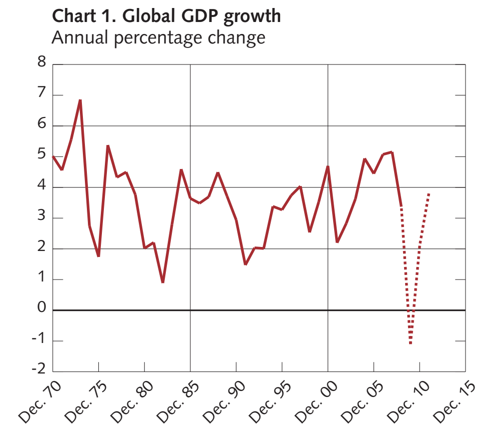
Global recession and financial stability

Introduction

As the financial crisis has gained ground in global financial markets, the economic situation has deteriorated very quickly and the world economy is now in recession. This means that what started as a crisis of liquidity, has increasingly become a solvency crisis concerning the survival of banks. The purpose of this article is to discuss, on the basis of a number of earlier crises, how the financial and economic crisis the world economy is currently undergoing may continue to develop, and what effects this may have on the bank's problem loans and on the financial system as a whole.

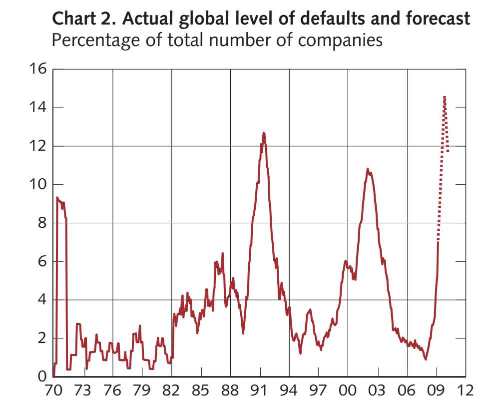
The article starts with an overview of the current macroeconomic situation. A number of crises occurring since the beginning of the 1990s are then examined, followed by what lessons can be learnt from them with regard to the current crisis. In conclusion there is a section on what government agencies worldwide are doing to protect financial stability and prevent a deepening of the economic crisis.

Chart 1. Global GDP growth
Annual percentage change



Sources: IMF and the Riksbank

Chart 2. Actual global level of defaults and forecast
Percentage of total number of companies



Note. The chart refers to companies classified as Ba/BB or lower by Moody's/Standard & Poor's, as the majority of total defaults take place among companies with this classification.

Sources: Reuters EcoWin and Moody's

Global recession and impaired credit quality

In 2008 it became increasingly clear that the world economy was starting to weaken. But it was not until the autumn, when the financial crisis gained a serious foothold in global financial markets, that the economy showed a clear decline. Uncertainty as to the creditworthiness of borrowers increased fast and the supply of credit decreased. A consequence of this is that the global economy is now in recession. In 2009 world GDP is expected to fall by 1.1 per cent.[120] A fall of such proportions is unique in modern times (see Chart 1). As the economic downturn deepens, companies' earnings and profitability are deteriorating and unemployment is rising fast. This can be seen not least in the rising percentage of bankruptcies; a development that is expected to continue (see Chart 2). For banks, this means deterioration in credit quality.

At the same time there is still uncertainty as to future developments. Even though the most acute crisis has abated and there are some rays of light, parts of the financial markets are still malfunctioning, which reduces the chances of a rapid economic recovery. Developments are also dependent on the extent to which the expansive economic policy being pursued in many countries, succeeds in stimulating the economy.

If the recession deepens even more and credit quality continues to deteriorate there is a great risk of further credit restraint. In such a situation it is possible that even creditworthy companies and households will be refused credit (a credit crunch). This means that

120 See Sveriges Riksbank (2009), "Monetary Policy Update" April.

the credit supply will decrease even more and the economic downturn will be steeper. The negative interaction between the financial markets and the real economy then risks being intensified. Poorer credit quality also means that investors are more careful in a situation when the banks need to strengthen their capital base to meet higher loan losses. To the extent the banks can obtain funding in the market, it is at a higher cost.

Previous financial crises

Consequently, the economic situation is highly uncertain and the recession may be both deeper and longer than is currently expected. It is inevitable that banks' loan losses will increase, but the size of the increase and its impact on the financial system as a whole is difficult to predict. Financial crises are by no means unusual – since 1980 there have been over 100 in various parts of the world. These crises have all, to varying degrees, had an impact on the real economy and banks' loan losses. Even if there is much in today's crisis that is different, previous crises can give an indication of what we can expect from this one. We have therefore chosen seven crises occurring in the past twenty years to examine in more detail.

THE BANK CRISIS OF 1991-1993 IN SWEDEN [121]

The Swedish bank crisis in the early 1990s presents itself immediately.[122] The underlying reasons for the crisis have been well described: it was a matter of highly necessary but not fully prepared deregulation of the credit market and currency flows to and from Sweden. Pent-up borrowing requirements after many years of regulation led to a very fast increase in credit. The credit expansion was heightened by favourable tax rules that gave negative real interest rates after tax to borrowers. The rapid rise in lending set in motion a strong and sustained upswing in property prices – in both the commercial and private housing markets. New construction also increased fast. At the same time there were great weaknesses in the regulatory supervision of the financial sector and the banks' own risk management.

A number of events took place in the early 1990s that triggered the crisis:

- There was a downturn in the global economy. This resulted in a substantial fall in Swedish exports. In addition, cost pressure had been high for several years, which had reduced the competitiveness of Swedish exports. As a consequence, a number of companies, some of which were relatively large, had payment problems. At the same time the property value bubble

121 See Sveriges riksbank (2008), "From local to global –today's crisis in the light of yesterday's", Financial Stability Report 2008:2.

122 At that time Sweden suffered a triple crisis: a bank crisis, a currency crisis and a budget crisis. Here only the bank crisis is discussed.

burst. The greatest fall in prices was in commercial properties in expensive inner city locations. This resulted in payment problems for companies in the property sector.

- In 1990-1991 finance companies were hit by a crisis of confidence that made it considerably more difficult for them to obtain funding in the market. A number of finance companies failed, while others received support from affiliated banks and other owners.
- In 1992 the confidence of foreign lenders in Swedish banks fell substantially reducing lending to them. As a result of the decline in market funding, Swedish banks suffered liquidity problems. However, there were no major runs on banks. Later in the year attacks on the Swedish krona intensified, which in November led to the decision to allow the krona to float. In effect this meant a substantial devaluation. However, many Swedish borrowers had borrowed in foreign currency despite having earnings in Swedish kronor. Hence, the considerable weakening of the currency entailed further payment difficulties and bankruptcies.
- There was a simultaneous change in economic policy towards lower inflation and reduced tax allowances on interest. Consequently, real interest rates after tax became positive.

Bank loan losses rose steeply during the crisis. A rough calculation shows that about two thirds of the loan losses originated in the property sector. Apart from loans to property companies, this figure includes loans to construction projects and loans with property as collateral. A large proportion of the remaining losses came from export and import related companies. An interesting observation is that while loans to private individuals constituted 60 per cent of the banks' loan portfolios, they accounted for less than ten per cent of the loan losses. Thus, lending to companies and other borrowers, representing 40 per cent of the portfolio, accounted for over 90 per cent of the losses. At most in an individual year (1992) loan losses were seven per cent of the loan stock. Problem loans in the same year amounted to 13 per cent.

Altogether during the bank crisis of 1991-1994 the banks' loan losses were at least SEK 175 billion, which is about 13 per cent of average lending in those years. This should be put in relation to the banks' total capital, which in 1992 was SEK 64 billion. Consequently, the banks needed considerable infusions of capital and these were given in various forms. For example, SE-Banken and Föreningsbanken issued new shares, while the government contributed share capital to Nordbanken and capitalised the surviving part of Gotabanken. The government also used considerable amounts to fund Securum and Retriva, the two investment companies tasked with managing, improving and selling bad assets from Nordbanken and Gotabanken.

The government also granted loans to the savings bank foundations to allow them to finance the merger of the failing Första Sparbanken with Sparbankernas Bank. Moreover, the government issued guarantees for possible future capital support to Föreningsbanken.

Apart from individual measures for certain banks the Riksdag also decided on an overall guarantee ensuring that no-one could lose on their exposures to Swedish banks (and some credit market companies) except their owners. The financial outlays for government measures under the support programme are estimated at SEK 65 billion, which is just over four per cent of GDP in 1992. This entire amount was recovered through sales of assets and sales of government shareholdings in the banks taken over, dividends and holdings of remaining shares in Nordea. [123]

The bank crisis in Sweden lasted from 1991 to 1993. In these years the country's GDP fell by over six per cent. [124] In 1994 GDP growth was again positive, as were banks' earnings in relation to their loan losses. In these respects the crisis can therefore be said to have lasted for three years, but it took a long time before the economy returned to its previous growth path and before the central government budget was in balance.

THE BANK CRISIS IN FINLAND 1991-1993

While the Swedish crisis was in progress Finland experienced an even deeper crisis. The factors behind the Finnish crisis were mainly the same as in Sweden – deregulation of the financial sector that contributed to rapidly rising household and corporate indebtedness. Sharply rising property and share prices were also an element. Additionally, just like Sweden, Finland had a fixed exchange rate that was subjected to speculative attacks in autumn 1992 and that finally had to be allowed to float. When the first warning signs were seen in banks' balance sheets in 1990-1991 Finland, just like Sweden, had no specific framework for dealing with bank crises. This meant that the Finnish central bank had to take responsibility for measures in the first phase of the crisis. For example, the central bank took over Sparbankernas Central-Aktie-Bank (SCAB) in autumn 1991. In connection with the takeover the savings banks suffered a confidence crisis, resulting in mergers between several banks and the establishment of a large nationwide bank, Sparbanken i Finland. But the economic situation deteriorated further and it became increasingly clear that the crisis threatened the entire financial system in Finland. To tackle the problems the Government Guarantee Fund was established under the provisions of an Act that came into force in spring 1992. The tasks of the Government Guarantee Fund included

123 The sales values are not discounted, but on the other hand there are a number of positive effects that are not included.

124 Refers to the change in GDP between the first quarter of 1991 and the first quarter of 1993.

giving injections of capital to the bank sector. The gross cost to the government (without recoveries) for recapitalising the banks was over eight per cent of GDP. The support went almost exclusively to the savings banks. The government also established a state-owned investment company, Arsenal AB, tasked with managing the problem assets of these banks. The company managed repossessed collateral mainly in the form of real property, credits, shares and participations in property and housing companies.

In the course of the crisis the government had to take over several banks. These banks together accounted for over 30 per cent of deposits in the bank system. The gross cost to the state for the Finnish bank crisis was estimated to be over twelve per cent of GDP.

Even if the run up to the crisis itself and a major part of the solutions for dealing with the crisis resemble the Swedish bank crisis, the crisis in Finland was deeper than in Sweden. This was largely due to a fall in external demand when the Soviet Union was dissolved. At that time Finnish exports to the Soviet Union more or less came to a standstill when the bilateral trade agreements between the countries ceased to apply. Unlike Finland, Sweden was helped out of the recession thanks to strong exports. Another reason for the deeper crisis in Finland was that the upswing in property and share prices before its outbreak had been sharper there than in the other Nordic countries.

THE 1997 ASIAN CRISIS

Some years after the Nordic bank crises, several countries in South East Asia were affected by a financial crisis. This crisis was also preceded by several years of high economic activity and steeply rising prices for property and other assets. These factors played a role in the run up to the crisis but the main reason was weaknesses in the financial system. As a consequence of rapid deregulation of the capital markets and fixed exchange rate systems, great imbalances built up. Financial institutions and companies obtained funding largely through foreign capital without any insurance against currency risk. Large inflows of capital also meant that substantial current account deficits built up in several Asian countries. Moreover, the banks' lending was at long maturities financed by loans at short maturities in foreign currency, which meant that the banks were exposed to liquidity risk if capital flows turned.

When the economy in due course turned, first in Thailand, several financial institutions with large exposures to the property sector fell. This was the starting signal for a series of speculative attacks on the Thai currency, the baht, which was ultimately left to float. Pressure thereafter increased on other countries with similar imbalances in their financial systems, such as the Philippines,

Indonesia, Malaysia and South Korea, starting a vicious circle. Devalued currencies and continued outflows of capital made more financial institutions insolvent. Domestic asset prices collapsed and several institutions fell, further intensifying the drain of capital.

Despite extensive support from the International Monetary Fund (IMF) it was not possible to prevent the spread of uncertainty in the financial markets in the first stage of the crisis. This meant that the consequences for the real economy were great, with GDP decreasing considerable in 1998. GDP in Thailand, for example, fell by over ten per cent in the worst year of the crisis (1998) but started to recover relatively quickly, and in 1999 GDP growth was over four per cent. In both Malaysia and South Korea GDP fell by about seven per cent in the worst year of the crisis. In Indonesia GDP fell by 13 per cent during the corresponding year. However, recovery came fast and already in the following year growth was positive again. It took longer for the financial sector to recover though, partly due to the fact that the share of problem loans was over 30 per cent in several of the countries affected.

From the start of the crisis until mid-2002 the Thai central bank was forced to close 59 out of 91 finance companies. These accounted for 13 per cent of total assets in the financial system and over 70 per cent of the assets in all finance companies. Eleven banks were closed while four were nationalised. The state's costs for recapitalisation amounted to over 18 per cent of GDP. In Indonesia 70 out of about 240 banks were forced to close while 13 were nationalised. The cost of recapitalisation amounted to over 37 per cent of GDP. The total cost to the state of the financial crisis was, however, far higher and amounted to almost 60 per cent of GDP. This is the highest cost recorded for a financial crisis.

ARGENTINA 2001 – 2002

The crisis in Argentina was not preceded by a period of economic expansion. On the contrary, several Latin American countries suffered a protracted business recession in the 1990s with negative credit growth. Despite the fact that the banks were relatively healthy at that stage there was uncertainty as to their financial position. The downturn had entailed a sharp increase in the percentage of problem loans. At the same time the banks had increased their exposure to the public sector through purchases of government bonds.

This meant that the banks were dependent on the government making its payments. A further weakness was that a large part of bank lending to the private sector was in dollars, while borrowers' earnings were in pesos. This meant that the financial system was particularly vulnerable to exchange rate fluctuations. Already in the early 1990s Argentina had tied its currency, the peso, to the dollar through a currency board.

Weak central government finances and political uncertainty brought a gradual drop in the confidence of international investors - it was thought that Argentina would not be able to pay its foreign debt. Credit spreads between Argentinean and American bonds grew from 500 to 3 000 basis points between January 2000 and December 2002 and credit rating institutions gradually reduced Argentina's credit rating from B to the lowest level. The general lack of confidence resulted in massive runs on the banks. In 2001 the bank system lost 20 per cent of its total deposits. The government authorities responded by limiting withdrawals and transfers of deposits in domestic currency and freezing withdrawals of dollar deposits. Apart from the economic chaos, political uncertainty increased and several changes in government ensued. At the beginning of 2002 the country was forced to suspend its payments. In an attempt to rebuild the financial system there was compulsory conversion of assets and liabilities in dollars to pesos at different exchange rates. This meant that the banks' lending in dollars to the private sector was converted at one peso to the dollar, while lending in dollars to the public sector and dollar deposits were exchanged at 1.4 pesos to the dollar. The idea behind this was to protect the companies and households who had borrowed in foreign currency. However, confidence was not restored and Argentina soon abandoned the currency board and the peso was left to float. The currency quickly lost value, resulting in major losses for the banks. The government was forced to support the banks and the final bill was presented to the taxpayers.

The crisis was costly for the Argentinean state, which had to close one bank and nationalise three. The government support measures amounted to almost ten per cent of GDP. GDP growth accelerated again as early as in 2002.

URUGUAY 2002

The main reason for the outbreak of the crisis in Uruguay was the country's great regional dependence on trade which contributed to its being infected by the crisis in Argentina. 40 per cent of Uruguay's exports were concentrated to Brazil and Argentina and the country's service sector was in addition highly dependent on Argentinean tourism and Argentinean investments. In addition some imbalances in Uruguay's banking system made it extra vulnerable to external shocks. Above all, the banks' deposits and lending were heavily exposed to foreign currency; as much as 90 per cent of deposits and 80 per cent of lending. Almost half of the total dollar deposits belonged to savers outside Uruguay. The starting point of the crisis was in December 2001, when Argentina's government decided to introduce capital controls and freeze withdrawals of deposits in dollars. In consequence, Argentinean savers rushed to Uruguay to withdraw their deposits in dollars. The Uruguayan savers followed close behind and the crisis was a fact. In 2002 Uruguay's banking

system lost about 40 per cent of its total deposits and almost half of total savings in dollars. A contributory reason for the great outflow of capital was that Uruguay had no deposit guarantee scheme, apart from for the two state banks where the government guaranteed all deposits. The extensive flight of capital led several international credit rating companies to downgrade Uruguay's credit rating from investment status to junk status and the country was forced to borrow USD 1.3 billion from the IMF.

To regain confidence in the markets and avoid a total collapse of the payments system the Uruguayan authorities decided to continue to respect existing bank contracts. In contrast to Argentina they accordingly decided against freezing withdrawals of deposits and against compulsory conversion of assets and liabilities in dollars to the local currency (peso). However, the authorities created a new legal framework that allowed the banks to extend maturities (time deposits). As compensation, the interest rates on these deposits were slightly above the market rate. In total the maturities for deposits equivalent to USD 2.2 billion were extended. To ensure that banks would be able to pay their depositors, Uruguay's central bank provided liquidity support to the banks that were considered to be systemically important (mainly domestic banks). Other banks, consisting of subsidiaries and branches of foreign banks, were left to fund any liquidity needs themselves, for example by borrowing from the parent banks. The central bank's liquidity support measures were a strain on the country's foreign currency reserve, which lost 80 per cent of its value in the first half of 2002. The low foreign currency reserve level made it impossible any longer to defend the domestic currency, which was tied to a currency band against the dollar and in June 2002 the peso was allowed to float. As both the banks' assets and liabilities were to a large extent in dollars, the floating exchange rate did not have any direct effects. Indirectly, the banks were affected in that their borrowers' incomes were largely in pesos. Despite the fact that the central bank injected USD 2.4 billion into the banking system, equivalent to 20 per cent of GDP, they were finally forced to take over four domestic banks and recapitalise the country's two state banks. To deal with private banks the authorities created a new banking law making it possible for them to liquidate and reorganise banks taken over under a "good bank/bad bank" model.

In the crisis year of 2002 GDP fell by eleven per cent. However, Uruguay recovered quickly, largely due to the action of the authorities. At the beginning of 2003 savings again began to flow into the system and in the same year GDP grew by eleven per cent.

JAPAN IN THE 1990S

Like Sweden, the Japanese banking system was regulated. In return the ministry of finance implicitly guaranteed the survival of all banks; the system was therefore regarded as being fully covered against

failure. A gradual relaxing of the rules took place in the 1970s and 1980s. Just as in many other countries, this led to a rapid increase in lending and a rise in the prices of property and shares. However, prices started to weaken in the early 1990s, resulting in the banks suffering major losses and some banks had solvency problems. The authorities decided that these losses were temporary and that profitability would return when asset values took an upward turn, which would be soon. So a "wait and see" policy was adopted, despite a continuing fall in prices.

Unlike other crises, the Japanese one was more protracted; it took ten years from its outbreak until the bank system had again become profitable. The 1990s therefore came to be called "the lost decade", during which the financial system functioned unsatisfactorily. This led in turn to a long-drawn out recession and depressed asset prices.

Some reasons for the prolonged crisis:

- Authorities and banks still took the attitude that no major banks would be allowed to fail, despite the fact that the Japanese central bank had declared that it would not always defend a bank with problems. Instead, the Deposit Insurance Corporation (DIC) that was set up would help to save banks and depositors. Unfortunately the DIC was far too small to deal with the bank failures it was faced with and the authorities therefore decided to use ad-hoc solutions that meant that all depositors would be indemnified. This meant that it took until 1998 until a more systematic framework was introduced to solve bank problems.
- Problem loans were heavily under-reported in the accounts, since legislation had very strict requirements that losses really must exist before exposures were allowed to be reported as non-performing. Despite the fact that actual (but not reported) problem loans amounted to between five and eight per cent already at the start of the 1990s the crisis was not regarded as a threat to the system until 1997.
- The authorities did not have support in law to intervene as long as the banks reported profits, even though these profits were fictitious due to deficient recognition in the accounts. Not until 1997 were the rules made more flexible, resulting in major impairment losses in the accounts.[125]
- By not fully recognising problem loans, the reported capital adequacy levels were overestimated. Seriously undercapitalised banks could therefore quite legally show that they fulfilled capital adequacy requirements.

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125 Despite the changes in the rules, as late as in 1999 problem loans amounted to only 7.8 per cent of GDP, which appears to be very low taking into account that the government's total cost for solving the crisis was considerably higher than in Sweden, where the percentage of problem loans was just over 13 per cent. The volume of state aid was in total 14 per cent of GDP.

- Incentives to write off and sell bad assets in the banks were very weak. Due to the very low key interest rate the cost of retaining the assets on the balance sheet was small and a sale would force write-downs to probably very low sales values.[126]

As a result of the above the banks had a very limited capacity to take on new business or risks, which led to a credit crunch. Moreover, due to their weak finances, the banks could not manage to write down and sell bad loans and other assets, which delayed the restructuring of the Japanese economy.

ICELAND 2008

The crisis in Iceland is a crisis close in time, the full effects are therefore still difficult to assess. The origins of the crisis can be found in vigorous domestic expansion led by large investments in the aluminium industry. In the wake of the investment upswing private consumption rose steeply, house prices and borrowings increased fast and the current account deficit grew. To dampen the overheating, the Icelandic central bank had to raise the key interest rate. The higher interest rate made it increasingly attractive for investors to borrow money in countries with low interest rates and invest it in Icelandic interest bearing securities at a higher interest rate. This increased capital inflows to the country and imbalances continued to build up in the economy.

Parallel to the overheating, the Icelandic banks expanded rapidly outside of Iceland, primarily in the other Nordic countries and the United Kingdom. This occurred both through corporate acquisitions and opening branches. The rapid expansion led to the Icelandic banking system's assets finally being more than nine times as large as the Icelandic gross domestic product. When the financial crisis worsened in 2008, international investors began to sell their Icelandic assets, which led to large capital outflows and substantial depreciation of the currency. The lower risk appetite had a serious impact on the Icelandic banks, which were highly dependent on market financing. As a result of the banks' enormous size in relation to the Icelandic economy investors became increasingly doubtful as to whether the Icelandic state had the financial capacity required to handle a bank crisis. The Icelandic banks found it more and more difficult to obtain financing and finally, in autumn 2008, the Icelandic government had to take over the management of the three major Icelandic banks. In order to refinance the banks and stabilise the currency the Icelandic state was forced to apply for an emergency loan from the IMF.

What the full effect of the financial crisis and ensuing recession will be is difficult to say at present. The Icelandic economy is expected to shrink by about eleven per cent this year[127] with consequently

126 Since the accounting rules did not require market value, which was another weakness.
127 See Sedlabanki (2009), "Monetary Bulletin," Vol. 12, No. 1, May.

higher unemployment and more defaults resulting in rising loan losses.

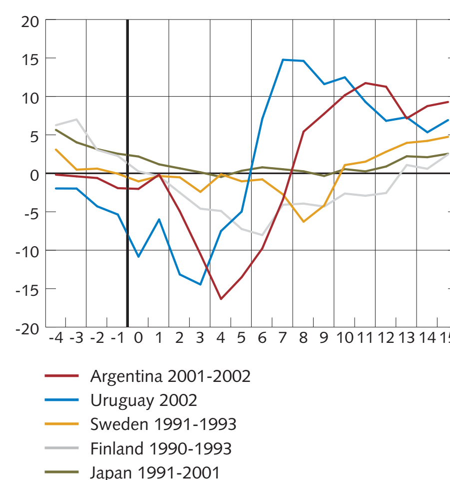
The crisis in Iceland is an example of how great the consequences can be when a small country builds up a banking system with total assets that are several times greater than the country's GDP. Apart from the Icelandic economy being hit hard, the collapse of the banking system also had consequences for other countries where those banks operated.[128]

Lessons from earlier crises

First and foremost it can be noted that there are several clear similarities between previous crises. They were often preceded by deregulation of the financial sector. This led to a very rapid increase in lending while at the same time, credit checks were often deficient. Loans were often granted for commercial properties and the prices of these and other assets rose fast. This was the case in Sweden, Finland, Japan and the countries in South East Asia. When the economy later turns, prices of properties have fallen, the solvency of property companies has deteriorated and banks have suffered major loan losses. Other similarities between the crises are the fixed exchange rate systems and dependence on foreign, often short-term, capital. Large capital inflows have entailed the build-up of major imbalances in the economies. When economic conditions have changed it has led to large capital outflows, which has put a great strain on fixed exchange rates. In all cases in which countries have had fixed exchange rates that policy has had to be abandoned and the domestic currencies have substantially depreciated. Of the countries discussed in this article only Japan, Iceland and the Philippines had floating exchange rates at the time of the respective crises.

Even if underlying and triggering factors in many cases are the same the effects on the real economy, the banks and the cost to the state have differed between the crises (see Table 1). GDP fell during the crisis period, but the amount and how long the crisis lasted varied (see Charts 3 and 4). The world economy plays a decisive role here. During the Swedish banking crisis the economy in the rest of the world was considerably stronger and external demand became an important driver of recovery. For example, in 1993 Sweden's exports grew by almost 20 per cent. The depreciation of the krona also contributed to this. In the same way, the rapidly growing world economy at the end of the 1990s and up to the IT crisis was a strong growth driver for the countries in South East Asia, while severely depreciating currencies aided improvement of competitiveness. Our neighbour Finland instead experienced a deeper recession due to the country's major dependence on trade with the former Soviet Union.

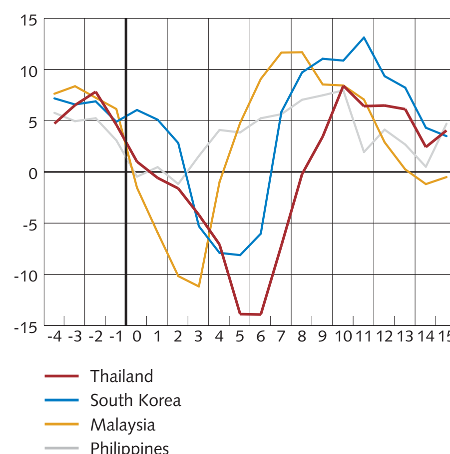
Chart 3. GDP growth during various crises
Annual percentage change



Note. Quarter 0 refers to the point at which the crisis began.

Source: Reuters EcoWin

Chart 4. GDP growth during the Asian crisis 1997-1998
Annual percentage change

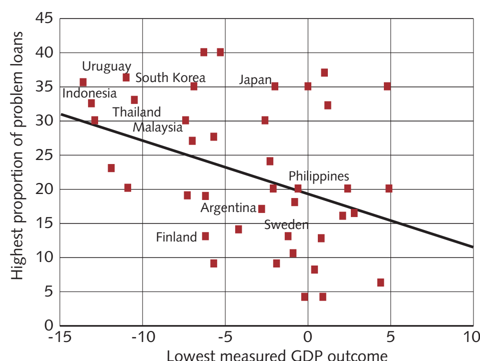


Note. Quarter 0 refers to the point at which the crisis began.

Source: Reuters EcoWin

128 See Sveriges Riksbank (2008), "Financial Stability Report 2008:2".

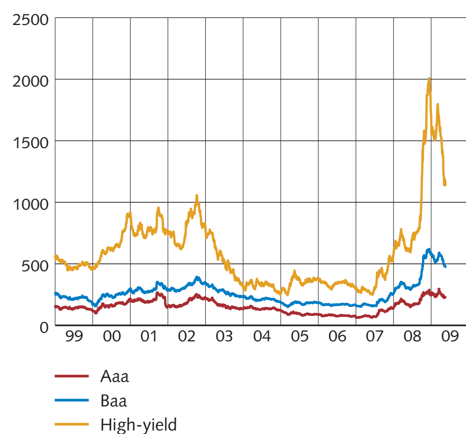
Chart 5. Proportion of problem loans and GDP loss internationally in a selection of previous crises
Per cent



Note. The definition of problem loans, which is to say the number of days which must expire before a loan is classified as a problem loan, can vary between countries.

Source: Laeven, Luc and Valencia (2008),"Systemic Banking Crises: A New Database" IMF Working Paper

Chart 6. Credit spreads for corporate bonds in the United States
Basis points



Source: Reuters EcoWin

A fall in GDP inevitably leads to a rise in loan losses. Even though major falls in GDP are associated with severe increases in the percentage of problem loans and loan losses there is a great variation (see Chart 5). For example a five per cent fall in GDP resulted in percentages of problem loans of both 10 per cent and 40 per cent. One factor that can increase the share of problem loans is if a country's currency depreciates while a large proportion of debt is in foreign currency. This entails a rapid rise in debt measured in domestic currency. This was the case in several of the crises above. But other, non-economic factors, can also explain the variation in the percentage of problem loans. For example, it is reasonable to believe that borrowers are more willing to meet their payment obligations for loans if they know that the country's legal system punishes breach of contract rapidly and effectively. The lender's willingness to modify loan agreements and cooperate constructively with the borrower may also play a role in this context. The rules governing when a loan can be regarded as a problem loan also play a part in developments. This is shown not least by the experiences of Japan.

Hence, the reasons for how problem loans develop depend on how deep and protracted the recession is and how the financial system is constructed, as well as on the exchange rate system and the country's legal system. But when there is a systemic crisis, the action of the authorities, or lack of action, plays a crucial role.

The Swedish authorities' management of the Swedish bank crisis in the early 1990s is often held up as a model, since the ultimate costs were small from an international crisis perspective. Another example is Uruguay, where the authorities, unlike the Argentinean authorities, decided to respect existing legislation. This brought a rapid recovery of confidence in the country and a renewed inflow of capital. Despite the fact that the initial costs to the state were higher in Uruguay, the economy recovered faster than in Argentina. In Japan the actions of the authorities and the formulation of the accounting rules may instead have contributed to the fact that it took longer for confidence to return and hence the economy to recover.

Table 1. GDP loss, problem loans and costs to the state for a selection of previous financial crises

	Length of crisis Years of negative growth	**Greatest GDP loss in one year** Per cent	**Largest percentage of problem loans in one year** Per cent of credit portfolio	**Costs to the state** Per cent of GDP
Sweden	3	2	13	4
Finland	3	6	13	12
Indonesia	1	13	33	57
Malaysia	1	7	30	16
Thailand	1	10	33	44
Argentina	2	11	20	10
Uruguay	1	11	36	20
Japan	1	2	35	14

Note. Problem loans usually increase more than loan losses, since not all problem loans result in loan losses for a bank. It is still a good indicator of how losses may develop.
Source: Laeven, Luc and Valencia (2008),"Systemic Banking Crises: A New Database" IMF Working Paper

THE PRESENT CRISIS MAY CONTINUE TO WORSEN

The present crisis was preceded, like many other previous crises, by rapidly rising borrowing and property prices, while banks in many cases underestimated and did not charge enough for the credit risk (one example is the American subprime market where borrowers with poor credit ratings were granted mortgages). But it was not only on mortgages that risk premiums fell sharply – this was true of a number of assets, which became apparent in very depressed credit spreads (see Chart 6).

The origin of the low risk premiums can be found in the circumstances that prevailed in the global financial markets and the large capital flows that helped push down interest rates. The good supply of investment capital and low interest rates on risk-free assets set in motion a hunt for returns. In other words, increased demand for higher yielding assets. This contributed to a steep rise in prices. Financial innovations, such as structured products and credit derivatives, also contributed to intensify asset price rises. Here there are many parallels to the crisis in Sweden in the early 1990s, for instance. Changes in the financial markets contributed to vigorous credit expansion while the banks, after years of regulation, had no well-established risk management. The result was incorrectly priced risk.

There are also other parallels with the Swedish bank crisis, such as the possibility of rule arbitrage. In the present crisis the specialist companies that the banks have used for securitisation have played a crucial role. The companies have not appeared on the banks' balance sheets, thus removing credit risk from there and making it unnecessary for the banks to hold extra capital for the increased risk. But committed loan facilities to the specialist companies have in practice returned the risk to the banks' balance sheets when the specialist companies have been unable to find funding in the market. It can be said that in the Swedish bank crisis the finance companies in some respects played a corresponding role. It was the finance companies that primarily gave loans for property and to construction companies. The finance companies themselves obtained short-term funding by borrowing on the securities market. Also, many of the finance companies were owned by the banks. When property prices fell and market funding declined the losses led into the banks since they were bound to the finance companies through formal and informal commitments.

Another similarity between these two crises is the existence of credit risk insurance. In the late 1980s and early 1990s the company Svenska Kredit sold credit insurance to Swedish banks. Many banks insured themselves against losses on their loans to property companies. But when the property market folded, Svenska Kredit

was unable to meet all of its obligations and consequently went bankrupt. This increased the banks' problems. Monoline insurers are the equivalent in today's crisis. Monolines are large insurance companies specialised in insuring bond loans, and recently also securities with exposures to the American subprime market.

There are further similarities between this crisis and previous crises. For example, just as in the Asian crisis large inflows of capital have caused the build-up of large current account deficits in certain regions. There are now imbalances in banking systems, where a large proportion of lending is in foreign currency while borrowers' earnings are in domestic currency, in many countries. Other similarities between these two crises and the current situation are the existence of fixed exchange rates and currency boards.

But there are also considerable differences, indicating that today's crisis may become worse than the previous ones. Above all, the previous crises were in all essentials national or regional. The world economy could then provide considerable assistance out of the crises, in most cases contributing to a relatively rapid GDP recovery. What makes this crisis different is that, as a consequence of recent years' globalisation and financial innovation, it is global and more complex than previous crises. It means that the effects are considerably more difficult to assess and predict. The crisis has simultaneously affected more countries, markets, assets and agents than ever before. In consequence, global demand has fallen sharply and world GDP is expected to shrink, which has never happened before in modern times. Thus the world economy is in many respects in a worse state than in previous crises. Moreover, studies show that recessions that coincide with financial crises often tend to be deep and protracted, as do recessions that overlap between several countries.[129]

At the same time there are factors indicating that it need not be so bad. Central banks the world over, have reduced interest rates to very low levels to stimulate the economy. For borrowers this means lower interest costs than for example in Sweden in the crisis of the 1990s. Moreover, in many countries there is scope to stimulate the economy with fiscal policy measures (see below).

To date banks' write-downs and losses amount to over USD 900 billion, while the total figure for financial institutions exceeds USD 1 200 billion. IMF forecasts indicate that total global losses may exceed USD 4 000 billion or seven per cent of lending (see Table 2). Of this, USD 2 700 billion is expected to derive from American assets, which implies a degree of loss of 10.2 per cent of the outstanding amount. The bank sector is expected to account for two thirds of the write-downs and losses.[130]

129 See IMF (2009), " World Economic Outlook," April.
130 See IMF (2009), "Global Financial Stability Report," April.

Table 2. Potential write-downs and losses in the financial sector
Per cent of lending, cumulative between 2007–2010

USA	**10.2**
Of which loans	7.9
Of which securities	12.6
EUROPE	**5.0**
Of which loans	4.3
Of which securities	10.0
JAPAN	**2.0**
Of which loans	2.0
Of which securities	2.2
TOTAL in the world	**7.0**
Of which loans	5.1
Of which securities	11.6

Source: IMF (2009), Global Financial Stability Report, April

Other commentators, however, believe that the figure may be even greater and that losses and write-downs on assets originating in the USA alone may reach USD 3 600 billion before the crisis is over.[131] American investors hold about half of these. Loan losses alone are expected to amount to USD 1 600 billion, which is 13 per cent of the credit portfolio. However, capital requirements are expected to be higher in Europe than the USA according to IMF estimates. In the USA capital requirements are expected to be between USD 275-500 billion. The corresponding figure for the euro area is USD 375-725 billion and for the rest of Western Europe outside the euro area the figure is USD 100-225 billion. The lower limit shows the required capital to achieve capital adequacy of four per cent, while the upper limit refers to capital adequacy of six per cent. The higher capital requirement in Europe is largely due to the countries' exposures to eastern and central Europe.[132] However, it is important to point out that these forecasts are uncertain.

Extensive measures taken by the authorities in many countries

In order to manage the problems in the financial markets, starting more than a year ago government authorities throughout the world have launched extensive programmes of action. To strengthen the liquidity supply many central banks have increased their lending and many governments have introduced various guarantee programmes. To boost banks' solvency, i.e. their ability to absorb losses and thereby their ability to survive in the long term, many governments have also provided access to injections of state capital. In countries where the regulatory framework for dealing with banking crises was inadequate, for example in the United Kingdom and Sweden, new legislation has been introduced.

Liquidity problems and solvency problems are often closely linked. The long-term survival of a basically sound bank can be threatened if for one or

131 RGE Monitor.
132 IMF (2009), "Global Financial Stability Report", April.

another reason it has problems with funding. More secure access to funding could therefore reduce the risk of liquidity problems turning into solvency problems. On the other hand, if there is uncertainty as to the solvency of a bank, there is a risk that the bank will have liquidity problems. A capital injection could therefore provide better prospects of borrowing in the market.

Apart from the bank's ability to meet its immediate commitments or absorb losses, access to both liquid funds and capital is important to the bank's ability to contribute to the credit supply in the economy. If the credit supply is neglected the effects on the real economy may be significant, which in turn has an impact on the banking system.

LIQUIDITY IMPROVEMENT

As banks' funding in private markets has become more difficult, central banks the world over have loaned large amounts to the banks at long maturities and against more types of collateral than normal (see chapter 1 and the box What is the implication of the Riksbank's extra lending?). In that way the banks' short-term funding has been improved. Several central banks have also provided emergency liquidity to individual institutions. In Sweden, for example, the Riksbank has provided special liquidity assistance to Kaupthing Bank Sverige AB and Carnegie Investment Bank AB. Many central banks, such as the Federal Reserve, have also drawn up agreements to lend their own currency to other central banks, thus making it possible to satisfy an increased demand for American dollars. In many quarters the circle of counterparties with access to the central banks' loan facilities has been extended.

The banks' demand for liquidity from central banks varies. Since October 2008, i.e. in the most acute phase of the crisis, demand has fallen in many quarters. This does not mean that the facilities no longer have a role to play. The fact that central banks the world over have declared themselves willing to continue to lend to banks to the extent necessary means that banks are willing to a certain extent to lend to each other.

A COORDINATED GUARANTEE PROGRAMME

Examples of other central government commitments are the borrowing guarantees that many governments are now offering banks. For a fee, central governments guarantee individual issues of certificates or bonds made by banks. In the EU guidelines have been agreed for these borrowing guarantees to ensure as standardised a form as possible. The agreement covers for example the scope of the programmes, pricing and maturities. The guarantees may only be given to solvent banks. The borrowing guarantees have a similar purpose to the central banks' increased lending, but are aimed at sustaining the more long-term market funding. They give the banks access to funds that can be used to satisfy the credit needs of the general public, but in a different way than the central bank lending. In many countries the authorities have also raised the ceiling for deposit guarantees and extended them to cover more types of accounts.

INJECTIONS OF CAPITAL

As the crisis continues attention is increasingly focused on the ability of the bank system to bear risk and absorb losses; in other words on the banks' capital (see the box Capital – regulatory capital under Basel II and economic capital). Despite the fact that banks currently meet the statutory capital adequacy requirements the market is hesitant to lend money to many banks and the banks to each other. This is because there is a perceived risk that future losses will wipe out the capital buffer. Thus the prevailing "liquidity problem" is basically due to concern about banks' solvency. As long as concern about banks' solvency remains, the banks' liquidity situation will also be under strain. Despite the fact that the central government measures are at present a necessary condition for financial stability, they are not sufficient to solve the financial crisis. This requires measures aimed at strengthening banks' solvency. It can be done in different ways, with measures aimed either at the asset side or the liability side of banks' balance sheets. For example the liability side could be strengthened by injecting capital or pressure on the asset side could be relieved by removing particularly risky assets. It is also possible to strengthen the balance sheet by reducing debt. Internationally measures are being undertaken aimed at all parts of the balance sheet.

Capital contributions

The most direct way of strengthening a bank's financial position is to contribute capital. Normally it is the business of the owners to increase the share capital by issuing new shares or other securities that can be included in the capital. In a situation in which the market is unwilling to contribute new capital, many central governments have decided to participate in banks' new issues of shares or long-term loans. In the USA the government has recently contributed capital to banks that fulfil certain conditions. In the EU agreement has been reached on general principles for government capital contributions.

In cases where the capital contribution is aimed at dealing with problems in individual banks, in general measures are also required to reorganise the bank. As has been mentioned, however, the programmes as a rule have a broader purpose than dealing with pure solvency problems. In many quarters the purpose of the programmes is described as bringing about a general strengthening of the banking system to promote continued lending in the country in question and prevent a serious credit squeeze on the national economy. In some cases the central government capital support has therefore been made conditional on the banks maintaining a certain level of household and corporate lending in their own country.

The balance between replenishment for the purpose of increasing resistance to losses and replenishment for the purpose of maintaining lending is, however, not simple. In a situation with seriously worsened economic prospects even well-capitalised banks may have an interest in obtaining a further buffer. Uncertainty as to the situation is also great and it is not possible to assess a bank's prospects with full reliability. One should also be aware that central government injections of capital also affect the conditions of competition. Less sound banks may be saved by

the injections of capital. To avoid unnecessary distortion of competition the state must make a careful analysis of the situation of the banks. The cost of the programmes should then reflect the risk, where a well-capitalised bank with good prospects should have access to more favourable funding than a higher risk bank.

An alternative way of strengthening the capital base is to reduce or refrain from dividends. At the same time such a measure may make it difficult to attract private capital contributions.

Measures on the asset side

Internationally there are several different programmes for dealing with the problem of troubled assets. As in the case of capital contributions there are measures both aimed at dealing with acute solvency problems in an individual bank and measures aimed at bringing about a general reduction of uncertainty in the market. The programme for purchasing difficult-to-value assets, the Troubled Assets Relief Program (TARP), implemented in the USA already during the autumn can be mentioned here. In the Netherlands too the government has bought bad assets from the banks, mainly from one bank with serious problems. Another example is the British programme to insure banks against losses on difficult-to-value assets.

Buying or insuring troubled assets may be a way to rapidly improve capital adequacy for banks with problems. Provided that the central government balance sheet is not burdened too much by the increased risk, the cost of such an operation can be kept reasonably low. The operation quite simply moves risk from agents paying a high price for liquidity risk to an agent whose risk premium is low.

This type of measure is, however, associated with a number of problems and difficult decisions as to selection, valuation and pricing, as well as management of the assets bought or otherwise taken care of by the government. It also raises important questions of principle, such as how to achieve an appropriate incentive structure and a reasonable distribution of risks, costs and possible future positive outcomes between the state and private owners. It is important to ensure that taxpayers do not take over the cost of losses already made. It is also important that as much of the uncertainty as possible is removed so that recovery is not delayed.

Debt relief

A third way of improving capital adequacy is for the creditors to write off the bank's debt. This is a measure associated with banks with very serious problems, where debt relief may be the only alternative to outright bankruptcy. The possibility of achieving debt relief for a bank that continues to operate differs from country to country. It may be done compulsorily only in some form of regulated reorganisation. This generally requires that a considerable reduction in the capital be made first by the owners and that a majority of the creditors agree to the reorganisation. Voluntary debt relief is of course also possible. In previous crises renegotiation of debt has often been a common element. In a few cases this has also been discussed in the

present crisis. In many countries, however, politicians have signalled that they intend to deal with problems threatening financial stability before they become serious enough for debt relief to be under consideration.[133]

The importance of accounting

Something should also be said on the importance of accounting in this context. Since the carrying amounts of the assets affect capital adequacy, they also affect the picture of how well the bank is fulfilling the statutory capital adequacy requirements. Consequently, the accounting rules affect the bank's legal solvency or equity/assets ratio, and thus the bank's possibilities of continuing to operate. According to international agreements, assets on banks' balance sheets must be disclosed in accordance with the "fair value" principle. This means that the market price largely determines the value at which an asset is recognised. When the markets for certain assets no longer function as they should – if they exist at all – it will be difficult to apply such an accounting method. Last autumn some possibilities were introduced to deviate from this principle. For example, it was allowed to reclassify some financial assets from "held for trading" or "financial assets that can be sold" to the category "held to maturity". This means that certain assets can be measured at cost of acquisition instead of at fair value. Further relaxations of the "fair value" principle are currently being considered. It is true that this means greater flexibility to use other valuation principles than market price. But at the same time too great flexibility can increase the risk that banks or government agencies will be tempted to manipulate the valuation of assets to make a bank look healthier than it really is. Consequently it will be more difficult to determine the risks the banks are actually bearing in their asset portfolios. If the market feels a lack of reliance on the valuations reported it will also be more difficult to achieve a return of confidence. The risk of a Japanese scenario, in which recovery takes longer than necessary, thus increases. It is therefore particularly important that the accounting is as transparent as possible, with a standardised application in all countries, and that the values disclosed are as close to the market values of the assets as possible.

Concluding remarks

At present, the world is experiencing a financial and macro economy crisis regarded by many people as the deepest since the 1930s. What started as a liquidity crisis in the financial markets has increasingly assumed the character of a solvency crisis. This means an increased focus on banks' loan losses and their ability to absorb them.

The crises we describe in the article show that financial crises normally last for up to three years and can result in problem loans for the banks in the order of ten to 30 per cent of lending. History shows, however, that the length and extent of financial crises depends on many factors. The crisis legislation in place, volume of loans in foreign currency, choice of exchange rate regime, willingness of lenders to renegotiate loan agreements and the

133 European Council statement.

actions of the authorities are examples of such factors. A strong international economy has often helped in national and regional crises.

The present crisis has affected more countries, markets, assets and agents than ever before. Its global nature and the global recession mean that the situation now is more worrying than in many previous crises. It is even more worrying, bearing in mind the protectionist tendencies that have become increasingly apparent recently, which are an effect of the crisis. These tendencies may contribute to a further deterioration in the outlook for the future.

An important factor for succeeding in bringing about a return of confidence in financial markets is how problems in the banks' balance sheets are dealt with. This applies not least to creating a credible floor for losses. In this, the determination and degree of transparency of the authorities' actions will often be crucial. In Uruguay the authorities' actions contributed to the rapid return of investors' confidence and the recession was therefore relatively short-lived. On the other hand, in Japan for example, uncertainty as to the banks' actual losses dragged on, making the crisis more protracted. This indicates how important it is that measures now taken by the authorities also promote transparency as to where the risks are. The dense and complex structure created in the financial system certainly makes this more difficult than in the Swedish financial crisis of the 1990s. But at the same time experience shows that attempts to gloss over the problems, for example by relaxing accounting rules, hardly constitute an effective method of crisis solution.

One of the most crucial factors behind the relatively successful management of the Swedish banking crisis of the 1990s was that there was political consensus over the need for extensive measures. There was a general awareness of the seriousness of the situation that made a concerted effort possible. In Uruguay too, unlike Argentina, there was political consensus that contributed to a rapid recovery of the economy.

We can note that the present crisis awareness of government authorities worldwide is great. Vigorous and often coordinated measures have been taken to alleviate the crisis. The global nature of the crisis makes such cross-border coordination central. Readiness to take further measures if necessary is also great. But the authorities' measures can also affect the risk behaviour of financial market participants in the long term. This is a matter that should not be disregarded now when the financial regulatory framework is being modified.

It is difficult to say how long it will be before the measures already taken reach their full effect. It cannot be ruled out that the recession will deepen and loan losses grow before the economy finally picks up. For a return of confidence in the financial markets the problems burdening the banks' balance sheets must be brought into the light. This may contribute to a faster recovery of the real economy.