Managing and Preventing Financial Crises – Lessons from the Swedish Experience

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In the early 1990s, Sweden went through a severe banking crisis. This paper gives a short presentation of how the crisis developed and how it was managed. We then discuss what lessons can be learned from the crisis. We also review the measures that have been taken since the crisis to reduce the risk of future banking crises and to handle the various phases of a banking crisis should one occur.

The Swedish Banking Crisis in the early 1990s

Characteristics of the crisis[1]

The banking crisis was one ingredient in a general economic crisis in Sweden.

The banking crisis was one ingredient in a general economic crisis in Sweden and it is relatively easy to see what made it erupt. During the 1980s, the process of full deregulation of the Swedish financial markets took place. At the time it was undertaken, the Swedish economy was experiencing a protracted economic upswing. This led to high investment, especially in the real estate sector where prices skyrocketed. Due to the earlier restrictions on borrowing there was a strong pent-up demand for credit. The increasing demand for credit was exacerbated by a tax system that favoured

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[1] A description of the Swedish banking crisis in English can be found in Burkhard Drees and Ceyla Pazarbaşioğlu "An overview of the Swedish banking crisis, Pitfalls in Financial Liberation?," *Occasional Paper 161* IMF 1998.

borrowing instead of saving especially in times of high inflation. The deregulation of financial markets led to increased competition between banks. Bank management lowered credit standards in their struggle for larger market shares. Banks entered into this competition despite the fact that they were unfamiliar with doing business in a deregulated environment and lacked adequate knowledge and procedures to make proper credit assessments. Nor did the Financial Supervisory Authority (FSA) have the competence and the instruments to make assessments of the financial risks and other important developments in credit institutions. The volume of credits expanded rapidly from 1985 to 1990. A large part was lent to investors in housing or commercial real estate and most of it was collateralised by real estate, thus concentrating a large share of risk to this sector.

The mismatch of maturities in loans and funding in foreign currencies exposed banks to large liquidity risks.

In the early 1990s, interest rates were historically high. Swedish monetary policy with its target of a fixed exchange rate, first towards a currency basket and from 1991 against the ECU, contributed to the upward pressure on interest rates. Given the high level of nominal interest rates for Swedish krona loans, a large segment of borrowers preferred to denominate their loans in low-interest currencies, such as the Deutsche Mark. Banks funded loans denominated in foreign currencies mainly in the international interbank market. These funds were predominantly short-term, whereas the lending was partly medium- or long-term. The mismatch of maturities in loans and funding in foreign currencies exposed banks to large liquidity risks.

A number of events that took place around the year 1990 set the stage for the ensuing crisis. The strong economic cycle ended and turned into a sharp recession with negative growth rates for three consecutive years. The recession coincided with a milder downturn in the international economy, which in turn weakened the demand for Swedish exports. The unemployment rate increased drastically as a result. Property prices plunged by more than 50 per cent over a period of only 18 months. At this time the major political parties agreed on a tax reform that favoured saving and sharply reduced the incentives to borrow. The government supported a strong and successful anti-inflationary stance. The combination of new tax laws, high nominal interest rates and low inflation lifted real interest rates to levels unimaginable a few years earlier.

The risk for a credit crunch became real.

Credit losses in the banking system began to accumulate rapidly, and during the summer and autumn of 1992, the situation grew worse. The recession combined with the rapid depreciation of real estate prices caused big losses for banks and other financial institutions (institutions that in most cases were owned by banks and therefore caused even bigger losses for the banks). The European currency crisis in 1992 forced the Riksbank to hike the short-term interest rates, and the depreciation of the Swedish krona following the abandonment of the fixed exchange rate policy in November 1992 led to a rapidly deteriorating situation in the financial markets. Many borrowers had debts in foreign currencies – debts whose values in one day rose to uncontrollable levels. Foreign lenders cut their credit lines to Swedish banks. This created a shortage for liquidity and foreign currencies within the financial system. The risk for a credit crunch became real.

In the late summer of 1992, the threat of a systemic crisis was evident. The seven largest banks, which accounted for approximately 90 per cent of the banking market, all had serious problems in their loan portfolios. The credit losses of these banks during the crisis amounted to 12 per cent of the Swedish GDP. Six of these seven banks needed more capital from their owners or from the government.

How the crisis was managed[2]

During the autumn of 1992, the Ministry of Finance (MoF) together with the Riksbank and the Financial Supervisory Authority (FSA) decided that the following actions were the highest priorities:

– Restore confidence in the financial system.
– Attain political consensus about the necessary actions.
– Organise and divide the work.

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The official guarantee[3] from the government to depositors and other counterparties of the Swedish banks laid the foundation for renewed confidence in the financial sector. No limit was set on the amount of the guarantee in order to minimise the political cost of renewed petitions for government support in later phases of the crisis. Moreover, the Riksbank transferred parts of its reserve of foreign currencies to the banking system to avoid a credit crunch. Further actions to restore the confidence were information to the financial markets, especially the international market, about the guarantee and the steps to be taken by the government.

[2] For a more detailed description see: Stefan Ingves and Göran Lind, "The management of the bank crisis—in retrospect," *Quarterly Review*, 1996:1 Sveriges Riksbank pp. 5–18.
[3] At the time of the bank crisis there was no deposit insurance scheme in Sweden.

To attain a political consensus the government kept the opposition informed and let the opposition give their views on the proposed actions. The opposition was also represented in the Bank Support Authority (see below).

It was obvious that the crisis was too large to be handled by the MoF. The Riksbank and the FSA were considered not to be the proper authorities to manage the crisis. The solution was to create a new separate organisation, the Bank Support Authority (BSA), governed by the MoF.

When the organisation of the BSA was in place, the next challenge was to find the best method for providing the support. The banks that had applied for support, that is to say all the major Swedish banks except Svenska Handelsbanken, had to report their real and expected credit losses, suspended interest rates payments, liabilities and securities to the BSA. The method for providing the support was based on these figures. The main purpose was to choose the form of support that was most efficient and cheapest for the economy and society as a whole. A balance was maintained between using a minimum of government funds and providing the bank with adequate capital. The best way of striking that balance was by providing part of the support in the form of guarantees. If the capital ratio fell below a certain threshold, the guarantee would be converted into loans or equity capital. One important question was the risk for moral hazard. To reduce that risk, it was decided that in cases where the government supported a bank with capital, the owners would loose an amount of money equivalent to the capital from the government. In order to reduce uncertainty concerning the bank's future, it was decided that the majority of its bad loans and assets would be transferred to some form of asset management company (AMC) not owned by the bank.[4] The idea was that the specialised management of loans would probably lead to a higher degree of loan-loss recoveries.

The fundamental paradigm guiding the support operations was the so-called hammock approach.

The fundamental paradigm guiding the support operations was the so-called hammock approach. This was a common yardstick according to which the banks' need of support and additional measures could be analysed. The objective of this model was to anticipate each bank's economic strength in terms of its earning capacity and capital buffer. All financial information obtained from banks and from other

[4] The functioning of these asset management companies is described in Stefan Ingves and Göran Lind, "Loan Loss Recoveries and Debt Resolution Agencies: The Swedish Experience," in *Bank Soundness and Monetary Policy*, Charles Enoch and John Green eds. IMF 1997 pp. 421–448, and Göran Lind, "The use of asset management corporations in the Swedish Crisis," World Bank and Monetary Authority of Singapore Conference on Global Lessons in Banking Crisis Resolution for East Asia, May 1998.

sources, including macroeconomic data and forecasts, was fed into this computer-based forecasting model. This model could then produce an estimate of the bank's likely financial development over the next three to five years. The result of the analysis would be used to divide the banks in different groups, designated as A-, B- and C-banks, depending on their potential for profitability in the short and medium term. In the next stage the forecasts were used to decide the amount of financial support that a bank qualifying for support needed. The guiding principle in this context was that the restructuring of the bank sector should preserve a satisfactory level of cost efficiency and competition.

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An A-bank was a bank that was forecasted to overcome its current problems and show a profit within the medium term. Its capital base would probably decrease, but stay above the required level of 8 per cent. The problems in these banks could be solved by capital infusions from the owners. An example was S-E-Banken, which never received any direct support from the government.

The B-banks were, like the A-banks, profitable in the medium term, but the temporary problems were more serious. The capital could be expected to decrease below 8 per cent for a limited period of time. The B-banks were deemed to need capital from their owners together with guarantees from the government. According to the design of the latter, if the capital ratio fell below the required ratio, the guarantee would be converted into loans or equity capital. The guarantees were necessary so that the owners would be willing to take the risk of buying new shares. Also, as mentioned above, a majority of B-banks' non-performing loans and assets were transferred to the AMC in order to facilitate a more efficient handling of the "good" and "bad" parts of the bank. An example of a B-bank was Föreningsbanken (The Cooperative Bank), which in the end managed to survive without any financial aid from the government.

C-banks were those with no future prospects, not even after official support or reconstruction. Capital was on its way down to and below zero. Those banks were to be closed or merged with other stronger banks depending on which alternative incurred with the lowest cost for the society as a whole. An example of a C-bank was Gota Bank. The bad loans in Gota Bank were transferred to a new company – Retriva – and the rest of the bank was put up for auction and later merged with Nordbanken. By separating the bad loans from the remaining sound parts of the bank, it was possible to get a higher price.

A number of foreign consulting firms were engaged with the task of providing the competence and expert knowledge on the management of bank crises that was needed at this juncture. These consultants had gained competence in these issues through earlier experiences with bank crises in the USA and Norway. The tasks were divided among them in order to avoid a situation in which any of these consultants gained too much influence. One of these firms helped the MoF and the BSA in analysing banks' loans and other assets and separating the sound ones from the non-performing ones. Other firms did the work of analysing banks' risk management systems, and still others analysed their strategies and efficiency levels. The result of this analysis was an important input in the design of adequate bank support measures.

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The remaining banks in the banking system in Sweden recovered from the crisis within a couple of years. As early as 1993, the owners in both S-E-Banken and Sparbanken Sverige agreed to put in more money in the banks, and the banks managed to fulfil the capital requirement of 8 per cent. After 1993, there were no further commitments from the BSA, and in 1994 the banking system as a whole showed a profit.

The total amount of commitments by the BSA during the crisis was 88 billion SEK, but the total amount actually paid by the BSA to the banks was 65 billion. Most of that money, however, has been paid back to the government through dividends, selling of shares, and the value of retained shares.

What can be learned from the banking crisis?

In the discussion of the lessons to be drawn from the Swedish banking crisis we identify three different crisis "phases": the building-up phase, the phase of acute payment system risk and the crisis management phase. For each phase we try to draw on the experiences from the crisis and discuss the measures that have been taken or are planned to reduce the risk for future crises and to mitigate the consequences, should a crisis actually erupt.

Phase one – the building up of the crisis

The *first* phase is the building up of a financial crisis. An examination of the Swedish banking crisis, like other banking crises in the world, reveals a number of factors that contribute in a rather complicated way to triggering the crisis development. One factor stands out, however, as crucial, and that is the consistency and credibility of macroeconomic policy. Here, macroeconomic policy should be interpreted in a broad sense not to include just conventional stabilisation policy.

One should rather look for the consistency and longer-term viability of various policy regimes concerning for instance fiscal and monetary policy. It is also important to analyse how these policy regimes conform to the general developments in the real and financial sectors of the economy.

In hindsight, it seems clear that the building up of the Swedish financial crisis could have attracted attention at an earlier stage and perhaps have led to a less severe course of events. One basic problem with the macro-policy mix in Sweden at that time was the choice of monetary policy regime. As mentioned, the Swedish currency was pegged to a basket of currencies within a fairly narrow band. With lax fiscal policy, the burden for the defence of the krona was entirely borne by monetary policy. During the crisis there was clearly a conflict between the price stability (through the exchange rate target) and financial stability goals of the central bank. To defend the krona, interest rates had to be raised, in the end to astronomical heights. This naturally hit the already problem-stricken banks hard and contributed to the acceleration of the crisis.

It seems clear that the building up of the Swedish financial crisis could have attracted attention at an earlier stage.

It is interesting to compare the crisis regime with the current inflation target regime. In the current regime, the above-mentioned policy conflict is basically eliminated. In a situation where the payment system is threatened with collapse, a lowering of interest rates would be appropriate not only for financial stability reasons but also to avoid deflationary tendencies in the economy.

Looking back at the Swedish financial crisis it is also clear that neither the banking sector nor the supervisory authorities were prepared to handle the new situation caused by the rapid deregulation of the financial system. It is easy to understand, although difficult to accept, that both banks and supervisory authorities entered this new world without paying much attention to risk management and risk control issues. Seen from the point of view of the regulatory authorities even a rudimentary evaluation of the development of for instance the loan portfolios in banks and other financial institutions should at least have revealed the lack of consistent risk analysis in loan decisions and the tensions created by the rapid and biased expansion of loans to certain sectors, in particular the real estate sector.

Looking back at the Swedish financial crisis it is also clear that neither the banking sector nor the supervisory authorities were prepared.

One has to be careful in making too much of the fact that in retrospect there seems to have been a number of indicators that should have given early warnings about what was building up in the financial sector. Still we should try to learn from the mistakes of ignoring these early warning signals and try to use the experiences from the crisis in the search for better methods to detect and handle crisis phenomena at an early stage.

Recent work aimed at reducing the risk that future financial crises will be allowed to develop to proportions like the recent one can be divided into two categories. *First*, the Riksbank and the FSA have been working systematically on building up an analytical framework, through which relevant macroeconomic and financial sector data and information are regularly evaluated with the purpose of making judgements about the health of the Swedish financial system. A major product of this effort is the *Financial Market Report* that disseminates the Riksbank's analysis of the financial system. *Second*, a major revision of the regulatory and legislative framework for the financial sector is underway. This work focuses particularly on the banking sector and includes the supervisory activities based on this regulation.

The analytical framework of the Riksbank

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The financial crisis made it clear that the Riksbank needs to put as much emphasis on its goal of preserving financial stability as it does on its price stability goal. This has meant clarifying the Riksbank's role as overseer of the payment system, establishing the areas of emphasis for gauging financial stability and publishing the Riksbank's views on developments in the financial markets in a biannual publication, the *Financial Market Report.*

The *Financial Market Reports* are public reports with the general purpose, as stated by the Governor, to regularly comment on the Bank's views about the stability conditions in the financial sector. Since one of the Riksbank's two main tasks (The other is of course price stability.) is to promote a stable and efficient payment system, it is considered natural for the Bank to give reports on developments in this area for much the same reason as Inflation Reports are a natural and important ingredient in the Bank's inflation policy. With these reports the Riksbank also aims to encourage debate about topics related to financial markets while providing relevant information and methods of analysis to policy makers, the public, the media and participants in the financial markets. This approach reflects the Riksbank's general appraisal of the benefits derived from openness and transparency in policy making. The response to this report has been positive. It has already proved to be a valuable conduit for communicating the Riksbank's concerns to those active in the financial arena.

These reports are an organic part of the Riksbank's analysis of financial markets. The starting point for this analysis was constructing a working definition of the Riksbank's role as overseer of the financial system. The Riksbank, like many central banks, has the responsibility for financial stability but not for supervision. The Riksbank Act describes this responsibility as the goal of promoting a safe and efficient payment system. The operationalisation of the oversight role was built up from insights gained in operating the central payment system and providing liquidity to banks as part of payment system and monetary policy operations. The oversight responsibility of the Bank also encompasses the analysis and techniques essential for the role as lender of last resort when the central bank provides liquidity in exceptional circumstances.

It became clear that it was necessary to try to identify the threats to the system by analysing the stability of the banking sector.

Banks and the payment system infrastructure are very closely linked to each other. Even though the central bank has the primary objective of promoting the efficiency and stability of the payment system, ensuring a smoothly operating and well designed system is not enough. For some years, the Riksbank had tried to ensure that the infrastructure would be able to withstand any disturbances that could occur in the system. However, it became clear that it was necessary to try to identify the threats to the system by analysing the stability of the banking sector, with special emphasis on the major banks.

Analysis could be used as a possible early indicator of excess risk taking in the banking sector.

The analysis of banking system stability is based on three parts. *First* there is the analysis of profitability and efficiency. If the banking system is not profitable there is a risk that banks will try to increase their risk exposure in order to show at least in the short term a better return on equity. In inefficient banking systems, history has shown that there is a risk that banks do not have the proper incentives to manage their risk taking in a prudent way. In both these situations the analysis could be used as a possible early indicator of excess risk taking in the banking sector, which in the longer run could lead to financial fragility.

Second is the analysis of the banking system's credit risks. In evaluating bank lending and comparing it to the macroeconomic development, important insights can be gained about the stability in the banking sector. This part of the analysis focuses on different categories of loan takers' ability to pay back their loans. The main categories are the household and corporate sectors. In the latter, the real estate sector receives special attention because of the substantial exposure that banks have towards this sector. In the past the real estate sector has been the source of large credit losses for banks.

The *third*, and last, part of the banking stability analysis is the counterparty and settlement risks. In this, the analysis of the banking firms and the payment and clearing systems are combined. A bank run of today will most certainly come from the international interbank market. Banks are becoming more and more dependent on other financial institutions in their trading and financing activities. Very large exposures towards liquidity and credit risks are built up in the FX and bond trading, for example. The extent of these risks depends on the creditworthiness of the counterparties but also on settlement procedures.

A deterioration of credit quality will almost certainly affect all banks.

A combination of these three parts of the analysis of the banking sector provides a good picture of the overall stability in the financial system. One can argue that operational and market risks should be included as well. However, these are mainly bank specific risks, which are being supervised in detail by the FSA. Even if one major institution were to face severe problems caused by exposure to these risks, this would not lead to a systemic crisis if counterparty risk, both liquidity risk and credit risk, were to be managed properly. A deterioration of credit quality, on the contrary, will almost certainly affect all banks, even though their respective risk management systems will make the difference on how they will be affected (as shown by the previous crisis).

The new legislative framework

As explained above, another lesson from the banking crisis was the need to review the legislative framework. A government committee was given the task of carrying out this review by examining and suggesting amendments to the legislation regulating banks and other financial institutions. As part of its work, the Committee is also directed to suggest methods for the supervisory implementation of the new legislation. The general purpose of the Committee work as stated in its directives is to build up a framework that could help reduce the probability of a financial crisis occurring in the future.

The main report of the Committee[5] has recently been published and was presented to the government. A brief account of the Committee's general ap-

[5] Reglering och tillsyn av banker och kreditmarknadsföretag (Regulation and supervision of banks and credit market companies). SOU 1998:160.

proach gives an indication of how it fits into the crisis management scheme. It should be noted that the Committee report is a *suggestion* that in the end will lead to a government proposal to Parliament on a new Banking Act.

The Committee in its analysis takes as a starting point a clear identification of the reasons why banks and other financial institutions require special attention from regulators. The main reason why banks are considered especially important is their strategic role in the payment system. In modern payment systems with their rapid expansion of large-value payments, the daily turn-over amounts to astronomic sums, and even the suspicion that one of the major banks is in trouble could cause serious disruptions in the payment system. The contagion effects of a sudden bank failure are potentially very large, and the system instability problem that is inherent here gives the usual "market failure" motivation for state intervention.

Even the suspicion that one of the major banks is in trouble could cause serious disruptions in the payment system.

The Committee makes it quite clear, however, that these interventions must be designed in such a way that the banks can work under competitive conditions and get proper incentives for innovation and product development. The regulatory framework needed to safeguard the stability of the payment system therefore must be set up in such a way that the stability in the banking system can be promoted without unduly hampering the competitiveness of banks. At the same time moral hazard effects of the regulatory framework must be avoided. Bankruptcies in individual banks must be an economic reality faced by all actors in the financial sector. It should be made clear that the bailing out of management and equity owners in crisis-stricken banks is not an alternative.

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From these considerations a couple of basic requirements for the management and status of banks are formulated by the Committee in terms of core paragraphs in the suggested Banking Act.

The *first* core paragraph proposed by the Committee is concerned with the solvency of banks. With a satisfactory capital base a bank would have a buffer against unexpected losses. With a reasonable amount of buffer capital, the incentives of bank managers and shareholders would basically coincide with those of the regulators. The health of the bank would be as much in their interest as in society's. Whether the capital base of a bank can be considered satis-

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factory or not depends of course on the risk exposure of the bank. Although this is the main philosophy behind the Basle Accord, it is also well known that the Basle rules in many respects are quite primitive and even in some cases misleading, especially the rules concerning the banking book. The Basle Accord will be updated and modernised, but since this probably will take time, the Committee has taken the view that the Basle capital adequacy rules are minimum standards, which could and should be refined and developed by national authorities.

The *second* general paragraph emphasises the importance of having well developed systems of risk management and risk control in the banks. It goes without saying that risk-based capital adequacy requirements without appropriate risk control systems are an empty shell. Also, one of the pillars of banking business (and that of other financial institutions as well) is controlled risk-taking. To discover that a bank does not have a clear strategy for its risk taking or a clear picture of its risk exposure is certainly an ominous sign.

The *third* main paragraph of the proposed new regulatory framework focuses on the transparency of banks. To make the measurement of banks' capital base and risk exposure meaningful they must be required to have high standards for their reporting and information systems. Business activities in the banking firm cannot be allowed to be too opaque.

The *fourth* main paragraph is an attempt to formulate a standard of good conduct for the banking industry as a whole. This is done in the intention to capture the possible negative externalities caused by a bank, which happens to fulfil the solvency and risk management requirements but whose business methods are considered to endanger the reputation of the whole banking sector.

By necessity the proposed main paragraphs are a bit vague in their formulations. The purpose is that they give as clear as possible a picture of what should be considered the main focus in the regulators' attempt to reduce the risk of a failure in one bank leading to the collapse of the payment system. This should also enhance the possibilities for the supervisory authorities to focus their attention on a major source of risk, systemic instability. The Committee proposes that the supervisory authority get a clear responsibility for implementing the framework given in the above-mentioned main paragraphs. This emphasises that the supervisory authority together with the Riksbank should make judgements on the whole banking and financial system as a summary statement of its investigations into how well the individual banks conform with the regulatory requirements.

It may help bringing concerns about financial stability to the forefront and provide the supervisory authorities with an agenda that is much more clearly focused on that task.

It is worth emphasising that we have spent time on presenting the proposed new banking legislation not because of over-confidence in the formal framework per se but because we think that it may help bringing concerns about financial stability to the forefront and provide the supervisory authorities with an agenda that is much more clearly focused on that task. The legislative and regulatory framework that was in place in Sweden when the crisis broke out was definitely lacking such focus.

Phase two – threats of payment system collapse

What we have discussed so far is the work that is aimed at preventing a crisis. The major focus has been on trying to detect and handle at an early stage tendencies toward macroeconomic inconsistencies that will in the end lead to serious financial disruptions threatening the stability of the financial system. We have also dealt with attempts at following more closely the developments among the most strategic players in the financial system, i.e. the banks. All that work has, however, focused on conditions when the banks (and other financial institutions) are still functioning reasonably well and the requirements set up by the regulators are (seemingly) met. Let us now continue our analysis of what we can learn from the crisis and look at what we have called the *second* phase.

The imminent risk of a payment system collapse was avoided through the government guarantee.

This phase is the short period when problems in the banking sector threaten to develop into a systemic crisis with a collapse of the payment system. It should be pointed out that the vulnerability of modern payment systems lies much more in the member banks' exposure to short-run interbank funding, especially from abroad, than in the traditional retail customer bank run problem. In the Swedish crisis, the imminent risk of a payment system collapse was avoided through the government guarantee. At first glance the only lesson to be drawn from the Swedish crisis experience might then be that the government should be alert and not hesitate to declare that it stands ready to issue a similar guarantee in case of a future emergency. In our view this oversimplifies the lessons from the Swedish crisis. It is true that the Swedish political system showed its capacity for prompt action when the crisis became acute. In many respects, the political situation was a bit special, however. Other crisis symptoms that need not necessarily be part of a banking crisis had created an atmosphere of national emergency of an almost war-like kind. The most spectacular illustration of this was the crisis packages agreed on between government and opposition (the social democrats) to rescue the fixed exchange rate, on which much of the confidence in the declared low-inflation regime seemed to rest.

In the future a banking crisis may very well erupt without other macroeconomic calamities having preceded it.

In the future a banking crisis may very well erupt without other macroeconomic calamities having preceded it (or developing simultaneously). Normally, the decision-making process in democracies is rather slow and often characterised by time-consuming wheeling and dealing, which could be devastating in a financial crisis situation. Since interbank funding can dry up extremely quickly – it could be a matter of minutes, there is very little room for hesitation in crisis situations. A clear mandate to an institution at arm's length from the political process to act as lender of last resort may be a natural alternative. This is of course one of the classical roles assigned to central banks. It has, however, been clearly demonstrated by a number of analysts of modern central banking that the main reasons for assigning a lender of last resort function to central banks were quite different and of little relevance for today's advanced financial systems. Today central banks still provide very short-term (intraday and overnight) lending facilities to banks, but they are typically part of the normal working of the payment system and more or less fully collateralised. These lending activities are performed by central banks not because they have unique access to liquidity, but because they have found it natural to take a leading role in the interbank clearing and settlement system. But in a world of well developed money markets the fully collateralised loans the banks acquire from the central bank could, under normal market conditions, as well be channelled via private institutions. In Sweden the Riksbank Act also contains a paragraph specifying the *lender of last resort* mandate: Under extraordinary circumstances the Riksbank may extend loans to institutions that stand under the supervision of the FSA without requiring full collateral. The spirit of the paragraph is the idea that last resort loans should be given to banks (or other financial institutions of vital importance) which have acute liquidity problems but are basically solvent. This is of course a prescription as easy to formulate as it is difficult to implement.

The consensus view among central bankers seems to be that reliance on general liquidity injections would not be enough in situations where a payment system crisis is imminent.

Some critics of the lender of last resort function have drawn the conclusion that since there is no reason why the central bank knows better than the market which banks are temporarily illiquid and which are basically insolvent, the central bank should abstain from directed loans. It should instead focus on injecting liquidity into the banking system through the ordinary monetary policy channel. Although there are few attempts to show rigorously the need for a lender of last resort role for central banks[6], the consensus view among central bankers seems to be that reliance on general liquidity injections would not be enough in situations where a payment system crisis is imminent. As mentioned, the time perspective in such a situation is extremely short and the uncertainty among the private actors in the financial system about each other's positions may be so deep that the system gets paralysed. Regardless of how much liquidity the central bank injects into the financial system, it is doubtful that the liquidity will be channelled to those banks, which need it quickly enough to avoid systemic problems. Central bank lending aimed directly at the illiquid banks seems to be the only alternative in the short run to prevent the liquidity problems from quickly developing into insolvency problems.

There also seems to be a consensus that the task of the central bank really is to provide liquidity to the banking system, not to take responsibility for the longer-term financing or even recapitalisation of banks that may turn out to be necessary. Consequently, last resort loans from central banks should clearly be short-term. The basic idea would be that central banks could offer "bridge" loans at short notice and that other sources, ultimately the government if that turns out to be necessary, should come in as soon as the picture gets clearer, allowing the central bank loans to be repaid.

Again, this simple idea is easier to formulate than to put into practice. Not much reflection is needed to see that the question of delegating a lender of last resort role to the central bank cannot be considered in isolation. The lender of last resort function should be seen as one of a number of ingredients in a well-designed crisis management package. In a broader sense, it could also be considered as part of the general safety net that is built around the financial sector, where deposit insurance and regulation and supervision of banks and other financial institutions are other ingredients.

The central bank cannot take on the responsibilities for last resort lending without reasonable knowledge about the health of the banks.

It seems obvious that the central bank cannot take on the responsibilities for last resort lending without reasonable knowledge about the health of the banks that get loan support and of the banking system as a whole. One piece in the information process is the ongoing attempts from the central bank to make judgements concerning the health of the banking system (see Phase one above). A crucial issue here, however, is what measures the central

[6] One interesting example is a paper by Mark Flannery, "Financial Crises, Payment System Problems, and Discount Window Lending", Journal of Money, Credit, and Banking, Vol. 28, No. 4 (November 1996, Part 2).

bank and/or supervisory authority could take when they have detected tendencies toward financial weakness in a bank that might develop into a bank failure with systemic consequences. At the time of the Swedish banking crisis (and this is the case even today) the supervisory authority did not have (nor did the Riksbank) much legal support for any actions going further than declarations about unsound behaviour in the weakening banks. The only really powerful measure at the disposal of the supervisory authority was the withdrawal of the banking licence. The problem with this measure is that it is usually too strong. In impending payment system crises, the threat of using this measure would most certainly contribute to aggravating the crisis.[7]

During the acute phase of the Swedish banking crisis no bank fell under the capital adequacy requirements.

The only clear triggering point was when a bank's capital base dipped under the level required by the capital adequacy rules. Formally, the consequence of such an event should be withdrawal of the licence, if the bank was not promptly recapitalised. On the one hand this would, as mentioned, be too crude a measure to be taken in a delicate situation, on the other hand the capital adequacy measures seem to react with a considerable lag to deterioration in the financial health of a bank. During the acute phase of the Swedish banking crisis, for instance, *no* bank fell under the capital adequacy requirements.

In short, there was not much of a formal framework for the crisis managers to lean on during the acute phase of the Swedish banking crisis. Therefore most actions had to be improvised. With the government guarantee issued in time to prevent a payment system collapse, the lender of last resort function of the central bank was not really tested.[8]

In our view, the regulatory system should be supplemented with a framework that provides a reasonable environment for the lender of last resort function of the central bank. What we have in mind is the creation of a legal basis for some kind of trigger point system. Based on this system, the supervisory authority (in close co-operation with the central bank) can take corrective steps vis-à-vis banks that seem to be entering the danger zone. These actions should include the final removal of the incumbent management. They should also include requirements

[7] In the case of the Riksbank, the only sanction is to exclude a bank from the payment system run by the Bank – the RIX system. This would most certainly have a rather negative effect on payment system stability and is therefore a sanction that is both very drastic and very difficult to use in practise.

[8] It should be added that the Riksbank did act as lender of last resort on a few occasions before the government guarantee was announced. After that the Riksbank formally acted as lender but the government had of course taken over the risk. The "bridge loan" phase, for which we have argued that the modern version of the lender of last resort facility is designed, was not needed, because of the prompt government intervention.

for recapitalisation without consent or claims of priority from the former shareholders. A proposal on how such a supplement to the regulatory framework should be designed is one of the tasks given to the above mentioned Government Committee.[9]

The Bank has set up an action plan based on the experiences of acting as lender of last resort during the ERM crisis in 1992.

To be prepared for its role as lender of last resort, the Bank has set up an action plan. This is based on the experiences of acting as lender of last resort during the ERM crisis in 1992. The plan consists of the logistics of crisis resolution, answers to some legal questions connected with extraordinary lending and a description of the documentation which is necessary should the Riksbank need to act as lender of last resort. The plan also includes an information strategy and some guidelines for crisis analysis.

The plan centres around a crisis staff consisting of key Riksbank personnel as well as representatives of the Financial Supervisory Authority whose task it is to recommend actions to the Executive Board of the Riksbank.

A financial system analysis group will also be set up. A parallel group made up of members of the Bank's trading room will monitor developments in the financial markets. The financial system analysis group is supposed to base its work on the ongoing analysis of bank profitability, case studies of different types of financial disturbances and legal evaluation on the Riksbank's options. The legal and technical analysis will provide guidance to the range of actions which the Riksbank can take, how lender of last resort activities can be carried out so as to minimise moral hazard, and the freedom with which the Riksbank may target its lending in accordance to the legislative framework.

Phase three – crisis management

There is no foolproof system that can completely eliminate the danger of a new bank crisis.

The analysis of financial system stability mentioned earlier attempts to identify unstable situations in the banking sector at an early stage. Building on the lessons from the past, we hope to avoid this kind of problem or limit its scope. Although the Riks-

[9] A reasonable starting point for this work would be an analysis of the system for prompt corrective action (PCA) and structured early intervention and resolution (SEIR) recently codified in the Federal Deposit Insurance Corporation Improvement Act (FDICIA) in the USA. Of course, the legal system, the structure of the banking sector and the way supervision is organised are all very different in Sweden as compared to the USA. The framework to be established must therefore necessarily get a rather different design.

bank has increased its competence and preparedness, there is no foolproof system that can completely eliminate the danger of a new bank crisis. However, by drawing lessons from the crisis management in the early 1990s, the likelihood of a successful management of future crisis can be increased.

The task of the central bank is clearly to provide emergency liquidity, not to get involved with recapitalisation.

These are basic principles that are to be followed in a potential future crisis. The crisis management policy should be characterised by a great degree of openness, in combination with information efforts towards market participants, both regarding the extent of the problems faced and the measures to be taken. This contributes to reducing uncertainties in the market that tend to create even larger problems. The authority in charge of implementing the support policies should be kept separate from the political sphere and from the central bank in order to avoid a conflict of interests. In the Swedish banking crisis, the Ministry of Finance set up the Bank Support Authority to deal exclusively with all matters of unwinding, recapitalisation, etc. of the ailing banks. The task of the central bank is clearly to provide emergency *liquidity*, not to get involved with recapitalisation. Experience also shows that it is problematic for a supervisor to be responsible for the actual management of ailing banks. The authority should have an analytical framework guiding the work of bank reconstruction. It should include a strategy as to the desired future structure of the banking sector. The risk for moral hazard should be minimised: support measures should be constructed so that the credit institutions have the incentive to use them as little as possible. Official support should, whenever possible, take the form of "participation capital" rather than loans – the aim being to benefit financially from the "upside" when the bank once again becomes profitable. Some form of asset management company should be established to handle non-performing and otherwise impaired loans.

Sweden came out of the acute phase of the crisis swiftly and at a relatively low cost.

In summary, considering the extent of the problems in the bank sector in the early 1990s, Sweden came out of the acute phase of the crisis swiftly and at a relatively low cost. This was due to a good portion of luck but also, we believe, successful crisis management. The key elements in the successful management of the crisis of 1992 were the speed with which confidence in the financial system was restored and the efficient division of tasks that involved the creation of the BSA – a separate entity from both the FSA and the central bank. The main impression is that the scheme set up for the BSA was appropriate and that the implementation was performed in accordance with this scheme. Our conclusion is that future crisis management in phase three could draw heavily on the experiences of the BSA.

Regarding the acute phase of the crisis, the rapid restoration of confidence was achieved through the unlimited government guarantee followed up by distinct information efforts directed towards both domestic and international market players. This demanded a high degree of political consensus, which fortunately could be achieved at that moment. However, although this was a crucial aspect of the successful management of the crisis, there can be no certainty that it will be present in potential future crisis. Clearly, the alternative to this "political consensus" approach in the preservation of confidence is given by the central bank's role as a lender of last resort.

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