaneously.

In Sweden the four major banks (Handelsbanken, Nordea, SEB and Swedbank) have a dominant position, with a combined market share of around 75 per cent. Besides the banks, the financial system comprises other institutions, market places and the financial infrastructure for registering and settling transactions. The infrastructure also includes the public framework, that is, rules and legislation.

Stability is founded on confidence in the financial system. The occurrence of a problem in one institution may suffice to generate apprehensions that spread to similar operations elsewhere. A loss of confidence can make it difficult for the banks to undertake their operations, in which case the system will be in danger. The basic requirements for confidence are sound institutions and efficient markets.

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 analysis focuses on the systemically important institutions: the four major banks. 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. Knowledge is also disseminated in other ways: by arranging dialogues with market participants, publishing speeches and participating in the public debate. Moreover, the Riksbank is in a position to influence the framing of laws and rules that pertain to supervision and crisis management, for instance by submitting opinions and by participating in international organisations.

The Riksbank is the authority that has the possibility to provide emergency liquidity assistance if problems arose of such a serious nature as to threaten the entire system. To be able to use this possibility in a good way requires adequate crisis preparedness. This in turn requires an appropriate crisis organisation with good information channels and analysis tools and well-developed forms of cooperation with other authorities.

The Riksbank cooperates closely with Finansinspektionen and the Ministry of Finance. The Ministry of Finance is responsible for the regulation of financial enterprises and Finansinspektionen (the Swedish Financial Supervisory Authority) is responsible for 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.

Summary of the stability assessment

In brief

Uncertainty on the international financial markets has recently increased again. This uncertainty is associated with the previously known public finance problems in a number of countries. Financial stability in Sweden is satisfactory – the Swedish financial markets are functioning well, under the circumstances, and the Swedish banks have strong buffers against unexpected, negative events. Sweden's central government finances are also comparatively strong. The Riksbank has not had to undertake measures resembling those implemented by the European Central bank (ECB), but is following developments carefully and will be able to act, should the need arise.

The Swedish banks have sustained significant loan losses as a result of the weak economic developments. These losses have not however been as extensive as first feared and in the Riksbank's main scenario the anticipated level of loan losses for the next three years has been revised significantly downwards. The low interest rate level is one factor contributing to mitigating these problems. The greater part of the loan losses have come from borrowers in the Baltic countries and this borrower group is expected to continue to dominate loan losses in the future.

In the Riksbank's main scenario, loan losses for the major Swedish banks are expected to amount to SEK 61 billion during the period 2010 to 2012. Compared with the main scenario in the previous Financial Stability Report, loan losses have thus been adjusted downwards by SEK 48 billion for the period 2010 to 2011. The banks have both sufficient earning capacity and capital to meet these losses and are well capitalised, from an international perspective. This has helped to improve the Swedish banks' access to market funding and the banks now have access to normal funding without government guarantees.

Even though Sweden has good chances of resisting the financial unrest, it still forms a risk, albeit an indirect one. A stalling of the economic recovery in the euro area would also constitute a setback for the recovery in Sweden. In such a situation, the Swedish banks' loan losses could be even greater than in the main scenario. The Riksbank has therefore examined the banks' resilience towards a much worse, but less likely, scenario in a stress test. The result indicates that the banks' loan losses would be extensive but still manageable, due to the banks' large buffers.

INCREASED UNCERTAINTY ON THE INTERNATIONAL FINANCIAL MARKETS

During the spring, the financial markets have been characterised by great uncertainty. This is connected with the public finance unease in several European countries, such as Greece, Spain and Portugal. This unease was particularly apparent in May and was manifested, among other effects, in a steep rise in government bonds, above all for Greece. This entailed increasing difficulties for these countries to obtain funding via the financial markets. At the same time, uncertainty arose regarding which banks were exposed to these countries and what the consequences would be of an escalation of the problems. Many investors became increasingly cautious in their investments and it became more difficult for several European banks to gain access to funding in dollars.

This development led the authorities to act. The initial measures were solely directed towards Greece, taking the form of substantial financing from the euro countries and the International Monetary Fund (IMF). However, at the start of May, as distrust manifested in increasingly extensive problems in the financial markets, a significantly more comprehensive programme was launched by the EU and IMF. At the same time, the European Central bank (ECB) and the central banks of the G7 countries decided on a series of measures to counteract the problems on the financial markets. The Riksbank has not had to undertake measures resembling those implemented by the ECB but is following developments carefully and will be able to act, should the need arise. Even if these measures have had a calming effect on the financial markets, they cannot solve the financial problems many countries are facing. Future developments are therefore dependent upon the governments of these countries showing their ability to take political action and implement the necessary fiscal policy tightening.

Even if the Swedish market has been impacted to a certain extent, Sweden is in a good position to resist the effects of increased financial unease. Compared with many other countries, Sweden's public saving deficit and public debt level are comparatively low. Furthermore, the banks' direct exposures towards the affected countries in southern Europe are minor. Consequently, the direct contagion risks via bank exposures towards southern Europe are comparatively restricted.

Real economic development has continued to stabilise. The recovery of the economy, globally and in Sweden, has continued, albeit from low levels. Growth has returned to positive in several countries, even if there are major regional differences, and world trade has increased. Nevertheless, the recovery is still unstable in Europe and the financial unease in several southern European countries is creating great uncertainty.

SO FAR, THE SWEDISH BANKS HAVE COPED WELL WITH THE RECESSION

As the global economy has improved, credit risk has decreased, and the Swedish banks' loan losses probably reached a peak during the second quarter of last year. However, the deep recession has left its mark and loan losses are extensive, even if they are less serious than noted in the Riksbank's main scenario in November. At the same time, the banks seem to have entered a new phase in the credit cycle, in which provisions for feared loan losses have decreased and realised losses have increased. The greater part of the loan losses still derives from the Swedish banks' operations in the Baltic countries.

Loan losses in Sweden and the other Nordic countries, except for Denmark, have been relatively minor. Even so, profitability in the corporate sector has continued to weaken and debt-servicing ability has largely been maintained by the low interest rates. Debt-servicing ability within the Swedish corporate sector has developed less strongly within the manufacturing sector than within the services and property sectors. This reflects the division of the Swedish economy, in which the manufacturing sector has been pressed hard by low demand from abroad, while domestic demand, in contrast, has been less affected. Another factor that may have contributed to the relatively minor loan losses in the corporate sector is the fact that companies were well equipped to enter the crisis and were also quick to cut their costs. To a certain extent, the banks have also extended credit and adapted repayment requirements in order to help companies experiencing temporary liquidity problems.

In contrast, loan losses stemming from operations in Denmark have become higher than in the other Nordic countries as both companies and households have been more affected by the previously overheated construction and property markets.

THE BANKS ARE EXPECTED TO REMAIN FINANCIALLY STRONG

Despite the recent unease on the financial markets, the Riksbank deems that loan losses will fall over the coming years. In the Riksbank's main scenario, the Swedish economy is expected to continue to strengthen, but the recovery will take place from a low level. A large portion of the major Swedish banks' losses are expected to continue to come from operations in the Baltic countries. Internal devaluations have had increasing impact in these countries and competitiveness has improved. However, at the same time, domestic demand has been under great pressure and unemployment and the proportion of problem loans have continued to increase, particularly in Latvia and Lithuania. GDP is also expected to continue to fall this year in these two countries. In Estonia, on the other hand, GDP is expected to show weak growth this year. The fact that Estonia now seems likely to receive the go-ahead to introduce the euro at the end of the year

is also expected to contribute towards increased stability. In Sweden and the other Nordic countries, loan losses are expected to continue to be low. At the same time, certain borrower groups are sensitive. Above all, property companies may experience problems in the period ahead, when loan costs will successively increase at the same time as a major portion of loans need to be refinanced. These companies are generally highly leveraged, in addition to which loan-to-value ratios have increased as property values have fallen.

According to the Riksbank's main scenario, loan losses in the four major Swedish banks are expected to amount to a total value of SEK 61 billion during the period 2010–2012. Compared with the main scenario in the previous report, loan losses have been adjusted downwards by SEK 48 billion during the period 2010 to 2011.

The major Swedish banks have sufficient earnings and capital to meet the loan losses expected in the Riksbank's main scenario. The Swedish banks are still well capitalised when compared with international banks. This means that the Swedish banks' access to market funding has gradually eased, despite the substantial losses from lending in the Baltic countries, and the banks have now been able to return to normal funding without government support.

WORK ON NEW BANKING REGULATIONS IS IMPORTANT

Work on strengthening the financial system is proceeding. It is still unclear how the new regulations being discussed will be formulated in detail, but the intention is to strengthen the resilience of the financial system against shocks. For example, the new regulations will mean that banks worldwide will need to issue significantly more bonds with longer maturities than previously. One consequence of this is that funding for the banks will become more expensive. At the same time, this will lead to a reduction in the banks' liquidity risk, which is positive for the stability of the financial system.

RISK OF INCREASING UNEASE ON THE FINANCIAL MARKETS

Due to the financial unease in southern Europe, the risk outlook and uncertainty regarding future developments have changed markedly in the recent period. The comprehensive crisis package announced on 9 May, in which the EU countries and the IMF committed up to EUR 720 billion to cover the future funding needs of euro countries with fiscal problems, has contributed towards the stabilisation of the immediate concern associated with the Greek support programme. But it is essential that the Greek authorities implement the measures of the support programme in order to safeguard the market's confidence in its economic policy. It is also essential that other European countries with financial problems undertake strong measures to reduce uncertainty on the financial markets.

Unease could increase again if the participants on the financial markets start to question the ability of the EU and IMF to handle future crises in other European countries with fiscal problems.

In such a situation, we could see a repeat of the developments we saw at the start of May, when the banks reduced their counterparty exposures and it became difficult for a number of European banks to gain access to funding. The fact that the banks are closely integrated in Europe may cause the unease to spread throughout the European banking system. Such contagion could thereby lead to increased borrowing costs for banks and companies in Europe and Sweden. This could ultimately impact the economic recovery.

In Sweden, the authorities have increased preparedness in recent months, in order to handle any increased unease on the financial markets in the most appropriate manner. The Riksbank is carefully monitoring developments and stands ready to undertake the necessary measures to safeguard the stability of the financial system in Sweden.

STRESS TESTS SHOW THAT THE BANKS CAN MANAGE MUCH LARGER LOAN LOSSES THAN IN THE MAIN SCENARIO

The Riksbank regularly carries out stress tests to assess how less probable but possible events could come to affect the banks' resilience. A decisive factor for the resilience of the banks is whether they have sufficient capital to deal with future losses. Even if economic prospects have brightened increasingly during the first months of the year, there remains great uncertainty regarding the future effects of the financial unease, and an interruption of the economic recovery cannot be ruled out. Given this, the Riksbank thus also provides an account in this Report of a stress test in which the world economy shows a poorer development than in the main scenario.

The scenario assumes a marked deterioration in the state of the financial markets and the disruption of the functioning of the market. Qualitatively, the scenario could be reminiscent of the situation in the autumn of 2008. As a consequence, demand and production would be expected to plummet in most of the world's major economies. Industrial output in Sweden, Norway, Denmark and Finland would fall by an average of two per cent per year during the forecast period. At the same time, the expected lending rate would be an average of three percentage points higher in these countries. In the Baltic countries, macroeconomic developments during the forecast period would be expected to resemble those experienced by the countries during 2008 and 2009.

The scenario takes place over slightly less than three years – from the second quarter of 2010 to the fourth quarter of 2012. Under the severe circumstances described in the scenario, the four major banks'

loan losses would amount to a total of SEK 275 billion. As a result of these loan losses, the banks' Tier 1 capital ratio would fall to a lowest point of between 9.4 and 12.9 per cent in the scenario. This means that all of the banks are above the legal minimum Tier 1 capital level during the entire period, not only in the main scenario, but also under more stressful conditions.

The Riksbank's stress tests thereby indicate that a seriously deteriorated scenario would lead to major loan losses. At the same time, the combination of the banks' future earnings and strong capital situation is sufficient to handle the effects of poorer development. On the other hand, major loan losses may impact confidence in the banks and thus their access to and costs for market financing. However, the Riksbank and other authorities are prepared to manage the problems that could arise from such a sequence of events.

OVER THE LONG TERM, AN INCREASED DEBT BURDEN MAY CREATE PROBLEMS FOR SWEDISH HOUSEHOLDS

Despite the deep recession, Swedish households have continued to increase borrowing. The low interest rates have been a contributory factor to this trend. The main part of these loans has been for housing purchases in which the prices have continued to increase. Debt-servicing ability is strong in the household sector due to the low interest rates, a high level of saving and good income growth. Nevertheless, at the same time, households have become more vulnerable. The loan-to-value ratios of new loans have increased, with a large portion of these loans being at variable interest rates. If house prices were to decrease, there exists a risk that the amount of loans would exceed the market value of the houses. As a result of the development of the housing market and with the intention of protecting borrowers, Finansinspektionen has proposed a general guideline for credit institutions stating that mortgages should not exceed 85 per cent of a property's market value. The Riksbank welcomes this proposal, which should contribute towards reducing the risk of individual households taking on excessive debts.
The high level of indebtedness does not entail an immediate threat to the banks and thereby financial stability. Similarly to previous studies conducted by the Riksbank, a study by Finansinspektionen indicates that the households that borrow the most are those that can afford to pay. However, a fall in house prices, which has taken place in many other countries, could create unease on the bond market and impact the banks' market funding, particularly their opportunities for the issuance of covered mortgage bonds.

1. Financial markets

Concern over the state of public finances in a number of European countries has had a strong impact on financial markets recently. Increased concern led to disruptions in several markets and reduced risk propensity on the part of investors. Extensive support packages from the EU and IMF have been presented to handle the situation and central banks have also taken action, reintroducing some of their measures. The turbulence at the end of April came after a period of stabilisation in the financial markets and recovery in both the Swedish and the global economy. Recent developments have shown that the recovery is vulnerable and that the problems of fiscal imbalances create considerable uncertainty about future developments.

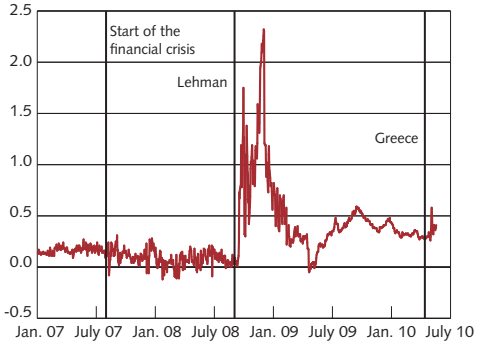
Swedish banks and corporations operate in global financial markets. Consequently, this chapter takes global developments as its starting point and begins with an overall picture of the conditions in the financial markets and the real economy. The second section analyses in detail the markets that are important for Swedish banks' funding, such as the bond and money markets. The final section analyses the markets that are important for supplying capital to Swedish businesses, i.e. the corporate bond and commercial paper markets.

Recent developments

The financial markets have been characterised by renewed financial turmoil. This follows from increased concern about fiscal imbalances in south European countries, particularly Greece. The situation was made worse when Greece's credit rating was downgraded in April, and despite support packages from the EU and the IMF both CDS spreads and government bond yields continued to rise (see box on fiscal unease in Europe). The uncertainty mainly led to increased difficulties for the countries concerned, and for south European banks to gain access to funding. But concerns on which banks were holding troubled assets meant that banks in other countries were also affected. Investors became more careful and consequently less willing to provide unsecured funding. Another and more drastic support package from the EU and IMF was presented in early May to calm down financial markets (see box "New crisis management package in the EU"). At the same time the European Central Bank (ECB) has taken a series of measures. These include buying government bonds on the secondary market issued by European countries in order to increase liquidity in the market (see below). The packages improved the situation in several markets, but uncertainty still remains concerning whether the countries affected are able to implement the necessary measures.

In connection with increased concern about central government finances a shortage of dollars arose in the European market. Banks became increasingly unwilling to lend dollars to each other on the interbank market. At the same time the commercial paper market, which

Chart 1:1. Difference between SEK/USD FX swap implied dollar rate and USD Libor rate (3 months)
Per cent



Note. The graph shows the difference between the FX swap implied dollar rate (the cost of exchanging Swedish kronor for dollars by using the swap market) and the Libor rate for US dollars. A positive spread means that the cost of dollar-based funding is elevated.

Source: Bloomberg.

Chart 1:2. Swedish and international stress index

Sources: Reuters EcoWin, Bloomberg and the Riksbank

also constitutes an important source of dollar funding, partially ceased to function. The reason was that traditional investors in that market, such as US money market funds, abandoned the commercial paper market in favour of more secure investments such as treasury bills and repos. Many banks turned instead to the swap market to borrow dollars. That meant that the cost of access to dollar-based funding via swaps (instead of on the interbank market) increased (see Chart 1:1).[1] The widespread turmoil also contributed to a reduction in volumes and impaired liquidity in the swap market. The situation was similar to the one that arose in autumn 2008, when several central banks, including the Riksbank, initiated cooperation with the US Federal Reserve to increase the supply of dollars. The problems did not appear as clearly in swap market prices this time, but were sufficiently extensive for several central banks to act (see below for central bank measures).

The real economic recovery in Sweden and globally has continued. Growth is once again positive in most countries and world trade is increasing. The strength of the recovery varies from region to region. Developments are driven by the strong growth in Asia, China in particular. There are signs of increasing demand from households in the United States, while developments in the euro area are mixed. The recovery of the Swedish economy rests on more solid ground than last autumn (see the Monetary Policy Update April 2010), which is positive as financial turmoil again increases. Sweden's GDP has started to grow again, above all driven by increased general government consumption and increased public investment. In addition, Swedish households' consumption, stimulated by both expansive monetary and fiscal policy, has contributed to the GDP growth.

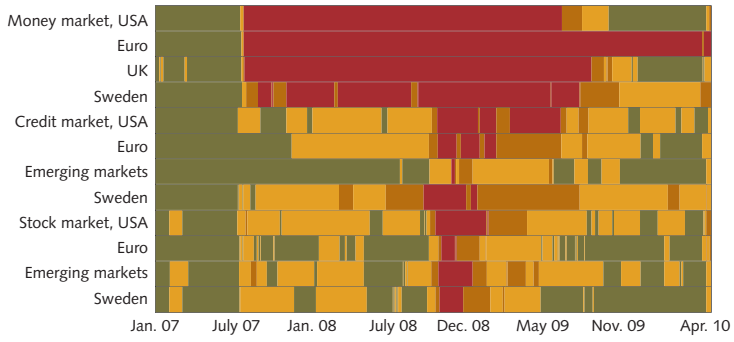
The Riksbank's stress index[2] illustrates how the aggregate stress level in financial markets has increased again after a calm period (see Chart 1:2). In early spring the index fell back to levels closer to the historic average, both internationally and in Sweden. Investors' risk propensity increased during the period and there was less uncertainty about future developments than earlier, which was also shown by the Riksbank's latest risk survey.[3] In April this year the positive trend was broken when the situation in Greece worsened. The level and volatility of the stress

1 The relationship is based on covered interest parity (CIP) and a positive spread means that
$\frac{F_{t,t+s}}{S_t}(1+r^{SEK}_{t,t+s})>1+r^{USD}_{t,t+s}$
where F is the forward rate for the currency, S is the SEK/USD exchange rate and the rates are the Swedish and US Libor rates respectively. A deviation from CIP means that arbitrage is possible, given that there is no counterparty risk, credit risk or liquidity risk. The calculations do not take transaction costs into account. The calculations are the same as in BIS Working Paper 285 by Baba and Packer (2009).

2 The stress index is based on five broad indicators: share volatility, bank-specific share volatility, bond spread, TED spread and exchange rate volatility. The indicators are then weighted equally in the aggregate index. Financial stress is defined as positive deviations from the historic average, calculated for the years 1997-2007. For more details about the stress index see the box in the Financial Stability Report 2009:2.

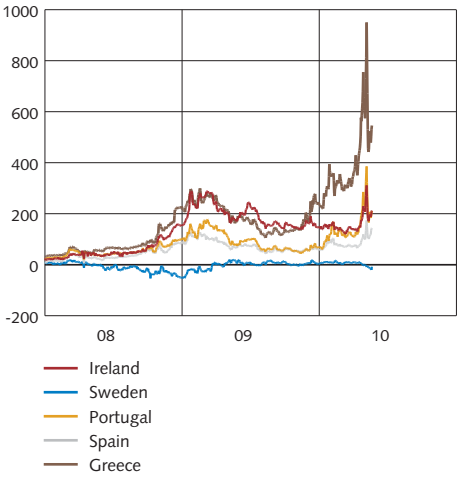
3 Once every six months the Riksbank conducts a risk survey, with responses from about 80 active participants in the Swedish fixed income and foreign exchange markets. See "Swedish market participants' views of risks and the functioning of the Swedish fixed-income and foreign exchange markets" at www.riksbank.se

Figure 1:1. Heat map



Note. The heat map measures the daily levels of spreads and volatility for various asset types relative to an historical mean calculated between 2003-2007. Deviations from the historical mean, i.e. larger spreads and higher levels of volatility, are expressed in terms of standard deviations: Green signifies a standard deviation under 1, yellow signifies 1-4 standard deviations, orange signifies 4-9 standard deviations and red signifies more than 9 standard deviations. The heat map is based on asset prices and volatility measurements and does not take other factors into account such as issue volumes or turnover.

Chart 1:3. Difference between ten-year government bond yields in relation to the German government bond with the same maturity
Basis points

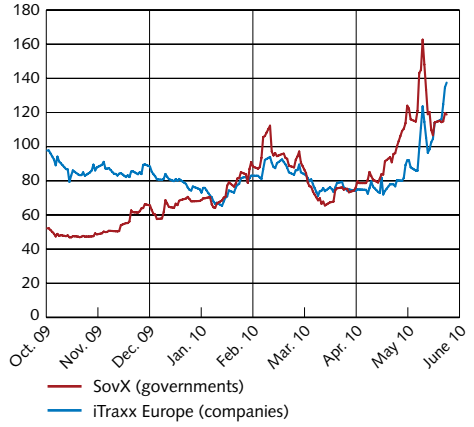


Source: Reuters EcoWin

index showed a marked increase. The stress level has not reached the same levels as in autumn 2008, but indicates that the markets are sensitive to disturbances and that the situation can deteriorate rapidly.

The Riksbank's heat map indicates that some markets are experiencing stress. The heat map illustrates the development over time in graphic form (see Figure 1:1). Unlike the stress index, which is intended to show the systematic, overall stress in the market, the heat map provides specific information about individual markets, both internationally and in Sweden. The fact that an individual market is experiencing stress will not necessarily have consequences for financial stability as a whole. The map shows that the market most affected in the various rounds of the crisis is the money market, which is again experiencing stress. This applies to the euro area in particular. The equity market managed best in the period after the collapse of Lehman Brothers and reached green fastest. The increasing volatility of the most recent period is reflected by the heat map. The equity markets have returned to yellow or orange. The heat map also shows that the Swedish financial markets were affected later and to a lesser degree by the crisis in the fall of 2008 than other markets.[4] Since the heat map is based on data it has some limitations. Qualitative information is not reflected in market data and hence does not influence the colours of the heat map.

Chart 1:4. CDS premiums for European governments and corporates
Basis points

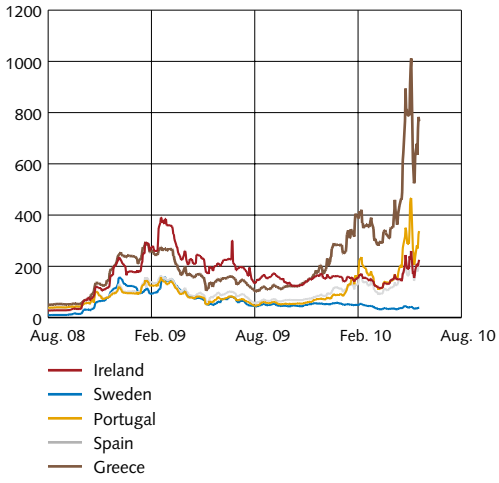


Note. SovX Western Europe represents an unweighted average CDS for 15 European sovereigns (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom)

iTraxx Europe consists of an equally weighted average CDS for 125 entities with credit ratings of at least BBB- or higher according to Standard & Poor's definition or at least Baa3 or higher according to Moody's definition.

Source: Bloomberg

Chart 1:5 Sovereign CDS spreads
Basis points



Source: Bloomberg

The problems of fiscal imbalances in Europe have left their mark on markets in several ways (see also the box "Financial unease in Europe"). For example, countries with large budget deficits have faced rising government bond yields. Countries such as Greece, Ireland, Spain and Portugal are now facing higher funding costs than other European countries. This can be illustrated by an increased difference between the yield on long-term government bonds in these countries and in Germany (see Chart 1:3). Concern about the Greek economy has also spread some uncertainty about the euro area's integrated banking system as a whole. Participants in the Swedish financial markets also stated in the Riksbank spring risk survey that they saw fiscal problems as one of the most important questions in the next six months (see also Chapter 4).

The growing concern over central government fiscal imbalances has made it more expensive for lenders to insure themselves against the risk of European sovereigns defaulting on their debt. This is reflected in higher premiums for Credit Default Swaps (CDS). The index of European sovereigns CDS spreads has increased sharply and is now higher than the index of European companies' CDS premiums (see Chart 1:4). It indicates that the sovereign risk in Europe is high. In April Greece's and Portugal's CDS spreads rose steeply and Spanish and Irish CDS spreads were also affected (see Chart 1:5).[5] The risk of the problems spreading to other countries is high. For Sweden the risk of contagion to the Baltic countries is of particular interest, given Swedish banks' exposures there (read more about developments in the Baltic states in Chapter 2 and about Swedish banks' activities in Chapter 3).

Uncertainty on the equity market, measured as volatility, increased sharply at the time of the Greek crisis (see Chart 1:6), thereby breaking the trend of decreased volatility that has run since last autumn. There was also a reverse in the trend of positive stock market development in Europe and the United States, among others. At the beginning of 2010 share prices continued to rise, but in the first week of May prices fell sharply in connection with the turbulence over Greek fiscal problems. The entire year's increase was wiped out in a week (see Chart 1:7). The initial reactions after the crisis measures were presented on 10 May were strongly positive but volatility in the equity markets has remained high.

The renewed financial turmoil is only moderately reflected in the risk premium on the interbank market. The risk premium is calculated here as the difference between the three-month interbank rate and the expected policy rate[6] and gives an indication of how risky interbank loans are considered to be and how great confidence between banks

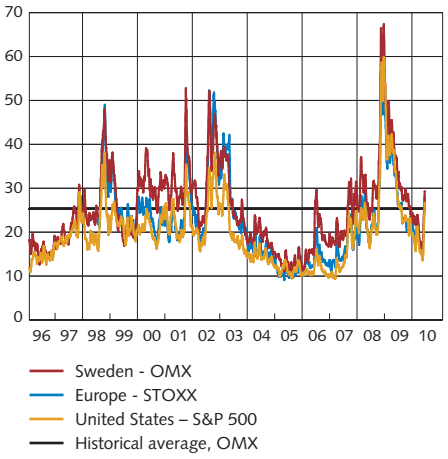
4 Read more on how the crisis has affected Sweden in Lars Nyberg's speeches: "The financial market turmoil" 22 November 2007 and "The crisis, the Riksbank and monetary policy" 28 November 2008.
5 The trend is partly driven by Greece's increased CDS premium, since the CDS index for states is equally weighted and thus gives a relatively high weighting to Greece.
6 The expected policy rate is measured as the overnight rate.

is. The interbank market was one of the most affected during the crisis. At the beginning of 2010 the risk premium had stabilised at a low but nevertheless higher level than before the start of the crisis in autumn 2007 (see Chart 1:8). The US risk premium fell most from the levels reached after the Lehman collapse, partly due to the US authorities' extensive support measures in the interbank market. As a result of the new financial turmoil in April, the risk premium on the interbank market increased again. It is true that in the United States the risk premium doubled in a few weeks, but from a low level, and now lies at around 25 basis points. It can be compared with the risk premium for the euro area, which is about 30 basis points, which to some extent reflects the market's concern regarding the ability of European banks to pay their debts and the weakened central government finances (see also the money market in the heat map in Figure 1:1.

Even if the situation in the financial markets improves in the coming period the risk premium will probably not return to the same level as before autumn 2007. It is difficult to determine a reasonable long-term risk premium level, particularly if the markets are affected by government support measures. But in recent decades the risk premium has varied[7] and the years before autumn 2007 were characterised by historically very low levels. For the stress index too (see Chart 1:2) the unusually low risk premiums in the years before the crisis bring down the historical average. Consequently, it is probable that both the risk premium and the stress index in the future will stabilise at a new, somewhat higher level than before the start of the crisis without this necessarily implying that the markets are under stress.

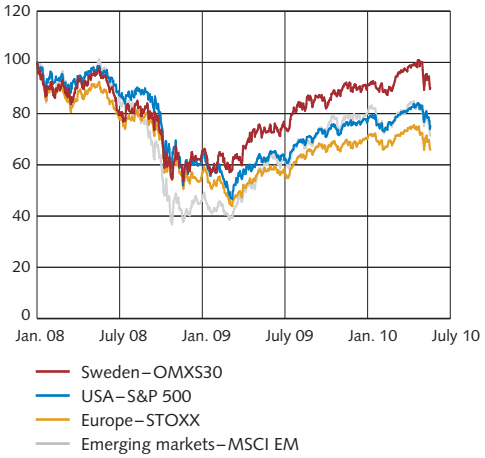
The prices of assets have increased on emerging markets due to capital inflows. Share prices, for example, have increased sharply since 2008 (see Chart 1:7). The reasons for the large flows of capital[8] to emerging markets in Asia and Latin America include the high growth in these regions and the low interest rates in the United States and Europe. The inflow of capital to emerging markets may, however, abate if investors' risk propensity decreases in connection with the increased concern over fiscal problems in Europe. Any implications and risks of large capital flows to emerging markets are analysed in Chapter 4.

Chart 1:6. Implied stock market volatility
Per cent, 10-day moving average



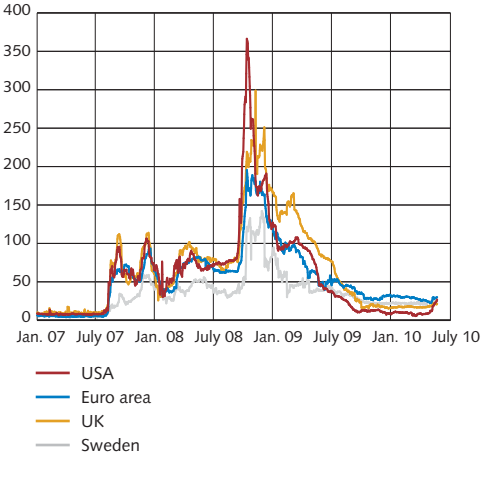
Source: Reuters EcoWin

Chart 1:7. Stock market movements
Index, 1 January 2008 =100



Sources: Reuters EcoWin and MSCI Barra

Chart 1:8. Risk premiums in the interbank market, 3 months
Basis points



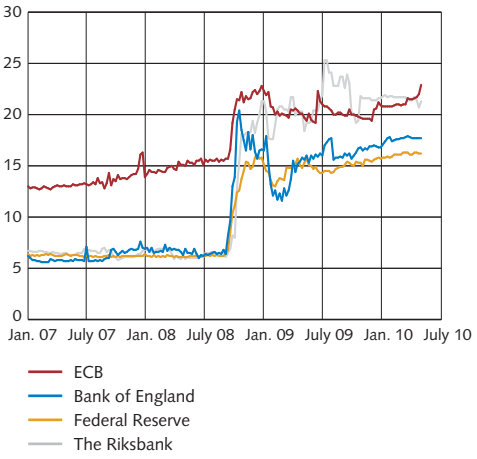
Source: Reuters EcoWin

7 The analysis is based on the diffrence between the interbank rate and the treasury bill rate (the TED spread) since there is no data for the expected policy rate before 2006. The risk premium on the money market, i.e. the difference between the interbank rate and expected policy rate, is a component of the TED spread. The second component is the difference between the expected policy rate and the treasury bill rate.

8 The capital flows are partly through carry trade, which is an investment strategy in which borrowing is conducted in a country with a low interest rate and investments are made in a country with a high interest rate. The yield depends on the relative interest rates, but also on the exchange rates of the currencies in question.

9 Swap agreements were set up with the European Central Bank (ECB), the Bank of England, the Bank of Canada, the Bank of Japan and the Swiss National Bank.

Chart 1:9. Central banks' balance sheets
Percentage of GDP



Sources: Respective central banks

CENTRAL BANK MEASURES

Earlier in the spring improved market conditions led central banks to start phasing out their liquidity support measures. At the end of March the Federal Reserve had discontinued all its liquidity support programmes, apart from the one aimed at the commercial mortgage-backed securities market (CMBS).[10] At the end of March the ECB had discontinued its extraordinary lending in euros at maturities of six and twelve months. The outstanding volume of the ECB's extraordinary lending was high and at the beginning of May was about EUR 670 billion. Of these, about EUR 440 billion mature in July when the ECB's first twelve-month loan matures. The Riksbank has also continued to reduce the extent of its liquidity support measures by successively raising the price of loans and reducing maturities. Most recently, in April the Riksbank decided to discontinue three and six-month loans in light of the banks' improved funding potential. Instead a 28-day loan will be offered to the banks up to and including October 2010. These loans will allow the banks to refinance parts of the Riksbank's three large loans of about SEK 295 billion, which mature in June, August and October. As a technical measure, the Riksbank has also decided to issue Riksbank certificates with longer maturities and repurchase rights. This is intended to reduce excess liquidity in the banking system.

In light of the renewed financial turmoil, several central banks have reintroduced crisis measures that had been successively discontinued over the previous six months. To improve liquidity in US dollars in connection with the problems that arose in early May, the Federal Reserve reintroduced swap agreements with a number of central banks.[9] The ECB reintroduced the dollar lending facility to facilitate European banks' dollar funding. At the same time the euro lending facility was also reintroduced with longer maturities of three and six months with full allocation to ease the banks' impaired liquidity situation in euros. On the same occasion the ECB announced that it would start to intervene in the bond market by buying government bonds in the secondary market. The purchases are intended to stimulate markets that are not functioning satisfactorily and to restore the monetary policy transmission mechanism. These measures by the central banks have probably contributed towards restraining risk premiums on the interbank markets.

Despite having already started to discontinue measures, the balance sheets of several central banks have continued to grow because they continue to purchase assets (see Chart 1:9). In March the Federal

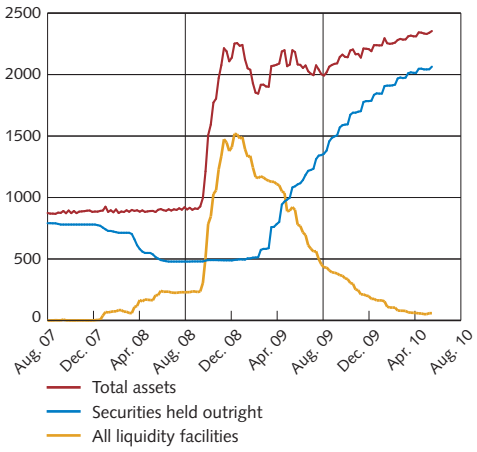
10 It is planned to discontinue the programme in June 2010.
11 When the programme was closed in March the Federal Reserve had bought MBS assets for USD 1 250 billion and the equivalent of USD 175 billion in bonds issued by government-guaranteed mortgage institutions.
12 When the programme was closed the Bank of England had bought assets, mainly government bonds, for GBP 200 billion.

Reserve closed its extensive programme of buying mortgage-backed securities (MBS), and bonds issued by government-guaranteed mortgage institutions.[11] The purpose of the purchase programme was to support credit supply for mortgages and the housing market. The Bank of England also discontinued its extensive purchases of government bonds in February.[12] The purpose of the purchases was to improve market liquidity, as well as to influence market interest rates for monetary policy purposes by making monetary policy more expansive. However, the ECB is continuing its purchase programme as planned for covered bonds. The intention is to buy bonds for a total of EUR 60 billion up to and including June 2010. The ECB's balance sheet will probably grow in view of newly introduced purchases of government bonds. The value of central banks' balance sheets is mainly dependent on two factors: assets acquired during the crisis in rescue purchase plans and liquidity support measures in the form of loans. Assets bought in rescue purchase plans will remain on the central banks' balance sheets until they either mature or are sold. But the liquidity support measures will disappear from the balance sheets as the loans mature. This is illustrated in Chart 1:10, the Federal Reserve balance sheet. The Federal Reserve plans to use several methods to reduce surplus liquidity in the market, such as deposits with longer maturities and reverse repo transactions.[13] The Riksbank's phasing out of support measures is made easier since they did not implement the type of rescue purchases that were made by the ECB and the Federal Reserve.

The outstanding volumes of government-guaranteed loans in Europe have fallen after peaking in early 2009, which is a consequence of improved conditions for market funding up to the beginning of May. The guarantee programmes were used until then to a lesser extent but in the last quarter of 2009 considerable volumes of government-guaranteed loans were issued. The continued use of government guarantees indicates that some banks in Europe were still dependent on government support for their funding. Within Europe 16 countries had government guarantee programmes at the beginning of May, the majority of which expire on 30 June 2010. They could however be extended. Three countries, France, Italy and the United Kingdom, have already closed their programmes. At the end of 2009 the outstanding volume of government-guaranteed funding in Europe was about EUR 920 billion.

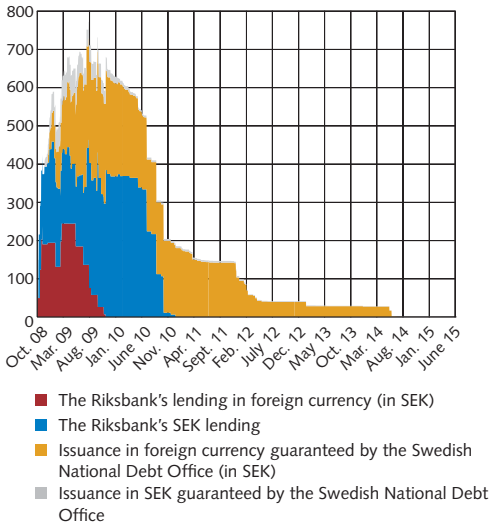
In Sweden, too, the demand for government guarantees has fallen since mid-2009 (see Chart 1:11). The Swedish guarantee programme was extended in May and expires on 31 December 2010 in accordance with current EU regulations. The outstanding volume of government

Chart 1:10. Federal Reserve balance sheet
USD, billions



Source: Federal Reserve

Chart 1:11. The Riksbank loans and the guarantee programme's outstanding volumes
SEK billion



Sources: The Riksbank and the Swedish National Debt Office

13 In the reversed repo transaction the Federal Reserve will receive liquidity in exchange for collateral. Read more about the repo market in the box "Developments in the repo market" in Financial Stability Report 2009:2.

Financial unrest in Europe – possible consequences for financial stability in Sweden

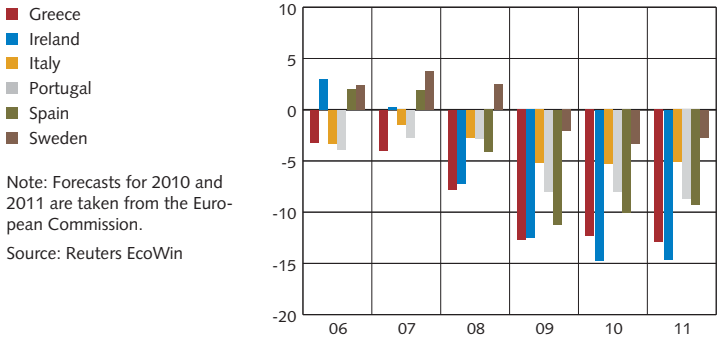
Increased problems with refinancing central government debt in European sovereigns with the weakest government finances may lead to higher interest rates, thus increasing costs for banks and businesses. Given that the banking system in Europe is closely integrated, increased concern for banks in southern Europe could spread further up through Europe. Contagion could spread both from banks in fiscally weak countries to their counterparties in other countries and via subsidiaries and branches. Such a development could entail disturbances in the functioning of the financial market and could also affect financial stability in Sweden.

The financial crisis has exposed and exacerbated fiscal weaknesses in several European sovereigns and led to concern in the market over how in particular countries such as Portugal, Italy, Ireland, Greece and Spain will be able to fund their budget deficits. Part of the increased budget problems can be attributed to costs directly related to the financial crisis. For example, the tax intake has decreased while government expenditure, such as unemployment support, has increased. Fiscal policy stimulation programmes have also been launched to prevent further falls in demand. All in all this has led to large budget deficits that are funded through government market borrowing. The deficit, in turn has increased countries' central government debt.

For the countries entering the crisis with weak government finances this has led to record deficits. For example, Greece had a deficit of 13.6 per cent of GDP in 2009, closely followed by Ireland and Spain, which also had two-digit deficits (see Chart B1). The large borrowing requirements have led to central government debt relative to GDP in industrial countries growing faster than at any time since the Second World War. Sweden, on the other hand, entered the crisis with a large fiscal surplus and, even if the deficit has risen since 2009, it is low in an international comparison. The CDS spread has risen since October 2009, particularly for Greece, but also for the other four EMU countries with the weakest government finances (see Chart B2).

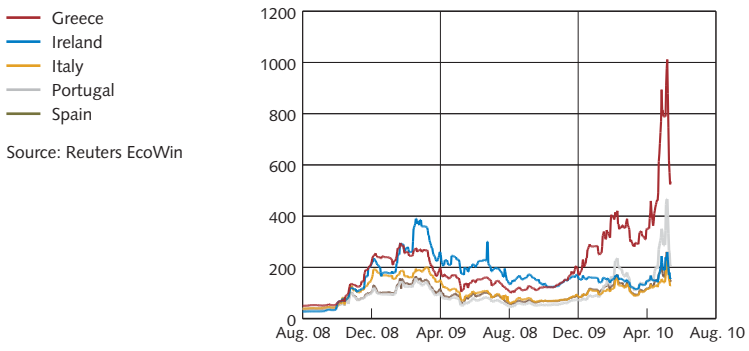
Country risk, measured in terms of the CDS premium, is affected by several factors related to a country's financial position. Country risk is affected by the amount of the claims held by international banks on the country's public sector and by how great the need is to consolidate central government finances. Furthermore, a country's current account affects its country risk, as this captures the degree of saving in both the public and private sectors. Major current account deficits are an indicator of rapidly growing foreign debt and increasing risks for the sustainability of a country's financial position.

Chart B1. Budget balance in selected EU countries
Percentage of GDP



Note: Forecasts for 2010 and 2011 are taken from the European Commission.
Source: Reuters EcoWin

Chart B2. CDS spreads (5 years) for selected EU countries
Basis points



Source: Reuters EcoWin

Even if all these five countries' economies have several common features, there are also differences between them. Greece's main problem is government finances and a large central government debt in relation to GDP. Spain has extremely high unemployment of almost 20 per cent and its property market has collapsed, which has also happened in Ireland. Italy has a lower budget deficit but instead a central government debt of 116 per cent of GDP. All in all most countries must tighten their budgets considerably in coming years to achieve balance and prevent an explosive increase in sovereign debt.

Increased sovereign debt risks leading to higher interest rates. An increase in the budget deficit of one percentage point in relation to GDP tends from a historical perspective to lead to a rise in ten-year rates of just over 30 basis points. Some countries, however, risk being hit by considerably greater interest rate increases. Drastic increases in interest rates have already affected primarily the southern European countries. Higher interest rates may mean, in principle, that it will be impossible to pay off the debt. Ultimately, the country may be forced to seek external funding, for example from the International Monetary Fund (IMF), or suspend payments and renegotiate central government debt.

Greece has opted for the first of these alternatives. Greece's estimated borrowing requirement is, however, so great that the other euro countries have also decided to grant loans. The situation can be compared with that prevailing in the autumn of 2008, when Iceland and Latvia received extensive financing packages from the IMF, towards which the Nordic countries, among others, contributed financing. Just as in that case, the loans to Greece are linked to conditions. These are intended to stabilise public finances and increase the competitiveness of the Greek economy.

Even if the loans allow Greece to implement necessary reforms, it remains to be seen if this will be sufficient to extricate the country from its debt crisis. There is a risk that part of the debt will have to be written down when it proves to be too large to be paid. One problem is that the international community currently lacks any framework for dealing with such a situation. Earlier cases of countries suspending payments on central government debt, such as Argentina in 2002, have proved to be difficult to manage from the point of view of coordination, since it is often a matter of different types of creditor that are affected. This in turn has contributed to unnecessary unease in the financial markets. In 2003, the IMF discussed setting up a mechanism, the Sovereign Debt Restructuring Mechanism (SDRM), which could make it easier for countries that had to suspend payments by increasing incentives for borrowers and lenders to reach rapid and orderly agreement. The member countries of the IMF did not, however, succeed in agreeing on this proposal.

Several of the countries also have a highly indebted private sector. This applies in particular to Ireland, Portugal and Spain. As a rule, increased refinancing costs for the government also mean that the private sector has to pay more to refinance its debt. This may in turn lead to fiscal problems spreading to the private sector. This makes these countries particularly vulnerable in a situation when the market is questioning their fiscal consolidation ability.

Most states have thereby found themselves facing a difficult dilemma – budget deficits need to be reduced to keep risk premiums on government bonds down. Otherwise there is a risk that interest rates will rise, possibly impeding economic recovery. Budget cuts may mean falling demand, which may hinder growth, with an even worse budget situation and even higher interest rates in consequence. Accordingly, a balance must be struck between fiscal stimulation and budget discipline. For this reason a recovery in private demand is also important. Up to now, countries that have initiated major cuts seem to have succeeded in keeping risk premiums down. To some extent, Ireland and the Baltic countries are examples of this.

How could stability in the financial system in Sweden be affected by these developments? There are principally three channels through which fiscal uncertainty could affect other countries.

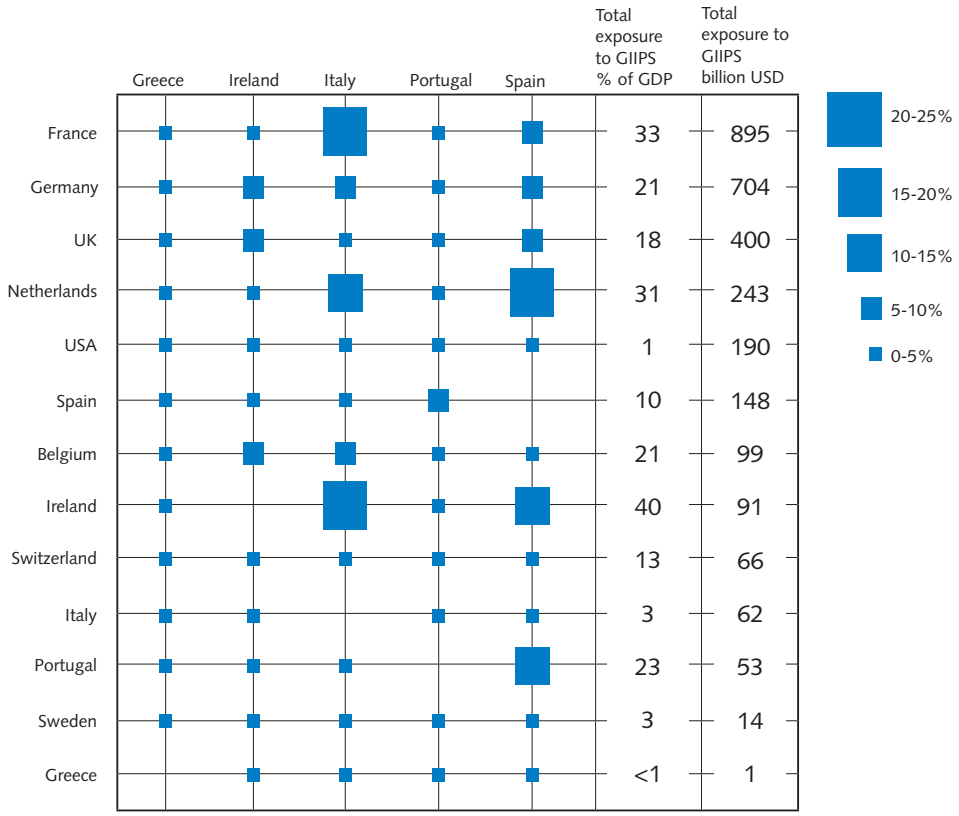
A first channel could be directly through the banking system. Swedish banks have relatively little exposure to Portugal, Italy, Ireland, Greece or Spain. This means that there is no risk that problems in any of these countries would affect the Swedish banking system to any great degree via their exposures.

Another channel could be contagion through the financial system in Europe. Banks in countries such as France and the Netherlands have large exposures in Spain. A large part of the Spanish central government debt matures this year and over the next four years. In a situation where growth is not picking up and fiscal consolidation is not being implemented as planned there is a risk that the market will increase its focus on the Spanish government finances. This, in combination with continued general concern over the fiscal situation, above all in Greece, Portugal and Ireland, could lead to an increased cost to Spain to refinance its debt. Higher general interest rates could in turn expose weaknesses in the financial system in Spain. Spanish savings banks in particular (cajas) are struggling with bad loans due to deterioration in the property market and increased funding costs could increase the problems of these banks. The fact that banks in Europe are closely integrated may in turn contribute to passing on concern over one country's government finances to other countries' financial systems. This may in turn create major concern over potentially risky exposures other banks may have, which could have negative consequences for the Swedish banking system in an indirect way.

Figure B1 shows the largest European countries' banks' exposure to Greece, Italy, Spain, Portugal and Ireland. In absolute figures the total exposure is greatest in France, but, given the size of the French economy, this exposure is not as great when expressed as a percentage of GDP. Ireland, Belgium, the Netherlands and France have considerable exposures, above all to Italy and Spain, and this means that they would be extra vulnerable if the fiscal problems were to get worse or if problems in banks were to arise in these countries. Concern over the banking system in southern Europe could thus spread on up through Europe and ultimately affect financial stability in Sweden through increased borrowing costs for businesses and banks. Given the size of the Spanish economy, any problems in the banking sector there could have greater consequences for financial stability in Europe and consequently Sweden than, for example, contagion from Portugal or Greece. It is also possible that problems from Spain, for example, could spread to Sweden via a country to which Swedish banks have large exposures, such as Germany or the United Kingdom. But as these countries in turn do not have any large exposures to Spain or the other four countries, the risk of problems there spreading to Sweden should be small. On the other hand, a spread of turmoil through the European banking system could lead to disturbances in the efficiency of financial markets; for example Swedish banks' international borrowing may be made more difficult. The latest financial crisis has shown that even relatively small events can have unexpectedly large effects on the financial system. If the same situation arises as before during the crisis, when market efficiency was severely impaired, there is a risk that Swedish banks and businesses will also be affected by it.

A third channel for influencing Swedish financial stability could derive from Greece. Greek banks have subsidiaries operating in many eastern and central European countries, such as Bulgaria and Romania. In a situation where these banks run into problems due to the crisis in Greece, this could spread to banks in these countries. Bulgaria, like Estonia and Lithuania, has a fixed exchange rate within the framework

Figure B1. Shows exposures (Q4 2009) to Greece, Ireland, Italy, Portugal and Spain of banks in the respective countries as a percentage of GDP.



Source: BIS

of a currency board. If the banking system in Bulgaria runs into major problems this may lead to increased pressure on the currency. During the financial crisis there was concern that the Baltic countries would be forced to devalue and that this could also affect other countries in eastern and central Europe with fixed exchange rates, such as Bulgaria. In a situation where Greek banks also have problems in Bulgaria, increased pressure on the Baltic countries' currencies cannot be ruled out. This in turn could impact Swedish banks, which run major operations there.

An argument against this happening is that to date the Baltic countries have succeeded well in tightening their economic policy. The fact that it appears that Estonia could join the European single currency contributes to stability and could also counteract any contagion effects from central and eastern Europe. Portugal, Italy, Ireland, Greece and Spain all have euro as their currency. This means that all adjustment must be made through fiscal policy and structural reform. Accordingly, the countries cannot use devaluation as a way out of the crisis, which was common in connection with previous fiscal crises. What these countries must do now to rectify their fiscal problems is to implement "internal devaluation" in the same manner as is taking place in Estonia, Latvia and Lithuania. This means both a very tight fiscal policy and structural reforms to make the economies more competitive. The Baltic countries have up to now succeeded with this policy. It remains to be seen whether the five countries with the weakest government finances in the euro area will succeed in implementing the same policy.

New crisis management package in the EU

In the shadow of the crisis in Greece the EU finance ministers have decided to set up a European stabilisation mechanism in the form of a crisis package totalling EUR 720 billion. The EU's contribution to the crisis package totals EUR 500 billion. Apart from this, the International Monetary Fund (IMF), is expected to contribute about EUR 220 billion.

Reasons for adopting the package:

The purpose of the crisis management package is to secure financial stability in the EU. Even if the financial markets have recovered after the crisis, developments in Greece indicate that individual countries may have major problems with their public finances that can spread and cause turmoil on financial markets. The purpose of the stabilisation fund is partly to manage the situation that has arisen, and partly to create a more general instrument for dealing with countries that get into financial difficulties.

About the package:

The package is in two parts.
In the first place the existing EU emergency fund for managing balance of payments problems in EU countries outside the euro area will be opened now for euro countries. In practice, all 27 EU Member States can use this emergency fund, in which EUR 60 billion remains.

In the second place it will be possible to set up a separate company for special purposes (SPV – "Special Purpose Vehicle"), which can buy assets such as various countries' government bonds. The 16 euro countries will back this SPV with up to EUR 440 billion. This is based on each EU country either paying in or guaranteeing its contribution pro rata in accordance with its share in the paid-up capital of the European Central Bank, ECB. The SPV set up with guarantees of up to EUR 440 billion will expire after three years. Furthermore, the IMF is expected to contribute half of what the euro countries contribute, i.e. about EUR 220 billion. The IMF has reported that they welcome the EU decision to build up confidence and financial stability in the EU.

Before the SPV can be established each euro country must give its approval at national level. In several cases parliament must approve the guarantees. IMF participation also requires approval by the Board of the IMF. Decisions to grant loans to countries will be on a case-by-case basis.

Financial assistance to a country is to be in the form of a loan or credit line/credit offer. The Commission is to borrow on the capital market or via financial institutions and establish necessary arrangements for administering the loans via the ECB. The process itself means that a member state seeking financial assistance is to conduct a discussion with the European Commission in consultation with the ECB on its financial requirements. The decision to provide financial assistance will be made by the Council of the European Union. If financing is via the IMF the Member State must first consult with the Commission. The Commission must also evaluate and verify on a regular basis whether the Member State's economic and financial policy is in line with the requirements imposed by the Council. Financial support will be linked to strict conditions similar to those that the IMF usually imposes.

Sweden's contribution:

As far as Sweden is concerned the crisis package means that Sweden will contribute to the existing emergency fund that is funded by all of the EU's Member States. In cases where money is lent to euro countries from the EUR 440 billion in the SPV, Sweden's participation will be voluntary. First and foremost it is euro countries that contribute. With regard to the IMF's share of the crisis package, Sweden will contribute via the Riksbank in accordance with its quota share in the IMF.

guarantees in the Swedish programme was about SEK 230 billion at the beginning of May. Since May, only one institution is participating in the guarantee programme.

Markets that are important for Swedish banks' funding

About half of the Swedish banks' funding consists of market funding. Of this, approximately two thirds is in currencies other than Swedish kronor. The currency risk, to the extent it arises, is managed via various types of hedges. This section discusses developments on the markets that are important for Swedish banks' supply of capital. Swedish banks are then analysed in detail in Chapter 3.

MARKETS FOR LONG-TERM FUNDING

The banks' long-term market funding takes place through the issue of bonds, a large proportion of which are covered bonds. The banks borrow mainly in the Swedish and European markets.

In principle there were no issuance, neither of covered nor unsecured bonds, in the euro market for a period after the crisis in Greece worsened. Before that the market in Europe functioned well, even if the terms and conditions of the issues to a large extent depended on the financial strength of the institution. Issuers who were assumed to be financially weakened due to the euro countries' problems of weak central government finances managed less well. This development has contributed to maintaining the differences between covered bonds issued by institutions from different countries. Against this background, Swedish banks have managed relatively well (see also Chapter 3). The Swedish primary market for covered bonds has functioned, even when turbulence was severe.

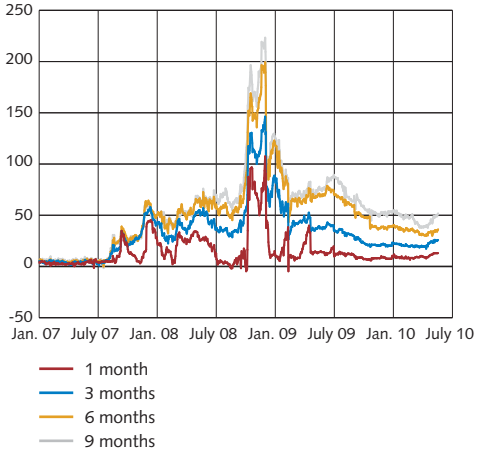
The recent deterioration on the European market for covered bonds contrasts with the positive development in the autumn. Issue volumes during autumn 2009 and early 2010 were large, both internationally and in Sweden. Swedish banks could issue bonds, both covered and senior unsecured, at a lower cost than previously. Swedbank's issue of senior unsecured bonds at the end of February was an example of the improvement in the banks' potential for long-term funding. More details of the Swedish banks' market funding are given in Chapter 3.

The European secondary market was supported by the ECB's purchase programme for covered bonds denominated in euro. The programme will be closed in mid-summer and it is not clear how the market will be affected by this. At the same time new and more stringent

Chart 1:12. Difference between the yield on 5-year Swedish covered bonds and government bonds
Basis points

Sources: Reuters EcoWin and the Riksbank

Chart 1:13. Difference between the Swedish interbank rate and expected policy rate for different maturities
Basis points



Source: Reuters EcoWin

methods of credit rating for covered bonds will be introduced, which has already led to lower credit ratings for several issuers.[14] Turnover in the secondary market for covered bonds[15] in Sweden was lower in the winter and spring, partly due to the financial turbulence and partly because the foreign participants have not fully returned to the Swedish market.

The difference between the yield on Swedish covered bonds and government bonds has increased since the previous report (see Chart 1:12). One explanation is the renewed financial turbulence. In addition, there may be some concern that future regulation will require a higher percentage of long-term funding than at present, which could lead to the banks finding funding to a greater extent via covered bonds (see also Chapter 3 on the possible effects of proposed bank regulation). All else being equal, this indicates an increased supply, which would lead to higher yields on mortgage bonds (see the box "Effects of liquidity requirements for banks on Swedish mortgage rates"). In Sweden during the spring a new Act was passed aimed at extending the mandate of the administrator in bankruptcy in the event of the default of an issuer of covered bonds. This increases the possibility in the future of retaining the highest credit rating for covered bonds, which is positive for the Swedish market.

MARKETS OF IMPORTANCE TO LIQUIDITY MANAGEMENT

The banks' short-term market borrowing mainly consists of certificates and loans via the interbank market. For their liquidity and risk management the banks also use the repo market and the derivatives market.

Considering the latest international developments the Swedish interbank market has functioned well. Interest rates on the interbank market have not increased to the same extent as in autumn 2008. This is partly due to the extra liquidity that has been provided to the system through the Riksbank's lending facilities at longer maturities, and partly due to greater confidence among market participants now than in autumn 2008. The difference between interbank rates with longer maturities (six and twelve months) and the expected policy rate means that funding with longer maturities is more expensive (see Chart 1:13). However, there is limited turnover for longer maturities.

A number of different factors may lie behind the improvement in the money market situation since the onset of the crisis. Firstly, the central banks have injected large amounts of liquidity in recent years, which reduced demand for funding at shorter maturities.

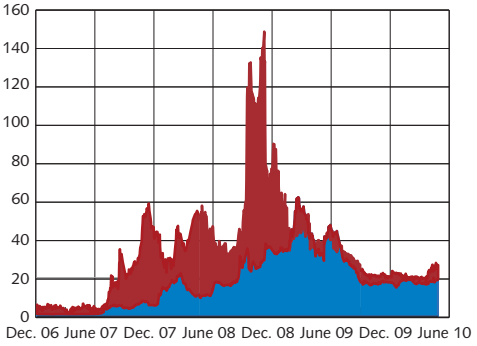
14 For the Swedish banks the new methods have not as yet meant any changes to credit ratings.
15 The majority of the Swedish banks' covered bonds are issued in SEK in the Swedish market.

Secondly, expectations of future regulation and requirements for a larger percentage of long-term funding from credit rating companies, for example, have also reduced the banks' interest in short maturity funding. The banks seem instead to be anxious to retain liquidity buffers while preferring not to have large exposures to other banks. For example, the interest in investing in Riksbank certificates continued to be low despite the fact that there is still extensive outstanding lending by the Riksbank. [16]

In the Swedish money market the risk premium [17] is still dominated by credit risk. Chart 1:14 illustrates an indicative decomposition of the Swedish risk premium into credit and liquidity risk. After the Lehman Brothers collapse, liquidity risk increased sharply, but subsequently decreased due to the authorities' liquidity support measures and the improved efficiency of the money market. The decomposition has not been appreciably affected by the recent renewed financial turmoil, though the liquidity risk increased somewhat in May. It is probable that the breakdown between credit and liquidity risk will remain going forward, unless the crisis becomes worse. Credit risk is a natural part of the risk premium, since interbank transactions are not made against collateral. The increase in liquidity risk during the crisis was, however, a sign of severe stress.

Activity in the Swedish repo market has increased since the previous report but continues to be low. Normally the repo market is important for banks' liquidity management, but since banks now have access to liquidity their interest in borrowing on the repo market is small. Another explanation is that the large liquidity supply has depressed the short non-secured money market rates against the Riksbank's deposit rate. This makes the interest rate differential between secured and unsecured funding relatively small. This means in turn that the gain from borrowing secured and then investing unsecured has decreased. At the same time interest from foreign market participants is still low, which further reduces activity in the repo market. It is also uncertain to what extent foreign participants who left the Swedish market during the crisis will return. Foreign participants accounted for a large percentage of turnover and for about 16 per cent of total holdings in the Swedish repo market in 2008. [18] Initiatives to introduce central counterparty clearing in the Swedish repo market have been underway for some time. [19] The purpose of such a service is for the reduced counterparty risk to lead to more market participants, resulting in increased turnover and generally improved efficiency. From a stability perspective the initiative is positive, even if the ultimate effects are difficult to assess in advance.

Chart 1:14. Indicative decomposition of the Swedish risk premium, 3 months
Basis points



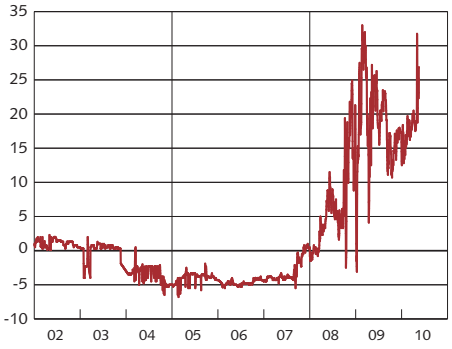
Note. The model utilises certain assumptions to devise a credit risk-related premium from CDS prices. The remaining risk premium is equivalent to the liquidity premium. See Economic commentary no. 14, 2009.

Source: The Riksbank

16 Only about two thirds of surplus liquidity is invested in Riksbank Certificates with a maturity of one week. This means that a third is instead deposited in fine tuning, i.e. overnight with the Riksbank, at a lower interest rate than the Certificates.

17 The risk premium is defined as the difference between 3-month Stibor and the expected policy rate.

Chart 1:15. EUR/SEK cross currency basis spread, 5 years
Basis points



Note. The cross currency basis-spread indicates the cost of swapping a loan in euro to Swedish kronor.

Source: Bloomberg

The financial unease in the spring has again increased the cost of Swedish banks' use of derivatives to access funding. This is linked to the fact that a large proportion of the banks' funding is in foreign currency. Since the banks then lend in Swedish kronor an exchange rate risk arises. The banks also need to manage liquidity risk and interest rate risk. These three risks are all managed using derivative instruments, particularly on the swap market (see Financial Stability Report 2009:2, box "Swapping covered bonds in euro to Swedish kronor – a decomposition of costs"). The currency market (spot market) functioned well during the most acute phase of the crisis in 2008, unlike the swap market, which was considerably affected. The higher costs in the derivatives market indicate an increase in the derivative-related cost differentials between borrowing in foreign currency that is swapped to domestic currency and borrowing directly in domestic currency.[20] Chart 1:15 shows that the derivative-related cost of borrowing in euro and swapping to Swedish kronor rose during the crisis. As a result of the financial turmoil in the spring the derivative-related cost has again risen to levels comparable with autumn 2008.

MARKETS THAT ARE IMPORTANT FOR SWEDISH COMPANIES' FUNDING

The funding situation for Swedish non-financial companies is affected by developments in the credit market. Apart from normal bank loans, Swedish non-financial companies also use the money and bond markets, both in Swedish kronor and foreign currency, for their funding.[21] The market for corporate bonds in Sweden is, however, dominated by a number of large companies.[22]

The issuance volume in both the Swedish and international primary markets for corporate bonds reached record levels in 2009. This was because the possibility of obtaining market funding improved for both companies with good credit ratings and those with poorer credit ratings. There was a clear decrease in the cost, in terms of lower yields, of corporate market-based funding in 2009 on both the US and the European markets (see Charts 1:16 and 1:17), which is positive for the Swedish companies that opt to issue at these markets (see also Chapter 2). After the renewed turmoil concerning government fiscal problems, however, credit spreads in Europe have again increased, which in turn raises corporate funding costs. Another factor that may impact corporate costs of market funding in the future is that at the same time

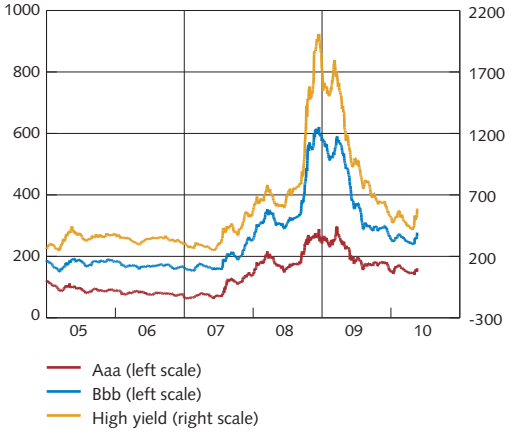
18 See "The Swedish financial market in 2009" and the box "Developments on the repo market" in Financial Stability Report 2009:2.
19 See the NASDAQ OMX press release of 19 April, "IT - NASDAQ OMX launches Clearing of SEK buy/sell-back Repo transactions (41/10)".
20 Whether as a whole it is more or less advantageous to borrow in foreign currency depends both on the interest paid and the cost of swapping the loan to Swedish kronor.
21 Swedish non-financial company funding is loan-based. The majority of these loans are from Swedish credit institutions and the remaining loans are raised mainly in euro and US dollars. Securities with maturities of up to one year constitute about one third of total corporate market funding.
22 The four largest issuers in the Swedish market (Vattenfall, Volvo, Teliasonera and Atlas Copco) account for over half of the outstanding bonds (February 2010).

governments, corporations and banks need to refinance maturing loans with new bonds, which should thereby increase the supply of bonds. Nordic companies' future refinancing needs will be further stressed by coming, unusually large, numbers of redemptions of syndicated loans.[23]

The volume of issuance in the United States and in Europe remained high in the first quarter of 2010. This applies to issues by companies with both good and poorer credit ratings. In general, companies have opted to borrow at longer maturities, to secure future borrowing requirements. This has led to subdued activity in the commercial paper market, in the United States and Europe as well as in Sweden.

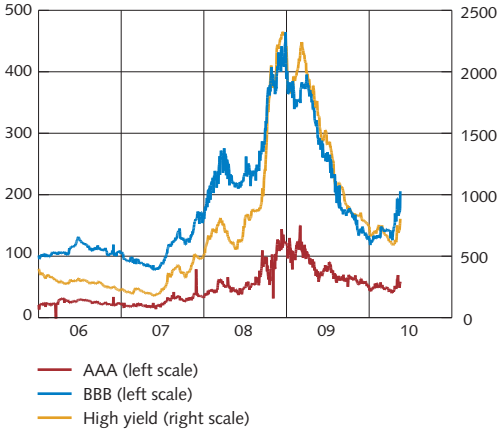
In the Swedish market for corporate bonds the issuance volume from non-financial companies continue to be small and activity is mainly driven by issues by financial institutes. One reason for the low issue volumes is that corporate funding requirements are lower in periods of low growth. On the other hand, Swedish companies issued large volumes on the euro market in 2009, probably motivated by receiving better overall terms than in the krona market (despite an increase in the cost component for swapping to Swedish kronor). According to the Riksbank company interviews[24] as many as 95 per cent stated that in the last six months they had obtained access to all external funding they had required. Large companies mentioned that they had had lower costs for their market funding, both certificates and bonds. Activity in the Swedish market for commercial paper continues to be low, mainly due to companies opting for longer maturity borrowing. Some of the large companies that participated in the Riksbank company interviews reported that they had increased their funding through bond issues partly due to concern about future access to syndicated bank loans, given that many international banks had decided to leave the Swedish finance market. As growth in the banks' lending to companies has decreased, non-financial companies have to a greater extent turned to the bond market for their funding via loans. Bank loans still, however, constitute the main part of Swedish corporate funding via loans; about three quarters.[25] Swedish corporate borrowing is analysed further in Chapter 2.

Chart 1:16. Credit spreads for US corporate bonds
Basis points



Source: Reuters EcoWin

Chart 1:17. Credit spreads for European corporate bonds
Basis points



Source: Reuters EcoWin

23 Nordic companies increased their borrowing via syndicated loans extensively in 2003–2007 as a consequence of favourable prices. Loan syndication means that several banks provide a joint loan to a company. The risk is divided among the banks in relation to the amount contributed by each bank. The conditions for all participating banks are the same. No participating bank is in a better position than the others as regards rights of priority.

24 Published in December 2009.

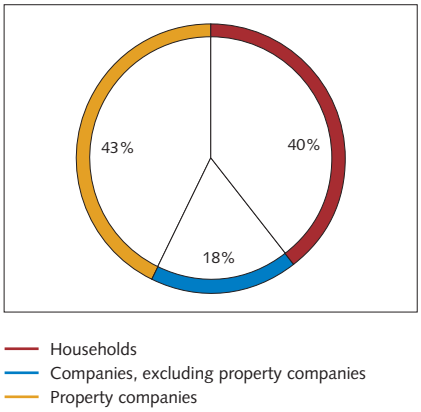
25 In the United States the proportion of bank loans is only about one third of total corporate funding, while the corresponding Chart in the euro area is about half.

2. The Swedish banking groups' borrowers

The recovery abroad and in Sweden implies that conditions for the Swedish banking groups' borrowers have improved. On the other hand, should the recovery of the economy come to a halt, certain groups of borrowers would be particularly vulnerable. Foremost among these are areas of the corporate sector and borrowers in the Baltic countries. The debt-servicing ability of the Swedish household sector is currently high and is expected to improve further as economic activity strengthens. However, despite the recession, Swedish households are continuing to borrow at a high tempo. Furthermore, the loan-to-value ratios of new loans have increased, and a large portion of these loans are at variable interest rates. Households are thus sensitive to interest rate increases and falling house prices. The high level of household indebtedness does not entail any immediate threat to financial stability.

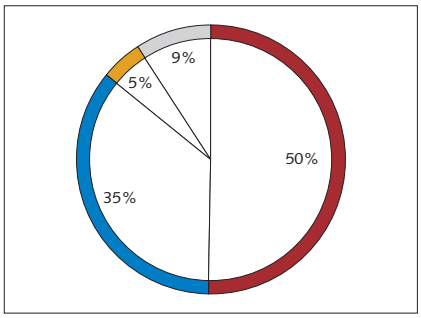
This chapter discusses developments among the Swedish banking groups' borrowers. The risk that these borrowers will be unable to repay their loans (the bank's credit risk) is the greatest risk to which the banks are exposed on the asset side. In addition, the banks' earnings and profits are directly affected by the loan volume. Consequently, this chapter reviews levels of borrowing, indebtedness and debt-servicing ability in the Swedish household and corporate sectors. Property companies are treated separately, as this is the industry to which the banks are most exposed (see Chart 2:1). The commercial property market is also analysed, as the debt-servicing ability of property companies, together with the value of loan collateral, is determined by this market. In recent years, an increasingly large portion of the banks' lending has been to borrowers outside Sweden, primarily in the Nordic and Baltic countries (see Chart 2:2). Consequently, these borrower groups are also analysed.

Chart 2:1. Lending activities of the Swedish banking groups by borrower category
March 2010, per cent of total lending



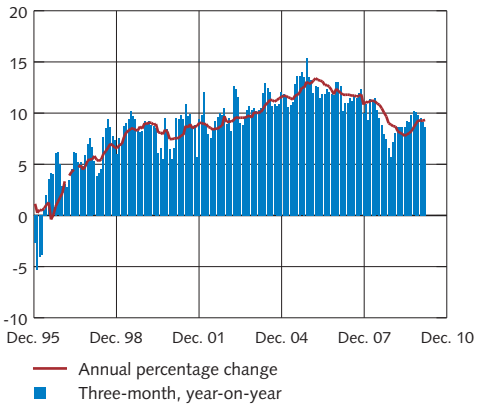
Sources: Bank reports and the Riksbank.

Chart 2:2. Lending activities of the Swedish banking groups by geographical area
March 2010, per cent of total lending



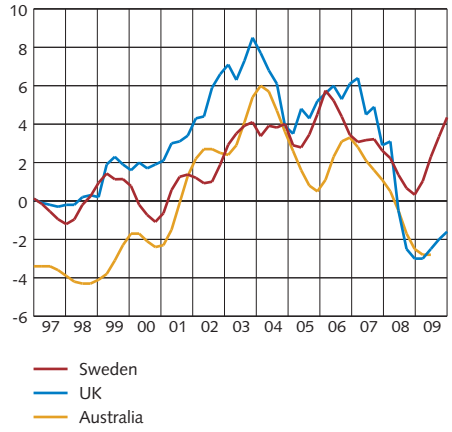
Sources: Bank reports and the Riksbank.

Chart 2:3. Households' total borrowing from credit institutions
Annual percentage change



Source: The Riksbank

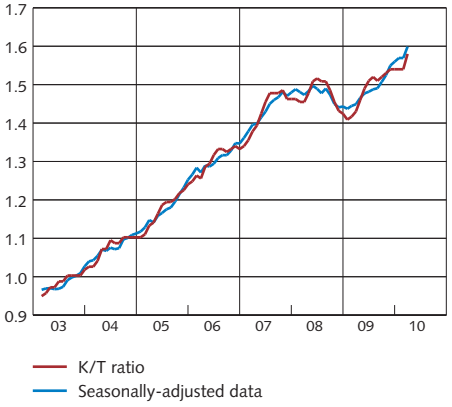
Chart 2:4. Estimated proportion of mortgages used for non-housing related purposes, percentage of disposable income
Per cent



Note. A value greater than zero indicates that the rate of increase of the mortgages exceeds that of the housing investments. Such a situation may arise when the housing sector takes out extra loans with homes as collateral, but uses these loans for consumption.

Sources: The Reserve Bank of Australia, Reuters Eco-Win, Statistics Sweden and the Riksbank

Chart 2:5. House prices
Purchase price coefficient



Note. The purchase price coefficient is the purchase price of the propertyin relation to the assessed value at a particular point in time (in this case the 2009 simplified property taxation), also referred to as the K/T ratio.

Sources: Statistics Sweden and the Riksbank

The Swedish household sector

Despite the weak economic activity, households' borrowing is continuing to increase at a rapid rate (see Chart 2:3). This is primarily due to the continued low interest rates and increases in disposable income. At the same time, households are more optimistic regarding the future. Households primarily borrow to fund housing purchases and home renovations, while normal loans for consumption only form just over seven per cent of the total loan stock. However, an increasing proportion of mortgage loans are also used for consumption,[26] which signifies that consumer loans have actually been somewhat underestimated (see Chart 2:4).

Housing prices are continuing to rise and, in Sweden, they have now recovered from the fall in prices following the financial crisis (see Charts 2:5 and 2:6). One consequence of households' increased optimism is that the average time to sale has fallen, after having risen rapidly in conjunction with the financial crisis (see Chart 2:7). Furthermore, fewer new homes are being built now than during the period 2006–2008 which also affects the development in house prices (see Chart 2:8). However, the building of new homes is expected to pick up again in the period of time ahead.[27]

The loan-to-value ratio among households is continuing to rise, making them increasingly vulnerable to both unexpected interest rate changes and falling house prices. According to a survey carried out by Finansinspektionen, the loan-to-value ratios of new loans has increased by approximately five percentage points since 2005, reaching almost 70 per cent during 2009.[28] This development is primarily due to amended capital adequacy rules and increased competition among the participants in the mortgage market. Consequently, in order to protect consumers, Finansinspektionen has produced a general guideline for credit institutions stating that mortgages should not exceed 85 per cent of a property's market value. Loans exceeding this limit are thus unsecured and usually entail a higher interest rate.[29] Indebtedness is thereby expected to decrease among households entering the housing market in the future. The loan-to-value ratio of the total outstanding loan stock is lower than that of new loans. The Riksbank's calculations of micro data from 2007 indicate that approximately half of indebted households have a loan-to-value ratio of less than 50 per cent.

26 These are usually called mortgage equity withdrawals or housing equity withdrawals, and are formed of the difference between net borrowing in mortgages and housing investment. They arise, for example, when households take out extra loans with their home as collateral but use the money for something other than home improvements or further property purchases, such as consumption, and can be seen as a form of withdrawal of the increase in value of the homes. They can also arise when a household moves to a cheaper home, but reduces the loan on the home by a smaller amount.

27 See the National Board of Housing, Building and Planning's indicators (2010), March.

28 See Finansinspektionen (2010), "Den svenska bolånemarknaden och bankernas kreditgivning" ("The Swedish mortgage market and bank lending").

29 See Finansinspektionen (2010), "Förslag till allmänna råd om begränsning av lån mot säkerhet i bostad" (Proposal on General Guideline on limitation on loan-to-value ratios for mortgages on residential property), FI DNR 10-1533.

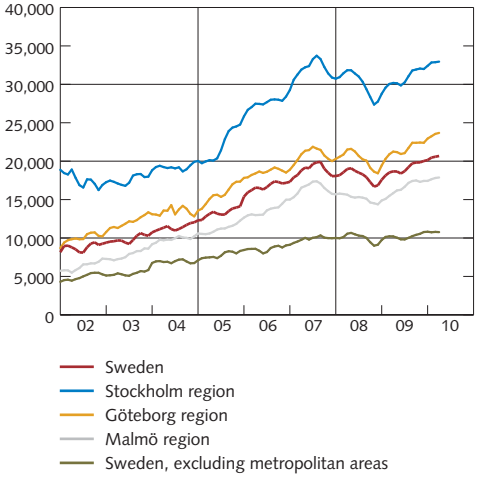
Despite the high level of indebtedness, households in general have a high level of debt-servicing ability. However, the high demand for credit has meant that household debt in relation to disposable income (the debt ratio) has increased to just above 167 per cent (see Chart 2:9). There are also significant regional differences between the major urban areas and the other parts of the country (see Chart 2:10). Of the ten municipalities with the highest average debt ratio, eight are in major urban areas, according to the Riksbank's own calculations based on the micro data on the financial situation of households. At the same time, the interest ratio (i.e. households' post-tax interest expenditure in relation to disposable income) is very low, amounting to 3.5 per cent in 2009.

One explanation for the rapid decline in households' interest expenses can be found in the increasingly large interest rate risk undertaken by households in recent years. Since the end of 2008, the majority of new mortgage loans taken by households have been at variable interest rates (see Chart 2:11) and, at present, just over 60 per cent of households' total stock of housing loans are at variable interest rates. The Riksbank's repo rate cuts have thus had a major impact upon households' interest expenses. This also means that, when the Riksbank starts raising the repo rate, the impact on interest expenses will probably come faster than on previous occasions.

Good income growth and relatively low interest rates suggest that households. borrowing will continue to increase rapidly, despite the unrest on the financial markets. At the same time, there are factors that may dampen borrowing in the coming period. For example, Finansinspektionen's proposed limitation of the loan-to-value ratio of new mortgage loans implies that loan costs for highly indebted households may increase in the period ahead. [30] Furthermore, there is a risk that the increasing costs faced by Swedish banks due to the new banking regulations will be passed on to households. This could thus also contribute towards dampening demand for credit in the coming period (see Chapter 3). If unease over sovereign finances in Europe increases and has consequences for the real economy, this may lead to increased pessimism among households. This may contribute to dampen borrowing.

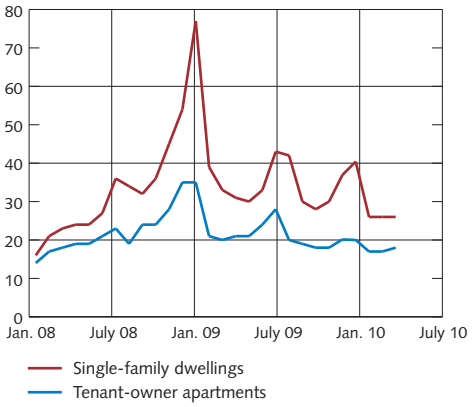
Housing prices are also expected to continue to rise over the coming year. Even if lending rates are expected to increase in the near future, contributing to dampening price movements due to the fact that more than half of all household mortgage loans have variable interest rates, this trend will be counteracted by brighter employment prospects. In the slightly longer term, the rise in house

Chart 2:6. Tenant-owned apartment prices, three-month moving average
SEK per square metre



Source: www.maklarstatistik.se

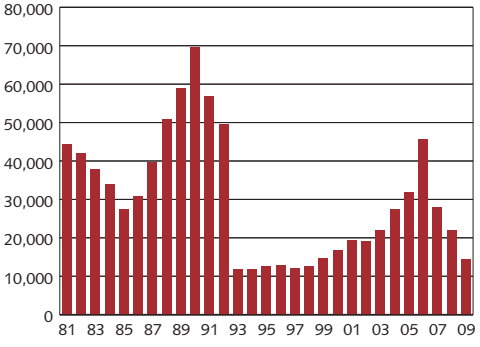
Chart 2:7. Time to sale in Sweden
Number of days, median



Note. The time to sale corresponds to the number of days a property is published on the Internet for sale before being sold.

Sources: Hemnet and www.maklarstatistik.se

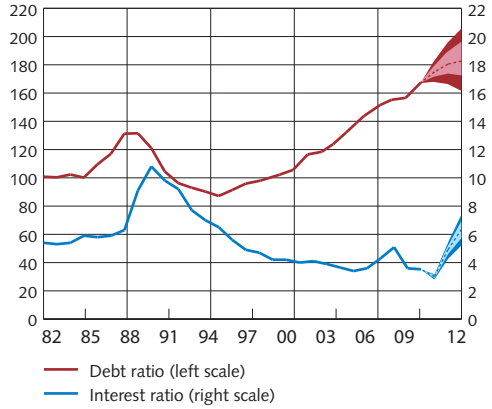
Chart 2:8. Number of housing starts
Number



Source: Statistics Sweden

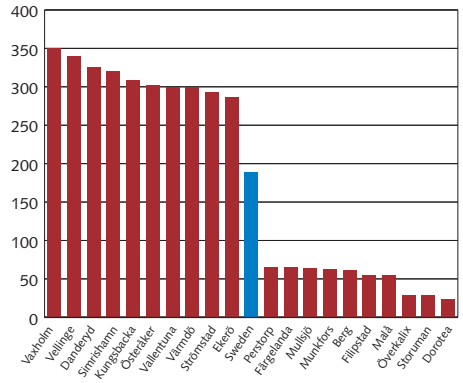
30 The amount of the loan exceeding the maximum loan-to-value ratio of 85 per cent will be granted as an unsecured loan. An unsecured loan is a loan without collateral, which, consequently, has a higher interest rate at the same time as the repayment period is shorter. This will thus increase the incentive for borrowers to avoid these loans completely or to amortize them promptly.

Chart 2:9. Household debt and post-tax interest expenditure
Percentage of disposable income



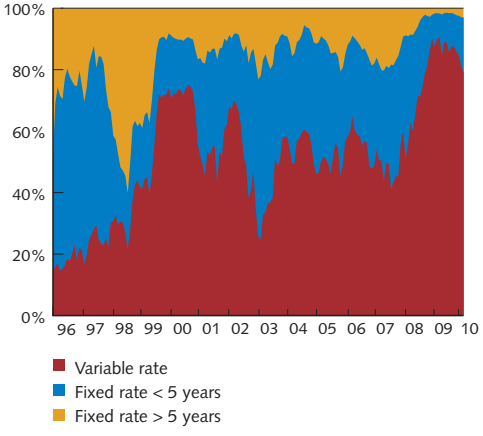
Note. Broken lines represent the Riksbank's forecasts.
Sources: Statistics Sweden and the Riksbank

Chart 2:10. Household debt ratios in different municipalities and in Sweden as a whole
Per cent



Note. Household total debt as a percentage of disposable income.
Sources: Statistics Sweden and the Riksbank

Chart 2:11. Breakdown of households' new mortgages by fixed interest periods
Per cent



Source: The Riksbank

prices will probably be dampened as the new construction of housing increases. [31]

Household debt-servicing ability will probably remain strong. This is because disposable incomes are continuing to increase, albeit at a moderate rate. Household saving will probably also remain high. This suggests that households' credit worthiness in general will remain strong, even though the debt ratio is expected to increase.

Compared with many other countries, housing prices in Sweden have not been impacted particularly negatively by the recession – quite the contrary. One explanation for this is that interest rates have been reduced to exceptionally low levels. However, if housing prices were to fall, some households would risk ending up in a situation in which their mortgage would be higher than the market value of their house or flat. According to the Riksbank's calculations, one tenth of households have a loan-to-value ratio of over 85 per cent. If prices were to fall by more than 15 per cent, these households would be left with debts if forced to sell their homes. This is also confirmed in Finansinspektionen's survey of the banks' lending. [32]

If housing prices were to fall the households would probably need to increase their already high saving (see Chart 2:12). This is partly because the banks would increase requirements for the repayment of loans and partly because households themselves would wish to compensate themselves for the lower net wealth resulting from the lower housing prices. The Riksbank's studies of the microdata show that the households that have the highest debts also have the largest assets. [33] The banks are also obliged to perform reasonable "left-to-live-on" calculations. [34] Lower housing prices would therefore probably not lead to higher loan losses in the banking system as a whole.

The Swedish corporate sector

Weak economic activity and low resource utilisation has resulted in that companies' borrowing from credit institutions is continuing to fall. [35] Historically, borrowing from credit institutions in particular has had a certain connection with the development of fixed gross investment, because companies often fund a portion of their investments with loans (see Chart 2:13). Gross investment fell sharply during 2009 and is currently at the lowest level since 2005. Borrowing from the securities market has also decreased over the most recent quarter, although to a lesser extent than borrowing from credit

31 See Sveriges Riksbank (2010), "Monetary Policy Update", April.
32 See Finansinspektionen (2010), "The Swedish Mortgage Market and Bank Lending", February.
33 See Sveriges Riksbank (2009), Financial Stability Report 2009:2.
34 Finansinspektionen's survey also shows that the banks take sufficient account of interest rate changes.
35 This section generally analyses listed companies. However, borrowing from credit institutions refers to the borrowing activities of the entire corporate sector.

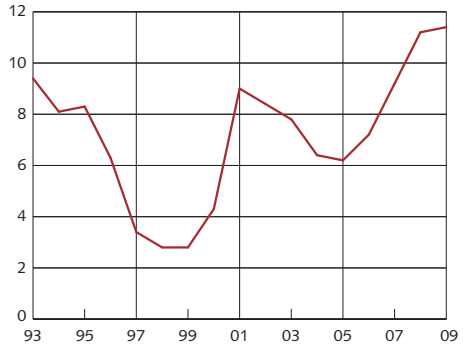
institutions (see Chart 2:14). According to the companies, reducing the proportion of borrowing from credit institutions is a deliberate strategy aimed at diversifying sources of funding and reducing the risk of being affected by disturbances in individual markets. At the same time, it is important to point out that the securities funding that does occur is concentrated among a small number of companies. In February 2010, only 70 Swedish companies had outstanding corporate bonds on Swedish and foreign markets.

At the same time as demand for credit is weak, it has become easier for companies to gain access to funding. Only 26 per cent of the companies asked by the National Institute of Economic Research's Economic Tendency Indicator in March stated that it was more difficult than normal to gain access to funding.[36] In the summer of 2009, this proportion was 36 per cent. The Riksbank's company interviews also indicate that the funding situation has improved, even if many companies still consider that the situation has not normalised.[37] But, it is not unexpected for certain companies to state that it has become more difficult to obtain credit – in a recession, creditworthiness in general deteriorates.

During 2009, listed companies' overall debt decreased by approximately SEK 100 billion. Companies have used their cash flows partly to make further amortisations of current liabilities, and partly to increase current assets. Current ratios have increased relatively strongly during 2009 as current liabilities have declined. In a longer perspective the current ratio is still rather low. Consequently, an average company can currently amortise all of its current liabilities with just over half of its current assets. This means, in turn, that companies' margins for meeting higher loan costs have improved and that, over the short term, companies are less vulnerable to disruptions on the financial markets. The reason that companies have actively tried to improve their liquidity was that the banks were unable to offer sufficient short-term funding to companies when the financial crisis began. This development has been clear among both small and larger listed companies.

Corporate debt-servicing ability has strengthened somewhat recently. This has been demonstrated by the increase of the interest coverage ratios of listed companies (see Chart 2:15), among other figures. Companies are thus finding it easier to service their loans through current earnings. At the same time, the profitability of the corporate sector has strengthened somewhat even if it is still weak (see Chart 2:16). The improvement in the ability to service debt is

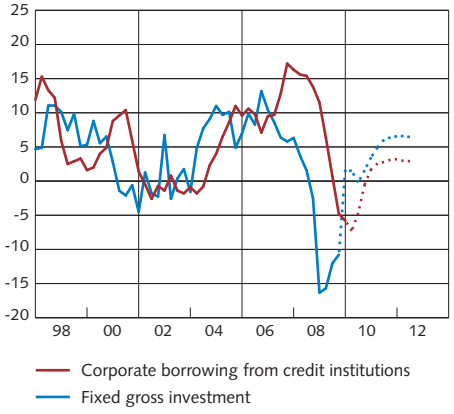
Chart 2:12. Households' savings
Per cent



Note. Households' savings in relation to disposable income.

Source: Statistics Sweden

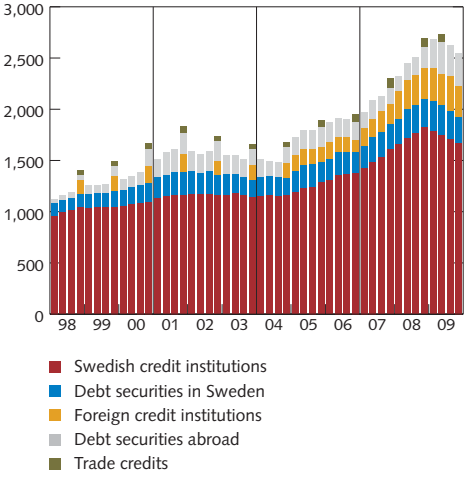
Chart 2:13. Corporate borrowing from credit institutions and fixed gross investment
Annual percentage change



Note. The broken lines represent forecasts. Forecasts of fixed gross investment are taken from the Monetary Policy Report from February 2010

Sources: Statistics Sweden and the Riksbank

Chart 2:14. Companies' borrowing from credit institutions and their securities funding
SEK, billions



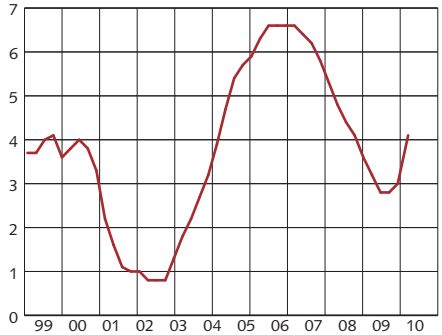
Note. Q4 2009 shows debts excluding outstanding Swedish bonds.

Source: The Riksbank

36 Above all, construction companies are finding it difficult to gain access to funding. In this industry, 28 per cent of construction companies reported that funding was more difficult to obtain than normal. However, this proportion has declined from 46 per cent in the previous stability report.

37 The Riksbank's interviews were conducted in December 2009.

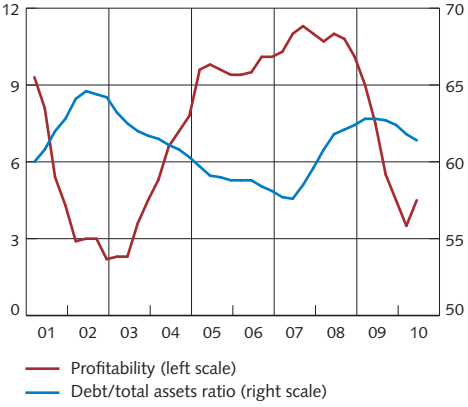
Chart 2:15. Interest coverage ratio in Swedish listed companies
Ratio



Note. Interest coverage ratio is defined as operating profit/loss plus financial income in relation to financial costs.

Sources: Bloomberg and the Riksbank.

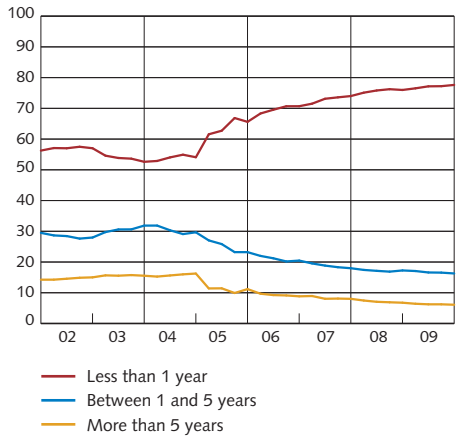
Chart 2:16. Profitability and debt/total assets ratio in Swedish listed companies
Per cent



Note. Profitability is defined as the operating surplus in relation to the total assets. Debt/total assets ratio is defined as total debts in relation to total assets.

Sources: Bloomberg and the Riksbank.

Chart 2:17. Corporate loans by interest-rate fixation periods
Per cent



Source: The Riksbank

mainly a result of the low interest rates. The majority of corporate loans have interest-rate periods of up to one year (see Chart 2:17). This implies that interest rate changes have a rapid impact on corporate loan costs. Short interest-rate periods, together with poor profitability, consequently suggest that companies will increase their amortisations, thereby continuing to decrease their indebtedness.

The number of bankruptcies has started to decrease, but remains on a higher level than one year ago. [38] However, the number of payment orders has decreased slightly, reaching the lowest level in two years in January. This suggests that the number of bankruptcies has already peaked. The industries impacted by the most bankruptcies are those with relatively large export-oriented production. This corresponds well with the prevalent view that domestic demand in Sweden has been maintained comparatively well during the financial crisis.

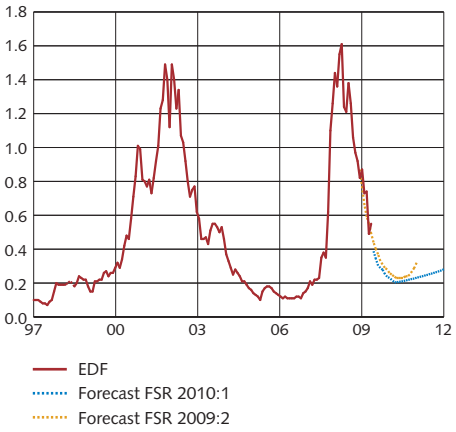
Companies' borrowing from credit institutions is expected to continue to decline during the year, before increasing again next year, albeit at a lower rate than previously (see Chart 2:13). This development can be explained by the low level of investments and by companies' continued strengthening of their balance sheets by the amortisation of liabilities at a faster rate than previously. However, Almi's lending indicator from the first quarter indicates that the banks still believe that lending to companies will increase slightly during 2010.

The debt-servicing ability of the corporate sector is expected to improve as the economy recovers. However, economic activity is still weak and it cannot be ruled out that certain companies may encounter difficulties as corporate loan costs increase. Above all, this applies to companies that are heavily indebted. Consequently, the probability of bankruptcies is expected to increase slightly towards the end of the forecast period (see Chart 2:18). On the other hand, however, should the recovery stall, the number of bankruptcies may increase (see Chapter 4).

38 This refers to bankruptcies among all companies, not just listed companies.

Companies' extensive refunding needs over the coming years may lead to higher financing costs. In the coming years, major Swedish companies will face a high level of maturation of syndicated loans. These loans have been funded by both Swedish and foreign banks. Since the financial crisis, foreign banks have generally decreased their presence in Sweden, which means that the number of banks contributing to the refinancing of due loans is probably fewer than previously. For certain companies, it may become more difficult and expensive to obtain access to funding. For companies active on the capital markets, the alternative is to turn, to a greater extent, to the market for corporate bonds for funding. By 2014, bonds held by Swedish companies to a value of approximately SEK 274 billion will have fallen due. However, these sources of funding also risk becoming more expensive, as both banks and companies need to obtain funding via the bond market, and at longer maturities than previously.

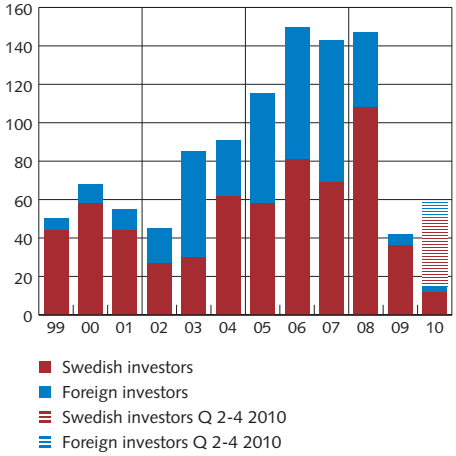
Chart 2:18. Expected default frequency (EDF), outcome and forecast
Per cent



Note. Moody's-KMV calculates the expected default frequency for listed companies within one year. The EDF is calculated as the likelihood that the market value of the company's assets will be lower than the size of its debts when they fall due for payment.

Sources: Moody's KMV and the Riksbank

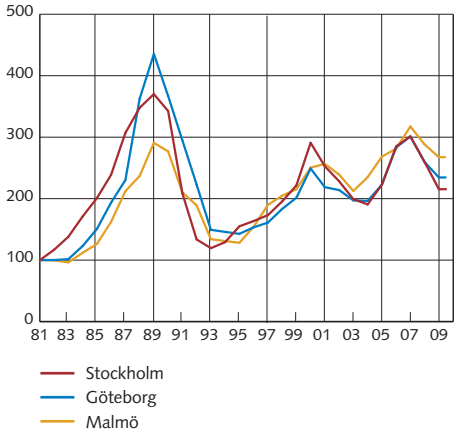
Chart 2:19. Transaction volumes on the Swedish commercial property market
SEK billion



Note. The data for quarter 2–4 2010 refers to the transaction volume during the first quarter of the year, multiplied by three. We therefore assume that developments during the rest of the year will follow the same pattern as during the first quarter.

Sources: Savills and the Riksbank

Chart 2:20. Real prices of office premises in city centres
Index, 1981 =100



Note. These values have been deflated by the CPI.

Sources: Newsec and the Riksbank

The commercial property market and property companies

The office market

The recent period has seen a slight increase in activity in the Swedish property market. During the first quarter of 2010, the total volume of transactions amounted to just over SEK 16 billion, almost twice that of the same period in 2009.[39] However, it is still significantly lower than previous years' transaction volumes. The increased level of investment on the property market is primarily due to the Swedish property companies' improved access to funding, but also to the fact that many international investors have started to return to the Swedish market (see Chart 2:19). For many years, foreign investors have played a major role in the Swedish property market, standing for 65 per cent of investments during the peak year of 2003. This proportion is presently only 22 per cent. The investors consist almost exclusively of investors with a large proportion of equity, such as pension funds and other types of institutional investors. The structure thus differs from the years before the financial crisis, when highly-leveraged investors stood for the greater part of investments.

Prices for office premises continue to fall. The largest decline has been experienced in Stockholm's inner city, where real prices fell by close to 15 per cent during the first quarter of 2010, compared with the same period in the previous year (see Chart 2:20). During the year 2009 as a whole, the decline in prices has primarily depended upon lower rents and, to a certain extent, upon higher risk premiums (see Charts 2:21 and 2:22).[40] In contrast, during 2009, the fall in prices was driven exclusively by high risk premiums.

However, rents have not fallen as far as was first feared. This is because the proportion of vacant premises has not increased to any great extent in inner city areas (see Chart 2:23). Neither have the level of economic activity and employment rates for office workers deteriorated to the extent first feared by the Riksbank and other analysts. Consequently, demand for rented premises has been relatively strong. At the same time, the supply of new premises has been comparatively restricted in recent years, which has also held the proportion of vacant premises down. But it is likely that the degree

39 See Savills (2010), "Fastighetsmarknaden Q1 2010 – Ökande intresse för kommersiella fastigheter", April.

40 The price of a commercial property is determined as anticipated future rental income, divided by a yield requirement. This yield requirement consists of a risk-free rate and a risk premium. An increase in the anticipated rental income will lead to an increase in commercial property prices, while an increase in yield requirement will lead to a fall in prices. Combining the actual outcome of rents and the risk-free rate with assumptions regarding the anticipated development of rents makes it possible to explain which portion of the change in prices depends upon changes in actual rents, anticipated rents and the risk-free rate, respectively. The portion of the change in prices that remains to be explained is due to changes to the risk premium required by investors.

of vacancies is higher for premises of lower standard, primarily in peripheral areas. [41]

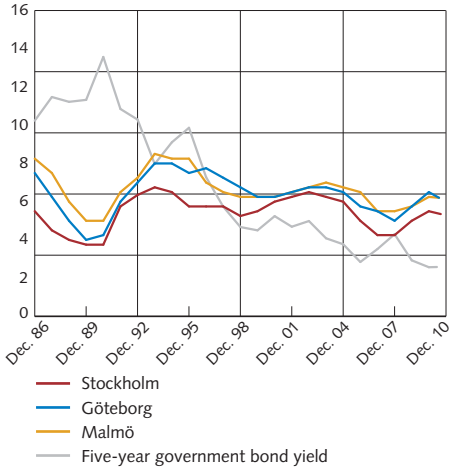
The property companies

The property companies' borrowing from the Swedish banks has decreased. [42] One reason for this is that the banks have become more restrictive in their credit granting due to the weak economic activity. Among other indications, this is apparent in that the highest permitted leverage has decreased and that the banks' lending margins have increased. At the same time, property companies report that, despite this circumstance, their opportunities to gain access to funding have improved, compared with the situation one year ago, even if it would still be premature to describe this as a normalisation. [43] However, this primarily applies to access to funding through interest-bearing securities, rather than bank loans. Borrowing through the issuance of interest bearing securities is, however, only available to the larger property companies.

The property companies' debt-servicing ability has remained relatively strong, even if the value of their assets has declined. So far, the rental market has not been impacted to any great extent by the recession. Consequently, the operating surpluses (i.e. the difference between rental incomes and management costs) of the listed property companies have remained on relatively healthy levels. Relatively strong earnings combined with low interest rates have meant that interest coverage ratios have continued to improve. The ability of the property companies to pay their loan costs has thus improved, which is also apparent in the low number of bankruptcies in the property sector.

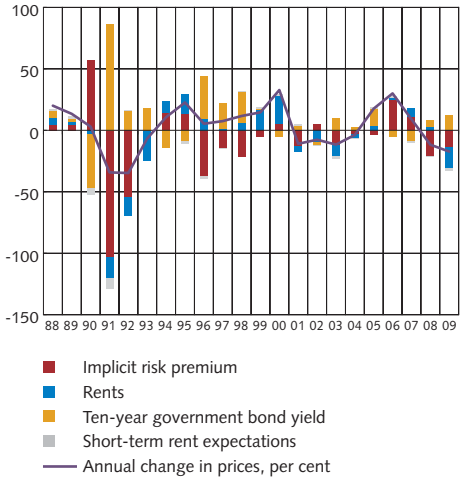
The lower property values have entailed that the loan-to-value ratios of the property companies have increased. However, seen from the banks' perspective, so far, loan-to-value ratios have not been decisive for the property companies' credit ratings, as cash flows have been strong and the property companies have been able to pay the interest on their loans. At the same time, there is still uncertainty as to whether the unrealised depreciation so far reported by the property companies has been extensive enough. The companies so far reporting the greatest write-downs of their assets are those with the strongest balance sheets, relatively seen, and who are thus in the best positions to report such write-downs. If property companies were to write down the values of their assets, they would need more share capital in order to maintain their present equity/assets ratios, or, alternatively, to reduce their indebtedness through the sale of property.

Chart 2:21. Average yield levels for modern office premises in city centres
Per cent



Sources: Newsec and Reuters EcoWin

Chart 2:22. Components contributing to the annual percentage change in office prices in Stockholm city locations
Per cent

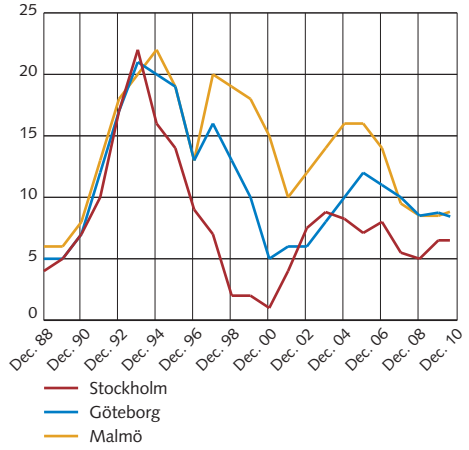


Note. The short-term anticipated rents are expected to follow household inflation expectations plus two percentage points. Prices refer to square metre prices for offices in Stockholm's inner city and rents refer to square metre rents in the same area.

Sources: Newsec, Reuters EcoWin and the Riksbank

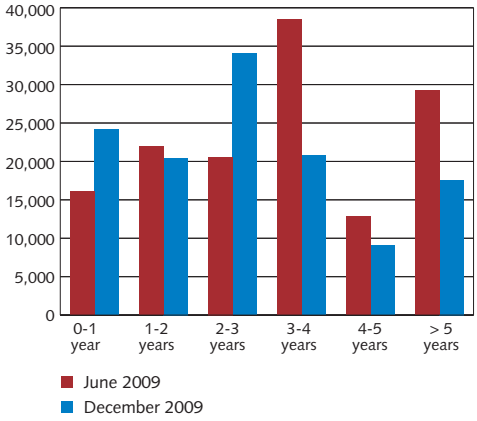
41 However, little data on vacancies in less favourable locations is available, and thus Chart 2:23 only refers to the prime locations in urban areas.
42 This refers to lending to all property companies, not just listed companies.
43 See Fastighetsägarna Stockholm (2010), "Fastighetsägarna Stockholms finansieringsenkät", February.

Chart 2:23. Vacancy rate for office premises in city centres
Per cent



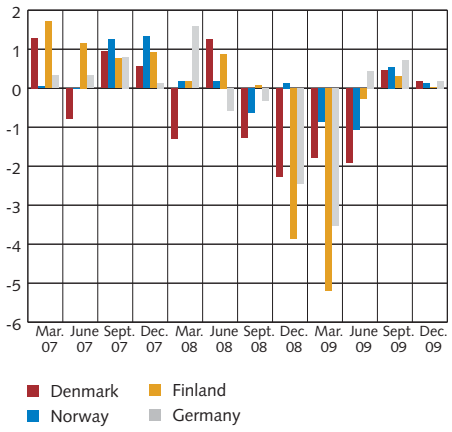
Source: Newsec

Chart 2:24. Credit structure of property companies
SEK million



Sources: Reports of the 17 property companies listed on the NASDAQ OMX Stockholm A-list, Q 4, 2009 and the Riksbank

Chart 2:25. GDP in the Nordic countries and Germany
Quarterly changes, per cent



Sources: Reuters EcoWin and the Riksbank

Over the shorter term, the property companies' debt-servicing ability is expected to decline, due to the weak economy. This may entail that vacancies will continue to increase and rents thus to fall. If the situation on the rental market deteriorates and interest costs increase, the debt-servicing ability of the property companies will be weakened. Over the longer term, demand on the rental market is expected to increase as economic activity improves. At the same time, as a successive decrease of the vacancy rate is expected due to the fact that the supply of new office space is relatively restricted. In this case, the property companies' opportunities to charge higher rents will also increase. However, it cannot be ruled out that, once economic activity turns around, certain property companies may continue to encounter problems in meeting the higher interest rates over the longer term. This primarily applies to highly-leveraged property companies with less attractive properties.

The property companies have large refunding needs in coming years (see Chart 2:24). By 2012, loans totalling almost SEK 500 billion will have required refinancing in the Swedish property market. It is uncertain whether this will be possible and, if it is, exactly how it will be achieved. This particularly applies to the approximately SEK 100 billion lent by foreign banks at high loan-to-value ratios.[44] As the foreign banks have now shown a decreasing interest in the Swedish market, the refinancing may become more expensive and harder to obtain.

44 See Fastighetsrapport (2010), "Den svenska obeståndsmarknaden", March. This also refers to non-listed property companies.

The Swedish banking groups' borrowers abroad

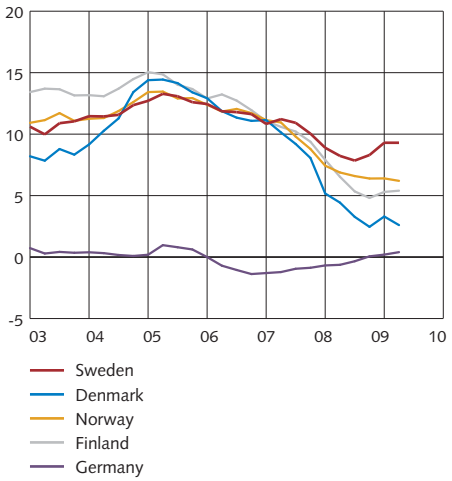
OTHER NORDIC COUNTRIES AND GERMANY

In the other Nordic countries and Germany, the decline in GDP has halted and the recovery started (see Chart 2:25). All of these countries are dependent upon exports and demand for exports has increased in line with the strengthening of demand overseas. This applies not least to Finland, where exports are dominated by capital goods which, as a rule, are sensitive to business cycle conditions. In Denmark, the recovery will probably be delayed by the dampening effect on domestic demand exerted by the previously overheated construction and property market. In Norway, the recovery is primarily dependent upon higher oil prices.

As in Sweden, households in the other Nordic countries are increasing their borrowing. However, the rate of increase is lower than in Sweden (see Chart 2:26). In Denmark, the weak level of demand for credit is due to the sharp decline in real house prices (almost 20 per cent). In the years prior to the financial crisis, Denmark saw a strong rise in new construction, which is now contributing to the downwards pressure on house prices. As with Sweden, house prices in both Norway and Finland recovered during 2009 and are now increasing rapidly (see Chart 2:27). In Norway, just as in Sweden, the strong rise in prices is due to very low interest rates at the same time as household incomes have developed well. In an international perspective, the rate of new construction is also low.

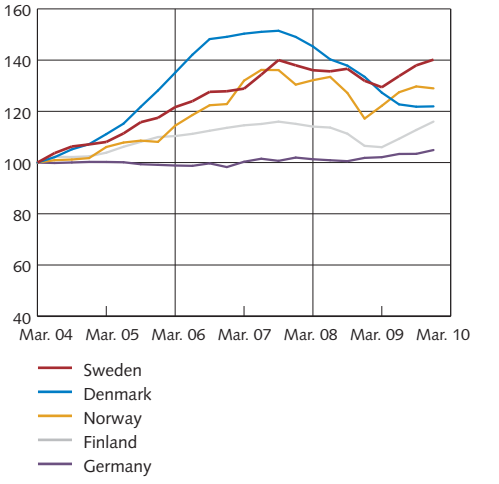
Companies' borrowing is continuing to fall (see Chart 2:28). This trend is reminiscent of the development of the Swedish corporate sector and reflects the weak economic activity and probably also companies' need to reduce their balance sheets. In Germany, the steep decline in investments taking place in 2009 has now come to a halt. The continuing weak credit growth may indicate that companies are funding investments with their own liquid funds. This can, in turn, be interpreted as indicating that the weak credit growth is primarily due to weak credit demand rather than a lack of credit. [45] In Norway, the banks are also stated to have eased companies' loan conditions. [46]

Chart 2:26. Household borrowing
Annual percentage change



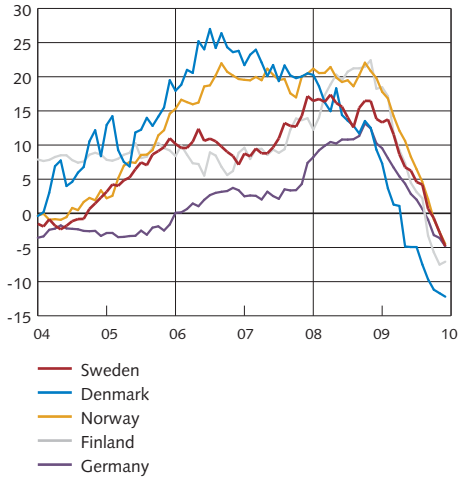
Sources: The ECB and national statistics agencies

Chart 2:27. Real house prices in the Nordic countries and Germany
Index, March 2004 =100



Sources: The BIS database, Reuters EcoWin and the Riksbank

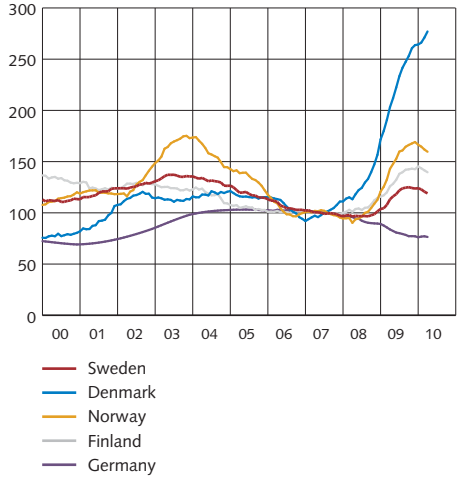
Chart 2:28. Companies' borrowing
Annual percentage change



Sources: The ECB and national statistics agencies

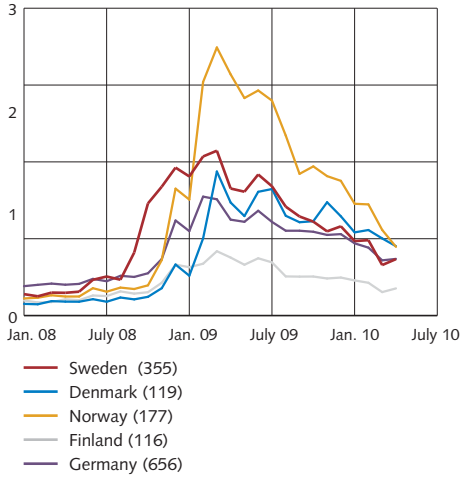
45 Deutsche Bundesbank (2010), Monthly Report, February.
46 Norges Bank (2010), Monetary Policy Report 1/10.

Chart 2:29. Corporate defaults
Twelve-month moving average, index, average year 2007 =100



Sources: National statistics agencies and the Riksbank

Chart 2:30. Expected default frequency for companies in the Nordic countries and Germany
Per cent



Note. Numbers within parentheses refer to the number of companies included in each country's portfolio.
Sources: Moody's KMV Credit Edge and the Riksbank

Credit risk remains high even though the economies have started to recover. While corporate indebtedness is certainly low and the current ratio strong, profitability is also weak (see Table 2:1). The weak profitability is also noticeable in the large number of bankruptcies in all of the Nordic countries, even if the peak now seems to have been reached (see Chart 2:29). However, in Denmark, bankruptcies are still increasing. At the same time, households are also facing pressure from increased unemployment. However, the low interest rates are contributing towards supporting households' ability to service debt.

Table 2:1. Key figures for listed companies in Nordic countries, full year 2009

	Denmark	Finland	Norway	Sweden
Profitability	4.9	0.9	2.3	3.8
Debt/total assets ratio	0.55	0.57	0.66	0.62
Current ratio	117	145	129	144
Interest coverage ratio	4.1	2.3	N/A	3.0

Note. Profitability is defined as the operating surplus in relation to the total assets. Debt/total assets ratio is defined as total debts in relation to total assets. The current ratio is calculated as current assets in relation to current liabilities. Interest coverage ratio is defined as operating profit/loss plus financial income in relation to financial costs. The ratios are calculated as an unweighted average for each country's listed companies. The number of companies included is 116 in Denmark, 115 in Finland, 176 in Norway and 231 in Sweden.
Sources: Bloomberg and the Riksbank.

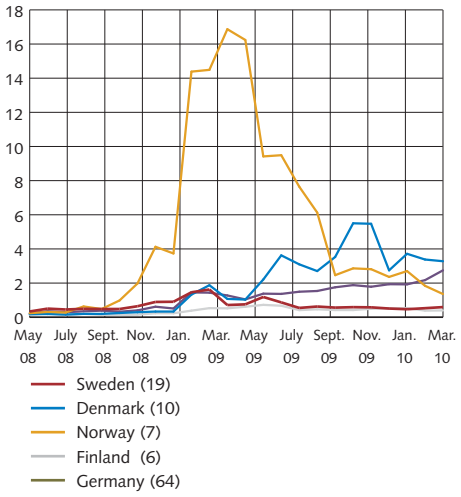
Increased optimism for the future suggests that households in the Nordic countries will continue to increase their borrowing. In Denmark and Norway, strong increases in income are also contributing to this trend. Households' debt-servicing ability is thus expected to remain strong in the period ahead, above all in Norway and Denmark. In Finland, household indebtedness is lower than in Norway, Denmark and Sweden. This means that Finnish households, on the whole, are expected to have sufficient margins to be able to service their loans, even when interest rates increase.

As in Sweden, house prices in Norway and Finland are expected to increase. House prices in Norway have already risen unexpectedly steeply, as the low interest rates have had a major impact on households' purchasing power due to the large proportion of mortgages with variable interest rates. However, the rise in house prices is expected to slow down as Norges Bank continues to raise the interest rate and housing construction increases. [47] In Finland, house prices have also continued to rise, while the decline in prices in Denmark has stabilised. There are many indications that prices will remain unchanged for some time to come as the market absorbs the surplus supply created by the previous Danish construction boom.

47 Norges Bank (2010), Monetary Policy Report 1/10, March.

At the same time, Nordic companies' demand for credit is expected to remain weak this year. Borrowing is not expected to increase again until some time next year. In Denmark, the downturn has been comparatively strong, but borrowing is expected to increase this year as willingness to invest picks up, particularly within the service sector. Debt-servicing ability is also expected to be strengthened due to the stronger economic situation and the normalisation of the financial markets. This suggests that the likelihood of bankruptcies is expected to continue to decrease over the next year (see Chart 2:30). The credit risk on the property market is also expected to decline as demand increases on the rental market. Above all, this applies to Norway, where the expected default frequency has fallen from the very high levels prevailing approximately one year ago (see Chart 2:31). The decrease of the default frequency is probably due to the stabilisation of prices for commercial properties following the previous steep decline. The expected default frequency is highest for Danish property companies. This may be because property prices are expected to fall further than they have so far and that property companies' debt-servicing ability will thereby deteriorate. Loan losses from the banks' lending to Danish property companies may thus increase in the period ahead. Danmarks Nationalbank also points out the construction sector as being particularly unstable. [48]

Chart 2:31. Expected default frequency for property companies in the Nordic countries and Germany
Per cent



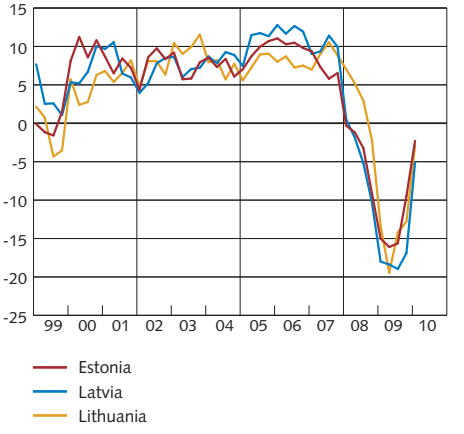
Note. Numbers within parentheses refer to the number of companies included in each contry's portfolio.

Sources: Moody's KMV Credit Edge and the Riksbank

THE BALTIC COUNTRIES

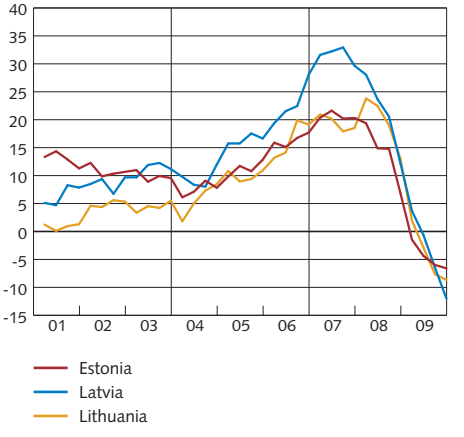
In the Baltic countries, the deep recession now appears to have bottomed out and the economies have started to stabilise (see Chart 2:32). However, domestic demand remains very weak, with falling wages and high unemployment exerting downwards pressure on private consumption (see Charts 2:33 and 2:34). However, exports have started to increase again as the rest of Europe has started to recover and the current internal devaluations begin to take effect. In addition, the improvement of terms of trade (i.e. that export prices have increased more than import prices) has provided a boost (see Chart 2:35). This has contributed towards a further strengthening of the surplus on the current account (see Chart 2:36). However, the terms of trade were negative in Lithuania during the first quarter. Furthermore, foreign companies have continued to make losses on their investments in the Baltic countries, entailing a decline in the outflow of capital. [49]

Chart 2:32. GDP
Annual percentage change



Source: Reuters EcoWin

Chart 2:33. Nominal wages
Annual percentage change

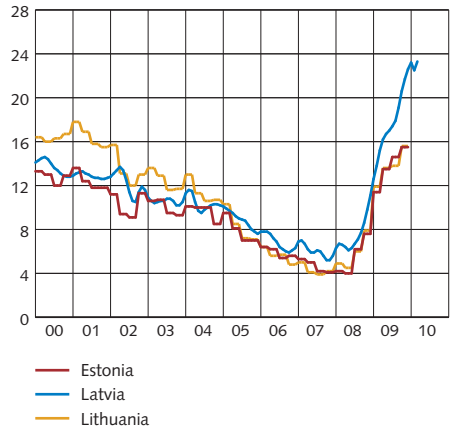


Source: Reuters EcoWin

48 Monetary review 4th Quarter 2009, Danmarks Nationalbank

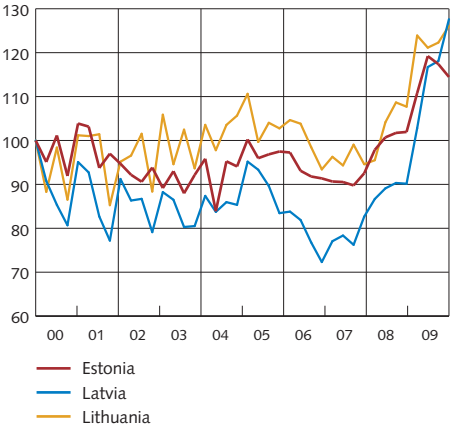
49 The current account consists of the balance of trade in goods and services, factor incomes and transfers. Foreign companies' losses have a positive effect on the current account, as the outflow of capital declines.

Chart 2:34. Unemployment
Per cent



Source: Eurostat

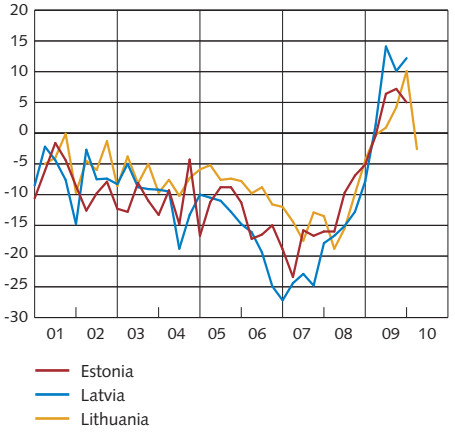
Chart 2:35. Terms of trade
Index, March 2000 = 100



Note. Terms of trade are calculated as the ratio of export prices to import prices.

Source: Reuters EcoWin

Chart 2:36. Current account
Percentage of GDP



Source: Reuters EcoWin

The deep recession has placed great pressure on public finances. Tax revenues have fallen due to the weak labour market, at the same time as expenses have risen rapidly. In order to deal with the growing budget deficits, the parliaments of these countries have therefore voted to accept several far-reaching supplementary budgets and have implemented extensive cutbacks. The Latvian deficit for 2009 thus lay below the limit set by the international lenders. In Estonia, the deficit only amounted to 1.7 per cent, making Estonia one of the few EU countries to comply with the Maastricht criterion on the maximum permitted budget deficit. This makes it likely that Estonia will be able to introduce the euro at the end of the year. The credit rating agencies have also raised their forecast credit ratings for all three countries from negative to stable as the economies have stabilised and the deterioration of the government finances has not been as extensive as first feared. At the same time, it has become easier to gain access to market funding and, during the winter, Lithuania issued another five-year dollar bond.

The internal devaluations have had a greater impact and the competitiveness of the Baltic countries has continued to improve. Both prices and average wages have declined steeply, which, in turn, has meant that the real exchange rate has depreciated (see Charts 2:33, 2:37 and 2:38). However, prices in Estonia have recently started to rise again due to a combination of VAT increases and higher petrol prices.

The banking systems in the different countries create different conditions for lending and recovery. In Estonia, the banking system is almost completely foreign-owned, with the Swedish and other Nordic banks as important participants (see also Chapter 3). In Latvia and Lithuania, the domestic-owned banking sectors are larger than in Estonia. The largest domestic bank in Latvia is Parex, which was taken over by the Latvian government in 2008.[50] The largest domestic bank in Lithuania is Snoras, which also has operations in the other Baltic countries via subsidiaries.[51] If the domestic banks were to be impacted by major losses with a resultant decrease of equity, access to credit would also decline. On the other hand, foreign-owned banks have thus far been able to rely on the provision of new capital by their parent banks, as these foreign operations are sufficiently small in relation to the banks' total operations. The parent banks have also

50 Following a lengthy process, the Latvian government has declared its intention of dividing Parex into two parts and subsequently trying to sell these.

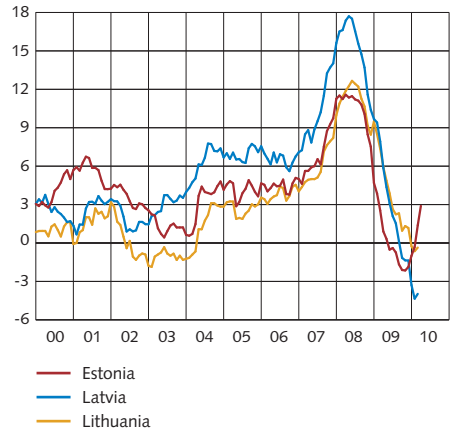
51 In Estonia, foreign banks stand for 95 per cent of lending. The majority of this lending (80 per cent) comes from Swedish banks. In Latvia, the proportion of foreign banks is about 70 per cent, while Swedish banks stand for 50 per cent of the total amount of lending. This means that there exists a significant domestic banking sector. Parex is the largest domestic bank and the second largest bank in the country, with a market share of 10 per cent of lending (in 2008). In Lithuania, the proportion of foreign banks is slightly greater than in Latvia – 88 per cent. The market share of Swedish banks amounts to 60 per cent. Snoras has a 7 per cent share of the market.

largely continued to provide their subsidiaries with credits to enable them to maintain lending in the Baltic countries. However, recently, loans to the banks' subsidiaries have decreased, reflecting the weak demand in the Baltic countries and borrowers' high credit risk. The reduction of the banks' balance sheets can be regarded as natural, given the deep recession (see Chart 2:39).

Households' and companies' borrowing is continuing to fall in all three of the countries (see Charts 2:40 and 2:41). A heavy debt burden, combined with high unemployment and few profitable investment projects, means that demand for credit is weak and that repayments of loans are greater than new loans. In addition, this debt burden has increased as GDP has fallen and, unlike before, it is no longer possible to rely upon inflation to undermine the value of these debts. There thus exists a great need to cut borrowing and reduce balance sheets if debt in relation to GDP is not to continue rising (see Chart 2:42). At the same time, the banks are continuing to exercise restraint in their lending activities, in line with the weak level of economic activity. A large proportion of all the loans are in foreign currency, primarily euro. However, the proportion of loans in foreign currency varies between the countries. In Estonia and Latvia, approximately 80 and 90 per cent, respectively, of outstanding loans are in foreign currency. In Lithuania, the percentage is somewhat lower – just over 70 per cent. At the same time, borrowers' incomes are largely in local currencies, exposing them to a currency risk.

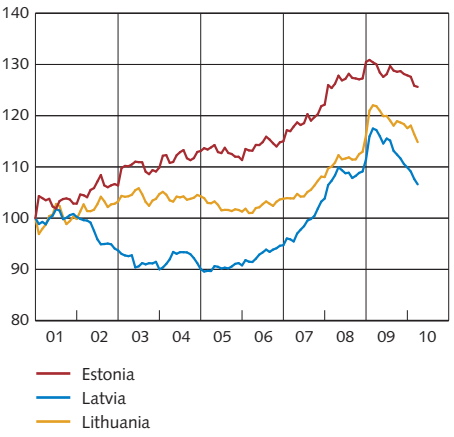
Households' and companies' debt-servicing ability has continued to deteriorate. This can be noted not least in that the number of late payments has continued to increase rapidly in both Latvia and Lithuania, even if a marginal decline could be noted in Lithuania during the first quarter of this year (see Chart 2:43). In Estonia, on the other hand, the number of late payments is no longer increasing. In both Estonia and Latvia, the corporate sector stands for just over 60 per cent of late payments. In Latvia, property and construction companies are continuing to find it difficult to service their loans, reflecting developments on the property markets, where prices have fallen dramatically. However, there have recently arisen indications that the Estonian and Latvian property markets have started to stabilise, and prices have started to rise again. Prices in Lithuania do not seem to have bottomed out yet (see Chart 2:44). However, borrowers' debt-servicing ability has been strengthened by the continued low interest rates. Furthermore, lenders are working actively to support borrowers finding it difficult to meet their payments, for example, by allowing them to postpone interest and amortisation payments (see also Chapter 3). Even if this relieves the pressure on borrowers, it may also hide the extent of problem loans.

Chart 2:37. Harmonised index for consumer prices
Annual percentage change



Source: Reuters EcoWin

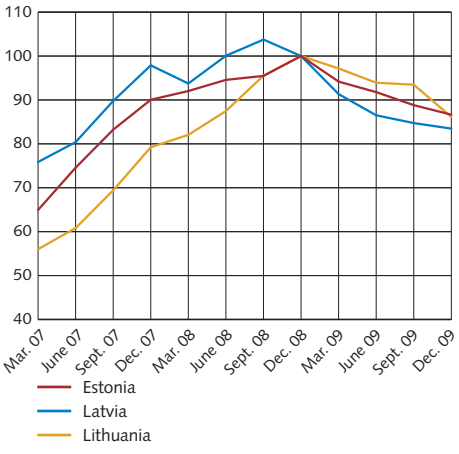
Chart 2:38. Real exchange rates
Index, 2000 =100



Note. The exchange rate is corrected for the price level (CPI). The scale is inverted so that lower values indicate weaker exchange rates.

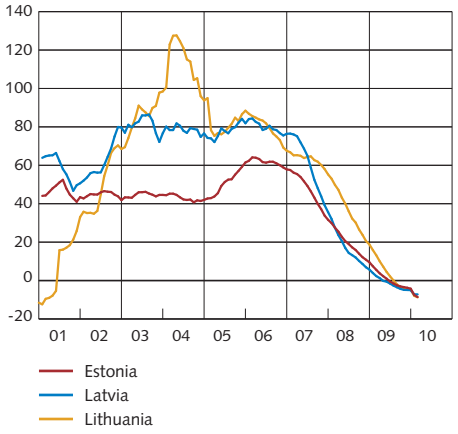
Source: BIS

Chart 2:39. Liabilities from banks operating in the Baltic countries to foreign financial institutions
National currencies; index, December 2008 = 100



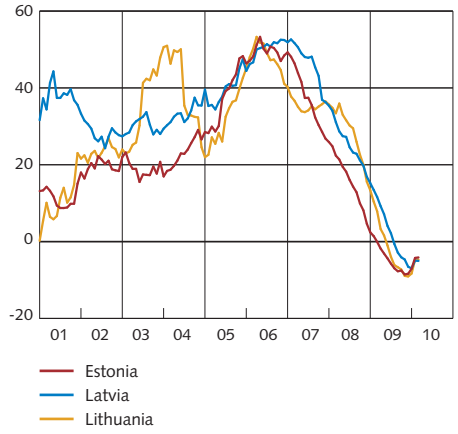
Sources: National central banks

Chart 2:40. Household borrowing
Annual percentage change



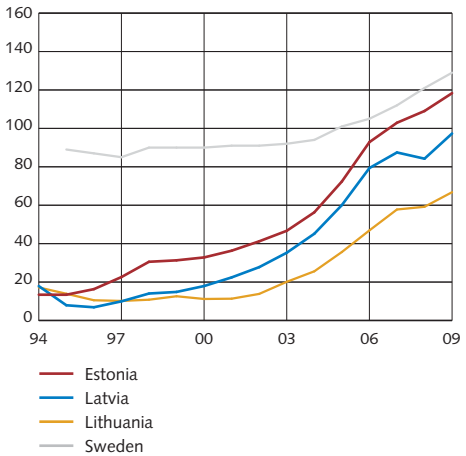
Source: Reuters EcoWin

Chart 2:41. Corporate borrowing
Annual percentage change



Source: Reuters EcoWin

Chart 2:42. Households' and companies' debts in relation to GDP
Per cent



Sources: National central banks and Reuters EcoWin

Several factors suggest that the recovery will be prolonged in the Baltic countries. Optimism among households has undoubtedly been strengthened recently, but this is probably a reflection of households' adjustment of their expectations to the prevailing recession. However, despite this increased optimism, GDP in Latvia and Lithuania is expected to continue to decrease this year too.[52,53] At the same time, the Baltic countries' production capacity in tradable goods is comparatively small, as a major portion of investments made during the years preceding the global financial crisis were primarily directed towards the service sector and property. When growth can no longer come from domestic demand, the business sector must adjust towards more export-oriented manufacturing. An export-driven recovery of this nature will require the continued completion of the internal devaluation process that has been initiated. Furthermore, the increased unease on the financial markets in Europe may cause the recovery there to stall. This would lead to a renewed reduction of demand for the Baltic countries' export goods.

Domestic demand will thus be weak for a long period of time to come. Further cuts in expenditure or tax increases will also be needed in both Latvia and Lithuania to consolidate the public finances and eventually fulfil the Maastricht criteria of a deficit of no more than three per cent of GDP. Further consolidation work to balance the budget is also expected in Estonia.[54] Continued cuts risk further dampening domestic demand at the same time as scope for private investments and consumption is highly restricted due to the hard pressure exerted by deflation on the private sector.[55,56]

52 In Estonia, GDP is expected to increase by 0.8 per cent this year. In Latvia and Lithuania, GDP is expected to fall by almost 4 and 1.6 per cent, respectively. See IMF (2010), World Economic Outlook, April.

53 Studies also indicate that recessions following on from steeply declining property prices tend to be more prolonged. See IMF (2009), World Economic Outlook, October.

54 This year, the budget deficit is expected to amount to 2.4 per cent of GDP in Estonia, 8.6 per cent in Latvia and 8.4 per cent in Lithuania, according to the IMF.

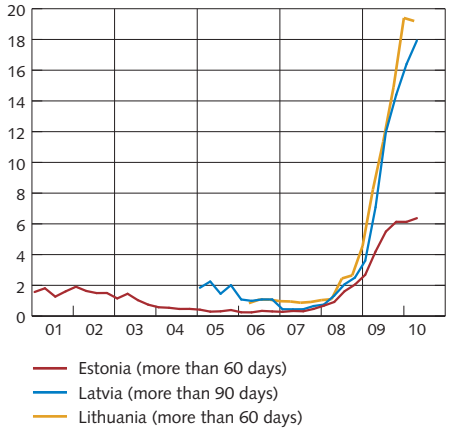
55 To gain an understanding of the possible length of time before domestic demand recovers in the Baltic countries, a comparison could be made with the experiences of Hong Kong after the Asian crisis, for example. In this case, it took approximately six years until real consumption increased again. At the same time, real investments have not returned to the level prevailing before the crisis. Just like the Baltic countries, Hong Kong had a fixed exchange rate and, in conjunction with the financial crisis, was affected by deflation and falling property prices. See IMF (2010), Republic of Estonia: Staff Report for the 2009 Article IV Consultation.

56 However, the latest statistics show that consumer prices are rising in Estonia.

Households' and companies' borrowing in the Baltic countries is expected to continue to decline for a longer period of time. Experience shows that it takes time for borrowing to increase again after a financial crisis.[57] The will to invest and consume is weak, with both companies and households shrinking their balance sheets. Deflation also means that real interest rates have again become positive after being negative for a long period of time, a situation which is encouraging the amortisation of loans rather than new borrowing. In addition, the high level of credit risk among borrowers means that lenders are expected to remain restrictive in their lending activities.

Debt-servicing ability is expected to remain weak for a long period of time due to the deep recession in the economies. The proportion of problem loans is thus expected to remain on a high level for some time to come. Studies also indicate that problem loans in growth economies, such as those of the Baltic countries, tend to increase rapidly following a financial crisis, reaching a level more than twice that prevailing before the crisis over a period of four years.[58] The high level of unemployment is expected to have a somewhat delayed effect upon households as unemployment benefits and other social safety nets expire. Furthermore, higher market interest rates in the euro area as a result of unease over central government finances will impact directly upon the interest rate levels in the Baltic countries, as their currencies are pegged to the euro. Consequently, households and companies may face higher lending rates.

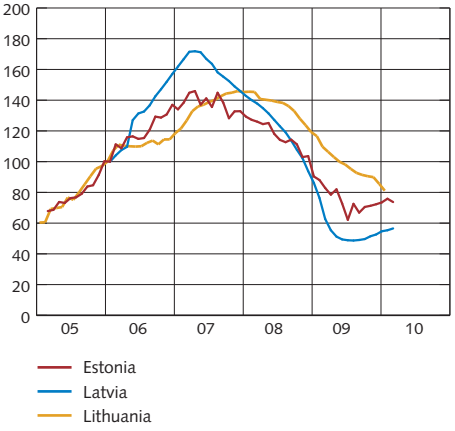
Chart 2:43. Late payments
Per cent of outstanding loans



Note. The definition of late payments may differ from country to country and comparisons between countries should therefore only be made with caution. In Lithuania, this refers to non-performing loans rather than late payments. Late payments are therefore lower than can be read from the chart.

Sources: Eesti Pank, Financial and Capital Market Commission and Lietuvos Bankas

Chart 2:44. Average price per square metre for apartments
Index, January 2006 = 100



Note. Definitions may differ from country to country and comparisons between countries should therefore only be made with caution.

Sources: Latio, OberHaus, Arco Real Estate Land Board and Lietuvos Bankas

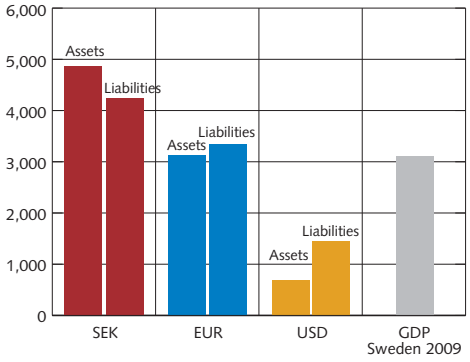
57 In Sweden, it took approximately three years for borrowing to increase again after the banking crisis at the start of the 1990s

58 See Global Financial Stability Report October, IMF (2010). However, in earlier crises, the exchange rate has depreciated strongly in conjunction with the decline of GDP, which has dampened problem loans. The proportion of problem loans should be lower, considering that the Baltic countries have maintained their fixed exchange rates.

3. Developments at the banking groups

Credit risk has declined in pace with the improvement in the global economy and the loan losses of the Swedish banks probably peaked in 2009. At present, Swedish banks are well capitalised in an international perspective and, together with earnings, the capital has been adequate to cover the loan losses that have arisen. During the financial crisis, it became apparent that the dependence of Swedish banks on market funding in foreign currency was particularly vulnerable to disruptions. On the other hand, access to market funding in Swedish krona was more stable. In the latter part of 2009 and early 2010, there was a marked improvement in the access to market funding. The recent turbulence in Europe with regard to central government finances has, however, once again led to a situation in which these markets are functioning less effectively.

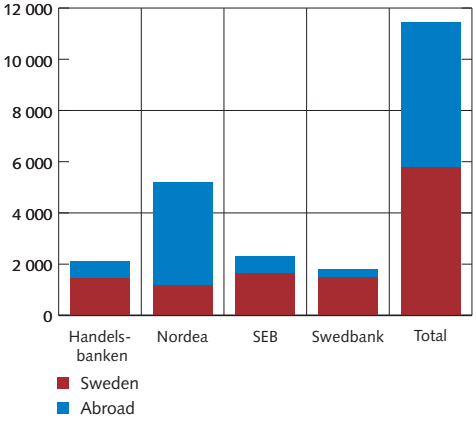
Chart 3:1. Assets and liabilities in the major Swedish banks, by currency, December 2009
SEK billion



Sources: Bank reports and the Riksbank

The Swedish banking sector is dominated by the four major banks Handelsbanken, Nordea, SEB and Swedbank. Together, they account for approximately three-quarters of the deposits from and loans to the Swedish public. This means that these banks play a decisive role with regard to the supply of credit and other important functions in the financial system in Sweden. The major banks have a significant share of their operations abroad. In order to fund their assets the Swedish banks are active on the international capital markets and large parts of their liabilities, amounting to 1.5 times Sweden's GDP, are in US dollars and euros (see Chart 3:1). The banks' total assets in Sweden and abroad are four times higher than Sweden's GDP. Consequently, a large part of their risk exposure is located abroad (see Chart 3:2). The Riksbank's analysis thus covers the banking groups, which include both Swedish and foreign branches and subsidiaries.

Chart 3:2. The total assets of the major Swedish banks in Sweden and abroad, March 2010
SEK billion



Sources: Bank reports and the Riksbank

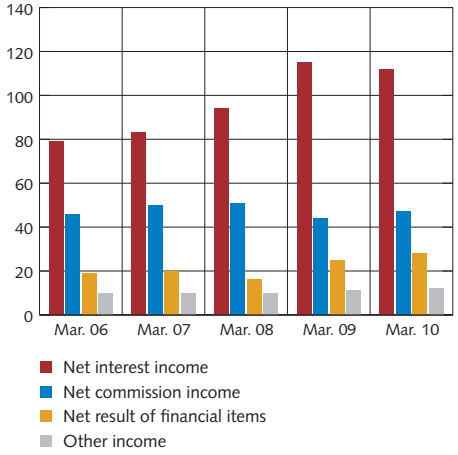
The chapter begins with a review of the major banks' earnings and profitability. This is followed by a description of the banks' lending and credit risk. The bank's capital, which is an important part of the assessment of their ability to cope with future losses, is then reviewed. The chapter concludes with a description of the banks' funding and liquidity risk.

EARNINGS AND PROFITABILITY

The Nordic operations are the basis for the profits of the Swedish banks. Approximately 90 per cent of the pre-tax profits come from the Nordic countries, with Sweden accounting for approximately half.[59] The banks' largest earnings items are net interest income, that is the difference between interest income and interest expenditure, and net commission, which constitutes charges for various services and products (see Chart 3:3). These two items together account for 80 per cent of the earnings.

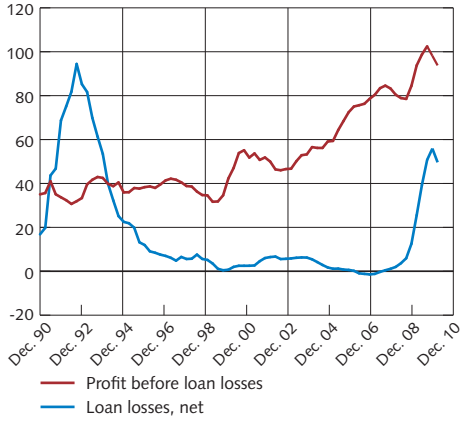
59 The reporting period comprises the latest four-quarters running to the end of the first quarter 2010. Unless stated otherwise, comparisons are made with the preceding four-quarters. The figures are adjusted for one-off effects. Hereinafter, the term Swedish banks refers to the Handelsbanken, Nordea, SEB and Swedbank banking groups unless stated otherwise.

Chart 3:3. The banks' earnings
SEK billion, rolling four quarters



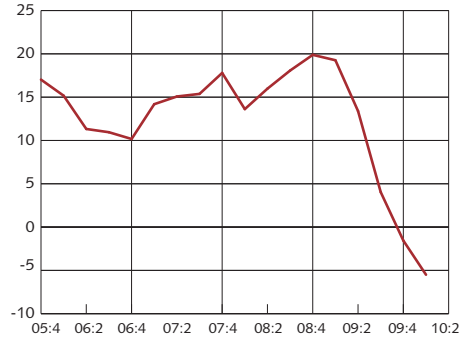
Sources: Bank reports and the Riksbank

Chart 3:4. Profit before loan losses and loan losses (net) in the major Swedish banks
Totalled over four quarters, SEK billion, fixed prices, 31 March 2010



Sources: Bank reports and the Riksbank

Chart 3:5. Annual lending growth at the major Swedish banks
Per cent



Sources: Bank reports and the Riksbank

The banks' earnings, that is profits before loan losses, declined somewhat towards the end of the reporting period (see Chart 3:4). This is mainly due to a fall in net interest income. The banks' profitability, measured as the return on equity, also declined. During the reporting period return on equity amounted to just over six per cent, which can be compared to the average of approximately 14 per cent for the last 10 years. This substantial deviation from the historical average is due to the relatively high loan losses.

Both reduced margins and a lower rate of lending affected the growth of net interest income during the reporting period. The banks' lending increased up to the end of the third quarter 2009 but then declined (see Chart 3:5). Deposit margins also declined and affected net interest income.[60] Chart 3:6 shows that the net interest income margin, that is net interest income in relation to interest-bearing assets, increased up to the third quarter of 2009 but then declined somewhat. The lower net interest income margin is attributable to the fact that deposit margins fell due to the low interest rate levels – if the deposit and lending margins had remained constant the net interest income margin would have remained unchanged.

Net commission income is increasing due to increased revenues from securities trading and asset management. Approximately one third of net commission income consists of income from brokerage and asset management. A somewhat higher turnover in securities has led to an increase in brokerage income while higher share prices have helped to increase revenues from asset management (see chart 3:7). In total, securities-related commission income increased by eight per cent during the report period. Other forms of commission income, such as charges for payments and lending, increased by nine per cent during the same period.

LENDING AND CREDIT RISK

The credit risk is the greatest risk on the asset side for the major Swedish banks. This is because approximately 60 per cent of the banks' assets consist of lending to the public (see Chart 3:8). The banks also have assets that in addition are exposed to market risk, such as interest-bearing securities, but these constitute a much smaller component of the total risk.

60 The lending margin refers to the difference between the banks' average funding costs and their average lending rates, and the deposit margin refers to the difference between what the banks receive for investing in the market and the average interest rate that they pay on their deposits.

Lending

Lending in the Nordic countries predominates in the four major banks. However, the geographical distribution of lending differs between the banks. Nordea, for example, has a smaller proportion of its operations in Sweden and a significantly larger proportion in the other Nordic countries compared to the other three banks. Lending to the Baltic countries accounts for approximately six per cent of the total lending of the major banks. For Swedbank, lending to the Baltic countries accounts for 13 per cent of the bank's total lending, while the corresponding figure for SEB is 12 per cent and for Nordea three per cent (see Table 3:1). Table 3:2 presents the banks' exposures to different risk areas. The respective exposures are presented in relation to core Tier 1 capital, which is that part of the capital that has the highest quality and with certainty has the capacity to absorb losses. A high value in the table thus always entails a higher credit risk than a low value. The table also shows that SEB and Swedbank have relatively large exposures to the Baltic countries, that a large proportion of Handelsbanken's lending is to the commercial property sector and that Nordea stands out in terms of its somewhat higher lending to the shipping sector.

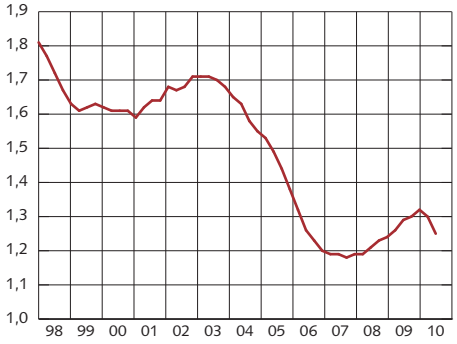
Table 3:1. The geographical distribution of the major banks' lending, March 2010
Percentage of lending to the public and SEK billion

	Handelsbanken	Nordea	SEB	Swedbank	Total
Sweden	67	23	58	82	49
Norway	13	15	3	<1	10
Denmark	4	24	1	<1	11
Finland	6	17	1	<1	9
Estonia	0	1	4	6	2
Latvia	0	1	3	4	2
Lithuania	0	1	5	3	2
Germany	1	<1	24	0	4
UK	4	<1	0	0	1
Eastern Europe, other	<1	3	0	2	2
Ret of the world	5	14	2	4	8
Lending to the public, SEK billion	1 468	2 841	1 204	1 214	6 726

Note. Eastern Europe, other" comprises Poland, Russia and Ukraine.
Sources: Bank reports and the Riksbank

The Swedish banks' exposures to countries experiencing problems with their central government finances are relatively limited. SEB has the largest exposure to these countries (see Table 3:2). By far the largest part of SEB's exposure consists of Spanish bonds, above all covered bonds.

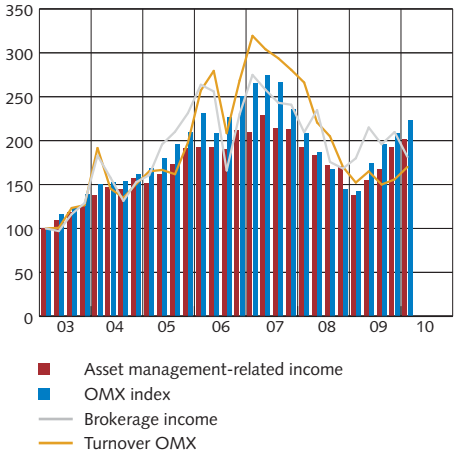
Chart 3:6. Net interest income in relation to interest-bearing assets, the net interest income margin
Per cent



Note. The net interest income margin is stated as net interest income for rolling four quarters in relation to average interest-bearing assets.

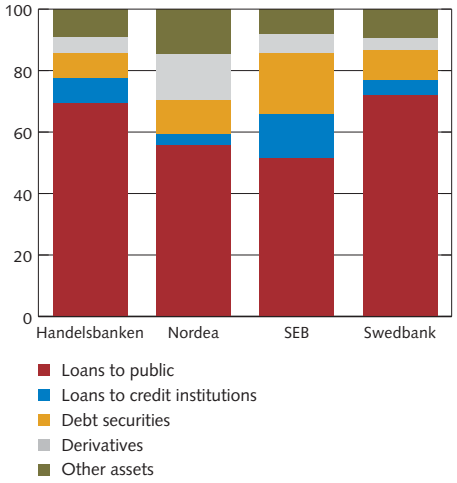
Sources: Bank reports and the Riksbank

Chart 3:7. The major Swedish banks' securities-related net commission income, Stockholm Stock Exchange turnover and the stock market index
Index, Q1 2003 = 100



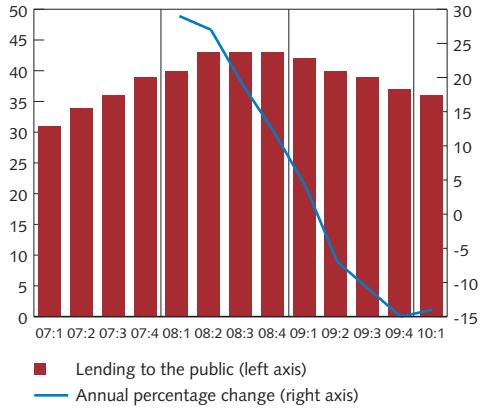
Sources: Bank reports, NASDAQ OMX and the Riksbank.

Chart 3:8. Allocation of total assets
Per cent, December 2009



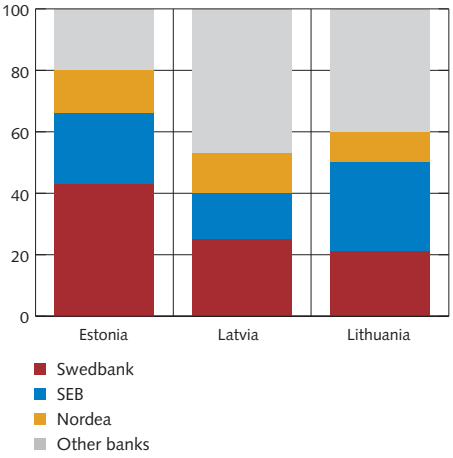
Sources: Bank reports and the Riksbank

Chart 3:9. Swedish major banks' lending in the Baltic countries
EUR billion, per cent



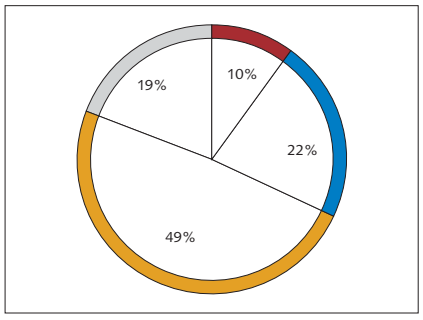
Sources: Bank reports and the Riksbank

Chart 3:10. Market shares of lending in the Baltic countries
Per cent, March 2010



Sources: Bank reports and the Riksbank

Chart 3:11. Geographical distribution of loan losses, in the period April 2009 to March 2010
Per cent



Sources: Bank reports and the Riksbank

Table 3:2. The banks' lending to risk areas in relation to core Tier 1 capital, March 2010
Per cent

	Handelsbanken	Nordea	SEB	Swedbank
Greece, Italy, Ireland, Portugal and Spain*, exposure	2	4	35	7
Shipping, lending	22	59	33	17
Commercial properties excluding lending in the Baltic countries, lending	478	209	124	187
The Baltic countries, lending	0	43	154	210
– of which commercial properties	0	6	27	32

Note. * Exposure May 2010. Lending to tenant-owner associations is not included in the risk area "Commercial properties".
Sources: Bank reports and the Riksbank

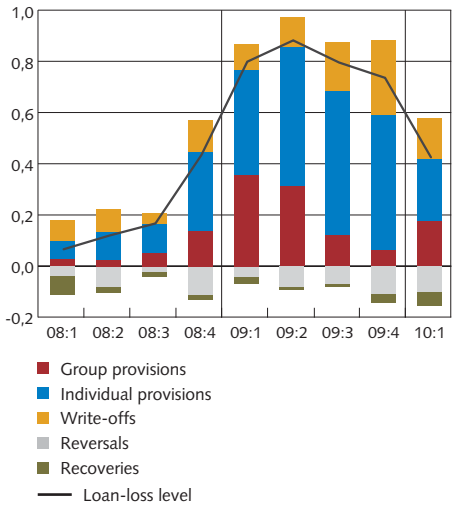
Lending to the Baltic countries is continuing to fall. Compared to the situation a year ago, the lending of the major Swedish banks to the Baltic countries, adjusted for the effects of shifts in exchange rates, has fallen by almost 14 per cent (see Chart 3:9). In Estonia, lending has fallen by 8 per cent, in Latvia by 15 per cent and in Lithuania by 19 per cent. Part of the fall can be explained by the fact that loans have turned into loan losses. But the main reason is that the demand for loans has fallen as a result of the weaker economic situation in the Baltic countries. Despite the fall in lending, the Swedish banks are market leaders in the region and their market shares have not noticeably changed compared to the situation a year ago (see Chart 3:10). The major Swedish banks' total lending to the public in these countries amounted to SEK 359 billion at the end of March 2010. Per country, the Swedish banks' lending to the public was SEK 132 billion in Estonia, SEK 107 billion in Latvia and SEK 120 billion in Lithuania.

Credit risk

It is probable that there has been a reversal in the increasing trend for loan losses. An indication of this is that the figures for the banks' loan losses in the first quarter continued the declining trend that was already seen after the third and fourth quarters of 2009. Assuming that the outcome is not worse than in the Riksbank's main scenario, the loan losses of the Swedish banks peaked during the second quarter of last year. The loan losses in the reporting period totalled SEK 50 billion, which corresponds to 0.7 per cent of total lending. This can be compared to the figures of just over SEK 25 billion and 0.4 per cent of lending for the preceding reporting period.

Loan losses stemming from the Baltic countries amounted to SEK 24 billion during the reporting period. This is just under half of the major banks' total losses (see Chart 3:11). In the case of SEB the Baltic loan losses accounted for 78 per cent of the banks' total loan losses, while the corresponding figure for Swedbank was 63 per cent and for Nordea 14 per cent. Over 40 per cent of Nordea's loan losses were from Denmark, while 60 per cent of Handelsbanken's loan losses were from Sweden.

Chart 3:12. Loan losses per quarter
Percentage of lending at the start of the respective quarters



Note. Annualised data.
Sources: Bank reports and the Riksbank

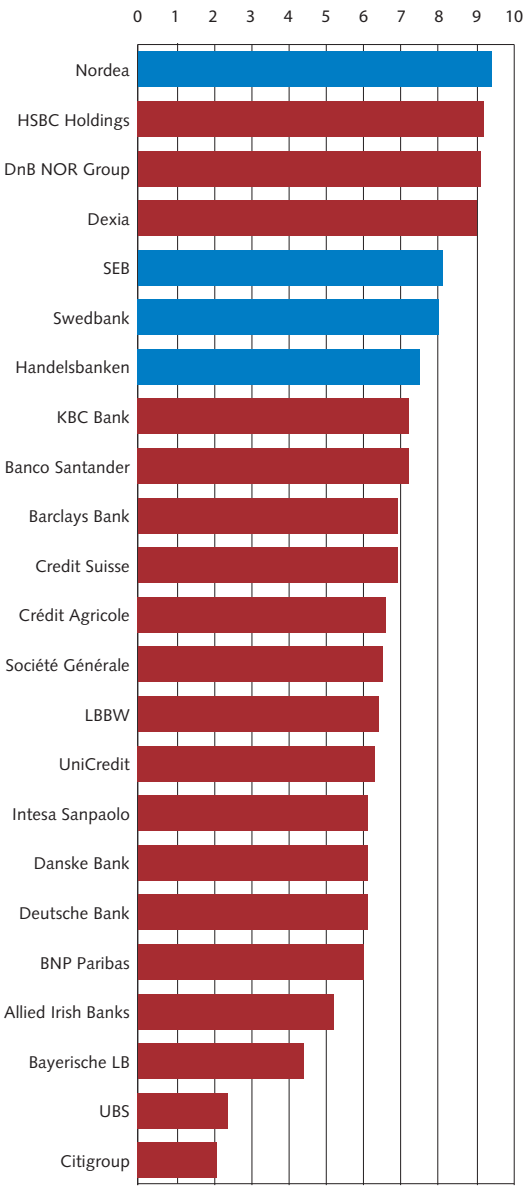
Loan losses from corporate lending in the Nordic countries, with the exception of Denmark, have been lower than expected. The main reason why companies have coped so well is that their interest expenses have fallen as a result of the prevailing low interest rates. Many companies were also well equipped when the crisis hit and as a further measure the companies acted quickly to cut their costs. The lessons learned during the bank crisis of the 1990s also helped to keep the losses low. This is reflected to a certain extent, for example, in the fact that companies assessed as having temporary liquidity problems were in certain cases awarded extended credit, had their amortisation requirements eased and were given more time to make interest payments. The measures were in many cases complemented by capital injections from the companies' owners.

Actual loan losses are expected to increase and provisions for feared loan losses are expected to continue to decrease. This trend has been particularly evident in the Baltic countries. The course of development in recent quarters can be seen as a sign that the banks are now entering a new phase in the credit cycle – from provisions for feared losses to realised losses. From the third quarter of 2008 to the present, the banks' loan losses has primarily consisted of provisions for future losses (see Chart 3:12). A large part of the provisions has been group provisions, that is provisions made for a group of loans or parts of a loan portfolio where the risk of loan losses has been assessed as high without being able to identify the specific loans that risk leading to loan losses. As the identification of uncertain individual commitments has become more precise, group provisions have decreased as sums have been transferred to individual provisions. At the same time, the percentage of write-offs has increased, although the percentage is still relatively small.

In the Baltic countries, the Swedish banks are working actively to handle the rapidly growing stock of problem loans and assets that the banks have now taken over. [61] One lesson learned from the bank crisis in the early 1990s is that it is important to identify and deal with problem loans at an early stage in order to limit the extent of the loan losses as much as possible. Another lesson is that high values can be recovered from pledged assets that the banks have taken over if the banks manage these actively themselves, with the help of experts in the field, and then sell them once asset prices have recovered. However, as long as this is justifiable in economic terms, the banks try as far as possible to cooperate with the borrowers to avoid taking over pledged assets, for example by easing the requirements governing amortisation and interest payments. Nevertheless, the banks will still take over the collateral relating to a large proportion of

61 In 2009, the Riksbank and Finansinspektionen together investigated how Swedish banks in the Baltic countries handle their problem loans. The conclusion was that the banks comply with sound international practice and have a realistic view of the expected total extent of these loans (see Financial Stability Report 2009:2).

Chart 3:13. Capital ratios of Swedish and international banks
Per cent



Note. Risk-adjusted capital ratios (RAC, Risk Adjusted Capital) according to Standard & Poor's where market risk is more heavily weighted compared to the Basel framework and lending to companies and households is on average allocated a higher risk weighting than the banks' internal rating-based approaches. See "Methodology And Assumptions: Risk-Adjusted Capital Framework For Financial Institutions" Standard & Poor's April 21, 2009.

Source: Standard & Poor's

the loans. Both SEB and Swedbank have established special companies to manage such assets; this primarily involves managing properties. By the end of the first quarter 2010, these companies had taken over assets amounting to almost SEK 300 million in Baltic countries. It is expected that the amount of collateral taken over by the banks will increase in the Baltic countries onver the next few years.

Capital

The major Swedish banks are well capitalised in international terms. Chart 3:13 shows that the Swedish banks are among the best capitalised in a comparison with a number of international banks. Sound capitalisation is important to the banks in that it enables them to get access to market funding and thus makes it possible for them to return more quickly to a normal funding situation without central government support. This is particularly important for the Swedish banks as they are largely dependent on funding their operations by issuing debt. Apart from securing access to market funding, having a relatively high level of capitalisation may also entail a deliberate adjustment to the stricter regulations on capital adequacy that are now in the pipeline. One of the effects of the financial crisis, during which the importance of adequate capital buffers has become clear, is that international discussions are now underway about changing and complementing the regulations governing capital adequacy.

Since the autumn of 2008, all of the Swedish banks have strengthened their Tier 1 capital in relation to risk-weighted assets. Total Tier 1 capital has increased by a third at the same time as the risk-weighted assets, after full implementation of Basel II, have fallen by eight per cent. Among other things, three of the four major banks have carried out[62] and issued Tier 1 capital contribution, which are a hybrid of equity and debts. In all of these issues, existing shareholders or private players have injected capital. Reduced or cancelled dividends have also contributed to the increase in Tier 1 capital. All in all, this means that the banks' Tier 1 capital ratios are substantially higher than the four per cent that is the minimum statutory level (see Table 3:3).

Table 3:3. Tier 1 capital ratios, March 2010
Per cent

	Handelsbanken	Nordea	SEB	Swedbank
Basel II	14.6	11.2	13.9	13.5
Transitional regulations	9.1	10.1	12.4	10.3

Note. Basel II will not be fully implemented until 2012 at the earliest. Until then, transitional regulations will apply under which the risk-weighted assets must correspond to at least 80 per cent of the risk-weighted assets under Basel I.
Sources: Bank reports and the Riksbank

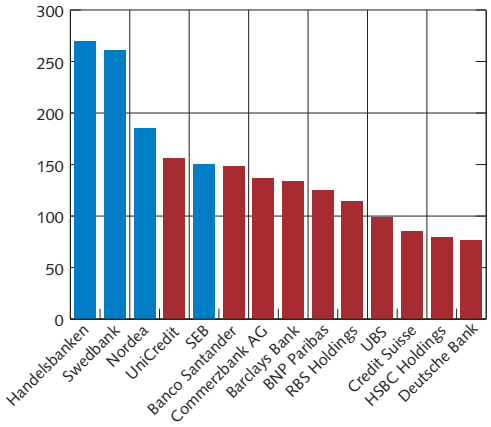
62 Swedbank has conducted two rights issues totalling SEK 27.5 billion, SEB's rights issue amounted to SEK 15 billion and Nordea's to EUR 2.5 billion.

Funding

One of the most important functions of the banking system is to convert short-term deposits and borrowing to long-term lending. A large part of the banks' liabilities, this is to say their funding, is to be regarded as liquid. The banks' assets in the form of lending are, on the other hand, largely illiquid. The banks thus have a liquidity risk to manage. The reason is that the banks cannot be certain about how they will be able to fund their operations in the future and at what price. It may also be difficult for them to convert their assets quickly.

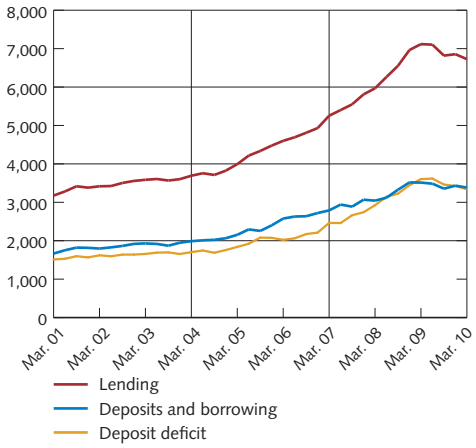
The major Swedish banks are dependent on market funding to a great degree. In comparison with a number of other European banks, the lending of the Swedish banks in relation to deposits is above the average (see Chart 3:14). The difference between lending and deposits, the so-called deposit deficit, shows how large part of a bank's lending that cannot be funded by deposits. At the end of the first quarter 2010, the deposit deficit amounted to SEK 3 340 billion (see Chart 3:15).

Chart 3:14. Lending in relation to deposits
Per cent



Sources: Bankscope and the Riksbank

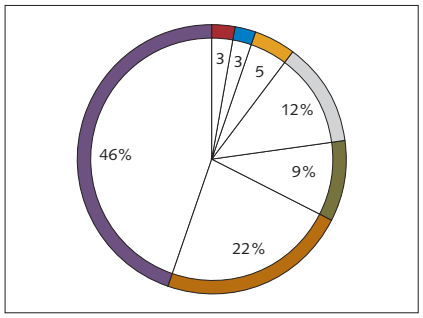
Chart 3:15. The major Swedish banks' deposits and lending
SEK billion



Note. Deposit deficit = lending – deposits.

Sources: Bank reports and the Riksbank

Chart 3:16. The major Swedish banks' sources of funding, March 2010
Per cent



- Credits from the Riksbank
- Government-guaranteed borrowing via the Swedish National Debt Office
- Interbank, net
- Covered bonds in SEK
- Covered bonds in foreign currency
- Other debt securities issued
- Deposits

Note. The funding of the major banks amounts to approximately SEK 7,600 billion.

Sources: Bank reports and the Riksbank

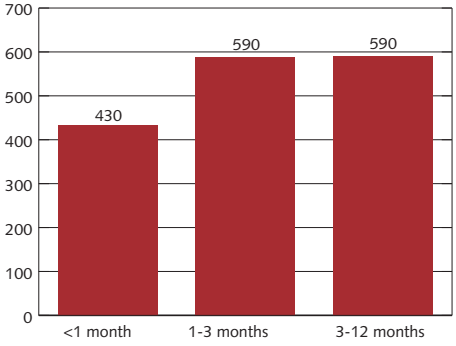
Approximately half of the banks' funding consists of market funding and half of deposits from the public (see Chart 3:16). In total, the banks' funding amounts to SEK 7,600 billion. Market funding mainly consists of issued securities of which bonds, largely covered mortgage bonds, account for the long-term funding. The fact that the Nordic markets for covered bonds worked relatively well throughout the financial crisis of course helped to ease the funding situation of the Swedish banks.[63] Short-term borrowing mainly consists of certificates. Borrowing on the interbank market, which is primarily used to balance liquidity, is also a part of the short-term market borrowing. In addition, loans from the Riksbank and other central banks, together with borrowing backed by government guarantees, replaced parts of normal funding during the financial crisis.

63 Despite the severe pressure placed on the international bond markets, the market for Swedish covered bonds remained open for trading throughout the financial crisis. Swedish banks were able to issue bonds on the primary market and market participants were also willing to offer ask and bid prices on the secondary market with a bid offer spread that never exceeded 10 basis points.

Swedish banks are ultimately dependent on being able to access those markets where they normally fund their operations. This is partly because a large part of the banks' market funding falls due within 12 months (see Chart 3:17) and partly because new regulations will probably lead to a situation in which some of the short-term market funding will have to be replaced by long-term funding. During the crisis, many Swedish banks, like other international banks, had problems funding their operations on the dollar market. This was largely because funding from US money market funds was restricted, mainly in terms of maturity. The Swedish banks' access to market funding has continued to improve in pace with the improvement of the global economy and in late 2009 and early 2010 the banks were active in issuing bonds and certificates. They have therefore prefunded some of the bonds that will soon fall due. As a result of this improved situation Swedbank, the only major Swedish bank that issued under a central-government guarantee, recently withdrew from the Swedish guarantee programme. Unease about central-government finances in southern Europe has, however, impaired the functioning of the financial markets once again. At the same time, a large part of the global banking system is still dependent on central-government programmes and on central banks throughout the world continuing to provide liquidity.

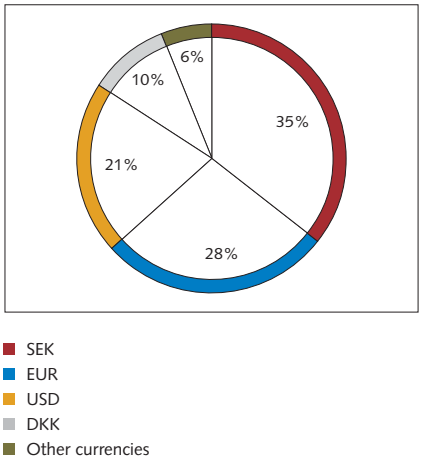
The market for currency swaps is important to the major Swedish banks. Two thirds of the banks' market funding is conducted in foreign currencies, above all in euros and US dollars (see Chart 3:18). Some of this market funding is converted into Swedish kronor to fund part of the banks' lending to the Swedish public. This conversion is carried out using so-called currency swaps and means that the banks' match their assets and liabilities in all currencies. They thereby take no, or a very limited, currency risk. Approximately one quarter of the foreign market funding is converted in this way. The banks are also dependent on being able to swap to euros and US dollars. When market funding in foreign currencies, for example in US dollars, falls due the bank can fund this by issuing new securities in dollars. The repayment can also be made using the bank's current holdings of US dollars or by the bank swapping, for example, Swedish kronor to US dollars.

Chart 3:17. Maturity of the securities of the major Swedish banks, March 2010
SEK billion



Sources: Bank reports and the Riksbank

Chart 3:18. The market funding of the major Swedish banks per currency, December 2009
Per cent



Sources: Bank reports and the Riksbank

Effects of liquidity requirements for banks on Swedish mortgage rates

During the financial crisis, the liquidity risks in the financial system became very tangible. In the wake of the crisis, there have therefore been calls from several quarters that the banks should reduce their liquidity risk. The Basel Committee has therefore proposed the introduction of two quantitative requirements for the banks' liquidity management: the "Liquidity coverage ratio" and the "Net stable funding ratio" which entail higher demands for the quality of the banks' liquidity reserves and for the proportion of long-term funding. The Committee also wishes to increase transparency in the reporting of the banks' liquidity risks. The proposals have not been adopted yet and it is therefore difficult to assess what all their effects will be. For Swedish banks that have a large proportion of mortgages at long maturities on their balance sheets the new proposals, in their current form, would lead to the need to extend the maturity of their funding. This would lead to an increase in the banks' funding costs, which in turn would probably affect the mortgage rates. In addition, it is likely that extending the maturity of the banks' funding would affect the relationship between the shortest and the slightly longer mortgage rates and thus the borrowers' choices between variable and fixed rates. The purpose of this box is partly to describe the liquidity risk and the reasons for the increase in risk taking that led to the financial crisis and partly to show how the changed liquidity requirements that the banks are now facing may affect the short-term mortgage rates.

Liquidity risk in the banking system

Long-term mortgages account for a large part of the lending of many banks and thus constitute a significant part of the banks' assets. The banks fund this lending partly from deposits from the general public and partly on the financial markets: on the money market by issuing certificates and on the long-term capital market by issuing (covered) bonds. Although deposits and bonds constitute the largest sources of funding, the average maturity of the banks' mortgage funding is much shorter than that of the mortgages themselves. This means that the banks can reduce their funding costs and offer their customers a lower interest rate than if the funding for the mortgages had the same maturity as the mortgages. However, it also means that the banks take a liquidity risk as they must acquire funding for the mortgages several times before they mature.

Still, one of the banking system's main tasks in the economy is to convert savings, for example liquid deposits, to illiquid lending and the liquidity risk is thus a natural part of the banks' operations. In recent years, however, the liquidity risk in the global banking system has increased significantly, which proved to have costly consequences during the financial crisis. The increase in risk taking is partly due to the fact that banks, both in Sweden and abroad, have increased their dependence on market funding because lending has grown more rapidly than deposits.[64] As deposits can be regarded as a relatively stable and long-term source of funding, despite the fact that they have a very short maturity in contractual terms, the greater dependence on market funding has led to an increase in the difference between maturities for lending and maturities for funding and, consequently, the liquidity risk has also increased.[65] Nevertheless, perhaps the most important reason for the increase in risk taking in the years preceding the financial crisis was that the banks increasingly used external investment

64 In Sweden, as in many other countries, the public's savings are converted into loans not only via bank deposits but also through, for example, pension funds' and life insurance companies' purchases of the securities issued by the banks. The Swedish banking system has therefore for a long time, but to an increasing extent, been characterised by the fact that deposits are not sufficient to fund all the lending that the public demands. This has given rise to a deposit deficit in the banks that is funded on the interbank and securities markets.

65 The contractual maturity of the banks' deposits is usually very short, the majority of the deposits are payable on request, that is in practice on the same day. The behavioural maturity of the deposits is much longer, however. Thanks, among other things, to the deposit guarantee scheme, deposits are a highly stable source of funding that experience shows is unlikely to disappear even when a bank is experiencing serious difficulties. All in all, this means that in terms of the interest rate risk deposits are to be regarded as very short, while in terms of liquidity they can be regarded as stable or very long.

units such as SIVs and conduits.[66] This led to a situation in which the funding for above all mortgages and other property-related lending was extremely short term, often with maturities of only a few months, and also off the banks' balance sheets. When investor confidence in the banks fell in connection with the turmoil on the financial markets there was thus a decline in liquidity on certain markets. Even banks that had not funded their lending off their balance sheets, for example the Swedish banks, and whose assets were still considered to be of good quality, were affected by this as they were dependent on international capital markets to fund their assets. Consequently, many banks experienced funding problems and this forced central banks in many parts of the world to act to relieve the pressure.

New bank requirements may lead to higher short-term mortgages

In the wake of the crisis, discussions are therefore now underway on how new regulations and frameworks can be designed in order to limit the liquidity risk in the banks. As part of a larger reform package, the Basel Committee has proposed the introduction of a global standard for liquidity management. The proposal has not yet been adopted and all the details have not been finalised, which means that it is not possible to definitely assess the effects that the liquidity-regulation proposal will have. It is already clear, however, that the new regulations will impose much stricter requirements on the banks regarding the reporting of liquidity risks and also entail quantitative demands regarding liquidity management. Today, the quantitative requirements are based on two main parts:

- *Liquidity coverage ratio* – Requires banks to maintain a larger liquidity buffer containing more liquid securities.
- *Net stable funding ratio* – Requires banks to hold a certain part of their funding in long-term or stable funding sources in order to reduce the maturity mismatch between assets and liabilities and the dependence on short-term funding.

For Swedish banks, the introduction of the net stable funding ratio is likely to entail the greatest challenge. As their balance sheets largely consist of mortgages, the proposal means that much of the funding that is now made up of mortgage certificates, which have a short maturity, must be replaced by bonds. This will increase the average cost of the banks' funding as they will have to pay a maturity premium to fund their operations in the long term instead of in the short term. To the extent that the banks are able to pass on this increased funding cost to their customers this will also mean higher interest costs for those with mortgages.

The question is whether all mortgage rates, irrespective of maturity, will increase as much. In recent years, variable-rate mortgages have often turned out to be less expensive than fixed-rate mortgages in Sweden. This can be explained by saying that monetary policy has been more expansionary than expected by the market but can also be the reason that the banks, for competitive or other reasons, have accepted a lower margin on variable-rate mortgages than on fixed-rate mortgages. Another possible explanation is that the banks have allocated a larger part of the less expensive funding in the form of deposits and certificates to variable-rate mortgages with the result that the funding cost for a variable-rate mortgage is lower than for a fixed-rate mortgage.

66 See the glossary for explanations of the terms SIV and conduit.

Assuming that the latter is at least part of the explanation of why variable-rate mortgages have been cheaper, imposing requirements for more long-term funding will lead not only to higher mortgage rates in general but also, in all probability, to a decrease in the difference between the shortest (variable) and the slightly longer mortgage rates. As the banks will be forced to replace some of their short-term certificate funding with funding at longer maturities, the banks' funding costs for variable-rate mortgages will increase, which in turn will push up the short-term mortgage rate compared to rates at slightly longer maturities. The advantage of having a variable-rate rather than a fixed rate will simply no longer be as great. As mortgage certificates usually have a maturity of up to one year, it is likely that the greatest impact on mortgage rates will be at maturities of between three months and one year. As this happens, a larger proportion of the borrowers should, all else being equal, choose to fix their mortgage rates. This effect will be reinforced by the fact that the new proposals will make it relatively more advantageous for the banks to fund their operations using deposits, which should lead to an increase in deposit rates as competition for the savers' money will increase. This will also entail higher funding costs for the banks and, given that deposits are to a greater extent used for the pricing of variable-rate mortgages than fixed-rate mortgages, contribute to a situation in which the level of the variable rate begins to approach that of the slightly longer-term rates.

On the one hand therefore, the proposals that the banks should reduce the difference in maturities between assets and liabilities will probably increase the interest rate costs of the banks and, ultimately, of those with mortgages. On the other hand, if the proposals lead to a reduction in the gap between variable and fixed interest rates they may lead to a situation in which a greater proportion of the mortgages are converted to fixed-rate mortgages. This in turn would dampen the volatility of mortgage rates and, consequently, lead to lower volatility in the disposable incomes of the households. At the same time the proposals will reduce the liquidity risk in the banks, which is what they aim to do and positive for the stability of the financial system. The requirement for greater transparency in the reporting of liquidity risks will also improve market discipline. In the longer term this will hopefully lead to more stable and more secure banks and make it possible to avoid financial crises like the one we have just experienced. In such a perspective it is therefore possible that the increasing interest costs that the proposals now entail will fall again as investors will require a lower risk premium to fund a more secure bank.

The financial infrastructure in Sweden

Oversight of the financial infrastructure is an important part of the Riksbank's financial stability work. The financial infrastructure consists of the systems that enable the secure and effective execution of various payment and securities transactions. A recurring part of oversight is to evaluate whether the systems in Sweden comply with international standards for how a particular type of system should function.

This box describes both the outcome of evaluations made by the Riksbank of the systems in the past year and infrastructural trends.

The Swedish financial infrastructure functions soundly

The oversight work includes an annual evaluation of how well Swedish financial infrastructure systems comply with international standards [67]. The systems evaluated are: RIX, which is the Riksbank system for large-value payments, BGC AB (Bankgirocentralen), which is the intermediary for retail payments, Euroclear Sweden AB, which is the central securities depository in Sweden and NASDAQ OMX Derivatives Markets (DM), which is the central counterparty and clearing organisation in derivatives trading.

The Swedish financial infrastructure is functions soundly. The 2009 evaluations showed that BGC and Euroclear Sweden fully observe all standards evaluated. RIX and NASDAQ OMX DM fully observes all but one standard.

Infrastructural trends towards internationalisation

Work on several changes in the Swedish financial infrastructure began a couple of years ago and some of these changes have already been implemented. Of the changes yet to be completed, some will take place in the next year and others within a few years. In general, the aim of these initiatives is to create more secure and effective markets. Economies of scale and harmonisation between countries are in focus, which in turn lead to internationalisation of the infrastructure.

The ongoing changes include the introduction of central counterparties in the Swedish equity market and outsourcing of the BGC payment system. In 2009 the Dutch company European Multilateral Clearing Facility N.V. (EMCF) launched central counterparty clearing in the equity market. In the coming year there are plans for another two central counterparties on the equity market, which will make it possible for participants to choose which central counterparty they wish to use. Like EMCF, these two central counterparties will also be foreign; SIX x-clear AG is based in Switzerland and European Central Counterparty Ltd (EuroCCP) is based in the UK. The BGC has in turn initiated a project to transfer the IT operation of its payment system to the British company VocaLink. The move will be made in two stages, the first of which was completed in the first half of 2010 and the second of which is planned the first half of 2011.

67 RIX and BGC are evaluated on the basis of the "Core Principles for Systemically Important Payment Systems", issued by the Bank for International Settlements (BIS) Committee on Payment and Settlement Systems (CPSS) in collaboration with the international umbrella organisation of securities regulators, the International Organisation of Securities Commission (IOSCO). Euroclear Sweden is evaluated on the basis of "Recommendations for Securities Settlement Systems", issued by the European System of Central Banks (ESCB) in collaboration with The Committee of European Securities Regulators (CESR). NASDAQ OMX DM is evaluated on the basis of "Recommendations for Central Counterparties", issued by the ESCB in collaboration with the CESR.

A few years ahead two other initiatives will have a great impact on the financial infrastructure. Euroclear Sweden AB, the central securities depository in Sweden, became part of the Euroclear Group in 2008, thereby participating in the work of the Group to create a Single Platform. It has not yet been decided when to migrate to the new platform, but it is likely that there will be a phased transfer, starting no earlier than the end of 2012. This will mean that safekeeping and other processing of securities will take place in a foreign system.

The second major change in the infrastructure over the next few years is TARGET2-Securities (T2S). T2S is a Eurosystem initiative aimed at creating a single European platform for securities settlement. T2S is expected to be introduced in the second half of 2014 and at that time settlement of securities will be conducted using a platform owned and run by the Eurosystem.

A common denominator of the changes described is that the infrastructure is becoming increasingly international and a considerable part of the payment and securities transaction flows will be in systems outside Sweden. The fact that the financial infrastructure is developing and becoming more harmonised is positive for the Swedish market. It opens up possibilities for participants to expand, at the same time as their operational activities are streamlined and become more effective and secure. However, it also makes greater demands of participants and system owners to adapt their activities in terms of operational processing and risk management, so that they can handle increased volumes, and to take into account the fact that the surrounding infrastructure is different in different countries.

The crucial factor for the Riksbank in its oversight activities is not where a system is operated but rather how it is operated. However, the fact that the flows are in foreign systems imposes greater requirements on cooperation with other central banks and supervisory authorities for joint monitoring of the systems.

4. Future prospects, risks and stress tests

The extensive crisis package presented by the EU, the IMF and the ECB has contributed to warding off the immediate unease on the financial markets. The real economy in Sweden and abroad has so far improved, albeit from a low level, and according to the main scenario the concern in the financial markets is not expected to grow in such a way that it will thwart an ongoing economic upturn. Against this backdrop, it has been possible to revise down the forecasts for the Swedish banks' loan losses to SEK 61 billion in the years leading up to and including 2012. However, there is a risk that the very tight fiscal policy that needs to be conducted in several European countries will suffer setbacks. This could in turn entail increased unease on the financial markets and thereby have a negative effect on financial stability in Sweden, which could ultimately have consequences for the real economy. Moreover, developments in the Baltic countries are still a risk for Swedish banks. The Riksbank's stress tests indicate that a seriously deteriorating scenario would lead to major loan losses, but that a combination of the banks' future earnings and strong capital levels would be sufficient to handle them. However, large loan losses combined with the financial markets functioning less efficiently could affect the banks' access to, and costs for, market financing.

This is the first time the Financial Stability Report contains a fourth chapter. The purpose of this new chapter is to describe the Riksbank's main scenario, the risks that may threaten it, and to use stress tests to assess the Swedish banks' resilience to potential shocks that might arise if developments were much worse than in the main scenario.

Main scenario

This section briefly describes the most likely developments, both abroad and in Sweden, of significance for Swedish financial stability. Using anticipated developments as a starting point, the Riksbank forecasts the banks' loan losses for the next three years.

DEVELOPMENTS IN THE REAL ECONOMY AND ON THE FINANCIAL MARKETS

The global economy is expected to continue to strengthen over the coming years, but the recovery will take off from a low level. The recovery is also still dependent on the extensive economic policy measures implemented by governments and central banks around the world. However, these measures will probably be phased out in the near future. Because of the public finance problems in Europe, fiscal policy consolidation will be necessary in many countries. This will contribute to the economic upswing taking some time. The recovery of the world economy is expected to receive a major push from the economies of Asia, where growth is expected to continue to be

strong. Over the coming three years, the world economy is expected to grow by approximately 4 per cent per year. This is in line with the historical average for the growth rate, but entails a slow recovery in relation to the heavy fall in GDP. However, this is a normal pattern after a financial crisis. [68]

Growth in Sweden is expected to return to positive this year, following the greatest fall in one year in the post-war period. It is assumed that the stronger developments abroad will contribute to an increase in Swedish exports, at the same time as domestic demand is increasing. Compared with many other countries, conditions for a recovery in Sweden are relatively favourable, due to the comparatively sound public finances, among other factors. However, as the international economic recovery will take time, it will also take time before the fall in Swedish GDP in recent years is recovered. GDP is predicted to grow by just over 2 per cent this year and just over 3 per cent in 2011. (Chapter 2 includes a more detailed look at the Swedish banks' most important borrower categories.)

It is assumed that central banks, including the Riksbank, will need to gradually increase their policy rates as economic activity improves. The phasing out of the extraordinary measures introduced during the crisis has already started and most indicators tell that the markets will function well without these stimuli. However, the financial markets will probably continue to be marked by uncertainty as a result of the problems with public finances in, for instance, Greece, Spain and Portugal. Among other effects, this is being expressed by higher long-term interest rates in these countries. So far, it has been possible to limit the contagion effects to the global financial markets with the aid of the extensive financing promises made by the EU countries and the IMF. According to the Riksbank's main scenario, this will remain the case, but there is a risk that the problems will spread (see the section on risks). If so, the phase-out of central banks measures will be affected.

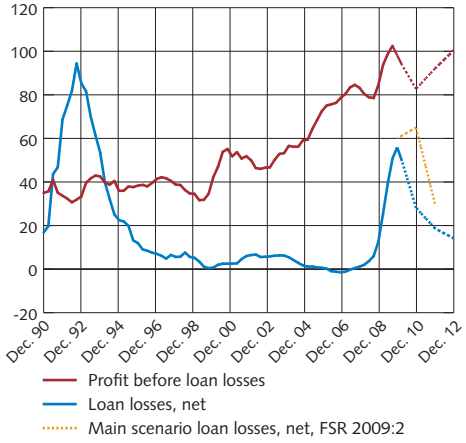
In the coming years, banks worldwide will need to issue significantly more bonds with longer maturities than previously in order to comply with the new regulations. In order to comply with the new liquidity regulations, which are intended to reduce the difference in maturities between assets and liabilities, the banks will be forced to obtain funding with longer maturities. This means that a large part of the banks' funding that today consists of certificates has to be replaced with bonds As these regulations cover banks worldwide, a strong increase of the supply of securities with longer maturities is

68 See Monetary Policy Update, April 2010, for a more detailed description of the Riksbank's economic forecast.

likely. Approximately SEK 1,000–1,500 billion of the major Swedish banks' short-term market funding will probably need to be extended to maturities of more than one year before the end of 2012. Given the existing price difference between short and long-term funding, this implies that the major Swedish banks' market funding will become more expensive.

At the same time, large Swedish companies have large volumes of syndicated loans falling due in the coming years.[69] This means that companies' need to obtain renewed funding is great. The trend is the same internationally. Companies have started to deal with these coming maturities to a certain extent, but large volumes remain to be refinanced. The volumes maturing will be greater than ever over the coming years, as the market for syndicated loans grew rapidly during the years 2003 to 2007. As governments, companies and banks are in need of long-term funding it is probable that they will face rising funding costs, although this need not be a problem in itself.

Chart 4:1. Profit before loan losses and loan losses (net) in the major Swedish banks
Totalled over four quarters, SEK billion, fixed prices, 31 March 2010



Note. The forecast for profit before loan losses is according to the consensus estimate presented in SME Direkt, March 2010.

Sources: Bank reports, SME Direkt and the Riksbank

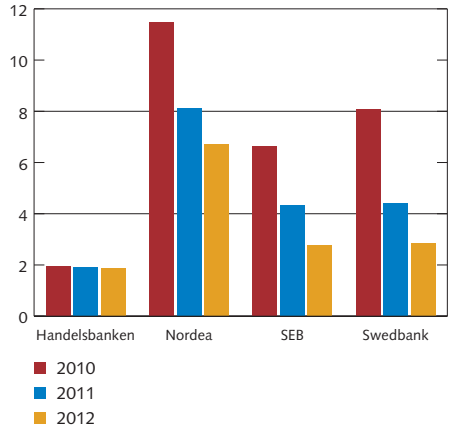
DEVELOPMENTS FOR THE SWEDISH BANKS

The Riksbank assesses that the Swedish banks' net interest income will continue to decline in 2010, before increasing over the subsequent two years. The primary explanation for this is that deposits margins will not increase until central banks across the world increase their policy rates. Furthermore, demand for loans to the corporate sector, which generally have higher lending margins than, for example, mortgages, is expected to continue to be weak before eventually picking up next year. In addition, the new bank regulations are expected to lead to higher funding costs. The greater portion of these costs is likely to be passed on to the banks' borrowers, although this will take time. Consequently, in a short-term perspective, the increased funding costs are expected to reduce net interest income.

According to the Riksbank's main scenario, the brighter economic outlook is expected to contribute to lower loan losses for the four major banks. During the period 2010–2012, the banks are expected to make loan losses totalling SEK 61 billion (Chart 4:1 and 4:2). These losses are expected to amount to SEK 28 billion in 2010, SEK 19 billion in 2011 and SEK 14 billion in 2012. In the scenario, all major banks will report positive net results during the entire forecast period. Compared with the main scenario in the previous Financial Stability Report, loan losses have been adjusted downwards by SEK 48 billion for the period 2010–2011. Note, however, that the forecast period has been shifted forward, compared with the previous report,

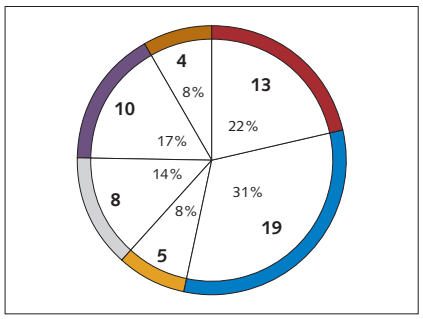
69 Loan syndication means that several banks provide a joint loan to a company. The risk is divided among the banks in relation to the amount contributed by each bank. The conditions for all participating banks are the same. No participating bank is in a better position than the others as regards rights of priority.

Chart 4:2. Distribution of loan losses in the main scenario per bank and year
SEK billion



Source: The Riksbank

Chart 4:3. Distribution of loan losses per region in the period 2010–2012 in the Riksbank's main scenario
SEK billion and per cent



Source: The Riksbank

and now extends until 2012. At the end of the forecast period the recovery is expected to make a widespread breakthrough.[70]

Losses from the Swedish banking groups' lending in the Nordic countries are expected to be low during 2010–2012. However, there are weak segments among the Nordic borrowers in which loan losses may increase. Property companies form one such segment. On the whole, the property companies have a far stronger financial position now than during the financial crisis of the 1990s. Nevertheless, the property companies generally have a higher level of leverage than other non-financial companies and certain property companies may thus encounter problems if their interest expenditure increases successively at a faster rate than their income, at the same time as the companies' loans need to be refinanced. As regards mortgage loans to Nordic households, these are expected to generate low loan losses. This is partly because the social safety nets in the Nordic countries are comparatively well-developed and partly because the legislation in these countries seldom makes the cancellation of mortgage payments advantageous for the households.

The largest loan losses will continue to come from lending in the Baltic countries. In total, approximately 40 per cent of the banks' losses (see Tables 4:1 and 4:2, Chart 4:3 and Chapter 2) come from the Baltic countries. GDP is also expected to fall this year in both Latvia and Lithuania, while Estonia is expected to show weak growth. These countries need to undergo a structural adjustment from domestically-driven growth to export-oriented growth. This means that many of the industries in the Baltic countries towards which the Swedish banks are exposed will not fully recover from the recession in the foreseeable future.

70 See Financial Stability Report 2009:2 for a more detailed description of the manner in which the main scenario has been calculated.

Table 4:1. The major banks' expected loan loss levels per year in the main scenario
Per cent of total lending to the public and credit institutions in each country

Type of exposure	2010	2011	2012
Sweden	0.12%	0.12%	0.11%
Households	*0.06%*	*0.06%*	*0.06%*
Non-financial companies	*0.20%*	*0.21%*	*0.20%*
Property companies	*0.24%*	*0.24%*	*0.23%*
Financial companies and credit institutions	*0.02%*	*0.02%*	*0.02%*
Nordic countries excluding Sweden	0.37%	0.25%	0.20%
Total for Baltic countries	3.77%	2.25%	1.34%
Estonia	*1.86%*	*1.22%*	*0.95%*
Latvia	*4.66%*	*2.84%*	*1.57%*
Lithuania	*5.15%*	*3.06%*	*1.74%*
Germany	0.17%	0.13%	0.11%
UK	0.20%	0.17%	0.17%
Other countries	0.51%	0.42%	0.37%
Total	**0.41%**	**0.27%**	**0.20%**

Source: The Riksbank

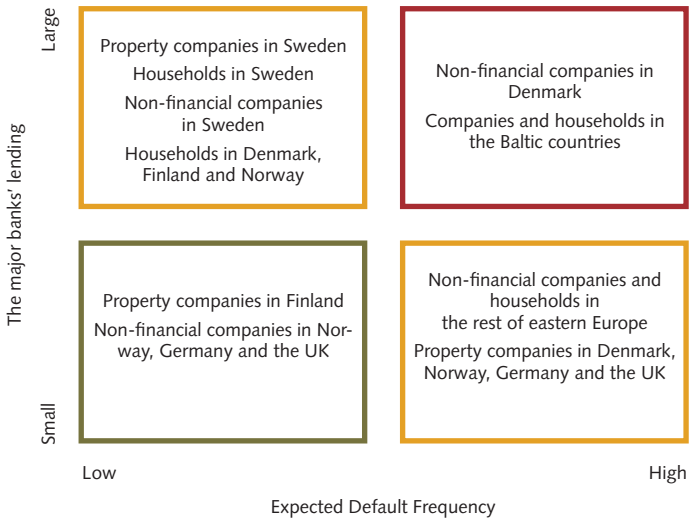
Table 4:2. The major banks' expected loan losses and lending in the main scenario, in total and in the Baltic countries
SEK billion

	2010	2011	2012	Total	Lending to the public and credit institutions excluding repos, end of Q4 2009
Total loan losses	28 (65)	19 (30)	14	61	6,852
of which Estonia	2.4 (5.3)	1.5 (3.8)	1.1	5.1	131
Latvia	4.8 (13.5)	2.4 (5.5)	1.1	8.3	103
Lithuania	5.9 (14.3)	2.9 (4.5)	1.3	10.1	116
Total loan losses as percentage of lending					0.89%

Note: The figures within brackets represent the estimated loan losses in the main scenario of the previous Financial Stability Report
Sources: Bank reports and the Riksbank

Figure 4:1 illustrates the Riksbank's overall assessment of credit risk, partly on the basis of the extent of the banks' exposure towards each borrower category and region, and partly on the basis of the expected default rate for each borrower category in each region.

Figure 4:1. Credit risk matrix



Risks

The development of the real economy and the financial markets is still vulnerable and there are a number of risks that could disrupt financial stability.

The wide-ranging crisis package presented by the EU countries, the IMF and the ECB on 9 May contributed to warding off the immediate unease in the financial markets with regard to public finance problems, but nevertheless several risks remain. Countries with weak public finances now need to implement very tight fiscal policy to address the underlying credibility problems. This primarily applies to Greece, but also Portugal and Spain. Should the financial markets begin to question the ability of the international community to manage future crises in other European countries with public finance problems, the unease could increase again. Another risk is that the implementation of tight fiscal policy may encounter setbacks. Increased unease could arise in a situation where, for instance, Greece was unable to implement the necessary tightening measures and was then forced to renegotiate its national debt.

In a situation where concern over public finances is renewed, there would be a risk of more serious consequences for the functioning of the financial markets. The most recent financial crisis has shown recent examples of sequences of events that were originally considered too insignificant to have any major consequences, but

which finally caused major problems for financial stability. We also saw a similar event at the beginning of May, just before the extensive aid package from the EU, the IMF and the ECB was presented.

There is a risk that the public financial problems in one country may have repercussions in other countries. The link between the central government and the financial sectors means that banks and companies are also affected by central government financial unease. This primarily takes place through three channels. Firstly, the cost of borrowing money may increase for companies and banks if the low interest rates are pushed upwards by the borrowing, by central governments, of large amounts on the market. Secondly, many international banks hold government bonds as assets, which may lose further value if the central government financial unease continues. Thirdly, banks with extensive holdings of bonds issued by banks domiciled in countries in which central government finances are weak may suffer. Such bank bonds can be expected to decline in value as the implicit government support to the banking system becomes less valuable.[71] As the European banking system is closely interlaced, the effects on banks in one country can thus spread to other countries through the banks' exposures to one another.

It is possible that the problems could spread via international banks with subsidiaries or branches in other countries. For example, the Greek banks are systemically important in Bulgaria (see the box Financial unrest in Chapter 1). A bank operating in a country in which the sovereign risk premium increases may be forced to cut back on the supply of credit in another country. This risks worsening the economic development and increasing risk premiums also for that country. Contagion can also occur indirectly through a reduction of risk appetite among investors. Events that may trigger such a development are political problems or downgrades of countries' credit ratings. This risks having the hardest impact on countries in which the economic recovery is more fragile, such as the Baltic countries. In turn, this can impact Sweden through our banks. Contagion to Sweden may also occur indirectly through a general worsening of the functioning of the financial markets.

Even if the Swedish market has been impacted to a certain extent, Sweden is in a good position to resist the effects of increased unease over public finances. This is because the starting position of public finances has been significantly stronger than in many other countries, due to Sweden's comparatively low budget deficit and public debt. Furthermore, the Swedish banks have a low level of exposure towards those countries affected so far. However, there is a parallel risk of a worse development if uncertainty increases once again.

71 For accounting reasons, bonds held to maturity are nominally unaffected by this channel.

The impact on the Baltic states is also of decisive significance for Sweden, due to the exposure of the Swedish banks in the region. Increased unease on the financial markets would also affect the Baltic countries in several ways. A stalling of the European economy's recovery may mean, for example, that exports in the Baltic countries will fail to develop in the way expected. The Baltic countries may also be indirectly affected by the increased concern over the state of Greek central government finances. A decrease in investors' willingness to take risks as a consequence of increased uncertainty may entail lower capital flows to the countries of eastern Europe.

At the same time, there are several domestic weaknesses in the Baltic countries that risk being exacerbated if the unrest in the financial markets increases and the economy's recovery stalls. Latvia is governed by a minority government and cannot be excluded that the opposition will take advantage of the situation to push through tax cuts to increase its support among the electorate prior to the parliamentary elections scheduled for this autumn. Such a situation would contravene the agreement with the international lenders. In Estonia and Lithuania there are also proposed legal amendments aimed at making it easier for households to carry out debt reconstruction, such as longer periods of repayment or partial loan write-offs. An implementation of these proposals may entail that the banks become even more restrictive in their granting of loans to households.

Furthermore, there is a risk that major capital flows to growth markets may cause financial instability that risks being spread to other markets. The recovery is stronger in growth markets than in other markets, among other reasons because these markets were less seriously impacted by the crisis. Even if this is largely a positive development, there are risks inherent to large-scale capital transfers. The major capital flows to the growth markets of Asia and Latin America are due to the low interest rates on the developed markets and the fact that investors have become more willing to take increased risks. Partly because of the carry trade,[72] the recent period's inflow of capital to growth economies has contributed to upwards pressure on asset prices. The share index on the growth markets has more than doubled since bottoming out at the end of 2008. The equivalent figure for the share index in Europe and the United States is between 60 and 70 per cent. House prices in Asia have also risen steeply, particularly in China. If interest rates in growth countries rise faster than those in other countries due to higher economic growth rates, this may further boost the capital flows to these growth markets. Rapidly fluctuating capital flows can contribute to the build-up of both inflationary pressure and asset bubbles, and

72 The carry trade is an investment strategy in which borrowing is conducted in a country with a low interest rate and investments are made in a country with a high interest rate. In addition to the relative interest rates, yield is also dependent upon the exchange rates of the currencies in question.

can cause financial instability with contagion risks in the same way as occurred during the Asian crisis[73] at the end of the 1990s. Financial unease on growth markets may impact Sweden through effects such as increased risk aversion among investors, deteriorating factors and import possibilities and weaker global economic activity.

The risks described above are not independent of each other. Imbalances in central government finances, the phasing out of support measures and major capital flows to growth markets all affect the same factors, which may lead to a negative spiral. The consequence of this may be a resurgence in financial unease. This would lead to lower risk appetite, higher interest rates and, consequently, higher funding costs for banks and companies. Ultimately, economic growth may be lower and the banks' loan losses higher.

Stress test of the banks' resilience

In order to assess the effect on the Riksbank of less likely, but possible, severe negative events, the Riksbank regularly conducts stress tests. The outcome of two such stress tests is presented in this section. First, contagion risks associated with the Swedish banks' major exposures towards each other and other major participants, counterparty exposures, are treated. Following this, the result of the Riksbank's stress test of the banks' resilience to higher loan losses is presented.

COUNTERPARTY EXPOSURES – CONTAGION RISKS

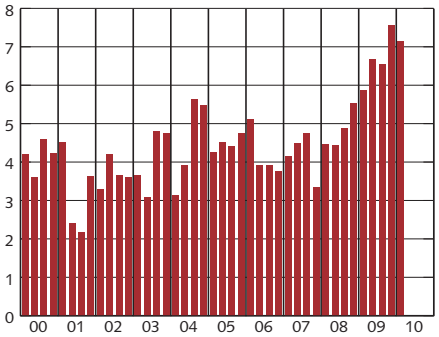
The major banks' central role in the financial system means that they have considerable exposures to each other and to individual companies, so-called counterparty exposures. If a bank or a company experiences problems and suspends payments, this can therefore lead to significant losses for the other banks. The risk that this will happen is referred to as contagion risk – the risk that a problem in one institution will spread to other institutions through counterparty exposures. By limiting their counterparty exposures and requiring collateral for their loans, the banks can limit contagion risk. In order to assess the risk of contagion effects, the Riksbank calculates the effect on the respective major banks' Tier 1 capital if the bank lost one or several of its large exposures. The tests are based on data on the major banks' fifteen largest counterparty exposures, which the Riksbank compiles quarterly.[74]

The Riksbank's tests indicate that the contagion risk in the Swedish banking system remains on a low level. This can be explained by the

73 The Asian crisis was partly due to the fixed exchange rates of the affected countries. This problem is not as widespread in the current situation.

74 For a detailed review of the Riksbank's counterparty data, see the box "The Riksbank's counterparty data" in Financial Stability Report 2008:2.

Chart 4:4. The major Swedish bank with the lowest Tier 1 capital ratio after another Swedish major bank has defaulted on payments
Per cent



Note. The major bank with the lowest Tier 1 capital ratio under the transitional regulations is not necessarily the same bank on every occasion.

Source: The Riksbank

fact that the banks' counterparty exposure towards other banks is small in comparison to previous years, just as in the previous report. This, in turn, is due to the fact that overnight deposits between the Swedish banks remain relatively limited. The greatest counterparty exposures have remained relatively unchanged, at the same time as the banks have continued to increase their Tier 1 capital. During the last year, no bank had any exposure that, according to the assumptions in the Riksbank's tests, would lead to a decrease below the statutory requirement of four per cent in the event of the cancellation of payments by another Swedish bank (see Chart 4:4).[75] Neither would the loss of the largest exposure to a counterparty other than a major Swedish bank, according to the Riksbank's tests, lead to the Tier 1 capital of any bank falling below four per cent.

However, a major portion of the exposure of Swedish banks is towards foreign counterparties. The Riksbank's data indicates that, at the end of the last quarter, just over 40 per cent of the major banks' total exposure was towards foreign banks. This means that problems outside Sweden can spread into the Swedish banking system directly, via the banks' exposure. Problems outside Sweden can also spread indirectly into the Swedish banking system if unease arise over the potentially harmful exposure that the banks towards which the Swedish banks are exposed, in turn have.

STRESS TEST OF BANK RESILIENCE TO INCREASED CREDIT RISK

Like the previous Financial Stability Reports, this report presents a stress test of the banks' resilience to higher loan losses. This stress scenario is intended to illustrate how the banks can be affected if a number of the risks described in previous sections materialise.

This test assumes, as in the stress test in the previous report, that the global business cycle will be significantly worse than the one described in the report's main scenario. The recovery that started at the end of last year in many countries is assumed to come to a halt and instead be followed by a period during which the performance of the world economy rapidly weakens. The situation in the financial markets deteriorates and market functioning is negatively affected. Such a scenario would be qualitatively reminiscent of the autumn 2008.

Simple model assessments for the stress test indicate that the probability of default during the forecast period is approximately consistent with a macroeconomic development in which growth in industrial production in, for example, Sweden, Norway, Denmark and Finland falls by two per cent per year, concurrent to the interest rate for borrowers rising by up to three percentage points in comparison

75 In the Riksbank's test it is assumed that 75 per cent of the banks' exposures to defaulting institutions or companies are lost and that 25 per cent can be recovered. The test corresponds to a situation in which a participant, completely without warning, suspends all its payments with immediate effect. Possible recovery is also assumed to be relatively limited. The resulting Tier 1 capital ratio should therefore be seen as a stress test outcome.

to the main scenario. The stress in the Baltic countries corresponds to a macroeconomic outcome in the last three quarters of 2010 until the first half of 2012 similar to the development these countries had during 2008 and 2009.

According to the scenario, both demand and production plummet in most of the large economies of the world during 2010 and 2011, the first two years of the scenario. However, the already large financial deficits due to the financial crisis and the expansionary fiscal policy adopted in the past year limit the scope of further fiscal policy stimulation in many countries. During the final year of the scenario, 2012, the first signs of a new recovery to the world economy become visible and it is assumed that the economic development in subsequent years is significantly stronger.

Meanwhile, concern about the financial problems of many governments is assumed to lead to increased risk aversion among investors and an increase in risk premiums. This implies higher government bond rates and rising CDS premiums primarily in the affected countries, but also elsewhere. The large supply of bank bonds, partly due to the banks' adaptation to new requirements on longer-term financing, further raises the banks' financing costs. Altogether, this results in higher interest rates for both firms and households than what the economic situation would normally warrant.

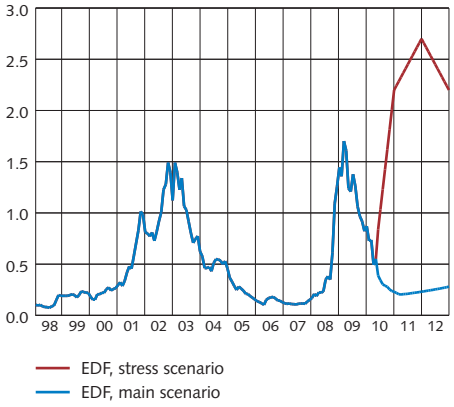
Sweden and the other Nordic countries are hit particularly hard by the weak performance of the world economy as demand for exports falls sharply. Employment is assumed to fall at the same time. As a result, production falls within both the industrial and the service sectors. This development also leads to a substantial fall in property prices.

Many Swedish and Nordic firms survived the dramatic downturn in the economy last year by rapidly cutting costs and drawing on the buffers they built up during the good years before the crisis. A rise in lending rates before economic growth picks up speed creates problems for many of these firms. In addition to export-related sectors, cyclically-sensitive sectors such as construction and transport are hit hard. Commercial property companies are particularly vulnerable to lower production in the service sector combined with generally higher interest rates over a relatively long period of time. The risks in the household sector increase slightly when lending rates increase, but bankruptcies are still assumed to be relatively few.

In the Baltic countries, weaker demand from abroad means that exports are not picking up as expected and that economic development is weaker than in the main scenario. The recovery is delayed, but the relative deterioration against the main scenario is assumed to be less severe in this region than in Sweden and the Nordic countries.

For the Swedish banks this development implies an increase in loan losses and a decrease in earning capacity. Compared with the

Chart 4:4. Expected default frequency (EDF) for the Swedish corporate sector in the stress test and main scenario
Per cent



Sources: Moody's KMV and The Riksbank

stress test in the previous report (Financial Stability Report 2009:2), the average level of stress is unchanged in the sense that the expected default rate in the four major banks' total portfolios remains the same. Since the main scenario in this report is brighter than the one in the previous report, the distance between the stress test and the main scenario is larger in this report than in the previous one. Chart 4:5 shows the expected probability of default for the Swedish corporate sector in the stress test and the main scenario. The stress test also assumes that recovery in the event of bankruptcy is lower than in the main scenario. The average loan losses for the four major banks per year, industry and region are presented below in Table 4:3.

Table 4:3. Loan loss levels per year in the stress test for the major banks
Per cent of total lending to the public and credit institutions in the respective sectors or countries

Type of exposure	Q2–Q4 2010	2011	2012
Sweden	1.06%	1.09%	1.03%
Households	*0.45%*	*0.48%*	*0.43%*
Non-financial companies	*1.73%*	*1.84%*	*1.74%*
Property companies	*2.13%*	*2.25%*	*2.34%*
Financial companies and credit institutions	*0.34%*	*0.37%*	*0.35%*
Nordic countries excluding Sweden	1.36%	1.38%	1.13%
Total for Baltic countries	6.54%	7.76%	5.51%
Estonia	*5.09%*	*5.81%*	*4.15%*
Latvia	*6.63%*	*9.19%*	*6.39%*
Lithuania	*8.11%*	*9.04%*	*6.84%*
Germany	0.90%	1.13%	0.50%
UK	1.13%	1.80%	1.04%
Other countries	2.88%	3.22%	2.46%
Total	**1.50%**	**1.57%**	**1.25%**

Note: The loan loss levels for Q2–Q4 2009 are annualised.
Source: The Riksbank.

In order to calculate the effects of the banks' Tier 1 capital ratio in the stress scenario, the following assumptions have also been made:

- Profits before credit losses are only 85 per cent of the market participants' average forecast for each bank in 2010, 2011 and 2012.[76, 77]
- Provisions corresponding to 40 per cent of net profit are made for anticipated dividends to shareholders in cases where a bank reports a positive net result.
- The banks are passive in the sense that they do not actively reduce their risk-weighted assets or raise new capital.
- Loan losses generated in the stress test are deducted from the banks' risk-weighted assets at the end of each year. The remaining risk-weighted assets increase by five per cent per year as the result of poorer credit quality.

76 The Riksbank uses the SME Direkt (April 2010) compilation for the market participants' average forecast. 85 per cent of this forecast entails an unusually large decrease in the banks' earnings.
77 This is a conservative standard assumption made to test the banks' resilience in the event that earnings come under hard pressure at the same time that loan losses increase.

The Riksbank's stress test shows that the banks have sufficient capital to handle the losses that arise during the stress test. The collective loan losses for the four major banks total SEK 275 billion during the stress scenario, of which approximately one fifth stems from the banks' operations in the Baltic countries (see Table 4:4). As a result of the loan losses and the rising risk level in the portfolio, which has an impact on the banks' risk-weighted assets, the Tier 1 capital ratio falls in each of the banks. However, all four banks have a Tier 1 capital ratio that is well above the statutory minimum requirement of four per cent[78] over the entire period and approximately on the same level as in the stress test in the previous report (see Table 4:4 and Chart 4:5).

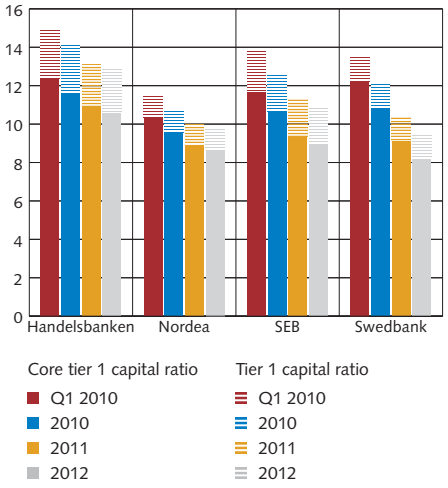
The Tier 1 capital of the four major banks includes hybrid capital to varying extents. This implies that the banks' Tier 1 capital ratios are not entirely comparable with one another. Hybrid capital is generally less able than equity to absorb losses. As a result, in the wake of the crisis the current capital adequacy regulations are under reform; expected changes include more of a focus on core Tier 1 capital and more stringent restrictions on which hybrid instruments may be included in Tier 1 capital.[79] At its lowest, the banks' Tier 1 capital ratio, calculated fully in accordance with Basel II, is between 9.4 and 12.9 per cent, while the corresponding figure for the core Tier 1 capital ratio, that is the ratio for Tier 1 capital excluding hybrid capital, is between 8.2 and 10.6 per cent in the stress test (see Table 4:6 and Chart 4:6).

Table 4:4. The major banks' loan losses in the stress test and lending in total and in the Baltic countries for the major banks
SEK billion

Loan losses	2010	2011	2012	Total	Lending to the public and credit institutions, excluding repos, Q1 2010
Total	77	109	89	275	6,852
of which Estonia	5.0	7.2	4.7	17	131
Latvia	5.1	7.8	4.2	17	103
Lithuania	7.0	8.5	5.0	21	116

Sources: Bank reports and the Riksbank

Chart 4:6. The major Swedish banks' Tier 1 and core Tier 1 capital ratios, today and in the stress test
Per cent



Note. The core Tier 1 and Tier 1 capital ratios have been adjusted upwards to take account of the allocations made for anticipated dividends. According to full Basel II.

Source: The Riksbank

78 There are statutory requirements that the banks must have a capital adequacy ratio equal to at least eight per cent of their risk-weighted assets, which given that the banks have adequate supplementary capital can be translated into a Tier 1 capital requirement corresponding to four per cent of risk-weighted assets.

79 For an overview of the new proposed regulations, see the box "The international regulation agenda" Financial Stability Report 2009:2.

Table 4:5. Profits and capital ratios in the stress test and for the four major banks
SEK billion and per cent

	Handelsbanken			Nordea			SEB			Swedbank		
	2010*	2011	2012	2010*	2011	2012	2010*	2011	2012	2010*	2011	2012
Profit before loan losses	10	15	17	23	37	40	9	13	14	9	13	14
Loan losses	13	19	17	32	45	37	15	21	16	16	23	18
Profit after loan losses	-3	-4	0	-9	-8	3	-6	-9	-1	-8	-10	-4
Taxes	0	0	0	0	0	-1	0	0	0	0	0	0
Profit after taxes and dividends	-3	-4	0	-9	-8	1	-6	-9	-1	-8	-10	-4
Tier 1 capital at start of year	86	84	81	198	188	180	100	94	85	80	73	62
Tier 1 capital at end of year	84	81	80	188	180	181	94	85	84	73	62	58
Risk-weighted assets at end of year	597	607	619	1,774	1,815	1,867	735	749	770	601	607	617
Tier 1 capital ratio at end of year (according to Basel II)	14.1%	13.3%	12.9%	10.6%	9.9%	9.7%	12.8%	11.4%	10.9%	12.1%	10.3%	9.4%
Tier 1 capital ratio at end of year (according to transitional regulations)	8.6%	8.0%	7.7%	9.1%	8.4%	8.2%	11.4%	10.1%	9.8%	9.2%	7.7%	7.0%
Core Tier 1 capital ratio at end of year (according to Basel II)	11.7%	10.9%	10.6%	9.6%	8.9%	8.7%	10.6%	9.3%	9.0%	10.9%	9.1%	8.2%

Note. * refers to Q2–Q4 2010
Sources: Bank reports and the Riksbank

If the stress scenario were to become a reality and the loan losses materialised, it could impact the credibility of the banks, their access to market funding and the supply of credit. It could become difficult to obtain access to all of the market funding that is needed, particularly for banks that are already considered to be weak due to the poorer quality of their assets and their lower credit rating. Direct links between banks in terms of counterparty exposures can raise the cost of market funding even for banks that have not experienced higher loan losses. More expensive financing and large loan losses in turn entail higher costs for the banks and, to the extent the banks can transfer these increased costs to customers, higher lending rates. This would, all else being equal, decrease the demand for credit. Furthermore, it is possible that, in a stress situation, the banks would both actively choose to decrease their lending to reduce their balance sheets and be forced to reduce it as a result of worsening funding possibilities on the market.

A rapid fall in housing prices in Sweden could impact the banks' market funding by reducing investors' willingness to purchase Swedish covered bonds. A steep fall in housing prices similar to the scenario described in the stress test would namely lead to a fall in the value of the collateral that forms the underlying assets of the Swedish banks' covered bonds. Even if the loan-to-value ratios of the underlying collateral probably would not rise to a critical level if property prices fell, uncertainty regarding the bonds and the value of the collateral would increase. This uncertainty would be greater if such a fall in property prices were to be rapid.

Glossary

ABS (Asset-backed securities): A security whose value and income are derived from and backed by underlying assets. The collateral is often some form of loan.

Arbitrage: Use of differences between prices or rules in different markets with the intention of achieving risk-free profit.

Automatic stabilisers: Arrangements that enable the economy to restrain itself during an economic boom and automatically stimulate itself during an economic recession. Examples include public expenditure and income.

Basel II: Standards regulating how much capital a bank must retain in relation to the risk it faces. The regulations also require adequate risk management and disclosure of public information.

Basis point: One basis point is one hundredth of one per cent, i.e. 0.01 per cent. Thus, 100 basis points is equivalent to 1 per cent.

Bond: A fixed-interest promissory note or debt instrument issued by a government, municipality, credit market company, mortgage institution or large company. Bonds generally have a long maturity, at least one year. Periodic payments are made prior to maturity, at which time the principal amount is repaid.

Brokerage: Transaction cost when an asset is bought or sold.

Capital adequacy regulations: Rules governing capital adequacy of banks. See Basel II.

Capital market: Umbrella term for the stock, credit and derivative markets.

Cash flow: The difference between a company's ingoing and outgoing payments during a given period.

CDO (Collateralised debt obligation): A structured credit instrument made up of bonds from many different securitised loan portfolios and other assets. This composite portfolio is then structured into segments with different credit risks.

CDS (Credit default swap): A contract between two parties in which one of the parties buys protection against the credit risk in a bond by paying a premium. The seller receives the premium in return for accepting the credit risk. The instrument is used as a form of insurance.

Central counterparty: An institution that acts as a seller to all the buyers and a buyer to all the sellers of financial instruments on an exchange.

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

Clearing: The handling of debts and claims between banks that are the result of payments between the banks' customers.

Conduit: A company that has been kept off the bank's balance sheet. A conduit's assets consist of different types of loans and structured products. Conduits are financed with certificates with short runs. Conduits often have a liquidity guarantee from the parent bank guaranteeing that the conduit will be able to repay investors that have purchased the certificate.

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

Core Tier 1 capital: Tier 1 capital after deductions for Tier 1 capital supplements.

Counterparty clearing: Securities trade occurs with the aid of a central counterparty, which functions as an intermediary between the buyer and seller to reduce counterparty risk.

Counterparty risk: The risk of a counterparty in a business transaction defaulting on its contractual obligations.

Covered bonds: A bond whose holder has a special benefit right in a bankruptcy. Covered bonds are intended to be more creditworthy than non-covered bonds, which reduces the cost of funding.

Credit rating agency: A company that assigns ratings, i.e. makes an assessment of the credit risk associated with a company.

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

Creditworthiness: The debt-servicing ability of a country, a company or an individual.

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

Currency transaction: Transaction when one currency is traded for another currency.

Current assets: Assets that are intended to be bought and sold as part of a company's operations. Examples include stock, cash and short-term claims. The opposite are non-current assets.

Current ratio: A measurement of a company's liquidity indicating that company's ability to repay its current liabilities.

Debt ratio: Household debt in relation to disposable income.

Debt/equity ratio: A company's liabilities in relation to total assets.

Deposit guarantee: An insurance on funds deposited with affiliated credit institutions. If a credit institution defaults, savers recover their deposits, usually up to a fixed amount.

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

Direct yield requirement: The difference between an investor's total yield requirement and the expected change in the operating surplus for (or value of) a property. Should not be confused with the term "direct yield", which refers to a property's actual operating surplus in relation to the price an investor paid for the property.

Disposable income: The total of a person's or a household's incomes less taxes and charges.

EDF (Expected default frequency): The probability that a listed company will default within a year. Calculated as the probability of the market value of the company's assets being exceeded by its liabilities when the latter fall due.

Equity: Item in a company's balance sheet showing the difference between assets and liabilities, including, for example, capital provided by owners, retained profits and reserves.

FX-swap: See Currency swap.

Gross fixed capital formation: The change in fixed capital, e.g. machinery, property, etc., of domestic producers.

Hybrid capital: A cross between equity and debt. In the event of a default, hybrid capital has higher priority than equity but lower priority than borrowed capital (bonds).

Implied volatility: Market participants' expectations of future variations in share prices, derived from option pricing. Volatility is usually measured as the standard deviation of the share's rate of return.

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

Interbank rate: A daily reference rate based on the interest rates for unsecured loans that banks offer to one another. In Sweden the rate that banks charge each other for SEK loans is called STIBOR (Stockholm Interbank Offered Rate). STIBOR is used as a reference for rate setting or pricing of derivative contracts.

Interest coverage ratio: A measure of a company's ability to meet financial costs with operating profits.

Interest ratio: A household's post-tax interest expenditure in relation to disposable income.

Key policy rate: The interest rates which a central bank sets for the purpose of monetary policy. In Sweden, they are the repo rate and the deposit and lending rates. The repo rate is the most important.

Liquidity risk: The risk of not being able to meet payment obligations without the cost of obtaining the funds increasing materially. Liquidity risk in a financial instrument entails that an investment cannot be immediately liquidated at all or without falling sharply in value.

Loan-to-value ratio: Borrowers' debt in relation to the collateral's market value. 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.

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

MBS (Mortgage-backed securities): A specific variation of a securitisation in which the return on the security is received via interest payments from a collection of mortgages.

Monetary policy: Aims to influence inflation, the exchange rate and/or economic activity by altering the amount of money in circulation and adjusting key policy rates.

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

Net interest income: Consists primarily of interest income from lending less interest expenditure for funding and deposits.

Net wealth: Assets minus liabilities. It is possible for net wealth to be negative.

New issue: A limited liability company issues (sells) newly-issued shares thereby strengthening its restricted equity.

Operating surplus (net operating income): The difference between rent income and the operating and maintenance costs for a property or property company.

P/E ratio (Price/Earnings): The price of a share in relation to earnings.

Profitability: A company's operating surplus in relation to its total assets.

Relative price: The price of a good or service in relation to another good or service. Often expressed as the number of units of the first good/service received for one unit of the second good/service.

Repo rate: The Riksbank's primary key 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 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 greater sum of money. The difference between the sale and the repurchase is equivalent to the interest rate on a loan.

Return on equity: Concept used to assess profitability; the same in principle as return.

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

Risk-weighted assets: Total assets and off-balance sheet commitments totalled, valued and risk-weighted in accordance with the prevailing capital adequacy regulations.

Securitisation: A financing process whereby a number of loans (e.g. mortgages or credit card loans) are bundled together and sold on to a company created specifically for the purpose and financed by issuing securities in the market.

Settlement: Final regulation of debt when money or securities are transferred from one party to another, usually payment from one account to another.

SIV (Structured Investment Vehicle): SIVs are investment units similar to conduits. SIVs are more indebted than conduits, 15 to 20 times their equity. They are not only financed on the short-term certificate market, but also with corporate bonds that have longer maturities. SIV debts are divided into different segments (tranches) that have different ratings. If a SIV makes a loss it first affects the owners of the lower rating segment, then the owners of the higher rating segment.

Spread: Usually the difference between two interest rates. In the bond market, spread is measured in basis points (see Basis point).

Stibor: See Interbank rate.

STINA swap (STIBOR Tomorrow Next Average): A STINA swap gives the floating leg receiver the average rate for STIBOR Tomorrow Next over the duration of the swap.

Stress test: Analysis of different scenarios to test the resilience of banks and households to unexpected and negative events.

Structured products: Pools of securitised loans. The most common products are collateralised debt obligation (CDO) and mortgage-backed securities (MBS).

Swap: A bilateral agreement to exchange a specific currency/interest rate in return for another currency/interest rate for a predetermined period according to specific conditions.

Syndicated loan: A loan where a bank sells parts of the loan to other banks, often internationally.

TED spread: The difference between a 3-month interbank rate and a 3-month treasury bill rate.

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

Tier 1 capital supplements: Certain types of perpetual subordinated notes may be included in the Tier 1 capital if permission is granted by the financial supervisory authorities. For Swedish banks Tier 1 capital supplements can comprise at most 30 per cent of the Tier 1 capital. Debenture loans with step-up, that is, where the interest margin on the loan increases after a given period of time, may amount to a maximum of 15 per cent of the Tier 1 capital.

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.

Transitional regulations: As of 2007 Q1, Swedish banks report risk-weighted assets in accordance with the new capital adequacy rules (Basel II). For the major Swedish banks this entails a reduction in the capital adequacy requirement, primarily as a result of their relatively large share of lending to households. Basel II will not be fully implemented until 2010 at the earliest.

Volatility: Usually measured as the standard deviation of an asset's rate of return.

Sveriges riksbank
SE-103 37 Stockholm

Tel +46 8 787 00 00
Fax +46 8 21 05 31
registratorn@riksbank.se
www.riksbank.se