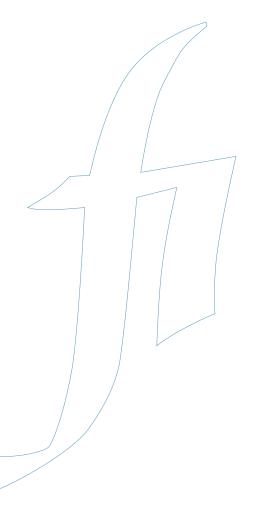


# **FINANSINSPEKTIONEN**

Risks in the financial system **NOVEMBER 2009** 

### 10 November 2009



### TABLE OF CONTENTS

Foreword	3
Summary	4
Finansinspektionen's expert panel	7
The macroeconomic situation	11
Banks and securities companies	17
Insurance companies	26
The securities markets	30
Risks for Swedish consumers	33
Appendix: Regulation Environment	41
Glossary	47

### Foreword

Finansinspektionen is charged with ensuring that the financial system is stable and efficient and that consumer protection is adequate. We carry out these assignments by conducting supervision of financial companies, which includes business intelligence, the granting of licences, preparation of regulations, operational supervision with controls of how companies act and potential interventions.

In order to direct our supervision activities toward areas that are most relevant, it is important that we analyse the state of the financial system on an ongoing basis. Through the publication of *Risks in the Financial System*, we can highlight the risks we consider to be most relevant within the various sections of our operations. The publication of this report also serves as a tool for linking macroeconomic development to the supervision of individual companies.

By disseminating this analysis to the actors in the financial system and other stakeholders, we hope to contribute to a debate and an increased understanding of these risks. We also hope that the report will encourage the Boards of Directors of these companies and other management constellations to prioritise management of these risks.

Martin Andersson

Director General

### Summary

The first quarter of 2009 marked the end of the acute phase of the financial crisis. Support measures from governments and central banks successfully reinstated confidence in the financial markets. As market actors regain their appetite for risk, risk premiums have fallen dramatically. Since the middle of March 2009, the stock and credit markets have posted strong growth and most stock markets have recouped more than half of the losses they sustained during the crisis. The financing situation for financial companies has also improved and many banks are starting to emerge from their dependence on government support measures.

However, large credit losses are still endemic in the global banking system. IMF estimates that the total write-downs during the crisis, i.e. from the second quarter of 2007 to the fourth quarter of 2010, will total USD 2,800 billion. This puts global credit loss during the crisis at a little more than five per cent.

The financial crisis has resulted in a joint global effort to re-design future regulation and supervision of the financial sector. In particular, the G20 countries and the EU have taken a leading in role in discussions about how to move forward. One suggestion is to reform the supervision of financial companies to include a macroeconomic perspective. An appendix to this report details the regulation changes that have already been decided or are being discussed for the future.

Finansinspektionen asked a panel of five internationally recognised experts to assess the macroeconomic and financial risks for the coming year. All of the panel members emphasised that the commercial real estate sector can cause major credit losses in the future, both in the U.S. and Europe. There are still significant risks in Eastern Europe, particularly in countries that hold a large portion of their lending in foreign currency. Several panel members felt that the credit risks in Europe are now larger than in the U.S., partly because the European accounting regulations have long allowed exceptions from the mark-to-market requirement. It is expected that the number of smaller financial companies declaring bankruptcy will continue to rise, but none of the panel members believe that a large bank will be allowed to fail.

The panel members were also given the opportunity to express which financial reforms they feel are necessary. Most of the panel members considered central counterparty clearing for OTC derivatives (non-standardised financial instruments) and higher capital requirements for systemically important financial companies to be key reforms. In addition, there was support for stricter liquidity regulations, more opportunities for governmental authorities to dismantle complex financial companies and the introduction of a type of debt instrument that authorities can convert to equity. The panel members considered the regulation of compensation systems and hedge funds to be the least constructive among the reforms.

#### THE SWEDISH BANKS

The Swedish banking system, thanks to support measures from the Government and the Riksbank, emerged relatively intact from the most acute phase of the financial crisis in comparison to banks in other countries. The low interest rates have allowed financial companies to keep their costs

down and in all probability minimised the number of bankruptcies. This implies that credit losses will be relatively limited. The underlying earnings of the banks are strong and they have also successfully raised more than SEK 80 billion in share capital during the past year.

Of the large banks' credit losses, which totalled approximately SEK 50 billion, more than half come from their Baltic operations. The shaky macroeconomic situation in the Baltic countries means that there is considerable uncertainty about how large future credit losses will be. The low interest rates have meant that commercial real estate companies have managed well, despite risking vacancy rates. But, if interest rates were to rise rapidly, the banks' credit losses linked to commercial real estate could also rise sharply.

Finansinspektionen's stress tests show that the large banks have adequate conditions for withstanding even extremely negative scenarios. FI's negative scenario tests both for a greatly weakened situation in the Baltics and a deeper recession in the rest of the world. This time the scenario also tested for higher credit losses on mortgages. The capital adequacy ratio of the banks exceeded the minimum levels stipulated by law by a large margin during the test. The results were also better than for the stress tests conducted last spring. The explanations for this are primarily capital reinforcements and continued decreased lending in the Baltic countries.

Mortgages do not constitute a threat to the stability of the Swedish banking sector, even if today's credit loss levels were to multiply.

#### **INSURANCE COMPANIES**

During the financial crisis, investors, banks and other financial actors fled to low risk securities, primarily government bonds. The large demand for government bonds in turn led to interest rates falling to historically low levels. At the same time, prices of high risk assets, such as shares, fell drastically. Own funds in life insurance companies were reduced partly by the fall in their assets' value and partly by the hefty upward adjustment of liabilities.

The solvency levels of life insurance companies have more or less returned to pre-crisis levels. However, the course of events has demonstrated how sensitive the solvency of life insurance companies is to a financial crisis. Part of the problem, particularly in times of crisis, is that the prevailing system requires life insurance companies to calculate the future value of their long-term commitments using current market rates.

A related risk for these companies is the high guarantee rates that were previously offered to customers. The low inflation that characterises the market today means that it may be difficult to meet the previously guaranteed rates.

#### THE SECURITIES MARKETS

The collapse of Lehman Brothers showed that large positions in financial derivatives can constitute a risk for the stability of the entire financial system. Trade in OTC derivatives, primarily credit derivatives, contributed to a situation where enormous counterparty risks had accumulated beyond the control of the markets and supervisory authorities. Even if Sweden was only minimally affected by the collapse of Lehman Brothers, improved transparency of OTC derivatives and a higher degree of clearing via central counterparties are prioritised issues.

The absence of overview and insight makes it easy to use OTC derivatives

to commit crimes. In many cases, it has been difficult to investigate suspicions of abuse since countries have not had access to information outside their own territory. Derivatives can also be used to obscure information about who is controlling a company, thereby circumventing the EU's transparency directive.

On the stock market, operational risks are increasing due to the introduction of algorithmic trading. The algorithms search for temporary price inconsistencies and, in order to react swiftly to take full advantage of these inconsistencies, there has been a tendency to compromise on safety procedures.

#### RISKS FOR SWEDISH CONSUMERS

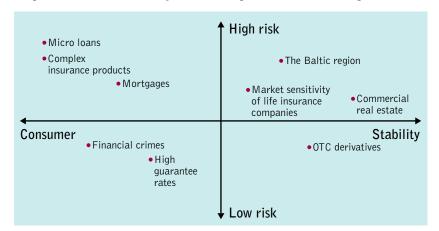
On the consumer market, mortgages are currently in focus. Lending growth is at just over eight per cent at the same time as the Swedish economy is contracting. The extremely low interest rate levels have also caused price levels to rise again, particularly in large cities.

The largest risks are naturally shouldered by new lenders entering the housing market with little or no capital to contribute. Since interest rates are expected to increase sharply within the next one to two years, and unemployment is continuing to rise, a large number of households may experience payment problems. It is likely that such a scenario would press housing prices downward. Some households may then be forced to sell their homes at less than the purchase price.

For this reason, it is extremely important that banks conduct a comprehensive and sufficiently forward-looking analysis of the situation of borrowers. FI has started a supervisory investigation into the lending of the larger banks to mortgage customers. The results will be presented in December 2009.

Another risk for consumers is the development of micro loans. The number of cases related to micro loans increased 35 per cent during the first six months of 2009. A licence is not required to conduct this type of lending and it therefore falls outside of FI's mandate. Additional measures are needed, such as increased supervision, credit checking requirements and stricter information requirements, to prevent problems with rising indebtedness.

There are also a number of risks in the insurance sector that can have a negative impact on consumers. Traditional pension saving is the most important type of savings in Sweden. However, pension insurance products are incredibly complex and difficult to compare, which means that consumers may be misled if transparency is not improved. With regard to funds, depositaries and risk management are important for consumer protection.



# Finansinspektionen's expert panel

In each Risks in the Financial System report, Finansinspektionen turns to a group of renowned experts to assess risks to the macroeconomic situation and the financial system from an international perspective. This year the panel consisted of Markus K. Brunnermeier (Princeton University), Douglas W. Diamond (University of Chicago), Albert Kyle (University of Maryland), Raghuram G. Rajan (University of Chicago) and Hyun S. Shin (Princeton University).

#### MAJOR ECONOMIC DEVELOPMENTS AND RISKS

- What do you see as the major macroeconomic risks in the next twelve months in terms of impact on the financial system? Do these differ across major regions (U.S., Asia, Europe)?
- Are there specific asset classes that warrant supervision in the near future?
- What kind of risk does growing public debt pose to recovery?

All of the panellists highlighted the looming, potentially very large credit losses in the commercial real estate sector, both in the U.S. and in Europe. Many mortgages will roll over in the near future and revenue streams have declined. Increased losses in consumer credit card debit are also a concern. Once these losses are recognised, it will become apparent that many banks actually are undercapitalised.

Emerging Europe is another risk area. In many CEE countries, mortgage loans are to a considerable extent supplied by foreign banks and in foreign currency, which adds significant currency risk. Many of the panellists also pointed to risks within the eurozone, especially in countries that experienced the biggest property booms, such as Spain and Ireland.

In terms of budget deficits, many of the panellists emphasised that the U.S. deficit may continue to add pressure to the dollar. The pressure on the U.S. budget deficit will increase further if the Obama administration fails to pass a cost-reducing healthcare plan and if consumer spending falls once the fiscal stimulus package ends. The budget deficit can drive up inflationary expectations and the long-term interest rights may rise significantly as a result. In turn, this could add to the interest-burden of the U.S. and put the credit quality of U.S. government debt into question.

Several members of the panel stressed that, at the moment, the most significant risks are not related to financial stability but instead to the long-term risks that are associated with the policies that have been used to mitigate the crisis, i.e. the consequences of expansive fiscal and monetary policy. Risk-taking among investors is already picking up due to the current low interest rate level, which will lead to a general price increase in riskier assets, such as emerging market equity. It is important that central banks realise that supervisory tools to mitigate risk-taking have limited impact when interest rates are held at very low levels.

Finally, countries with large budget deficits like the U.S. will be forced to

slow their growth. This will have a significant impact on the world economy, but hopefully this adjustment can take place in a controlled manner.

# RISKS FOR SPECIFIC SECTORS AND INSTITUTIONS (BANKS, INSURANCE COMPANIES, FUND MANAGEMENT COMPANIES, HOUSEHOLDS)

- In your opinion, how far have banks and financial institutions come in their recovery since the financial crisis? Does this vary depending on the region of the world (Europe, U.S., Asia)?
- How do you view the risk that a major financial institution will fail in the next twelve months? Is there any risk that such a failure would be allowed to result in (uncontrolled) bankruptcy?
- In your opinion, are the financial markets currently in a credit crunch, i.e. is credit significantly constrained by a (perceived) lack of capital in banks? Was there a credit crunch at some point during the financial crisis?

The panellists agreed that the risks are now shifting to banks focused on traditional lending. In the U.S., smaller banks have more exposure to commercial real estate than large banks, and more failures among regional banks are expected. One panellist pointed out that trading institutions are now doing well thanks to the high price of risk. Returns can be gained with relatively little exposure to risk, which explains the high returns of Goldman Sachs and similar firms.

Several panellists pointed to the fact that different accounting rules, such as exceptions from mark-to-market accounting of assets, have allowed European banks to hide more of their losses. It is therefore more difficult to get an idea of the risks in these banks. Several panellists also thought it was very clear that Chinese banks will face rising credit losses. But while the default rate of their credit portfolios might increase, Chinese banks enjoy an implicit government guarantee that probably makes the banking system in China less vulnerable.

The panel judged there to be little risk of an uncontrolled bankruptcy in a major financial institution, simply because no government would allow it to happen. However, smaller banks and other financial firms, e.g. hedge funds, cannot count on government aid and we should expect insolvency issues among smaller banks. One panellist added that, since the market expects the government to support major banks, there is also a lower risk that the such banks will fail due to a bank run or an inability to roll over debt, although it is also clear that this type of expected guarantee creates long-term problems in the form of increased risk-taking and unfair competition.

On the issue of the credit crunch, the panel pointed out that it is very difficult to determine if the banks reduced their credit supply due to their own problems or because borrowers became more risky at the same time as they were less interested in new loans. Surveys indicated that loan officers tightened their lending standards, which suggests an increased credit risk. However, large companies with access to the bond markets (where we have seen considerable fundraising activity lately) are very unlikely to face a credit crunch. Equity markets also seem receptive to these firms. Rather, the major impact was on small and medium-sized companies without access to

capital markets, and these firms may continue to experience credit restrictions (although we have so far not seen a major impact on aggregate investment). Also, without the massive risk-taking undertaken by governments, we would most likely have experienced a huge credit crunch in all industries.

# DESIRED/EXPECTED REGULATORY CHANGES AND GOVERNMENT ACTIONS

- Which major changes in financial regulation and other government intervention in the financial markets do you anticipate within the next twelve months?
- What do you see as the most important regulatory changes in financial markets that need to be undertaken within the next few years?
- Which of the regulatory initiatives currently debated would be the least effective or even damaging?

Most of the panellists did not foresee any fundamental regulatory reforms within the next twelve months that would require international agreement. Short-term political debates drive the pressure to regulate, and some early proposals have faded out as the credit markets stabilised. However, several panellists believed we will see both increased capital requirements in some countries and compensation regulations. It is also likely that at least some of the most liquid derivative instruments will be moved to central clearing counterparties within a year. Some panellists believed that lawmakers in the U.S. might be able to agree on new bankruptcy resolution mechanisms for systemic financial institutions. One panellist also noted that political pressure may lead to the break-up of some large banks over the next year. Still, another panellist believed it to be unlikely that U.S. legislators will reintroduce major limitations on the scope of activities of banks. In general, the U.S. legislators are less concerned about fluctuations in the financial sector than their European counterparts since the financial sector is relatively less important to the overall U.S. economy compared to some European countries.

The panel pointed out the need for measures that mitigate the effects that fluctuations in the banks' capital requirements have on the business cycle, i.e. pro-cyclicality. This would require a change in the structure of the capital adequacy regulations. One way could be the introduction of contingent capital in banks, along the lines of debt instruments that governments can convert to equity, and this idea has some support among government representatives. Still, several panellists emphasise that a meaningful reduction in pro-cyclicality also requires a change in monetary policy.

Several panellists stressed the importance of basing capital requirements on an institution's incremental systemic risk, i.e. its "spill-over effects" on the financial system, and not just its risk of default. Everything else the same, capital requirements should be proportionately higher for larger banks, banks that hold more illiquid assets, and banks that finance more of their operations with short-term debt. A general mistake before the financial crisis was to focus primarily on risk on the asset side but ignore the liability side of the balance sheet. In order to take these types of "spill-over effects" into account in capital regulation, a macroeconomic perspective on systemic risks are needed.

Higher capital requirements, centralised clearing of OTC derivatives and so-called "living wills" are desired reforms. The idea of living wills is that complex financial institutions should be forced to have a simplified financial structure that is easier to dismantle. For example, customer assets in derivative books and repo books should be invested in liquid securities that are held in segregated client accounts.

When it comes to less prioritised reforms, panellists mentioned the absolute salary caps and short sales restrictions (e.g. selling loaned equity). Regulation of hedge funds or private equity funds is probably counter-productive. Instead, it is more appropriate to regulate the entities which supply them with funds, e.g. banks and pension funds. One panellist concluded that a lot of political capital in the U.S. is spent to improve consumer protection. While this is an important endeavour, it is important not to forget that consumer protection is not a substitute for other stabilising measures.

Finally, one panellist emphasised that the goal should be light but uniform regulation that treats different types of financial institutions in a similar way. Stricter regulation targeting specific sectors will simply force important financial activities outside of the regulated system, which was one of the drivers behind the current financial crisis in the first place.

### The macroeconomic situation

The first quarter of 2009 marked the end of the acute phase of the financial crisis. Massive support measures from governments and central banks successfully reinstated faith in the financial markets. As confidence returned to the markets, risk premiums have decreased. The risk mark-up on the interbank market, which reached historically high levels in the autumn of 2008, has fallen back to the levels from before the default of Lehman Brothers.

In Sweden, the three-month basis spread, which is the difference between the three-month interbank rate and the expected central bank repo rate, fell to around 20 basis points after peaking at 140 in October 2008. Global credit spreads have also fallen back to the levels preceding the Lehman Brothers bankruptcy. Since the middle of March 2009, the stock market has demonstrated very positive growth. The MSCI world stock market index rose around 65 per cent after it bottomed out in March 2009 and is now back at 74 per cent of its record high levels from the autumn of 2007. The Stockholm Stock Exchange's general index rose 50 per cent since its lowest point, primarily driven by banks and cyclical industries.

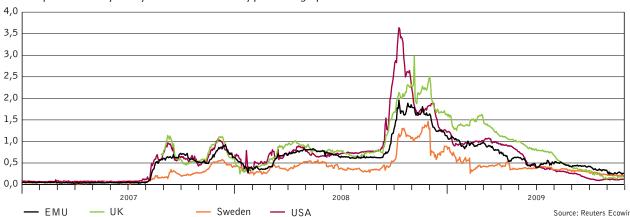
Following greatly depressed economic activity during the winter and spring of 2009, a number of countries posted positive growth during the first and second quarter. The forecasts for growth in 2010 and 2011 have also been generously adjusted upward, particularly for the U.S. and Asia. Business cycle data has also supported this development. Surveys of consumers and companies, known as confidence indicators, clearly demonstrate an upswing in the expectations of these groups.

GDP growth and forecast in per cent

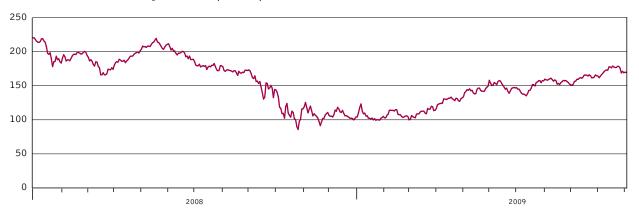
	2007	2008	2009	2010	2011	
Eurozone	2.7	0.6	-4.2	0.5	2.1	
USA	2.1	0.4	-2.8	1.7	2.7	
Sweden	2.6	-0.2	-5.0	1.5	2.9	

Sources: Eurostat, OECD, IMF, national sources and the National Institute of Economic Research





Index for the stock exchanges in Brazil, Russia, India and China (BRIC countries)



Source: Reuters Ecowin

A rediscovered appetite for risk is clearly evident in the developing countries. Currencies strengthened against the U.S. dollar and investors returned to the market. The stock exchange index for the BRIC countries (Brazil, Russia, India and China) rose over 100 per cent after it bottomed out in October 2008, and has regained approximately 80 per cent of its precrisis high. The downturn in the Asian countries in particular appears to be short-lived, partly due to the strength of China's recovery and partly as a result of the large stimulus packages implemented in these countries.

Several Eastern European countries have experienced extreme and unbalanced growth, which has resulted in massive budget and trade deficits, and a large portion of their credit growth has occurred in foreign currency. This especially applies to the Baltic economies (please refer to the section in this report entitled *The Baltic region*). Even if the budget deficits in many Western European EU countries are now larger, a new exodus to secure assets would most likely have a significantly larger impact on Eastern Europe.

Market financing opportunities for companies have been improving steadily since the spring. Credit premiums have continued their downward fall at the same time as business cycle forecasts have climbed and bankruptcy predictions decreased. Corporate bond issues to non-financial companies have picked up speed again on the Swedish market. The increased market financing opportunities to a certain extent are replacing traditional loans from banks since many banks have tried to decrease their corporate exposures and increase interest rate margins.

The financing situation for financial companies has also improved and many banks are now starting to emerge from their dependence on government support measures. In the U.S., some of the banks that received governmental support have started the repayment process. The quarterly results for the U.S. banks in many aspects exceeded the expectations of the market. European banks have also begun to sell assets in order to pay back state funding. In Sweden, lending via the government guarantee program decreased after the mid-year point and SEB recently announced its intention to leave the program. The large fall in liquidity and credit premiums resulted in positive valuation effects, primarily for banks that have considerable trading operations and a large trading book in debt securities.

However, there are still major credit losses within the banking system. The International Monetary Fund (IMF) estimated in its Global Financial Stability Report, which was published in October 2009, that credit loss levels for the European banking market would culminate at between 0.9 and 1.3

per cent of lending in 2009. In particular, the commercial real estate sector is expected to generate additional credit losses. This especially applies to countries that experienced large price increases leading up to the crisis, such as Great Britain, Ireland and Spain. In many countries, mortgages also are a major contributor to the credit losses. In the U.S., more than 40 per cent of the expected losses are estimated to come from mortgages.

IMF estimates that the total write-downs during the crisis, from the second quarter of 2007 to the fourth quarter of 2010, will amount USD 2,800 billion. This puts the total credit loss during the crisis at five per cent. IMF estimates that the U.S. banks represent around 60 per cent of this total volume and the European banks only 40 per cent. That the U.S. banks have had a greater volume of write-downs thus far can be due to the fact that they have a higher share of securitisations and are subject to different accounting principles.

#### Estimated global write-downs in banks 2007-2010

Billion USD	Loans	Securities	Total	
U.S.	654	371	1,025	
United Kingdom	497	107	604	
EMU countries	480	333	813	
Other EU <sup>1</sup>	165	36	201	
Asia	97	69	166	
	1,893	916	2,809	

1) Denmark, Iceland, Norway, Sweden, Switzerland

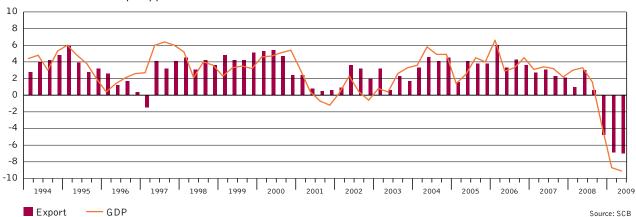
Source: IMF, GFSR October 2009

#### **SWEDEN**

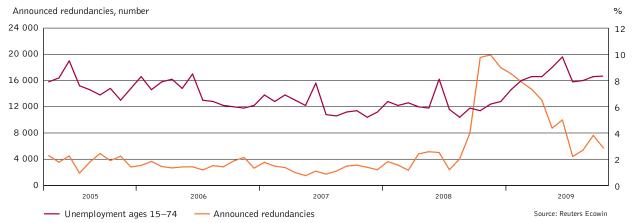
The Swedish business cycle dipped sharply in 2009 primarily due to the heavy contraction in exports. Sweden's dependence on foreign demand meant that the country took a blow when international demand fell. Even if growth recovers in the second half of the year, GDP in Sweden is expected to fall by about five per cent in 2009. Increased global demand is necessary for the recovery of the Swedish economy. International indicators have recently begun to point upward and Swedish export indicators are showing some optimism.

The contraction on the labour market intensified during the summer. However, one positive sign is that the number of announced redundancies is

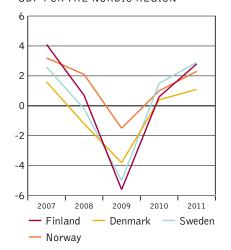




#### Announced redundancies and unemployment



#### GDP FOR THE NORDIC REGION



Sources: Eurostat, OECD, IMF, national sources and the National Institute for Economic Research

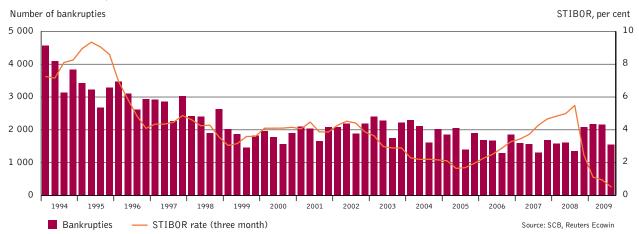
now falling. Several fiscal policy measures are aimed at supporting the demand for labour, but the risk of rising unemployment is tangible and the National Institute of Economic Research estimates that unemployment will land at 8.8 per cent in 2009 and 11.4 per cent in 2010.

The number of defaults during the crisis years 2008-2009 has thus far been low in Sweden, and it fell even further during the third quarter of 2009. The low interest rates have certainly enabled companies to keep their costs down, thereby exhibiting more resistance to the crisis, but one quarter is too short a period to determine if the trend has reversed itself. Standard & Poors and Moodys are forecasting that defaults will reach their culmination in the U.S. at the end of the year. The low default levels in Sweden suggest some optimism that the credit losses in the Swedish banks will be modest.

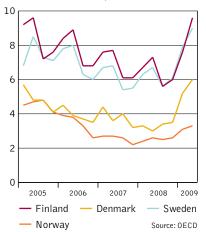
#### OTHER NORDIC COUNTRIES

The economies of our neighbours also stumbled in 2009. The development in Finland has mirrored most closely that of Sweden since Finland has a similar industry structure and dependence on exports. The unemployment rate in Finland is higher than in Sweden and is expected to rise. However, just like Sweden, Finland has a strong base in its stable government finances and therefore has some room to conduct expansive fiscal policy. The prices of real estate in Finland have also been relatively unaffected by the crisis, much like in Sweden. For more information about how Swedish real estate

#### Number of bankrupties in Sweden and STIBOR rate (three month)



UNEMPLOYMENT RATE IN THE NORDIC REGION (in per cent)



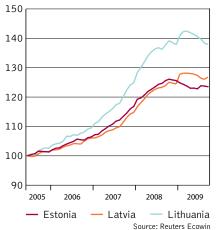
prices were affected by the crisis, see the chapter *Financial risks for Swedish consumers*.

Denmark was hit by the recession earlier than the other Nordic countries. The catalyst was the collapse of the overheated construction and housing market. For example, apartment prices in downtown Copenhagen have fallen 35 per cent since their peak in the third quarter of 2006. Denmark's exports are focused on sectors that are less sensitive to fluctuations in the business cycle such as foodstuffs, agricultural products and pharmaceuticals, and Denmark also has significantly lower unemployment rate than Sweden and Finland.

Norway has not been affected to the same extent by the crisis. Just like its neighbouring countries, it experienced a rapid fall in exports, but has recovered surprisingly well. The recession in Norway appears to be mild. Monetary and fiscal policy stimuli have also contributed to limiting the fall in GDP. Unemployment rate has risen, but remains under three per cent. House prices fell at the end of 2008 but the trend has already reversed itself and prices are back at the same levels as before the fall. Norway's central bank has also been one of the first to start raising the repo rate.

The effects of the financial crisis in Iceland were significantly more extreme than in the other Nordic countries. When the three largest commercial banks collapsed, the Icelandic State took over the debts. High unemployment rate and real salary decreases have hit Icelandic residents hard.

#### CONSUMER PRICE INDEX



#### THE BALTIC REGION

When the financial crisis erupted, the Baltic economies had been overheated for several years. The rates of inflation and increase in salaries were in the double digits and annual credit growth was climbing rapidly. During 2005-2007, the average annual credit growth rate for households was 38 per cent in Latvia, 65 per cent in Estonia and 75 per cent in Lithuania. Too much credit was funnelled into the real estate sector and private consumption. The fall in economic activity is expected to be enormous in 2009 and the GDP is expected to contract 14.5 per cent in Estonia and 18 per cent in both Latvia and Lithuania. Both exports and domestic consumption have fallen dramatically. Compared to October 2008, exports for the three countries declined 20-25 per cent while imports declined 30-40 per cent.

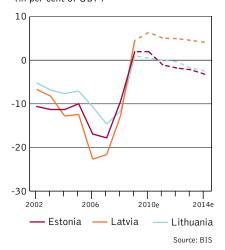
UNEMPLOYMENT RATE IN THE BALTC REGION (in per cent)



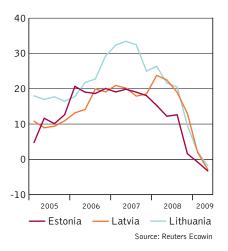
In the autumn of 2008, the problems in Latvia reached an acute level. The lack of confidence in the domestic bank, Parex, contributed to a financial crisis that forced Latvia to negotiate a programme with IMF. To date, Latvia has received EUR 3 billion.<sup>4</sup> The loans, which were issued within the framework of the IMF programme to which Sweden is one of the contributing countries, were conditioned with strict savings requirements.<sup>5</sup> Latvia's budget deficit in 2009 is expected to total 10 per cent of its GDP.<sup>6</sup> The restrained fiscal policy, which is necessary, is naturally also an extra burden in the current economic climate and places considerable demands on the political powers in the country.

- 1 National central banks
- 2 The Baltic Ministries of Finance
- 3 National central banks
- 4 Corresponds to approximately SEK 30.8 billion or LVL 2.1 billion.
- 5 One condition is that Latvia decreases its 2010 state budget by EUR 700 million, which is 4 per cent of its GDP.
- 6 Latvia's Ministry of Economics

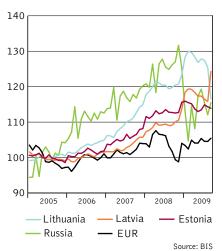
### BALANCE ON CURRENT ACCOUNT (in per cent of GDP)



#### ANNUAL SALARY GROWTH (per cent)



#### REAL EXCHANGE RATE



Estonia and Lithuania are also cutting their budgets in order to avoid an increase in their deficits. Estonia had expressed that it intended to meet the Maastricht criteria in 2009, which would open the door to the euro as early as 2011. However, the country's strict budget cuts are contributing to a rapidly rising rate of unemployment. Since the middle of 2008, unemployment rate has jumped and now passed 12 per cent for the Baltics as a whole. The market expects that unemployment rate in all three countries will continue to rise.

As the global economy begins its careful recovery, the conditions in the Baltic countries are also improving. CDS prices (insurance against default) and interbank rates have fallen, which indicates a slight decrease in the uncertainty on the market. However, the market's forecasts are indicating that the economies in the three Baltic countries will not begin to grow again until 2011. Domestic demand has fallen faster than foreign demand, which has resulted in a positive current account balance in these three countries.

The three Baltic countries have tied their currencies to the euro. Estonia and Lithuania have formal currency boards, while Latvia has a fixed but adjustable exchange rate to the euro, normally called a peg. Since the currencies in the Baltic countries are tied to the euro, the sharp salary inflation that has occurred since 2005 has led to high cost levels, particularly in Latvia. A large portion of the Baltic countries' exports are sent to, for example, Poland, Russia and Hungary, the currencies of which weakened against the euro in the autumn of 2008 and the beginning of 2009. If the currency pegs are maintained, which all three countries intend to do, it may be necessary to decrease salary levels in order to increase competition. Latvia has expressed a goal to decrease the salaries of its state employees by 15-20 per cent.<sup>7</sup>

#### GLOBAL RESPONSE TO THE FINANCIAL CRISIS

In the wake of the financial crisis, a number of changes to regulations and supervision are on the table. The G20 countries have agreed on a number of measures. The EU has implemented several regulation changes as a direct response to the financial crisis and G20's agenda. For example, there is a proposal to reform the supervision of the financial markets to include a macroeconomic perspective. In the chapter *Regulation Environment*, an appendix to this report, there is a more thorough review of the newly implemented and coming rule changes within the EU.

Several of the most important reform proposals include:

- higher capital requirements for market risks,
- a higher share of high-quality capital, ordinary shares, in the banks' own funds
- quantitative liquidity rules
- a higher degree of central counterparty clearing for OTC derivatives
- counter-cyclical capital requirements or buffers
- rules for limiting compensation systems that lead to excessive risk-taking
- special requirements for systemically important financial companies

# Banks and securities companies

The four largest banks on the Swedish banking market, Handelsbanken, Nordea, SEB and Swedbank, hold a dominant 75 per cent of lending and 70 per cent of deposits. The internal ranking among the four banks has remained relatively unchanged in recent years.

Swedbank has the largest share of lending to households and the largest share of deposits in Sweden. Handelsbanken and SEB have the largest share of lending to companies. Nordea is the most diversified of the banks with wide diversification across the Nordic countries.

Savings banks conduct banking activities just like other banks, but by definition do not have an owner and are run by a number of trustees. There are currently 60 savings banks in Sweden, of which the majority to some extent cooperate with Swedbank. There are currently 141 companies with a licence to conduct securities business and fall therefore under the supervision of FI. There are also a number of banks, both commercial banks and savings banks, that in addition to their banking business also have a licence to conduct securities business. The group, Other banks, consists of around 25 joint stock banks, of which half are savings banks that were converted to limited liability companies. There are also a number of niche banks and banks owned by insurance companies.

The operating profits of the large banks as a group weakened considerably during the first three quarters of 2009 compared to the previous year. This development was primarily due to higher credit losses in their Baltic operations. The turbulent macroeconomic situation in this region means that there is considerable uncertainty about how large future credit losses will be. Despite the lower lending levels, exposures to the Baltic countries continue to represent the largest individual risk for the Swedish banks doing business there.

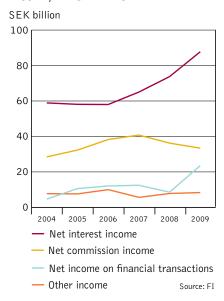
However, Finansinspektionen's stress tests show that the large banks have adequate capital buffers for withstanding even extremely negative scenarios. The reasons behind this are mainly the banks' capital reinforcements and continued stable underlying earnings. FI's negative scenario tests both for a greatly weakened situation in the Baltics and a deeper recession in the rest of the world.

In the commercial real estate sector, there is a risk that the struggling economy will weaken the ability of real estate companies to meet their payment commitments, which increases the risk of default. In Sweden, the commercial real estate companies have thus far managed well despite rising vacancy rates, primarily due to the low interest rates. If, however, the interest rates were to rise sharply before a robust recovery in the business cycle, this could lead to larger fall in prices than what we have seen yet. Weakened solvency combined with a major fall in prices could result in significant credit losses for the Swedish banks.

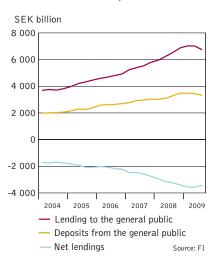
#### **EARNINGS AND PROFITABILITY**

The operating profits of the large banks weakened during the first three quarters of 2009 compared to the previous year. Profits for this period totalled approximately SEK 32 billion, which was 41 per cent lower than the same period the previous year. The decrease can primarily be traced to

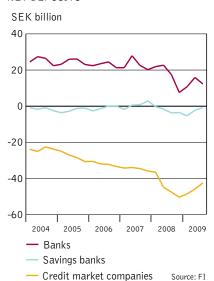
#### INCOME, LARGE BANKS



# DEPOSITS AND LENDING TO THE GENERAL PUBLIC, LARGE BANKS



#### NET DEPOSITS



higher credit losses. The banks' net interest income is increasingly their most important earnings entry. Thanks to higher lending margins and increased lending, net interest income has continued to grow. Net commission income's share of total revenues has decreased in recent years and to date is around 22 per cent of revenue, although the stable development on the financial markets during the second and third quarters of 2009 has led to a rise in commission income from securities during this period. The third largest income entry, net income on financial transactions, increased sharply at the beginning of the year primarily due to positive valuation effects on debt securities as a result of falling interest rates.

The operating profits of the savings banks for the first three quarters of 2009 totalled SEK 1,365 million, which was somewhat higher than the same period in 2008. Net interest income decreased while net income on financial transactions increased.

The operating profits of credit market companies showed a positive, stable development. The profits for the first three quarters of 2009 totalled SEK 1,241 million. Net interest income, which for this group of companies also includes lease income, is the dominant income entry and net commission income and other income entries are small.

The operating profits of the securities companies continued to show weak growth. The profits for the first three quarters of 2009 totalled SEK 788 million. The revenue for this group of companies consisted of 52 per cent commission income from securities. The earnings of securities companies are strongly linked to developments on the stock market.

#### LENDING AND FINANCING

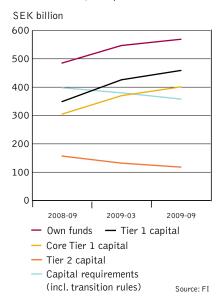
The lending of the large banks at the end of the third quarter of 2009 totalled SEK 6,740 billion. The low deposit rates, in many cases close to zero, probably contributed to the subdued deposit activity from the general public. Thus, the market's borrowing needs continued to rise and now totals more than SEK 3,400 billion.

Approximately half of the banks' lending is in Sweden and half in foreign countries. Swedish lending to households is the most stable and in the past five years increased 8–10 per cent annually. Lending to Swedish companies fell steadily during the year and the annual lending rate was negative in September 2009 for the first time since 2004. Lending growth in foreign operations fell dramatically during the past twelve-month period. Lending rates have fallen primarily in the Baltic region where the banks decreased their lending by around SEK 70 billion in 2009.

Lending growth in the savings banks has decreased by more than half compared to one year ago and in the past twelve months barely reached 6 per cent. More than 80 per cent of the savings banks' financing comes from deposits from the general public, which has held steady in recent years.

Since 2004, the lending of credit market companies has increased steadily. The annual rate of growth has varied between 8 and 30 per cent, but fell sharply in the past year. For the group, other banks, the lending growth the past few years has been around 20 per cent, which is higher than any of the other groups. Lending now totals close to SEK 200 billion. Thanks to high deposit rates, many credit market companies have increased their deposits from the general public. In one year, deposits increased by around SEK 9 billion and at the end of the third quarter of 2009 totalled SEK 36 billion.

#### CAPITAL ADEQUACY, LARGE BANKS



#### CAPITAL ADEQUACY

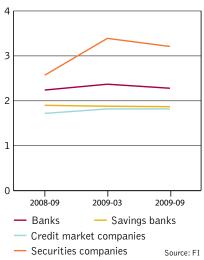
From 2004 until the end of the third quarter of 2009, the own funds of the large banks increased by SEK 260 billion to approximately SEK 575 billion. During this period, the banks' profits less dividends contributed almost SEK 200 billion to their own funds. The banks raised the remaining SEK 60 billion during the last year in order to strengthen and improve the quality of their own funds following stricter requirements from actors on the market. Share issues contributed more than SEK 70 billion to their Tier I capital and hybrid securities issues an additional SEK 11 billion. The capital requirements of the large banks currently total approximately SEK 360 billion, which means that they have around SEK 215 billion more in capital than the minimum requirement stipulated by law.

#### Capital infusions in large banks 2008-2009

Bank	Volume	Date/Period
New issues		
SEB	SEK 15 billion	2009-02-05
Nordea	EUR 2.5 billion	2009-02-10
Swedbank	SEK 12.4 billion	2008-10-27
Swedbank	SEK 15 billion	2009-08-17
Hybrid issues (Tier I capital	infusion)	
SEB	EUR 500 million	2009-09-21
Nordea	USD 1 billion	2009-09-16
Handelsbanken	SEK 2.3 billion	Q4 2008
Handelsbanken	SEK 2.705 billion	Q1 2009

Source: Interim reports from the banks, FI

#### CAPITAL ADEQUACY RATIO



The savings banks, credit market companies and other banks have higher capital adequacy ratios than the large banks. This is because their operations are less diversified and individual defaults are a greater threat to their business.

In operations where earnings vary significantly across different periods, it is important that the companies' capital reserves are strong enough to withstand such fluctuations. Securities companies in general have a higher capital adequacy ratio, the ratio between own funds and the capital requirement, than banks. At the end of the third quarter, the average capital adequacy ratio for the securities companies was 3.2, which can be compared to the average for the large banks, 1.6.

#### **CREDIT LOSSES**

Since the middle of 2008, the large banks have experienced a rapid rise in their credit losses. During the first three quarters of the year, the losses totalled SEK 44 billion. Although somewhat simplified, they can be divided into provisions for specific losses, which can be linked to specific activities, and provisions for group losses, which are judged to have occurred in a credit category but where the losses are not yet identified at the company level. The majority of the group provisions, which totalled SEK 13.9 billion for the first three quarters of 2009, originated from the large banks' Baltic operations.

Both the credit loss level and the share of impairied loans have increased

CREDIT LOSSES IN LARGE BANKS

SEK hillion

50

40 30

20

10

O

-10

significantly since the end of last year. Calculated on an annual basis, the credit loss level for the first three quarters of 2009 totalled 0.87 per cent. Per market, the distribution was 6.6 per cent in the Baltics, 0.25 per cent in Sweden and 0.75 per cent in other foreign countries. A positive development was that the credit loss level for the banks' Swedish operations improved in the third quarter of 2009. This was unexpected since the banks' credit losses historically have reached their peak around one and a half years after the largest fall in GDP, which occurred in the second quarter of 2009. The low credit loss level in Sweden is probably due to a large extent to the low interest rates, but other factors have also contributed, such as the weakened krona, capital-strong owners of companies and good development of disposable income in recent years.

For savings banks, their credit losses started to rise in 2008 but are still at a historically low level. Annual credit losses of more than SEK 600 million corresponds to a credit loss level of only 0.48 per cent on lending that totals SEK 130 billion.

The downturn in the business cycle has also affected credit market companies. For many years, the annual credit losses were stable at around 0.35 per cent of lending. Starting in 2008, their credit losses began to rise and have even jumped dramatically since the end of the last year. The losses in the last twelve months totalled 1.1 per cent of lending, or SEK 850 million.

#### LIQUIDITY RISKS

10

8

6

4

2

O

2009

Source: FI

2008

Access to liquidity has improved continuously in 2009, primarily as a result of the monetary policy stimulus packages introduced by the central banks and the government's guarantee program for borrowing, but also due to an increase appetite for risk on the market. In the past year, the large banks improved their liquidity by extending the maturity of their borrowing and creating larger liquidity reserves. The banks' own analyses show that, in general, as of 30 September 2009, they can handle their cash flows for more than one year without access to the capital markets, which is a large improvement compared to one year ago.

### CREDIT LOSSES



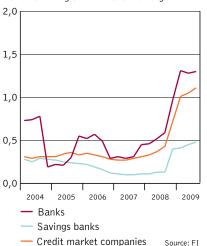
2006

2007

2005

Credit loss level, %

Credit losses



#### Distance to illiquidity of the banks

	2008-12-31	2009-09-30	
Nordea	n.a	24 months	
Handelsbanken	>12 months	>24 months	
SEB	6–8 months	>15 months	
Swedbank	>12 months	>24 months	

Source: Interim reports from the banks

Swedish banks are extremely dependent on foreign financing. The situation on the borrowing markets has normalised with larger volumes, longer maturities and falling margins. However, there is still considerable risk for set-backs since new failures in the financial sector can lead to decreased confidence in the market and financing problems.

#### RISKS WITHIN COMMERCIAL REAL ESTATE

Lending to commercial real estate represents a significant portion of the banks' total lending and has historically caused major credit losses, particularly during the banking crisis at the beginning of the 1990s. After the

banking crisis, the banks' real estate lending began to focus to a larger extent on the companies' cash flows rather than the loan-to-value ratio of the property. The share of real estate lending in the banks' credit portfolios is also significantly smaller today.

These factors and the current low interest rate level mean that the credit losses from the real estate sector in Sweden are currently small. However, if the interest rates were to rise rapidly at the same time as unemployment rises and the upswing in the business cycle is delayed, the solvency of real estate companies can become significantly worse. In 2008, commercial property prices fell 8 per cent. If prices were to continue to fall at the same time as the real estate companies experience payment difficulties, the Swedish banks could face credit losses.

This scenario would require a major fall in prices before the banks are affected, since they generally do not grant loan-to-value ratios that are higher than 70-75 per cent and add clauses to the loan agreement stating that the loan can be withdrawn if the loan-to-value ratio at any time during the period of the loan exceeds a pre-determined level.

In a previous report, FI pointed out other short-term and long-term risks within the commercial real estate sector. One of the risks FI identified was that foreign actors could continue to withdraw from the Swedish real estate market, which would press real estate prices downward. Another risk FI identified was that an increasingly growing portion of lending for commercial properties accepts collateral in shares instead of in real estate. In the event of a default or dispute, this type of development can result in uncertainties related to deciding the banks' right of priority.

#### RISKS IN THE BALTICS

The heavily weakened economic situation has led to significant credit losses in the banks on the Baltic market. During the second quarter, the share of loans in Latvia for which the interest had not been paid in 90 days was 12 per cent of total lending. The share in September in Lithuania was 8 per cent and in Estonia 4 per cent.

The large Swedish banks are market leaders in the Baltic countries. Swedbank holds more than 40 per cent of the lending market in Estonia and more than 20 per cent in Latvia and Lithuania. SEB is largest in Lithuania with a market share of 30 per cent. Its market share in Estonia is 25 per cent and in Latvia 15 per cent. Nordea's market share is just over 10 per cent in all three countries. The lending of Nordea, SEB and Swedbank in the Baltic countries corresponds to 3-12 per cent of their total lending. The exposure in the Baltics is not judged to be a threat to the solvency of the Swedish banks. However, renewed turbulence in the region could have a negative impact on confidence and make it harder for the Swedish banks to find financing alternatives.

The lending of the large banks in the Baltic region decreased by approximately SEK 70 billion during the past three quarters. This is primarily due to restrictive new lending, older loans falling due and the recording of large credit losses. In addition, the Swedish krona has strengthened against the euro in the past two quarters, which further decreased lending measured in SEK. Lending by the Swedish banks in the Baltic countries totalled in the third quarter of 2009 around SEK 400 billion.

Despite decreased lending, the exposures in the Baltic countries continue to

be the largest individual risk for the large Swedish banks that are present there. There is still considerable uncertainty surrounding how large the total credit losses will be for the recession as a whole. Thus far in 2009, Nordea, SEB and Swedbank have suffered credit losses of around SEK 20 billion in the Baltic countries and the market is expecting at least this many losses in the future before the levels normalise.

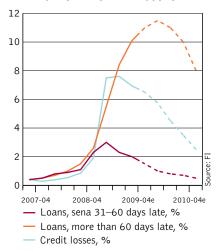
A dominant share of the banks' loans in the Baltics are in foreign currency. For the Swedish banks, 82 per cent of their lending is in euro. The lending volume in euro has continued to increase compared to one year ago, while lending volumes in domestic currency have decreased. Interest rates on loans in domestic currency are significantly higher than loans in euro, —

#### ■ How large are the credit losses remaining in the Baltics?

The graph below shows the development of Swedbank's credit losses and late payments in the Baltics. The number of loans that are between 31-60 days late have started to fall and the growth rate of the number of loans that are more than 60 days late has slowed. Swedbank made provisions for approximately the same amount, in absolute terms, for credit losses in the Baltics in every quarter of 2009.

Up until the fourth quarter of 2008, the connection between credit losses and loans more than 60 days late was relatively strong. Around 60 per cent of all loans that were more than 60 days late became credit losses. Since then, Swedbank has opted to estimate that a larger share of the late loans become credit losses. This is probably mainly due to the bank's introduction of a macro-model to determine at an earlier stage the provisions that will be needed further in the future. If the estimated connec-

LATE LOANS AND CREDIT LOSSES



tion between late loans and credit losses holds, this would mean that, until the end of 2010, Swedbank needs to absorb credit losses of around SEK 48 billion in its Baltic operations. The credit losses have totalled around SEK 25 billion for the past five quarters, meaning that half of the credit losses still remain. This analysis assumes constant lending levels over the next five quarters. In addition, it is assumed that the development for late loans over the past few quarters continues to apply. If the economic deve-

lopment in the Baltics worsens, the credit losses can reach higher levels than in the forecast. They can also be lower if the economic recovery advances faster than expected or if the banks continue to decrease lending at the same rate as in the past few quarters.

Experiences from previous crises have shown the importance of efficient processes for handling bad loans when they arise en masse. The banks' regular personnel seldom have the capacity or education for handling this, which leads to lower recoveries than what would otherwise be possible. Finansinspektionen and the Riksbank are therefore investigating how Swedish banks in the Baltic countries are handling their bad loans.

which continues to fuel the demand for loans in euro. However, this also entails a currency risk for lenders in the event the domestic currency is depreciated against the euro.

The plummeting house prices in all three of the Baltic countries has meant that a large portion of the countries' mortgages now exceed the value of the property. According to Swedbank, the percentage of "over-mortgaged" households was anywhere between 24-54 per cent in the three countries during the second quarter of 2009.

There is proposed legislation currently being discussed primarily in Latvia that would allow lenders to pay back only the portion of the loan that corresponds to the value of the underlying security, i.e. the property. This would lighten the burden of debt on a number of mortgage customers while increasing the credit risk for the banks. However, there are currently no indications that such a proposal will become reality. But even if it did, and even if the rule would go into effect retroactively, according to FI's calculations it would only result in a few billion SEK of additional credit losses, which is a relatively small effect given the context.

#### LENDING/CREDIT LOSSES LARGE BANKS SEK billion 25 500 400 20 300 15 10 200 100 2 2008-12 2009-06 2007-12 2009-03 2009-09 Lending (left axis) Credit Josses (right axis) Source: FI

#### STRESS TESTS OF THE FOUR LARGE BANKS

Stress tests¹ are a tool that FI uses to asses the banks' ability to withstand different negative scenarios. The tests are also used in FI's annual capital assessment of the banks. FI most recently published the results of the stress tests in June 2009. Due to the extremely negative macroeconomic development in the past few quarters, both in Sweden and in other countries where Swedish banks are present, FI has decided to publish the results of its updated stress tests.

The methodology for the stress tests in this report is basically the same as for the tests presented in June. However, the variables were changed to take into account the developments over the past few months. For example, the stress tests in Scenario 2 raise the risk that the banks' credit losses for mortgages would increase compared to today's low levels.

The assumption of higher credit losses related to mortgages is based on a, for mortgage holders, disadvantageous development in interest rates and unemployment. If economic growth is weak at the same time as unemployment and inflation increase, a situation that would force the Riksbank to raise the interest rate, house prices would be affected negatively. The households that in recent years took on mortgages with high loan-to-value ratios could find themselves in a situation where the size of the loan exceeds the value of the property. It is possible that unemployment could cause these households to default. The banks' losses are then the "excess mortgage" for each house at the time of the default.<sup>2</sup>

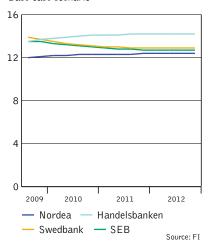
The two scenarios that were tested were:

- a conservative base case scenario
- a drawn-out recession in Western Europe and the Baltics and higher credit losses linked to mortgages

2 Banks have a claim on borrowers even after the security is realised. However, in a normal case, the banks make provisions for credit losses according to what is left of the claim after the security is realised. Outstanding amounts can be recovered at a later date.

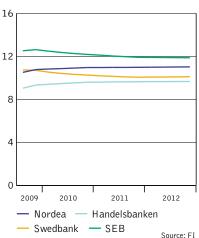
<sup>1</sup> For more detailed information about the methodology and results, see the separate memorandum, "Finansinspektionen stress tests large banks", published 2009-11-10 on fi.se.

# TIER 1 CAPITAL RATIO EXCLUDING TRANSITION RULES, % Base case scenario



# TIER 1 CAPITAL RATIO INCLUDING TRANSITION RULES, %

Base case scenario



#### Results

In the base case scenario, all of the banks easily covered the minimum requirements stipulated by law, and none of the banks came in under a 12 per cent Tier 1 capital ratio, excluding transition rules<sup>3</sup>. Even with transition rules the banks easily cover the legislated requirement. FI's base case scenario should be interpreted with a certain degree of caution. Even though the scenario is conservative in relation to analyst forecasts, it is not possible to exclude the possibility that the macroeconomic development could take a turn for the worse, causing credit losses to rise. The development could also be more positive.

In Scenario 2 we assume extremely high credit loss levels. FI judges this scenario to be improbable but not impossible. Even in this scenario, all of the banks retained satisfactory buffers to the minimum requirements stipulated by law, both including and excluding transition rules. The reason for this is that the banks are well capitalised from the outset and have good underlying earnings.

Finansinspektionen's assessment from this spring remains the same, i.e. that there is currently no need for the large Swedish banks to continue to strengthen their capital adequacy based on the legislative requirements.

Credit loss levels in the base case scenario, per cent

	2009	2010	2011	2012	2009–2012	
Nordea	0.56	0.79	0.61	0.55	2.51	
SHB	0.23	0.42	0.37	0.49	1.51	
Swedbank	1.77	1.26	0.85	0.60	4.48	
SEB	0.88	1.27	0.91	0.69	3.74	
Average	0.86	0.93	0.68	0.58	3.06	

In the base case scenario, the four large banks will have credit losses total-ling approximately SEK 175 billion for the period starting in the fourth quarter of 2009 and ending in 2012. This can be compared to the total earnings of around SEK 325 billion during the same period. On an aggregate level, the banks will continue to post a profit if the development follows the base case scenario. Only Swedbank posts a loss in 2010 in this scenario, primarily due to assumptions of high credit losses in the Baltics and Ukraine.

The banks' total credit losses and earnings in the basic scenario

Credit losses (SEK billion)						Earnings
	2009	2010	2011	2012	2009–2012	2009–2012
Nordea	16.6	21.6	18.0	17.3	73.5	187.3
SHB	3.8	7.1	6.5	6.8	24.2	73.6
Swedbank	24.5	17.5	12.2	9.0	63.2	68.1
SEB	13.4	18.6	13.7	10.8	56.4	73.1
Summa	58.3	64.8	50.4	43.8	217.3	402.1

Scenario 2 has higher credit losses in all industries and regions. This especially applies to the Baltic countries, Ukraine and loans to companies with

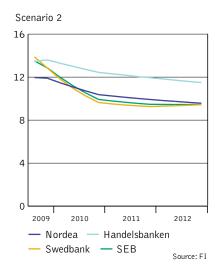
<sup>3</sup> Transition rules apply in 2009, which means that the capital requirement according to Pillar 1 is calculated as the highest of the capital requirement under Basel 2 or 80 per cent of the Basel 1 capital requirement. It is probable that these transition rules will be extended to include 2011.

<sup>4</sup> For the entire period 2009-2012, credit losses will reach more than SEK 200 billion.

high risk, for example lending to shipping companies. In this scenario, the credit losses related to mortgages are also assumed to be significantly higher than in the basic scenario. This assumption primarily applies to the Swedish market, but also to the other Nordic countries.

A negative scenario in the Baltics would result in at least one country being forced to devalue their currency. FI, like most actors on the market, makes the assessment that a devaluation would lead to accumulated credit losses that are approximately the same in scope as an internal devaluation in the form of decreased salaries and budget cuts. The Baltic economies must lower their costs and rein in domestic demand in order to achieve a sustained reversal of the trade deficit, which up until the crisis was very large. If this occurs via external or internal measures is considered to be less important for the scope of the total credit losses.

TIER 1 CAPITAL RATIO EXCLUDING TRANSITION RULES, %

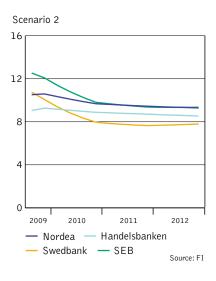


Credit loss levels in Scenario 2, per cent

	2009	2010	2011	2012	2009–2012
Nordea	0.66	1.91	1.44	1.38	5.38
SHB	0.24	1.08	0.94	0.94	3.19
Swedbank	2.14	2.57	1.38	1.09	7.19
SEB	1.20	2.73	1.53	1.28	6.75
Average	1.06	2.07	1.32	1.17	5.63

Credit losses are significantly larger in Scenario 2 and total approximately SEK 340 billion for the four large banks for the period starting with the fourth quarter of 2009 and ending in 2012.

TIER 1 CAPITAL RATIO INCLUDING TRANSITION RULES, %



The banks' total credit losses and earnings in Scenario 2

Credit losses	Earnings					
	2009	2010	2011	2012	2009–2012	2009–2012
Nordea	19.6	53.2	40.0	38.2	151.1	168.6
SHB	4.1	17.7	15.6	15.6	53.0	66.0
Swedbank	29.5	32.8	16.7	13.1	92.2	59.0
SEB	18.2	36.6	19.4	16.2	90.4	62.9
Total	71.4	140.4	91.7	83.2	386.7	356.6

As in the base case scenario, all of the banks easily covered the minimum requirements set out by law in Scenario 2. The assumption of higher credit losses for mortgages has the greatest effect on Handelsbanken and Swedbank, which have relatively larger shares of mortgages.

# Insurance companies

Fund and insurance saving is high in Sweden and an important area for FI's supervision. In the traditional pension insurances sector alone, there are accumulated savings of almost SEK 1,800 billion, which represent around 35 per cent of the savings in Sweden. At the same time, many insurance products are very complex and difficult for the consumer to evaluate. FI believes that the position of the consumer needs to be strengthened with regard to saving in traditional pension insurance.

The insurance companies can be roughly divided into non-life insurance companies and life insurance companies.

LIFE INSURANCE COMPANIES
(solvency ratio)

20
16
12
8
4
0
2007-06 2007-12 2008-06 2008-12 2009-06
— Solvency ratio.

Insurance is based on the premise that premiums are paid in advance and potential pay-outs occur later. This provides the companies with capital to invest in different types of assets, which are reported in the company's balance sheet as assets. The companies liabilities are estimates of future payments based on the terms of their active insurance agreements.

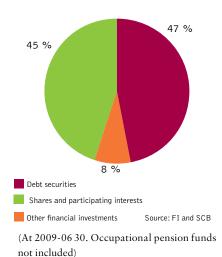
The most common product offered by life insurance companies is pension insurance. In a pension insurance, the individual normally pays premiums for a very long time before any payments are made. As a result, the companies manage the money for several decades. In addition, the insurance agreements promise nominal, perhaps life-long, pension amounts. Depending on how the insurance companies invest their assets, this can entail significant financial risks.

The products of non-life insurance companies, such as home or third party insurance, are instead characterised by short, often one-year agreements and payment often occurs in the same year or at the most a few years after the damages were incurred. The financial risks in non-life insurance companies are therefore significantly smaller.

#### ASSETS, LIFE INSURANCE COMPANIES

life insurance companies

Source: FI



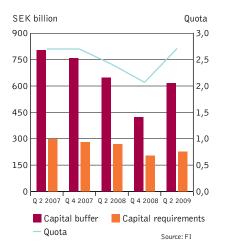
# THE FINANCIAL CRISIS AND THE SOLVENCY OF LIFE INSURANCE COMPANIES

During the financial crisis, the rates on treasury securities across the entire world fell dramatically. Investors, banks and other financial actors fled to safe securities, in particular government bonds. This high demand forced interest rates to historically low levels. At the same time, the price of high risk assets, such as shares, fell drastically. Both plummeting stock markets and falling rates on treasury bonds had a negative effect on the solvency of life insurance companies.

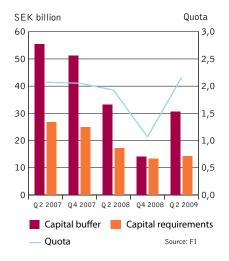
The life insurance companies have invested a large portion of their assets in shares, which decreased sharply in value. At the same time, the companies were forced to use a low interest rate to calculate the present value (discount) of commitments, i.e. future pension payments.

As a result, solvency levels fell during the crisis. However, all of the companies met the solvency requirements required by law. The companies also passed the stress tests in the traffic-light test reasonably well. The traffic-light test first calculates a capital buffer based on the fair value of both assets and liabilities. Based on the stress tests, the hypothetical capital needs (capital requirement) for the company are then calculated.

# STRESS TEST LIFE INSURANCE COMPANIES



# STRESS TEST OCCUPATIONAL PENSION FUNDS



#### DISCOUNTING LONG-TERM COMMITMENTS

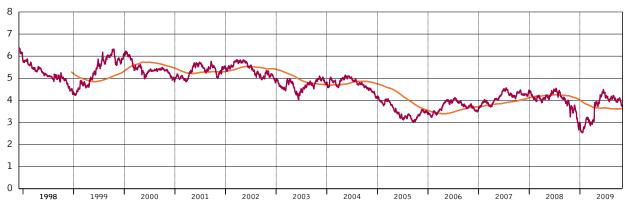
Since 2006, when Sweden implemented the occupational pension directive, life insurance companies have used market rates to calculate the present value of their commitments (technical provisions) for occupational pension schemes. This method has also been applied to other forms of life insurance since April 2008. Discounting with market rates has several advantages, one of which is facilitating the matching of assets and liabilities in the company.

The financial crisis illustrated how sensitive the life insurance companies in particular are to the choice of the discounting rate. The decreased appetite for risk during the financial crisis put pressure on both shares and interest rates. In Sweden, the limited number of long-term treasury bonds meant that the long-term government bond rates fell to historically low levels. Part of the problem, particular during financial crises, is that the prevailing system requires life insurance companies to calculate the future value of their payments using current market rates.

Since the promised payments will not be made until far into the future, the calculation of the liability is very sensitive to the interest rate level. The Swedish life insurance companies have invested approximately half of their assets in debt securities, although with significantly shorter maturities. Based on the balance sheets of the insurance companies on 30 June, a one per cent decrease in interest rates for all maturities would mean an increase in the value of the liabilities by around SEK 150 billion. The Swedish interest-bearing assets would only increase SEK 35 billion, so the net effect would be SEK –115 billion given a one per cent decrease in the discount rate.

As part of the ongoing Solvency 2 process, the EU is currently agreeing on the criteria for how to define the risk-free rate and the methods for calculating the liabilities of commitments that extend further into the future than the longest market rates. Sweden and Norway have together presented a proposal for a method aimed at decreasing large value changes in long-term commitments that are due to technical factors such as short-term yield curves or supply and demand. The sets a long-term neutral interest rate that is built from expected real interest rate and the expected inflation. This could break the harmful downward spiral that occurs when there is a run on safe treasury securities causing the rates on these to fall, which increases the liabilities of the life insurance companies and decreases their capital at the same time.

#### Longest government bond interest rate, per cent



Based on SGB 1041 until 2004-01-22, followed by SGB 1047 until 2009-03-23 and then SGB 1053.

Twelve months moving average (253 days).

Source: Reuters Ecowin

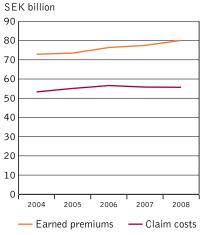
#### **GUARANTEE RATES**

At the end of the 1990s, the long-term market rates sank toward 5 per cent. In 2004 and 2005, the rates sank even further. After a brief upswing the next few years, the rates fell below 3 per cent due to the financial crisis in the autumn of 2008.

The transition during the 1990s to an economy with low inflation has created problems for life insurance companies, which guaranteed large future payments. Many life insurance companies promised insurance amounts that are based on meeting a pre-determined yield ("guarantee rate) that varies between 3–5 per cent depending on when the insurance agreement was signed. The average guaranteed yield for the Swedish insurance companies' assets as a whole are estimated to be just under four per cent at the end of 2008, but this number varies for each company and insurance. Today, guarantee rates in the insurance industry for new agreements are down to 2–2.5 per cent, but in some cases there is no guarantee of any yield at all, but rather only repayment of premiums.

Life insurance companies can have savers with different guarantee rates, which can create problems if the companies' actual yields do not reach the highest guarantee levels. If the yield is less than the guarantee rates during a set period, this means that the companies' ability to take risks for their savers decreases, which in turn means decreased flexibility in their management and a potentially lower long-term yield for the savers.

#### PREMIUMS AND CLAIM COSTS



Source: FI

Development for national companies and major regional companies, excluding Afa sjuk.

#### PRICE PRESSURE ON NON-LIFE INSURANCE

In recent years, a large number of actors entered the non-life insurance market in Sweden. Both foreign and domestic companies are trying to gain market shares, for example by offering low premiums. Earned premiums (recognised income) increased only around seven per cent between 2005 and 2008. After inflation adjustments, the non-life insurance companies experienced a real decrease in premiums. Price pressure is still present and, for the twelvemonth period starting June 2008 and ending June 2009, paid premiums for Swedish insurance increased by only just over one per cent compared to the corresponding period the previous year. The increase for the full year 2009 is expected to be just as small. However, as a whole, the companies will report significant profits this year, even though the profits will vary between companies. The positive outcome is due to the decrease in the frequency of heavy damages, e.g. bodily injuries related to road-traffic.

At the same time, there are signs that claim costs will increase in the future. Due to the downturn in the business cycle, the claim costs for unemployment and income insurance increased sharply in 2009, in some cases by more than 200 per cent. Insurances that were previously considered to be extremely profitable have also attracted new actors. The problem for the new companies is that they have not built up profits that they can use to counteract losses. But companies that previously specialised in this type of insurance have also been hard hit since they cannot use other insurance branches to distribute risk.

Another more long-term phenomenon is that climate-related damages are expected to increase for non-life insurance companies. The UN's climate scenario states that, in the near future, there may be more wind and rain and, most importantly, the weather conditions will be more varied than they are now. If the climate changes to such a degree that storms become more common, this will result in increased claim costs and the companies will raise their premiums as compensation.

## The securities markets

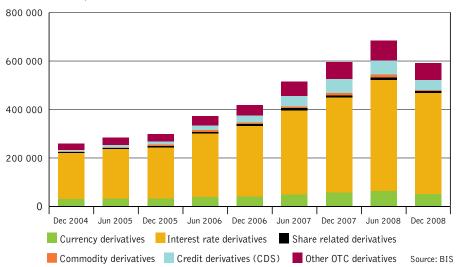
The securities markets include the stock market, the interest rate market and the derivatives market. The stock market has a large number of closed deals and many households participate directly as investors, while the interest and derivative markets' contracts in general refer to extremely large amounts between professional actors. Supervision of the stock market is therefore to a large extent about protecting consumers and investors.

The European equity markets are currently undergoing major changes as a result of the mergers between existing stock exchanges and the creation of new market places. There are two regulated markets (stock exchanges) on the Swedish equity market today, Nasdaq OMX Stockholm and Nordic Growth Market. In addition, there are four companies that operate multilateral trading facilities (MTFs) in Sweden. MTFs can be operated by an exchange or a securities institution and offer simpler trade alternatives than a regulated market. Equity trading in Sweden is demonstrating continued growth and the average number of closed deals last year exceeded 100,000 per trading day. However, turnover in SEK fell sharply in 2008 due to the fall in the stock market.

On the equity market, there is a certain degree of risk for decreased insight in the future due to the rising amount of trade that is taking place outside the regulated markets and MTFs. The introduction of central counterparty clearing in Sweden via Dutch EMCF (European Multilateral Clearing Facility) means that counterparty risks between participants disappear, but that EMCF as the central counterparty shoulders all counterparty risk. This makes supervision of EMCF very important. Another international trend is the increasing volume of algorithmic trade. Algorithms are programs that are used to identify temporary price errors. Since competition between algorithms is on the rise and the difference between the buy and sell prices is decreasing, increasingly larger volumes must be purchased at increasingly faster speeds to achieve a satisfactory profit. This leads to an increase in operational risks and potentially also stability risks.

1 The Swedish Financial Market 2009, The Riksbank.





The derivative market in Sweden was established relatively early compared to other countries. From once having a focus on relatively simple instruments such as standardised options and forwards, the development has moved toward increasingly complicated and customised OTC derivatives. Total sales on the derivative market total hundreds of billions every day and are dominated by currency derivatives.

Trade with OTC derivatives, especially credit derivatives, have undergone enormous international growth during the 2000s. The collapse of Lehman Brothers showed that large exposures in the financial instruments of a counterparty may hide risks that can threaten the entire financial system. And this can take place beyond the purview of the market and supervisory authorities. Even if Sweden was only minimally affected by the Lehman collapse, improved transparency of OTC derivatives and a higher degree of central clearing are prioritised issues.

#### MARKET ABUSE USING OTC DERIVATIVES

The absence of overview and insight makes it easier to use OTC derivatives to commit crimes. As securities trading becomes more global, cross-border trade in OTC derivatives has also risen, which increases the need for control across national borders. Market abuse is difficult to investigate since countries often do not have access outside of their own territory. A planned expansion to the reporting obligation next year will include OTC instruments.<sup>2</sup>

A report from the European securities supervisory committee, CESR, not only shows that the use of derivative instruments for market abuse has increased, but also that they can be used to circumvent the transparency directive's rules on transparency. One example of this is the strategy to take positions in OTC derivatives to gain indirect influence over a company without directly controlling voting rights as a shareholder. This holding does not need to be flagged according to the currently applicable regulations and thusly it is not subject to any transparency requirements. This strategy is usually called "creeping control".

#### COMPETITION BETWEEN MARKET PLACES AND OTC TRADE

The Directive on Markets in Financial Instruments (Mifid) in many ways has opened up the equity markets and changed the conditions on secondary markets in Europe. Since the directive entered into force, hundreds of MTFs have been started and the regulated markets' (stock exchanges') market shares have decreased. In addition to the directive contributing to more competition between market places, competition from OTC trade has also increased.

One type of OTC trade that continues to grow rapidly is the building of "crossing networks" or "dark pools" by financial companies. The major difference between these and traditional trading venues is that there is an intention to hide the order books. This means that neither price nor volume is visible to the actors on the market. One advantage of this is that larger volumes can be closed, either in full or in part, without affecting the price. This primarily applies to illiquid equity. Representatives for stock exchanges and trading facilities, on the other hand, say that "crossing networks" have an unreasonable competitive advantage since they do not face the same requirements on transparency or market supervision as the regulated markets.

#### INCREASED ALGORITHMIC TRADE

At the same time as the competition between previous stock exchange monopolies and the new trading facilities has intensified, speed has become an increasingly important competitive advantage. This development is rapidly accelerating the development of machine-based trade, algorithmic trade, which represents an increasingly larger share of total trading. Trade orders must be carried out quickly in order to beat the competition's machine, therefore making it important to avoid functions that would decrease the speed of the computer. As a result, a current trend is to dismantle safety measures in the trading systems of market places and trading participants. When the safety measures are removed, not only does the speed increase, but also the risk for incidents related to placing orders. On a number of occasions, members of various stock exchanges in Europe have been criticised for insufficient control when carrying out algorithmic trades.

As the share of algorithmic trade rises, systemic risks also increase. Algorithms are programmed to find arbitrage (price errors), change orders and strategies and discover and follow trends. Since the technological development is rapid, competition from other machines is increasing and the difference between buy and sell prices is decreasing, larger volumes are constantly needed to reach a satisfactory level of profits. Many program strategies are also similar to one another and result in herd behaviour. This herd behaviour combined with the increasing size of the volumes being traded can create larger fluctuations in the market and in some situations entail systemic risk.

#### **NEW CLEARING FUNCTION FOR SHARES**

Central counterparties (CCPS) have been a part of the clearing of derivative transactions for a long time, but are a relatively new addition to the clearing of shares. In Europe, there are several central counterparties for the clearing of derivatives, shares and debt securities. In Sweden, there is thus far only one central counterparty, Nasdaq OMX Derivatives Markets, for the derivative instruments traded on Nasdaq OMX.

In October 2009, the actors on the Swedish stock market switched from bilateral to central counterparty clearing for the trading of shares in the 80 largest companies on Nasdaq OMX's regulated market and Burgundy in Stockholm. The central counterparty is currently Dutch EMCF, but there is interest from several European central counterparties to also start clearing Swedish shares.

The implementation of central counterparty clearing in Sweden will redistribute risks. With a central counterparty, market participants exchange the counterparty risks they have with individual counterparties for counterparty risk in the central counterparty. EMCF currently is subject to voluntary supervision by the central bank and supervisory authority in the Netherlands. FI has signed a Memorandum of Understanding (MoU) with the Dutch authorities to establish conditions for ongoing supervision.

### Risks for Swedish consumers

a number of shareholders.

Finansinspektionen has received an assignment from the Government to promote consumer protection within the financial system. Many financial services require additional protection, for example products that are complex and have long maturities, such as life insurance products, and products that are absolutely necessary for most consumers, such as credit cards, mortgages and home insurance.

> limited. The steep downturn on the stock market has more or less been reversed. Hefty interest rate decreases have meant that the interest rate costs of households have been held down since the fall of 2008, despite the high credit and liquidity premiums on the market. Other measures by pub-Swedish consumers were directly affected by the Lehman Brothers failure via their holdings in bonds issued by the bankrupt company. How large these losses will be is still not determined. The losses in Carnegie, which

The direct losses of consumers as a result of the financial crisis have been

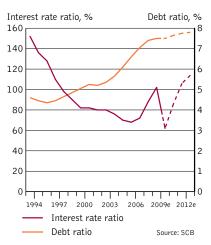
But now, the struggling economy and the rising unemployment that followed in the wake of the financial crisis are starting to have an impact on a larger group of households. In September 2009 the total debts of the general public with the Swedish Enforcement Service increased by almost 11 per cent compared to the corresponding month last year. Pawn shop lending has also accelerated, a trend that is usually associated with a recession, ployment is expected to rise in 2010 and reach its peak at 11.8 per cent in 2011. At the same time, interest rates have bottomed out and are expected to start rising in the fall of 2010.

One of the risks a number of Swedish households will be facing in coming years, especially in the larger cities, is taking on a mortgage that is too large due to the low interest rates. Rising unemployment and the risk for rapid interest rate increases in the future can create problems for many households. Problems related to micro loans, sometimes called SMS loans, continue to grow and the high fees for these loans can have a negative effect on an already marginalised group, including a damaged credit history and indebtedness. Other risks are associated with savings, insurance mediation and account fraud. FI's ongoing supervision of the mortgage market is also discussed in this chapter.

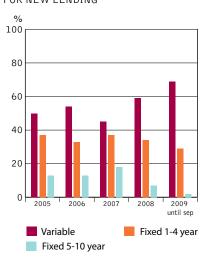
# lic authorities during the crisis, such as the expansion of the deposit guarantee, also mitigated the consequences for households. However, a number of led to it being taken over by the Swedish National Debt Office, also affected

and is expected to rise by 20 per cent during 2009 to SEK 1.6 billion. Unem-

#### INTEREST RATE RATIO AND DEBT RATIO



#### INTEREST RATE GUARANTEE PERIOD FOR NEW LENDING



Statistics include only new lending and not changes in terms and conditions. Source: SCB

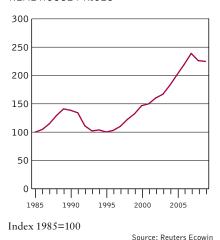
#### RISKS ON THE MORTGAGE MARKET

Approximately two-thirds of Sweden's population owns its own house or tenant-owner property.<sup>2</sup> The mortgage represents more than 90 per cent of the household's total lending. The annual lending rate for households is rising and was in September 8.2 per cent. The household debt ratio (debts in relation to disposable income) increased steadily from the middle of the 1990s until last year. During the second quarter of 2009, it totalled 149 per cent.

<sup>1</sup> Source: Soliditet, www.soliditet.se/pressrum

<sup>2</sup> Source: SCB. The data is from 2007 and is based on a random sample of individuals 18 years of age and older.

REAL HOUSE PRICES



However, even though the debt ratio is historically high, household interest rate costs are at a historic low thanks to the extremely low variable interest rates. Households are taking advantage of this situation by choosing a variable interest rate with increasing frequency. According to SCB's statistics, more than two-thirds of new mortgages are at variable rates. SCB reports that the average house price in Sweden is SEK 1.7 million. In a little more than a year, the interest rate expenses for the average house fell by SEK 3,500 per month. 4

During this period of low interest rates, household debts will probably continue to rise sharply in 2010 and thereafter at a lower rate when the interest rates start to rise. The graph (on the previous page) shows the households' debt ratio and interest rate ratio (interest rate costs after tax in relation to disposable income) and a potential development for these ratios based on current market expectations for the interest rate.

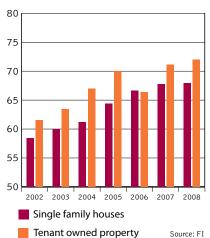
Housing prices dipped for a short period of time in 2008, but are now continuing to rise. This is particularly evident in larger cities. In Stockholm, Malmö and Gothenburg, prices of tenant-owner properties rose 5 per cent in the past twelve months.<sup>5</sup>

The largest risks are naturally shouldered by new lenders entering the housing market who have little or no capital to contribute. If unemployment and interest rates would rise sharply in the near future, this could result in a number of household having payment problems. It is likely that such a scenario would press housing prices downward.

The loan-to-value ratio of mortgages has risen continuously during the 2000s and last year it was estimated that 8 per cent of all tenant-owners had a loan-to-value ratio of greater than 90 per cent. If prices were to fall more than 10 per cent, these households would have loans that exceed the market value of their tenant-owner property.

For the majority of households, the mortgage does not represent a big problem, but rapidly increasing interest rate costs and a potential dip in property values could have large effects on household consumption and, consequently, the real economy as a whole.

# AVERAGE LOAN-TO-VALUE RATIO IN NEW LENDING (per cent)



#### HOW HIGH CAN THE INTEREST RATES RISE?

According to the Riksbank, the central bank repo rate will be 0.5 per cent at the beginning of 2011. However, the market believes that the increase will occur earlier. The graph on the next page, Interest rate expectations on mortgages, shows the market's expectations for mortgage rates in one and two years, respectively. We also show the market situation from one year

- 3 Total lending in September 2009 consisted of 45 per cent variable loans, 38 per cent loans with fixed terms of up to five years and 17 per cent with fixed terms of five years or longer.
- 4 Interest rate expenses after tax calculated using the average two-year fixed rate of the four large banks for the third quarters of 2008 and 2009.
- 5 Svensk fastighetsförmedling 09-10-13. The statistics are based on the sale of 14,103 tenant-owner properties in July-September 2009, represent a twelve-month moving average and are compared to the period July-September 2008.
- 6 FI rapport 2009:7, "Utvecklingen på bolånemarknaden 2008" (Mortgage Market Developments 2008).
- 7 Forward curve on 2009-11-04. The banks' average margin for each maturity is the difference between the banks' mortgage rate for that maturity and the three-month interbank rate, two-year and five-year interest rate swaps. In the neutral scenario, the key interest rate is 4.25 plus the difference between the key interest rate and the interbank rate (0.25)

ago when the Riksbank's central bank repo rate was 4.25 per cent. This is a large change compared to today's interest rates, but 4.25 is the interest rate that is in the middle of the Riksbank's long-term interest rate interval. If the central bank repo rate reaches this level, and the banks' margin on mortgages would be the same as it is today, the variable mortgage rate would be at around 5.5 per cent.

According to a survey by Fastighetsbyrån<sup>8</sup> that was presented on 8 October, 89 per cent of all households with mortgages believe that they can handle an interest rate of 5 per cent. For 53 per cent of the households, their limit is 7.5 per cent. That 11 per cent of mortgage holders do not believe they can handle a 5 per cent interest rate level is worrying since the short-term mortgage rate was above 5 per cent just a little more than one year ago. This is far higher than the levels FI identified in a previous survey.<sup>9</sup>

# SUPERVISORY ASSIGNMENT - THE BANKS' CREDIT ASSESSMENT OF MORTGAGES

Banks and mortgage institutions carry a large responsibility not to grant larger loans to households than what they can pay back. According to Finansinspektionen's "General guidelines concerning consumer credits", lenders shall conduct an assessment with the "aim to estimate the borrower's current and future ability to pay". O Given the weak labour market and the low interest rates, combined with high risk that the rates will rise, it becomes particularly important that the banks conduct a forward-looking analysis.

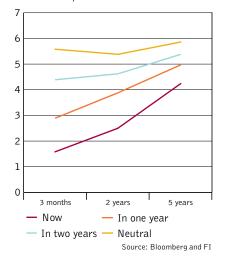
Most banks use a "left-to-live-on calculation" before granting a mortgage. This calculation should contain information about the customer's income, assets, debts and large, regular exposures. The banks use their own estimate of interest rates, amortisation requirements and standard costs in their calculations. They also use different guideline values for how much a family should have left to live on after living expenses and the mortgage are paid.

FI has therefore chosen to start a supervisory assignment that focuses on the mortgage market. The investigation will be completed in December 2009 and is directed at the major actors on the mortgage market. Some of the questions we will be asking include:

- What interest rate does the bank require the customer to be able to handle in its left-to-live-on calculation?
- How do you include in your calculation the risk that interest rates might rise rapidly?
- How does the bank check income information, and how is this information updated during the term of the loan?
- How large of a first mortgage does the bank accept and what is the bank's position on amortisation exemption?

FI will also take a random sample of newly granted mortgages from a num-

INTEREST RATE EXPECTATIONS ON MORTGAGES, %



plus the current average margin for each maturity.

 $<sup>8\,</sup>$  1,000 people with mortgages participated in the survey, which was conducted on 18-23 September 2009.

<sup>9</sup> When we asked last winter how much of a rise in interest rates Swedish mortgage holders would be able to handle, only one per cent of the households believed that they would not be able to meet their loan payments at all if the interest rate reached 6-7 per cent.

<sup>10</sup> See FFFS 2005:3 regarding Consumer Credit, 3.2.1

ber of banks and mortgage institutions to check how their practices are applied.

#### RISKS WITH MICRO LOANS

Some consumer groups have difficulty receiving loans from regular banks. Increasingly, they are referred to credit card agreements and expensive micro loans. This development has received more attention by the Swedish Enforcement Service, the Swedish Consumer Agency and FI. The Swedish Enforcement Service, for example, notes that 6,000 more cases of unpaid SMS loans were reported in the first half of 2009 than for the corresponding period in 2008, which is a 35 per cent increase. Youth are still overrepresented even if there has been a redistribution from the youngest age group to middle-aged borrowers.

When micro loans and similar forms of credit increase, the result is overindebtedness. Micro loans are not only characterised by quick delivery and high fees, but also simplified credit assessments or, in worst case scenario, no credit assessment at all.

The responsibility for ensuring that advertising and other marketing is not inappropriate falls to the Swedish Consumer Agency. The agency has sued several companies that offer micro loans in the Swedish Market Court for different types of prohibited price-setting methods and inappropriate marketing. The Swedish Data Inspection Board has also recently expanded its supervisory actions with regard to the IT safety and handling of customer information at lending companies.

Under current legislation, these lending operations are not required to carry a licence to operate. It is first when lending is combined with deposits that the license and supervision requirements enter the picture. However, credit issuers should be registered with FI. This registration means that FI knows which companies are active on the market, but we do not have a mandate to monitor their credit management.

#### **■ Exceptions in the Consumer Credit Act**

There are currently several exception provisions in the Consumer Credit Act for small amounts and short maturities that have a negative effect on the information about micro loans and consumer protection. If the loan is less than SEK 1,500 or if the term of the loan is less than three months, the company does not need to state the effective interest rate in marketing material. Furthermore, credit agreements do not need to be in writing for amounts under SEK 1,500 or that must be repaid within 45 days. After the rapid development of short-term loans via telephone and the Internet and an increased number of payment injunctions at the Swedish Reinforcement Service, the Swedish Consumer Agency asked the Government in 2007 to review the matter. In addition to stricter information requirements, the Swedish Consumer Agency suggested measures that include a requirement for some kind of credit assessment.

As mentioned, some types of companies with activities on the financial market are only required to register with FI, which means that supervision is limited and it is not possible to levy fines. FI has pointed out in several different contexts that this "middle ground" is inappropriate. It is difficult for a consumer to differentiate between the implications of a company being registered with FI and a company that has FI's permission to conduct operations. With regard to short-term micro loans, one alternative is that all credit providers offering loans to consumers be obligated to obtain a licence and be subject to supervision, with the exception of salespersons who apply customary invoice and payment conditions when selling goods and services.

Parts of the regulatory framework for short-term loans are currently being reviewed in conjunction with the ongoing modification of the Consumer Credit Act. The Swedish Consumer Agency, the Swedish Reinforcement Service and FI are concerned that the negative development of the increasing number of individuals with impaired credit history and growing indebtedness will continue if additional measures are not implemented. Stricter information requirements and requirements on a simple form of credit assessment have been presented along with increased supervision of the actual lending companies.

# ■ THE CONTRIBUTION PRINCIPLE

A basic principle of the insurance legislation is the contribution principle. It is primarily applicable to operations that are related to traditional insurance savings and states that, unless otherwise agreed, the surplus in the operations shall be distributed to the individual policyholders based on their contribution to the company's surplus. The law is very clear that the contribution principle shall be applied, but it is not as clear about how it should be applied. What is clear, however, is that each branch of operations shall be assessed individually and that the distribution between different groups and generations should be fair. The companies must also factor in the contribution principle when costs are distributed between policyholders and when transfer terms are formulated. There are multiples instances where there is a risk that certain policyholders benefit at the expense of others and exercising supervision over the contribution principle is difficult.

#### CONSUMER RISKS IN THE INSURANCE INDUSTRY

#### Saving in pension insurances

FI believes that the position of the consumer needs to be strengthened with regard to saving in traditional pension insurance. This area is prioritised due to the extremely large sums that consumers save, the long-term nature of the agreements, lock-in effects and difficulty in scrutinising yields, risks and fees. It is important for the saver to receive relevant information before their purchase so they cannot only understand the product but also make comparisons with other products.

#### Fair distribution

Because the contribution principle plays a key role in protecting the right of policyholders to surpluses, or bonuses, there is justification for placing more emphasis on it, both for companies and from a supervisory perspective. One issue that has recently arisen in this context is the decision companies have made to charge low fees for the parts of the occupational pensions that are negotiated via collective agreements, called supplementary pension insurance. The fees that the life insurance companies charge for supple-

mentary pension insurance are normally lower than the fees for other occupational pensions and private pensions. If this cannot be motivated by the contribution principle, these contracts are harmful for other pension savers.

#### Right of transfer

The issue of the right to transfer is closely associated with the distribution of surplus across generations. The right to transfer is important for strengthening the position of the customers and giving them the opportunity to decide how they want to manage their own saving. A dissatisfied customer should be able to switch insurance companys. An extended right to transfer should lead to increased transparency in the industry since customers who do not understand how their savings are being managed will be able to switch to a company that provides clearer information about its management and how the surplus is distributed among savers. The negotiating position of the customer is strengthened, regardless of whether or not the transfer right is utilised.

For traditional pension insurance, the right to transfer is relatively complicated. The company is responsible for handling guarantees and distributing surpluses/deficits in such a way that there are no conflicts of interest between generations of insurance savers or other groups of savers. It is important that the contribution principle is applied properly. The customer needs to conduct a detailed analysis and the companies need to provide advice about how such a move can affect future pension payments.

#### Risk for dishonest insurance intermediaries

Insurance intermediaries have been on the rise in recent years. One reason for this is increased interest from private consumers due to PPM savings. Another reason is that capital insurances have made it possible to invest in securities without capital gains tax. The market has been beneficial for insurance intermediaries. Rules governing insurance intermediaries are based on a directive and were entered into Swedish legislation in 2005.

In 2006, around 650 companies held a licence to conduct insurance mediation business. In 2009, this number had grown to 900. One of the reasons behind this large increase is that the licencing process is relatively simple for insurance intermediaries compared to securities companies and fund management companies. Insurance intermediaries are also not subject to any capital requirements. Instead, they are subject to a requirement on responsibility insurance.

In 2007, stricter regulations were implemented regarding advisory and responsibility for banks and securities companies (Securities Market Act). Corresponding advice can be given by insurance intermediaries about securities that are invested in different insurance solutions, but this advice is not regulated as clearly. This can mean that consumer protection for advice from insurance intermediaries is worse than if the same security is provided by someone who applies the Securities Market Act.

In recent years, FI has looked closer at the behaviour and compliance of insurance intermediaries via desktop surveys and onsite visits. The results from the surveys have shown that there are considerable deficiencies among many insurance intermediaries. This is a serious problem since the advice insurance intermediaries give consumers can sometimes refer to large amounts and other times often refer to capital that private individuals are saving for their future pension. There are examples of situations where careless advice by insurance intermediaries caused their clients considerable losses. However, it should be pointed out that there are also serious insur-

ance intermediaries, the behaviour and compliance of which are satisfactory. FI sees a need to clarify the problems related to giving advice, increase consumer protection and, via its supervision, create motivation and desire within the industry to achieve a self-reorganisation.

#### CONSUMER RISKS WITHIN FUND MANAGEMENT COMPANIES

There are no stability risks related to saving in investment funds. The consumer risks in this area, which falls under the responsibility of FI, are instead related to risks for deficiencies in compliance with the regulations. The regulations have given depositaries information for checking important risks that the saver would have difficulty monitoring, for example that the assets included in the fund are held separately and that the fund management companies are acting in the best interest of the unit holders. An important supervisory area therefore is to monitor that the depositaries provide the independence and monitoring function required by law.

Another important supervisory area is the risk management of fund management companies, particularly given the uncertainty on the market in the past year.

#### FINANCIAL CRIMES

#### Money laundering and terrorist financing

There are approximately 130 companies and persons registered with FI to conduct currency exchange and/or monetary transfer business. These financial institutions are only obligated to register with FI and are subject to a limited degree of supervision. The companies must comply with the money laundering regulations and FI carries out annual controls of owners and the management.

FI's reviews of financial institutions indicate that there are wide differences in the level of compliance with the money laundering regulations. There is a risk that some of these companies are being used to bring illicit funds into a legal system and then move them around and/or mix them with clean funds. In order for the regulations to prevent money laundering and financing of terrorism, it is important that all of the companies in the financial market follow the rules so the problems are not transferred between companies.

#### Investment fraud

Investment fraud has devastating consequences for the people and companies that are deceived. FI has currently listed 1,700 companies on a warning list published on its website, fi.se, and approximately 150 of them are active right now. These companies often have global organisations with links to many countries. Crime can potentially undermine confidence in financial companies, financial products and trading venues.

#### Dishonest actors in foreign exchange trading

In recent years, FI has received more questions from the general public and an increased number of warnings from other supervisory authorities about foreign exchange trade investments. For this reason, we have recently warned investors about dishonest operations (published on FI's website). Several of the companies that offer trading or management services conduct operations that may require a licence for operation, although they do not have a license. Consumers run the risk of both large losses and becoming fraud victims.

#### Account fraud

The number of cases of account fraud is rising, albeit from a very low level. According to a survey by FI of approximately 3,000 private individuals, only about one per cent of the population, encountered account fraud in 2008. The amount that was taken varied from a few thousand Swedish krona to tens of thousands of krona. On average, the fraudster received more than SEK 4,000. The majority of the affected individuals, 84 per cent, that applied for compensation received it, either in full or in part. In general, they were satisfied with the bank's or the credit card company's response.

The survey also shows that the fear of being the object of account fraud is unjustifiably large and keeps a number of consumers from using their credit cards or the Internet to purchase goods. Expectations about compensation are also significantly lower than what happens in practice.

# Appendix: Regulation Environment

Due to the economic crisis, a large project was started to reform the regulations within the EU. Many aspects of this project are being handled by the Swedish presidency. Below is a general description of several of the most important rule changes that are being discussed and several of the other major changes that are not a direct result of the crisis.

The EU Commission is expected to present in 2010 a proposal for the regulation of the derivative market and a revision of the regulations for packaged investment products<sup>1</sup>. In addition, the EU Commission has initiated a project on the regulation of crisis management in the banking sector<sup>2</sup>. In Sweden, a proposal for a new Insurance Business Act is expected at the end of 2009 and the law is expected to enter into force on 1 January 2011. The development of these regulations will be followed up in Finansinspektionen's report, *Risks in the Financial System 2010*.

#### PROPOSAL FOR NEW SUPERVISION STRUCTURE IN THE EU

In September 2009, the EU Commission presented a proposal for how supervision in the EU financial markets should be improved.

One lesson that was identified as a result of the financial crisis, and that was highlighted in the de Larosière report in which the general outline of the new structure was drawn up, is that the link between the supervision of individual companies and the macroeconomic situation has not been strong enough. The Commission therefore proposes the formulation of a special council, European Systemic Risk Board (ESRB). The board would have as its mandate to issue risk warnings and recommendations that may be directed to the EU as a whole or one or several Member States or national authorities. The board should be independent but will be financed and administered by the European Central Bank (ECB). According to the proposal, Finansinspektionen will participate in ESRB as an observer and the Riksbank will act as a member.

The second important lesson learned from the financial crisis, which the de Larosière report also touched on, was the lack of cooperation and coordination between the national supervisory authorities. Opportunities to improve this situation will be created by expanding the assignments of the current EU Committees, CEBS, CEIOPS and CESR, and making them EU authorities. An exact description of the assignments and authorisations of these authorities will not be finalised until the negotiations with the European Council have been concluded, but the EU Commission proposes that the authorities will:

- issue binding technical standards that are decided on by the EU- Commission
- ensure that there is unified compliance with EU law
- hold special authorisations in crisis situations
- serve as a mediator between supervisory authorities if they can not agree on supervision.

<sup>1</sup> See the EU Commission's "Ensuring efficient, safe and sound derivatives markets: Future policy actions" [COM(2009)563 final] and "Packaged retail investment products" [COM (2009)204 final].

<sup>2</sup> See the EU Commission's "An EU framework for cross-border crisis management in the banking sector" [COM(2009)561/4].

According to the proposal of the EU Commission, as a final resort, the authorities should be able to intervene and make binding decisions about individual companies in crisis situations, when EU regulations are applied improperly or when attempts at mediation have failed, although only if there is directly applicable EU legislation. The proposal leaves the daily supervision of financial companies under the national supervisory authorities, with the exception of "pan-European" credit assessment institutions, for which supervision will be centralised (see below).

ESRB and the new authorities will be given wide authorisation to request information for completing their assignments. An important point of the proposal is that ESRB and the new EU authorities should work together in order to compile a complete picture of the economic and financial situation in order to counteract and prevent new financial crises.

The deliberations surrounding the proposal were started in September. The ESRB proposals were discussed at the Ecofin Council meeting on 20 October 2009. Ecofin established that there was wide consensus and political support for the content of both the proposal for the proposed regulation and the proposal for the decision on ECB's role. The Swedish presidency was also given the mandate to start deliberations with the European Parliament. This was confirmed by the EU summit on 29–30 October.

Deliberations related to the part of the supervision that applies to specific companies will continue during November and the goal is for Ecofin to be able to decide on a general direction at its meeting in December. The EU Parliament will then discuss the issue and the new structure will be implemented in late 2010.

#### Compensation system

In April 2009, the EU Commission issued a recommendation for a compensation policy within the financial services sector. The purpose of the recommendation is that financial companies should introduce, apply and maintain a compensation policy that is in line with and promotes sound and effective risk management and does not encourage excessive risk-taking. Finansinspektionen received an assignment from the Government to implement the recommendation before the end of the year. FI's proposal for regulations and general guidelines were sent out for review on 22 October 2009. FI has also taken into consideration the guidelines issued by the Financial Stability Board (FSB) on behalf of G20.

The EU recommendation is the first step in a series of measures from the EU Commission regarding the compensation systems of the financial sector. For credit institutions and securities companies, the EU Commission has submitted a proposal for an addition to the Capital Adequacy Directive (2006/48/EG) stating in part that the supervisory organs should be able to raise the capital requirement in the event of a high risk compensation system. It also proposes the possibility for supervisory authorities to decide on economic or other types of sanctions directly related to the existence of a compensation system that is too risky.

#### **BANK**

#### Changes to the Capital Adequacy Directive

The Capital Adequacy Directive was modified in 2009.<sup>3</sup> The modifications affect own funds, large exposures, supervision procedures, crisis management and some technical provisions regarding risk management. The Member States must apply the new directive starting 31 December 2010.

#### Own funds

The new directive gives the EU unified regulations for hybrid capital. It regulates the criteria that must be met to include hybrid capital in Tier I capital (the part of own funds that contains the highest quality of capital) and the limits that should be applied for how much hybrid capital in total may be included in this part of the capital.

#### Large exposures

The regulations on large exposures were simplified from three limits to one. An exposure to a client or a group of connected clients may not exceed 25 per cent of own funds. The definition of a group of connected clients was changed so that it is also important to take into consideration risks that arise via a common source of financing.

The allowable exception for exposures to credit institutions or securities companies was removed. Such exposures can be as serious as a loss due to another exposure. They should be reported and treated in the same manner as other exposures. Some extremely short-term exposures related to monetary transfers, clearing, settlement, etc., are excepted. Interbank exposures may not exceed 25 per cent of the own funds or, alternatively, a threshold of a maximum of EUR 150 million, depending on which amount is the highest. The threshold amount may not exceed the own funds. The Member States may decide to lower the threshold value.

#### Securitisation

The directive contains stricter requirements on both the companies that securitise, i.e. "repackage" loans to transferable securities and other financial instruments, and the companies that invest in these securities or instruments. Investors are required to conduct due diligence, i.e. examine the securitisations. Before they may invest, credit institutions should be able to show that they have a complete and thorough understanding of their investments in securitisations. Credit institutions should regularly conduct their own stress tests that are suitable for their securitisation positions and monitor on an ongoing basis the development of the exposures underlying their positions. In cases where the underlying exposures themselves consist of securitisations, the credit institution should also have information about the characteristics and profit trends for the groups of assets that are behind these securitisations. If there are any material deviations from the requirements, an extra risk weight should be added to increase the capital requirements.

#### The Basel Committee's initiative

The Basel Committee is a global organisation for banking supervision that produces standards, guidelines and recommendations. It developed the Basel 2 regulations that serve as a basis for the EU capital adequacy regulations. Finansinspektionen and the Riksbank participate in the Basel Committee and a number of working groups within the Basel Committee.

<sup>3</sup> Work with additional changes to the capital adequacy rules continues with regard to trading books, securitisations, compensation, etc. Efforts to modify the capital adequacy rules follow the changes in the global regulations, Basel 2.

Even though the excessive credit expansion and risk accumulation that characterised the financial crisis occurred before the new regulations had begun to be used, a comprehensive project is still underway to review how the regulations can be improved.

The Basel Committee's work is now focused on presenting proposals for how the regulations can be supplemented and developed.

Concrete proposals will be submitted at the end of 2009. During 2010, a comprehensive consequence analysis will be carried out to test the final calibration of the measures. The EU is continuously working in parallel to adapt its own regulations, the Capital Adequacy Directive.

Some of the proposals the Basel Committee is working on include:

- higher quality to the own funds that the banks must have; more equity and stricter requirements on the hybrids that may be included
- a risk-sensitive measurement of the leverage ratio, which will supplement the current risk-sensitive capital requirement in Basel 2
- a capital buffer that is built up during good economic times when the capital requirements decrease and that can be drawn upon when the capital requirements increase during uncertain economic times
- stricter rules for liquidity, with a minimum standard for the reserves the institution must have in highly liquid securities
- rules for the secure handling of problem banks with cross-border operations rescue or orderly dismantling

#### **INSURANCE**

#### Solvency 2

A project has been underway since 2002 within the EU to create a common solvency system for insurance companies. The directive was adopted in April 2009.<sup>4</sup> The regulations must be entered into Swedish law no later than 31 October 2012. Until this time, additional implementation provisions from the EU Commission and guidelines from the supervisory authorities will be formulated to complete the regulation. Finansinspektionen is an active participant in this project.

Solvency 2 are rules that partly govern how the company should value assets and liabilities and partly how large the buffer capital of the company must be to meet its commitments with reasonable assurance. The current solvency system, Solvency 1, does not discuss the valuation of assets and liabilities. This means that the underlying methodology for calculating the solvency requirements can vary between countries. Solvency 2 gives more consideration to risk than the current regulations.

The capital requirements in Solvency 2 include the following risks:

- Operational risk
- Financial risk, including:
  - equity risk
  - interest rate risk
  - real estate risk

<sup>4</sup> Directive of the European Parliament and the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency 2). It does not have an official designation since the directive has not been published in EUT yet.

- foreign exchange risk
- Insurance risk, including:
  - life insurance risk
- non-life insurance risk
- health insurance risk
- catastrophe risk

#### ■ Counterparty risk

A capital requirement is determined for every risk or subrisk that corresponds to the loss the company could suffer within one year, except for events that are judged to possibly affect the company once every two hundred years, i.e. with a probability of at the most 0.5 per cent. The capital requirements from the different risks are then added together for a total capital requirement in which consideration is given to potential dependencies between the risks. Solvency 2 defines two capital requirements in this way: solvency capital requirement (SCR) and the minimum capital requirement (MCR). If the company cannot meet the MCR, the supervisory authority may recall the license to conduct insurance business. SCR is also a requirement, but the company can be given a 6-month respite to improve its position so it meets the requirement.

According to the insurance companies, the capital requirement is expected to be significantly higher with the current proposal. But the higher capital requirement will be placed in relation to a revalued balance sheet in which the own funds in many cases will increase. Solvency 2 will place high demands on reporting from the companies. A final calibration of the solvency regulations will be carried out in 2010.

As part of the ongoing Solvency 2 process, the EU is currently agreeing on the criteria for how to define the risk-free rate and the methods for calculating the liabilities of commitments that extend further into the future than the longest market rates. Sweden and Norway have together presented a proposal for a method aimed at decreasing large value changes in long-term commitments that are due to technical factors such as short-term yield curves or supply and demand. The proposal is based on determining a long-term interest-smoothing rate that instead is based on expected real yields and the country's inflation target. This could break the harmful downward spiral that occurs when there is a run on safe treasury securities causing the rates on these to fall, which increases the debt of the life insurance companies and decreases their capital at the same time.

#### THE SECURITIES MARKET

#### Alternative investment funds

Alternative investment funds include a number of different types of funds, for example hedge funds, private equity funds and real estate funds. There has previously not been any EU regulation of the management of these funds. In April 2009, the EU Commission submitted a directive proposal. The purpose of the regulation would be to strengthen the opportunities of the supervisory authorities to carry out supervision in order to assess system risks, improve the funds' systems for handling risks in individual companies and strengthen the protection of the investor. The EU Commission's proposal has been heavily criticised and Finansinspektionen agrees with the criticisms<sup>5</sup>. FI's primary objection is that the proposal is not proportionate

<sup>5</sup> See FI's comments to the AIFM directive, PM 2009-07-31, fi.se/skrivelser

to its purpose – safeguarding stability and investors. From a Swedish perspective, the proposal would also mean that the opportunities for Swedish investors to invest in funds outside the EU would be limited. The proposal is being deliberated during the Swedish presidency.

#### New fund directive, UCITS IV

A new fund directive, UCITS IV<sup>6</sup>, was adopted in the spring of 2009. It is intended to give fund management companies better business opportunities while still maintaining strong consumer protection. The directive replaces the older fund directive from 1985.

The changes will mean that:

- funds will be allowed to merge, even across borders
- master-feeder structures will be allowed, i.e. that one or more funds invest basically the entire value of the fund in another fund
- fund management companies will be allowed to manage funds in other Member States (fund management company passport)
- information for investors will become clearer
- cooperation between supervisory authorities in different Member States will be strengthened.

The directive must be implemented no later than 1 July 2011. The Government adopted the investigation directive regarding investment funds on 22 October 2009.

#### Credit assessment companies

Credit assessment companies are important in a number of aspects. One aspect is that their credit assessments are integrated into the regulation of the capital adequacy rules since they are used to decide risk weights for positions in securitisations and for credit risks.

The control of credit assessment companies has to date been limited to an approval of the credit assessment methodology. The new rules on the supervision of credit assessment companies were implemented via regulation April 2009. This means that the rules will have a direct effect and will enter into force 20 days after the publication of the act in the European Union's official newspaper (EUT), which is expected to occur in November 2009. The purpose of the regulation is to maintain a high quality to the credit assessments and the credit assessment methodologies and to ensure that the methodologies are clear. Another important aspect is how the credit assessment companies should handle conflicts of interest that are built into their operations, i.e. on the one hand conducting independent credit assessments and on the other hand conducting a business.

Registration and supervision will be carried out by a cooperation between national supervision authorities via colleges of supervisors and CESR will have a coordinating role for all applications for registration and supervision. In conjunction with the conversion of CESR to an EU authority, it will take over responsible for registration and supervision. Finansinspektionen will be a part of the college of supervisors for the credit assessment company, Standards & Poors.

<sup>6</sup> Directive 2009/65/EG of the European Parliament and of the Council on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS).

# Glossary

**Central counterparty** The institution that enters as the seller for all buyers and the buyer for all sellers for the financial instruments being traded.

**Clearing** Settlement, off-setting of mutual claims. Clearing occurs when instructions are compiled regarding the transfer to the receiver's account.

**Technical provisions** Technical provisions for insurance agreements should correspond to the needs of the company to meet all of the commitments that can reasonably be expected to arise. For life insurance, they are calculated as the difference between future expenses and the additional premiums the company could have received. The value of these expenses and premiums is calculated as the expected discount value. The company makes assumptions about, for example, the discount rate, operating costs and the lifespan of the insured. Calculations and assumptions are overseen by the company's actuary.

**MTF** Multilateral Trading Facility. Can be operated by an exchange or a securities institution. Offers simpler trade alternatives than a regulated market.

**Own funds** Own funds are the sum of equity, untaxed reserves and some subordinated loans less intangible assets and dividends.

**Capital requirement** According to the rules governing capital adequacy, the capital requirement is linked to the bank's current and future risk profile, a self-conducted measurement of risk and an assessment of risk capital needs.

**Capital adequacy ratio** Relationship between own funds and the capital requirement.

**OTC (Over the Counter)** Trade that occurs directly between a buyer and seller, but outside a market place.

**OTC derivative** OTC derivatives are derivatives that are traded between two parties without using a market place.

**Tier I capital** A simplified definition of Tier I capital is the restricted capital deposited in the bank. No other party may draw on this capital and it must be available to handle losses that arise. Tier I capital consists primarily of equity, share capital (the capital shareholders have contributed to the company), and profits in the company.

**Tier 1 capital ratio.** By combining the value of all of the assets (investments) of a bank and risk-weighing these assets using certain weights, it is possible to produce a single value for the risk-weighted assets in the bank.

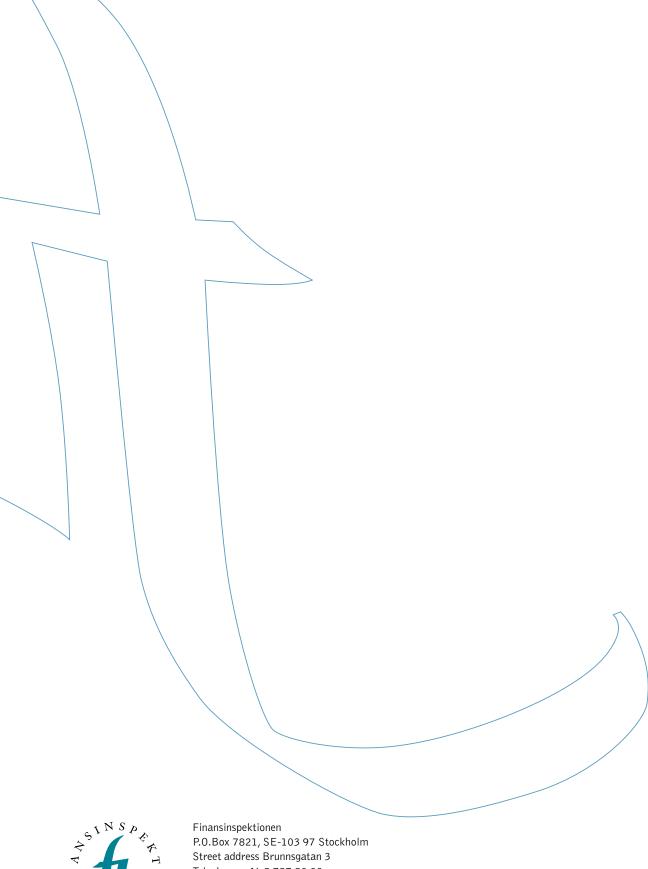
The share of Tier I capital of this total is called the Tier I capital ratio. For example, investments in treasury securities in the home currency are normally considered to be completely secure and, therefore, have a weight of 0, while, perhaps, a mortgage loan that is secured by residential property is given a weight of 50.

**Liability coverage** An insurance company must have assets that as a minimum cover its technical provisions. The company should invest and value the assets in such a way as to fulfil the provisions set out in the Insurance Business Act. The company shall prepare and follow guidelines for how the company's assets may be invested, both in general and with regard to coverage of liabilities in particular.

**Solvency** The ability to meet liabilities or undertaken commitments. One way to strengthen a company's solvency is to create sufficiently large equity reserves to cover potential future losses.

**Solvency margin** The solvency margin is the lowest acceptable level (solvency requirement) for own funds. Its calculation is based on the company's nature and scope.

**Traffic-light** The traffic-light model is part of Finansinspektionen's supervisory methodology for Swedish insurance companies. The model measures the exposure of the companies to different risks.





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