Financial stability in Sweden and the euro

The risks in the financial system would be affected in a number of ways by a Swedish changeover to the euro. This article discusses how the banks and payment system would be affected, the extent to which systemic risks would be influenced, and how the government's ability to manage financial crises would change in the event of Sweden joining the Eurosystem. The effects are numerous and often difficult to distinguish from the general integration of financial markets that has taken place in the EU over the past decade. They also involve different developments, which is why it is not possible to give an unequivocal answer to whether the euro would entail an improvement or deterioration in the stability of the financial system.

A Swedish decision to adopt the euro[68] would change the economic map in several respects. The public debate thus far has mainly focused on the consequences of reduced exchange rate risk and the effects on factors such as economic activity and macroeconomic stability. The significance of joining EMU for the stability of the financial system has not been discussed in detail, however. The aim of this article is to analyse the consequences of potential Swedish participation in EMU for the stability of the financial system in Sweden.[69]

Almost all financial transactions are dependent on some exchange of payment. The availability of a safe and efficient payment system is therefore important for the functioning of the economy. Essentially, financial stability activities aim to prevent crises that threaten the payment system and thereby also economic growth in the long run. This preventive work is carried out in a number of ways which include ensuring the safety and efficiency of vital systems and making sure that important participants are given the incentive to manage risks in a safe and efficient manner. In addition to the preventive work, it is important to establish routines in good time for managing a potential crisis that could threaten the payment system, in the event such a crisis should occur.

The discussion in this article of the effects of the euro on stability in the financial system has been broken down into four questions. How will a Swedish changeover to the euro affect the individual financial institutions, the systemic effects and contagion risks between the institutions, the financial infrastructure, and the possibilities and tools for managing a crisis should one occur? An additional aspect concerns how supervision and oversight of financial stability should be organised in the EU. This is discussed in a separate box.

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68 Technically, the issue at hand is whether Sweden will participate fully in Stage Three of EMU. The first stage was initiated with the abolition of all obstacles to the free movement of capital in the EU. The second stage, which began in 1994, involved a number of steps including the establishment of the EMI (the forerunner to the ECB), stricter requirements for the public finances of Member States and greater independence for the national central banks. Stage Three began in 1999 with the formation of the European System of Central Banks (ESCB), the introduction of the euro in eleven EU Member States, and the formulation of a single monetary and exchange rate policy by these Member States. Twelve countries currently participate fully in EMU. The following discussion does not distinguish between the different stages of EMU.

69 The discussion focuses on how Swedish participation in EMU would affect stability in the financial system. Thus, the analysis is not a complete study of the consequences of a Swedish changeover to the euro. In 1994 and 1997, the Riksbank considered the economic advantages of participating in EMU to outweigh the disadvantages. The Riksbank will not be participating in either campaign ahead of the coming referendum.

The article ignores the immediate practical effects that can arise in the transitional phase, i.e. before and during the actual introduction of the euro. Instead, the article presupposes that the euro has been introduced and focuses on the long-term effects of this. One problem when analysing a Swedish changeover to the euro is that several of the consequences are only indirect and discernable over the long term. This renders comparisons with other countries that have already introduced the euro more difficult. While the effects on these countries can already be seen in certain areas, e.g. foreign exchange trade, fixed-income markets and asset management, the adjustment process is still in progress in others. The lack of distinct effects in these countries does not necessarily imply, however, that the forces driving long-term changes are insignificant. In several important areas, the adaptation process could take many years. This applies in particular to issues concerning competition, payment systems, contagion risks, etc. As a result, there are no clear boundaries defining immediate adjustment effects and long-term, permanent consequences.

A common risk involved in forward-looking analyses is that the discussion becomes speculative and the results are interpreted as a description of the situation in, say, five years' time. That is not the purpose of this article. The purpose instead is to describe the economic driving forces and trends that will arise from Swedish membership in EMU and thereby also the expected *direction* of these changes. Although a monetary union entails the removal of obstacles to cross-border activities, there are other obstacles – e.g. legal, technical and cultural differences – which could be of great importance for individuals' behaviour. Consequently, the scope and time horizon for the changes are uncertain.

However, it is not simply EMU alone that will determine how the economic map will change. Other determinants include globalisation, the development of new technical and financial services, the increasingly efficient and liquid securities markets, and amendments to regulations, not least due to the work on the EU internal market. Sweden will be affected by all these trends – including EMU – whether or not we adopt the euro. Although the article is focused on the consequences of Swedish membership in EMU, it is not always possible to separate these effects from more general trends.

The financial institutions

The participants that are most important for financial stability – primarily the banks, marketplaces and clearing institutions – would be affected in several ways by Swedish membership in EMU. The following section discusses the effects on the individual institutions.

- *Changed market conditions run the risk of increasing vulnerability.* Internationalisation and the work on the internal market will lead – regardless of the euro – to stiffer competition. A single currency is likely to intensify the pressure of competition in some product segments, however, e.g. through better price transparency. In addition, EMU would result in a reduction in the sales of certain services. Some foreign exchange trade would disappear. The opportunities to act as correspondent bank for foreign banks are likely to diminish. Services such as asset management and trading in securities, particularly in fixed-income securities, would be exposed to stiffer competition. For the banks, these effects should in all likelihood lead to both weaker earning capacity and squeezed profit margins. It is not certain that the banks would be able to compensate themselves through increased income from other services, e.g. international investment banking or through higher margins on services to other customers such as households and small and medium-size businesses. If Swedish participation in EMU also results in a lower level of interest rates, in particular long-term rates, this could reduce net interest income, thereby squeezing the banks' profit margins further. Lower long-term interest rates could partly be explained by the disappearance of exchange rate risk premiums. At the same time, a changeover to the euro could make it easier for the Swedish banks to compete internationally. While they may not be large by international standards, they are relatively efficient. Participation in EMU should also lead to a reallocation of various securities portfolios, which should enhance the possibilities of generating greater income for the banks during a period of adaptation. All in all, however, the assessment is that the euro, as a result of stiffer competition and a reduction of certain services, would lead in the long term to poorer earnings and lower profits for the Swedish banks. Consequently, this is likely to increase vulnerability and somewhat weaken the banks' capacity to absorb different kinds of risks and shocks.[70]

- *Greater liquidity in securities markets may reduce dependence on bank financing and entail lower borrowing costs and greater opportunities for reducing risks.*
  EMU would encourage the trend towards efficient and liquid securities markets. In addition, the Swedish securities markets would become a more integral part of the European markets. On the whole, this should reduce premiums for liquidity and exchange rate risk and thereby also the costs of borrowing in the securities markets. As the proportion of corporate borrowing via the securities markets increases, the economic costs of a bank failure would decrease. Furthermore, borrowing costs for the Swedish banks should decline. Although the Swedish banks may lose the advantage they currently enjoy when borrowing in the Swedish krona market, it is likely that they would retain their advantageous borrowing position with private customers in the foreseeable future. Borrowing costs could therefore fall somewhat. As participants in a larger, more anonymous market, however, it is probable that the banks' credit ratings

70 This indicates a conflict between stiffer competition (positive) and greater risk of financial instability (negative). Healthy competition is a prerequisite for efficient institutions, however, and a system will only be stable in the long term if it is efficient. A protected sector, on the other hand, tends to become inefficient and thereby also sensitive to financial disturbances.

would play a significant role for these borrowing costs. Changes in borrowing costs may therefore vary between the Swedish banks. Greater liquidity in securities markets would also facilitate the use of securitisation and credit derivatives. Swedish membership is likely to improve access to these markets. This would afford the banks greater opportunities to both capitalise on new sources of financing and eliminate different kinds of risk, which should improve the conditions for maintaining stability in the financial system. On the whole, somewhat lower borrowing costs and better capabilities for managing risk should reduce the banks' vulnerability, even if the size of this effect is uncertain.

- *Structural transformation may accelerate in the long term.* Due to factors such as EMU, cross-border integration has already begun in the securities and payment area.[71] For the banks, structural transformation in Europe thus far has mainly entailed national rather than international consolidation.[72] There are exceptions, however, e.g. Nordea. In many countries a number of banks have become so dominant that cross-border structural transformation is the only remaining step. Although numerous obstacles exist, e.g. of a legal nature, EMU could in the long term facilitate further structural changes in the banks. The integration of payment systems and securities trading could increase international economies of scale and reduce the number of national barriers. The short-term effect should not be exaggerated, however.[73] The structural transformation itself would also entail strategic uncertainty for many producers of financial services. The need for new strategic choices together with greater competition would increase the risk of strategic errors in coming years, which could have implications for financial stability. At the same time, the structural transformation would create opportunities to both rationalise the production of financial services and render them more efficient.

The effects described above show that Swedish membership in EMU can be expected to affect individual institutions in several ways. Although it can be difficult or impossible to discern the effects of EMU separately, the overall analysis here indicates nevertheless that the individual institutions could be exposed to more intense competition, at least within certain segments, and that this could increase the vulnerability of the banking system. A changeover to the euro should also be capable of reducing borrowing costs somewhat and enabling better risk management, while also facilitating cross-border structural transformation between the concerned institutions in the long term.

71 See Chapter 4 for a further description.
72 See, for example, Boot, A. (2003). "Consolidation and Strategic Positioning in Banking with Implications for Europe", Working Paper.
73 The clearest examples of cross-border bank mergers are found in the Nordic market, between countries with highly different strategies as regards the EU and the euro.

Systemic effects and contagion risks

In addition to the direct impact on financial institutions, a Swedish changeover to the euro could affect stability in the financial system in a wider sense. Systemic risks in the financial system can arise in two ways.

Firstly, there are macro risks, e.g. if several banks encounter problems simultaneously. If many banks have large exposures in one company or sector, such as the property sector, and this company or sector experiences financial difficulties, the effects on financial stability could be significant. Secondly, there are direct contagion risks. Problems in one bank can spread quickly and easily to other banks through the extensive commitments they normally have with one another.

SYSTEMIC EFFECTS

Swedish participation in EMU would affect macroeconomic development in several ways. The discussion here is confined to three effects: the effect on the risk of loan losses, on cyclical fluctuations in the economy, and on industrial structure.

- *The risk of loan losses may be affected.*
  One of the aims of EMU and the internal market is to provide companies in all sectors with a larger domestic market. While this is positive, it is also likely to make it more difficult to assess market potential and competitive conditions for many companies. Some companies would become successful while others may run the risk of encountering problems with profitability. The problem would be most evident among small and medium-size companies, as well as during the period when companies are required to adapt to new market conditions. From the banks' perspective, it could also become more difficult to assess credit risk in a larger, more integrated market. This could lead to an increase in loan losses. While a large part of this effect is due to the internal market rather than EMU, the latter also contributes to this integration and thereby to the effect. At the same time, a monetary union is likely to entail smaller fluctuations in interest rates and exchange rates. This would provide households and companies with the opportunity to operate in a more stable macro-environment, which could reduce the risk of loan losses. In other words, the risk of loan losses should be affected to a relatively smaller degree by macro-variables such as interest rates and exchange rates, and to a relatively larger degree by sector- and company-specific factors. Even if the net effect is uncertain, this indicates that loan losses may become less systemic in nature if Sweden joins EMU.

- *The effects of large macroeconomic shocks may be aggravated.*
  A single monetary policy may entail less scope for managing certain shocks in the real economy, in particular asymmetric shocks. Although a currency union fosters a stable macro-environment under

normal conditions, thus reducing the risk of shocks, there is a danger that the inability to conduct domestic monetary policy would make it more difficult to prevent large macroeconomic shocks from giving rise to financial disturbances of a systemic nature.

■ *Specialisation may increase.*
The integration of markets in the euro area could lead in the longer term to a structural transformation with increasing specialisation in the real economy. Therefore, exposure to individual companies and sectors may increase. This could result in larger and larger companies that would become increasingly significant for the risks in the national banking systems. Even if the companies do not become larger, there are theoretical arguments to support the view that corporate structure in certain regions and countries could be concentrated to a greater extent to certain sectors as a result of EMU. While there are no clear signs of this as yet, it could reduce the degree of diversification in the banks if a significant part of their borrowing was to remain domestic. This could lead to an amplification of the macroeconomic fluctuations both regionally and nationally. At the same time, a single currency facilitates international diversification of loan portfolios. A larger, more liquid securities market would create more favourable conditions for eliminating some of the risks via these markets. The increased opportunities for diversification could be limited, however, by greater covariation in economic activity between the various Member States of the euro area. While it is genuinely difficult to make an overall assessment, it is likely that the opportunities for reducing risk would be the more important factor.

DIRECT CONTAGION RISKS

Normally, the banks also have large direct exposures to each other. In principle, the banks encounter four kinds of counterparty and settlement risks.[74] These arise via foreign exchange settlement, short-term liquidity management, securities trading, and the clearing and settlement of different financial instruments. The size of these transactions and the payment system's dependence on the banks are such that any problems could have dramatic consequences for stability in the financial system.

■ *The need to manage foreign exchange exposure would decrease.*
Swedish membership in EMU would reduce some of the non-financial companies' foreign exchange exposure, while also decreasing foreign exchange trade. This should result in less extensive exposures for the banks to manage. Thus, it is likely that the foreign exchange exposure in Swedish banks would decrease.

74 See also the chapter on the banks´ borrowers for a discussion of the banks' counterparty risks.

- *A diversification of counterparty exposures would entail lower systemic risks.*
  As the four major Swedish banks currently dominate in Sweden, the number of participants in the krona market is limited, thus forcing the banks into considerable exposures to each other. An appreciably larger number of potential counterparties exist in the euro area, enabling the spread of exposures over several participants, i.e. the concentration to individual counterparties can be reduced. The risk of financial problems in one bank spreading to others would thus fall. This applies in particular to the management of short-term liquidity, i.e. short-term loans from and deposits in other banks, but also to a number of longer-term contracts. The probability of encountering counterparty problems increases with a larger number of counterparties. The risk of one counterparty experiencing financial difficulties becomes greater if there are a hundred counterparties than if there are only three. However, a larger number of counterparties is also likely to lead to a reduction in the individual amounts of these exposures, which is why the banks' capacity to manage the problems without public intervention would probably improve. This leads to the tentative conclusion that a Swedish changeover to the euro would increase the risk of the banks incurring losses from certain counterparty exposures but that the amounts involved would be smaller and thereby more manageable. It is primarily the concentration of these exposures that would affect the contagion risks and thereby stability in the financial system. The extent to which the Swedish banks choose to alter their exposure profile if Sweden adopts the euro will depend on their liquidity management and their confidence in other potential counterparties.

- *The banks' credit ratings may become more important.*
  Compared with a small market in which all the significant participants know each other well, the importance of information about creditworthiness will probably increase in a larger, more integrated European securities market. Consequently, if Sweden adopts the euro, the banks' credit ratings could have a greater impact on both borrowing costs and the choice of counterparty in the interbank market. With more counterparties, the need for and dependence on external credit ratings could therefore be expected to rise. If different credit ratings are available, this could have different consequences for the four major Swedish banks.

It should be noted, however, that the banks' exposures will diminish for several reasons whether or not Sweden joins EMU. A substantial proportion of the banks' counterparty exposures today are short-term settlement risks for foreign exchange transactions. These will be reduced significantly when the Swedish krona, during 2003, becomes a member

The European systems for large-value interbank payments

By definition, payment systems are closely-related to a currency. A single currency makes it natural therefore to have a common payment system. Prior to the beginning of Stage Three of EMU, the relevant EU authorities realised the need to have a common payment system in order to manage the single monetary policy and to render large-value, cross-border payments more efficient. Consequently, an RTGS system[75], TARGET,[76] was developed for large-value interbank payments.

One disadvantage with RTGS systems is that they require considerable liquidity, i.e. a bank may have to send a large number of payments before receiving any itself and thereby incurs a temporary deficit. From the point of view of stability, it is important that large-value payments are settled in central bank money, as the central bank is the only party that can create unlimited liquidity in the domestic currency and therefore carries no credit risk. In Sweden, the Riksbank currently manages the RIX system, where the banks can borrow unlimited intraday credit as long as they can provide satisfactory collateral. TARGET is not a new system but has essentially the role of linking and harmonising the existing national systems for large-value interbank payments where settlement can be made in central bank money.

One disadvantage with TARGET's existing structure is that cross-border euro payments are more expensive than domestic payments. The maintenance of many systems – one in each country – would be expensive in the long run. With a single currency, it would be easier to spread the fixed costs over a larger number of payments and thereby produce a more efficient solution.[77] Another problem is that the complexity of the current system makes it sensitive to disturbances, at the same time as increasingly stricter requirements on operational security have pushed up costs. Neither has the system been adapted to accommodate an enlarged EU with more than 15 members. Consequently, work has begun on developing a new common RTGS system for large-value interbank payments, TARGET2. This system will also imply settlement in central bank money. However, the new system will not be introduced until after a potential Swedish entry into EMU in 2006.[78] It is unlikely that payments, including cross-border payments, will have to pass through the different national systems first but will instead be debited or credited directly to the sending/recipient bank account regardless of the bank's location within the EU.

The introduction of a simpler, more direct system for large-value interbank payments in Europe is independent of whether or not Sweden adopts the euro. The Swedish banks already use the TARGET1 system to make certain payments in euro. The number of euro-based transactions in the Swedish part of TARGET is small, however – around 300 payments per day – compared with 4,500 krona-based transactions per day. Nevertheless, Swedish membership in EMU would make the structure of the future TARGET2 system an important issue for the Swedish banks.

In addition to TARGET, there are commercial systems for euro payments. It is only in TARGET, however, that real-time settlement is made continuously during the day in central bank funds. For euro payments, the second largest system, after TARGET, is Euro1.[79] It is also the most frequently used system for cross-border euro payments. Euro1 is used for both interbank and customer payments. The four major Swedish banks all participate in Euro1 and have chosen to channel their euro payments to a large extent via Euro1, as the cost per transaction is lower than in the current TARGET system.

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75 RTGS stands for Real Time Gross Settlement, which means that payments are settled individually and immediately, instead of settling them in batches. This means that at the same time bank A pays bank B, bank B will have the funds in its account and will be able to use them to make new payments. This also reduces the counterparty risks that arise in the payment systems.

76 TARGET stands for Trans-European Automated Real-Time Gross Settlement Express Transfer system, and comprises the fifteen national payment systems of the EU. The system enables the central banks to be connected to approximately 5,000 commercial banks in the EU.

77 Payment systems are generally characterised by economies of scale and network effects. It is relatively expensive to build the infrastructure but relatively inexpensive to process an individual payment. The more parties that join a system, the greater the benefits will be for all the participants.

78 It is expected that the system will be ready to put into operation some time between 2007 and 2010. The exact structure of the TARGET2 system has not been decided, but the system will be based on three principles: i) harmonised core services available to all participants, ii) a single price structure and iii) cost-effectiveness, i.e. no subsidies. TARGET2 will also continue to allow national systems in addition to the common system. However, the price in each system will be based on the price level in the system that – with full cost coverage – demonstrates the lowest cost. Thus, most likely there will eventually be a highly limited number of systems in Europe.

79 Euro1 is managed by the Euro Banking Association (EBA), which consists of more than 70 banks in Europe.

of CLS.[80] Other risk-reducing changes that are independent of EMU include Newclear, VPC's new system for securities settlement. In other words, this situation will develop entirely irrespective of EMU or of a potential Swedish adoption of the euro.

All in all, a Swedish changeover to the euro should in the long term entail positive macro effects on financial stability on the one hand due to the risk of loan losses becoming more company-related and less macro-related and systemic. On the other hand, negative effects should arise from the fact that it would no longer be possible to use domestic monetary policy to manage large macroeconomic shocks. Of greater importance for financial stability is the positive effect that would stem from lower concentration in counterparty exposures. All factors point to a resultant decrease in contagion risks, although at the end of the day it is the actions of the individual participants that would determine the exposures and thereby also the level of dependence between the banks.

The payment system

It is of vital importance for the economy that payments can be made in a safe, efficient manner. To ensure this, it is necessary to have a well-functioning payment system. In reality, it is specifically the role of the banks themselves in this infrastructure that motivates the special public interest in the banks with regard to safeguarding stability in the financial system. The payment system comprises the instruments of payment as well as the individual systems for managing the payments. Examples of relevant systems in Sweden are the bank giro system for retail payments and the RIX system for large-value interbank payments.

As a consequence of EMU, the European payment systems are currently undergoing a process of change.[81] This development will take place whether or not Sweden joins the euro, but it will of course be more important in the event of Swedish membership. This would have several consequences for the payment system in Sweden.

- *A specific Swedish system for large-value interbank payments would be unnecessary.*
  If Sweden joins EMU, there will be no need for a specific Swedish system for large-value interbank payments. A more integrated system, such as the single platform in TARGET2, will entail lower costs and higher efficiency than the current RIX system, as there will be greater opportunities for economies of scale.

- *Volumes from the Swedish banks are likely to decrease in the systems for large-value interbank payments.*
  A Swedish changeover to the euro could imply a fall in the volumes of interbank payments from the Swedish banks. One reason is that

80 CLS stands for "Continuous Linked Settlement" and is a special purpose bank for managing global settlement of foreign exchange transactions. CLS enables simultaneous settlement of both payments in a foreign exchange transaction irrespective of time zones, thus eliminating so-called Herstatt risk. CLS is discussed in more detail in the chapter on financial infrastructure.

81 Please see the boxed text for a discussion of the systems for large-value interbank payments.

many of the transactions performed today in RIX are krona payments to and from foreign banks' accounts in Swedish banks. Within the eurosystem these payments will become euro flows for which the foreign banks in the majority of cases should already have established other channels. However, the number of transactions will not be affected only by a Swedish adoption of the euro. Other changes such as the introduction of Newclear and CLS Bank will have an appreciably larger impact on the banks' payments, for instance. The netting of foreign exchange settlement performed in CLS will reduce volumes of interbank payments via RIX in any case.

- *The risks in the payment systems would change.*
  As liquidity can be managed more efficiently in a large system, it would be possible to reduce contagion effects between the banks following entry into EMU. Thus, it would also be possible to reduce the risks of financial difficulties in one institution having detrimental effects on stability in the financial system. At the same time, dependence on a single system would increase. In this system, operational problems would have significant consequences for the entire euro area, making the choice of technical solution and business continuity planning more important. On the other hand, a single system should improve the chances of finding alternative operational solutions to potential crises. It is often simpler and less expensive to add more security features to new systems than to adapt existing systems to a higher level of operational security. It is likely that the resources to be invested in both prevention and the management of operational problems in the event of a crisis would depend partly on the ownership structure for the chosen system. It is not clear what the optimal level of security and business continuity planning is from an economic perspective. The system would attain such a level of significance for the economy that the authorities may find it difficult to accept far-reaching problems. There is a risk that the problem of moral hazard would lead commercial participants to underinvest in security solutions, while theoretically there may be an incentive for public authorities to overinvest in comparison to what is economically efficient. A good analysis of the risks and consequences for the existing payment systems forms the basis for decisions on a reasonably balanced continuity solution. An ECB committee, PSSC, is currently working on these issues.

- *Cross-border retail payments may become more efficient.*
  Today, the Swedish banks use primarily the Euro1 system for euro payments. In the event of a Swedish changeover to the euro, it is likely that the banks will continue to do so as long as the prices in the TARGET system do not fall. Retail payments are presently both slower and much more expensive if made cross-border than if made domestically. The EBA is planning to introduce a new system in summer 2003 that will enable cross-border retail payments to be settled not just individually but also in batches. This is likely to re-

duce the costs of small euro payments, thus contributing to a more efficient internal market with larger cross-border payment flows. From an economic point of view, this would entail a considerable efficiency gain. Nevertheless, it is difficult to expect changes in retail payments to have a significant effect on stability in the financial system in the short term. They could, however, promote integration and thereby also structural transformation in a wider sense.

- *The integration of retail payment systems may have significant implications for long-term bank structure.*
  The development of more efficient systems for cross-border payments could in the long term also affect the present distinctly national characteristics of the banks at present[82]. For the really big companies, national boundaries are not of great importance. The banking market is already international in nature for these companies. For households and small and medium-size companies, however, the market is still largely national. There are several reasons for this. Banking legislation, standards and traditions differ from country to country. Another probable reason is that a number of retail payment systems are still national in nature. The availability of important infrastructure can often be a precondition for efficient competition. The current dissimilarities between the national retail payment systems are one of many barriers to entry. If the systems for retail payments between euro countries were to become more efficient and more standardised, this could have significant long-term consequences for structural transformation in the banking sector as well as for the opportunities for banks to compete outside the domestic market, even for services aimed at households and small and medium-size companies. The internationalisation of the banking structure in Europe would be stimulated and the trend towards a European banking market would accelerate. As the new systems for retail payments are euro-based, the largest potential earnings ought to be most attainable after a Swedish adoption of the euro. Having the euro as legal tender in Sweden would increase the chances for Swedish companies and households to benefit fully from this development.

- *The integration of payment systems would have implications for supervision and oversight.*
  The new pan-European systems, such as those for payments, run the risk of becoming so large that the authorities will be unable to accept any serious problems. The need for public intervention in the event of a crisis, and thereby also supervision and oversight under normal circumstances, could therefore change as a result of EMU. The strictly national responsibility of the public authorities would need to be modified and replaced by a more international coordination of supervision and oversight. Such coordination already exists in

82 For a discussion of the integration of the financial infrastructure, see also the chapter on this infrastructure.

various forms.[83] However, coordination is also associated with the risk that national supervision, oversight and management of financial crises would not fully heed potential international contagion problems. The more advanced integration becomes in the banking market, the greater the reason to introduce a more central form for supervision and oversight of financial stability in order to internalise the contagion problems that exist. In the future of EMU, the need for more centralised responsibility for financial stability at EU level can therefore not be ruled out.[84] At the same time, it should be noted that if EMU in the long run leads to a more integrated market for financial services, the banks of today would be small participants in this market. This would lessen their importance for financial stability, which would reduce the need for public intervention to safeguard stability in the financial system. While the banks may become less systemically important, the infrastructure may become more important as a subject for oversight.

All in all, EMU has produced greater integration of the payment systems in Europe. This should lead to efficiency gains and in the long run to integration of the banking market via, for instance, integrated retail payment systems in Europe. This will take place irrespective of Sweden's decision on EMU, although Swedish participation is likely to improve the chances for Swedish companies and households to avail themselves of these efficiency gains. In the long term, the integration of payment systems could facilitate the creation of a pan-European banking market, which would also have considerable consequences for the authorities' oversight and supervision of this sector.

Crisis management

Any crisis that threatens stability in the financial system must be dealt with, in particular to avoid a situation where the payment system ceases to function. The biggest threat is if one or more institutions – in practice one or more banks – of importance for the payment system encounters financial difficulties. If the bank is solvent but has liquidity problems, the central bank can come to its aid by providing emergency liquidity assistance (ELA).[85] If the bank is insolvent, the best thing is usually to treat it like any other company. This involves the owners providing a capital injection or allowing the bank to go into bankruptcy. In certain circums-

83 For example, the EBA operates under the supervision and oversight of the ECB. Furthermore, the banks' international payments are entirely dependent on SWIFT (Society for Worldwide Interbank Financial Telecommunications), which is a bank-owned network for financial messages. In addition, CLS bank manages the risks involved in foreign exchange settlement. Technically, SWIFT comes under the responsibility of the Belgian authorities and CLS under US responsibility, but the degree of international cooperation is significant in both cases.

84 The implications for supervision are discussed further in the box in the next section. See also European Economic Advisory Group (2003). "Financial Architecture", Chapter 4 of "Report on European Economy 2003", CESifo, and Stolz, S. (2002) "Banking Supervision in Integrated Financial Markets: Implications for the EU", CESifo Working Paper No 812, July 2002.

85 In practice, it is difficult to distinguish between a bank with liquidity problems and a bank with solvency problems, especially given the time pressure under which decisions often have to be made.

tances, however, a bankruptcy may have considerable negative effects on the payment system and thereby also on the economy in general. The government may then have to provide some form of financial assistance to the bank. As the costs of providing assistance to insolvent banks can be substantial, the government is the only party that can serve as guarantor for this kind of assistance. Ultimately, solvency assistance is thereby based on the right to levy taxes. There is good reason, however, to refrain from assisting insolvent banks, as it creates problems of moral hazard. In the event that assistance is provided, it should be given in such a way that does not save the shareholders from incurring losses, which is why assistance should target primarily the bank's lenders.[86] Another reason to refrain from assisting insolvent banks is that it could conflict with the EU's prohibition of government support. Instead, it is often better to attempt to limit the harmful effects of a bankruptcy, e.g. by ensuring that settlement procedures are conducted in a smooth manner. Should a bank become insolvent, it may also be necessary to provide ELA to solvent banks in order to prevent contagion effects of a systemic nature. The question here is whether and in what way EMU will affect the government's ability to manage crises efficiently.

- *The Riksbank would continue to be responsible for ELA.*
  According to current regulations for the European central banks, the national central banks are responsible for promoting financial stability. As early as 1999, the ECB stipulated that "the competent NCB takes the decision concerning the provision of ELA to an institution operating in its jurisdiction. This would take place under the responsibility and at the cost of the NCB in question."[87] Consequently, even if Sweden were to join EMU, it is the Riksbank that, under current regulations, would be responsible for decisions regarding the provision of ELA to Swedish institutions.

In practice, however, EMU entry could affect the government's possibilities to manage a crisis in the financial system. There are several possible effects in this regard.

- *ELA would require coordination.*
  One consequence of joining EMU is that the ability of a national central bank to provide unlimited ELA changes. As ELA affects liquidity in the economy, it can therefore have undesirable effects for monetary policy. The exchange of information with the ECB and the other central banks of the euro area would therefore be important in the event of financial crises, especially if the ELA involves more considerable amounts.

86 For a discussion of the moral hazard problem, see, for instance, the final report of the Banking Law Committee.
87 ECB Annual Report 1999, pp. 98.

Oversight of the financial sector in Europe

IN BRIEF, public oversight of the financial sector can be said to have three components. The first is a regulatory framework, consisting of laws and regulations, that establishes the bounds within which financial companies must operate. The second is the day-to-day oversight, which comprises supervisory authorities' supervision of the risks and regulatory compliance in individual companies, and central banks' oversight of the risks in the financial system as a whole. The third component is crisis management, which concerns public measures designed to deal with crises in the financial system. What follows is a discussion of a number of relevant trends in light of the ongoing shift of this oversight in Europe from national to EU level.

The development of the regulatory framework for financial institutions in Sweden has mainly been carried out for a number of years within the EU. The driving force behind this is the fact that a similar framework for all financial institutions in Europe is a precondition for one of the EU's main objectives – a single market for financial services. Given that the regulatory framework constitutes a restriction for these institutions, the existence of different rules could create barriers to competition between institutions from different countries.

As a single regulatory framework for the EU is achieved through negotiation between all Member States, the drawing up of new regulations can sometimes be a lengthy process. At the same time, the financial sector is safeguarded by an extensive regulatory framework, which means that a large number of rules need to be drawn up in the EU. With a view to accelerating this process, the EU developed a plan in 1999 (Financial Services Action Plan) containing 43 items that must be implemented by 2005 to complete the internal market for financial services. This plan of action will help realise the vision of making the EU the most competitive, knowledge-based economic area in the world by 2010. Three-quarters of the items have already been decided upon. A large proportion of these relate to the securities markets. In order to enable all the measures to be implemented within the appointed time, it was also necessary to make the process for enacting the new rules more efficient. This has been achieved through the introduction of the so-called Lamfalussy process.

Briefly, the Lamfalussy process entails that the European Commission will play a more prominent role when the regulatory framework is to be revised. Presently, amendments to regulations are decided by the Council of Ministers and the European Parliament. Through the Lamfalussy process, a considerable number of amendments will be made by decision of the Commission in collaboration with committees comprising representatives of the Member States governments. Two new committees have been created for securities matters, one with a regulatory and decision-making function (European Securities Committee, ESC) and one with an advisory function (Committee of European Securities Regulators, CESR).

The aim is to conduct all coordination of public regulatory and supervisory functions in the securities markets in one unit and to speed up the decision-making process in the EU. In the new structure, the European Commission asks CESR to study a particular area. CESR in turn consults market participants and users of financial services, after which it reports back to the Commission, which then develops a proposal. This proposal is then sent to ESC, which makes a decision on the matter. Finally, the Commission adopts the new regulation. Both committees can propose changes in regulations for the securities markets.

In 2002, efforts were initiated to find an equivalent way of making the work on banking regulations more efficient. The proposal implied the creation of two new committees: the European Banking Committee (EBC) and the Committee of Banking Supervisors (CEBS). Their overall mandate is to foster cooperation between supervisory authorities, to advise the Commission on issues related to banking supervision, and to contribute to a uniform implementation of EU directives in the Member States. Central banks without supervisory powers will be represented in CEBS through the ECB and through their own national members.

The initiative to make the regulation process more efficient is commendable. It is important that new rules are negotiated with a certain degree of speed. At the same time, the developments entail a certain amount of risk. For the EU, the harmonisation of the regulatory framework is the most important goal. This focus on producing a speedy harmonisation of regulations runs the risk of attaching far too much importance to both the time aspect and the reaching of an agreement, at the risk of neglecting the objectives of the regulations themselves. Thus far, this has not resulted in overly vague or inadequate regulations that could lead to excessively high risks in the financial sector. On the other hand, it is open to discussion whether the regulatory framework has become so comprehensive and restrictive that it risks leading to efficiency losses in the production of financial services. There are no clear incentives for individual Member States to propose an abolition of existing regulations, which is why there is a risk of only more regulations being created. With the proposed new process, it is mainly representatives of regulatory interests that are discussing the need for changes to regulations. But it is not certain that this will safeguard efficiency interests to the desired extent if the EU's vision of being the most competitive region in the world for financial services by 2010 is to be realised.

Cooperation in the area of day-to-day oversight is not as advanced as in the formulation of regulations, particularly due to the fact that responsibility in this regard still largely lies at national level.

The principle of home country supervision applies to supervisory authorities, which means that financial companies that are established as legal entities in a country are also subject to supervision by that country's supervisory authority, while branch offices are supervised from the home country. Consequently, corporate groups that include legal entities in a number of countries are subject to supervision by authorities in several countries. To facilitate this, and to foster the exchange of other information, the various supervisory authorities have concluded both bilateral and multilateral agreements of mutual understanding. Furthermore, the EU's supervisory authorities cooperate in Groupe de Contact, the aim of which includes coordinating and formulating principles for how supervision is conducted in the EU. This is done through an exchange of information and experiences, as well as by creating best practice solutions for the field of supervision. The role of the group will be given more official status in the future when it is made a working group of CEBS. In addition, the central banks and supervisory authorities cooperate on financial stability issues within the scope of the European System of Central Banks (ESCB) through their participation on the Banking Supervision Committee. The Committee has two principal tasks, namely to follow and analyse the macroeconomic trend from a financial stability perspective, and to promote cooperation between supervisory authorities and central banks.

Although oversight and supervision are being conducted more and more at EU level, the tasks of the central banks and supervisory authorities are still primarily domestic in nature. This is mainly due to the fact that the majority of financial companies are still largely domiciled according to national origin, from where oversight can be conducted. As cross-border consolidation in the financial sector progresses, an increasing number of genuinely international companies will appear, i.e. companies that do not have the majority of their operations in one country. One example of such a company today is Nordea, which has significant operations in Finland, Sweden, Norway and Denmark. Nordea, as well as other banks with a dominant position in several countries, currently has a subsidiary-based structure, which means that each national central bank and supervisory authority is responsible for supervision and oversight of the bank subsidiaries operating in its jurisdiction. This gives the impression of a clear delineation of responsibilities. Corporate groups often operate as one unit, however, which raises the question of whether the operations are separate to such an extent that makes supervision of the legal entities meaningful. In addition, it is uncertain whether the legal entities could be separated in the event of the bank failing. For example, it is likely that liquidity problems in an international bank will always be a group matter, as the bank's counterparties do not distinguish between the various legal entities.

The current rules governing home country supervision may prove difficult to implement for these kinds of genuinely international banks that could be systemically important in several countries. In the long term, it is therefore likely that there will be a need for alternative, complementary solutions.[88]

As regards crisis management, cooperation and the delineation of responsibilities at European level is even less advanced than for day-to-day oversight. A first step towards greater cross-border cooperation for crisis management has been taken within the scope of the ESCB. This arose through a cooperation agreement between different authorities in crisis situations. The agreement concerns practical arrangements such as the exchange of information. This is an initial step, but there is reason to intensify the cooperation further at European level.

One problem regarding crisis management is that it is not formalised in the same way as the other two components. The need to manage crises

88 See, for example, European Economic Advisory Group (2003). "Financial Architecture", Chapter 4 of "Report on European Economy 2003", CESifo, and Stolz, S. (2002) "Banking Supervision in Integrated Financial Markets: Implications for the EU", CESifo Working Paper No 812, July 2002.

seldom arises, which has resulted in a less distinct division of responsibilities and structure for how the different public authorities should act and for what options are available. In addition, crisis management is often perceived as sensitive and difficult to discuss in advance. This is particularly due to the fact that crisis management is partly a question of government willingness to provide financial assistance to the financial sector. Even if the government should do its utmost to avoid such measures, due to problems of moral hazard, experience says that governments are seldom able to avoid giving financial assistance when particularly serious crises occur. This also means that it is financial resources – i.e. the government's possibilities for making use of the government budget and thereby the right to levy taxes – that are the ultimate guarantee for crisis management.

All of this makes crisis management problematic for banks with significant operations in a number of countries. If there is a risk that one such bank's failure could threaten stability in the financial system of several countries, crisis management will also have to be conducted jointly by several countries. This places great demands on the ability of countries that become involved in such a problem to cooperate with each other.

- *The Riksbank would not be able to use the repo rate to manage a financial crisis.*
  Should the Swedish financial system encounter a financial crisis, it would not be possible as part of the Eurosystem to lower interest rates in Sweden alone to alleviate the consequences. In other words, membership in EMU could make it more difficult to limit the effects of a financial crisis on the real economy. The importance of domestic monetary policy as a means of managing a financial crisis should not be overestimated, however.

- *The need for government financial assistance in crises may diminish.*
  EMU is likely to contribute to integration of securities markets, payment systems and banking markets. The disappearance of exchange rate risk should result in larger and more numerous international flows between participants in different countries. The banks' liquidity management is also likely to become more European and less national than it is today. A likely consequence is that financial dependence in Europe will increase, while there will also be more banks and more advanced financial securities markets that can absorb part of the risk. Even if this implies that problems in one bank would have an impact on other banks, systemic contagion problems and the need for ELA would diminish following entry into EMU.

- *European integration may impose new demands on crisis management.*
  Crisis management is associated with how other elements of the government's oversight of the financial sector are managed. Regardless of EMU, European integration will entail increasing demands for this oversight to be managed to some extent at EU level. Within EMU, Sweden's influence would be greater. In this respect, the negative effects of remaining outside EMU is especially pronounced with regard to issues concerning stability in the financial system. The development of European oversight and the consequences this will have for crisis management is discussed further in the adjacent box.

If Sweden joins EMU, there will not be any change, technically speaking, in its capabilities for managing a crisis that threatens stability in the financial system. The Riksbank will continue to be responsible for ELA. It is possible that the management of a crisis will be made somewhat more difficult as it will not be possible to adjust interest rates to reduce the effects on the real economy. However, EMU could accelerate integration of the European banking market, which could have more far-reaching consequences for supervision, oversight and crisis management in the long term.

Summary and conclusions

Swedish membership in EMU would affect financial stability in several ways. This article focuses on the effects within four areas: on the individual participants of importance for stability, on the contagion risks between these participants, on the financial infrastructure, and on crisis management. The implications of membership vary.

One important conclusion is that membership in EMU would quickly have consequences for certain areas, such as reduced foreign exchange trade and a concentration of securities trading to other instruments. Although these direct, initial effects would have some impact on the institutions, the implications for financial stability would be marginal in the short term. In the longer term, the consequences may be more significant as the markets for financial services become increasingly European. The rate of change will largely depend on how quickly the financial institutions adapt to the new situation. The euro is an obvious part of the increasing market integration and would therefore contribute to increasing dependence between European countries as regards stability in the financial system.

The analysis points to several potential consequences of Swedish participation in EMU. Some likely effects are:

1) Competition in the financial services market would increase. In the long term, this could squeeze profit margins and thus make the financial system more vulnerable.

2) Structural transformation would accelerate and the financial market would become more European.

3) Larger financial markets should result in better allocation of capital and risk in the economy. As a result, companies should seek financing to a greater extent via the securities markets. This in turn would reduce the effects of a bank failure on the economy.

4) Counterparty risk should diminish since the opportunities to spread exposures over more counterparties would rise. This should improve stability in the system as well as alleviate the problem of moral hazard. However, the size of this effect would depend on how the banks decide to manage their exposures in a euro-world.

5) The payment system would change, although the most important changes would occur irrespective of whether or not Sweden adopts the euro. Dependence on one or a few systems in Europe, as well as continuity in this/these, is likely to increase.

6) Cross-border payments in the new systems would be safer and less expensive, which may result in more payments.

7) As EMU contributes to a uniform European financial market, oversight of the financial sector would have to be conducted to a greater extent at EU level.

The management of financial crises would primarily remain a national matter, however:

a) as long as the formal responsibility rests at national level, and

b) as long as the banks are mainly national in nature.

As the effects would vary, it is impossible to draw any definite conclusion as to whether Swedish participation in EMU would result on the whole in an improvement or deterioration in the stability of the financial system. The effects would also depend on how market participants behave in the new environment and to what extent the European authorities are able to adjust the focus of their oversight on to Europe.