Sveriges Riksbank

Financial Market Report

1/1997

Contents

Foreword

People generally associate the Riksbank with monetary policy. Safeguarding the value of money is one of the Riksbank's principal functions and, following the changeover to a flexible exchange rate, it has attracted increased attention. At the same time, however, the work of safeguarding the payment system's stability, another of the Riksbank's primary functions, has become increasingly important. The background to this is the extensive changes in the financial sector and the financial crises that have occurred in various parts of the world in the 1990's.

This is the first issue in the Riksbank's new series of reports on financial markets. The purpose of the series is to present the Riksbank's appraisal of tendencies in the financial system twice a year. The reports will include an account of a topical aspect of the financial system and the related policy issues for the Riksbank. The account will largely constitute an analysis that integrates the three components of the Riksbank's oversight of payment system stability: the payment system's infrastructure; the financial enterprises that are crucial for the payment system; and the financial regulations.

The work on the report has been undertaken in the Payment System Department of the Riksbank under Kai Barvèll, Head of Department, and Martin Andersson from the Financial System Division.

This financial market report served as a foundation for a discussion by the Governing Board of the Riksbank of 2nd October 1997. The conclusions from that discussion are presented in Part III of the report.

Stockholm, November 1997

Urban Bäckström
Governor of the Riksbank

PART I

Analysis of financial structures

PART I • CHAPTER I

Functions of the Riksbank in the financial system

The Riksbank is required by law to promote the stability and efficiency of the payment system. This task stems from the function of the Riksbank as the provider and central operator of the payment system. Besides overseeing the payment system, the Riksbank therefore needs to analyse the financial system, with particular reference to financial agents who are of central importance for the payment system. In its work on payment system issues, the Riksbank is primarily concerned with reducing and managing systemic risks, that is, risks that represent a threat to the functioning of the financial system as a whole.

The objectives of the Riksbank as regards the payment system are presented in this chapter, with a discussion of why the Riksbank is active in this field, what its purposes are and some major premises for its work. The account begins with the activities of the Riksbank in the payment system in a narrow sense, namely the segment of the financial system that transmits payments and provides the associated services. This is followed by a discussion of the Riksbank's function in the financial system in a wider sense.

The Riksbank and the payment system

The financial system provides vital, though in many respects indirect, services in a market economy. Its primary functions are to:

- provide payment services,
- transform savings into investment, and
- enable households and firms to manage economic uncertainty and risks.

The financial system can be said to oil the wheels of the whole economy. An efficient financial system leads to lower costs and less risks in the production of goods and services, thereby promoting economic growth and employment. By the same token, a disturbance in the functioning of the financial system can have negative consequences for the economy as a whole. Crises in the financial system may tend to bring economic developments into a vicious circle of falling output, rising unemployment and deflation. Growth comes to a standstill and the restoration of normal economic conditions may be difficult as well as costly. The conditions for conducting monetary policy are also impaired, which is why the authorities in many countries devote more resources to monitoring and regulating the financial sector than they assign to many other sectors.

A disturbance in the functioning of the financial system can have negative consequences for the economy as a whole.

One of the financial system's principal functions is the mediation of payments. A highly important component of the financial system is accordingly the payment system, which basically consists of all the accounts that firms and individuals hold in the banking system. In other words, the mediation of payments is closely connected with bank deposits and this means that banks play a crucial part in the payment system.

An indication of the economic significance of the payment system is that virtually every economic transaction involves some form of payment. Payment facilities must therefore be reliable and cheap. It is also important that the facilities are not liable to be disrupted, for instance by a financial crisis.

Under normal circumstances one can largely expect payment services to be provided at the customary market terms that is to say market agents build up payment systems and charge for these services. The banks, for example, have built up a giro system to handle payments to and from households and firms. But market agents cannot be expected to make full allowance for the risk that in a crisis, the mediation of payments ceases or is severely impeded. This risk results from market failure or external effects that arise when a third party suffers because two parties in a market do not have an economic incentive to take the effects on the third party into consideration. The most significant external effect with respect to the payment system is called systemic risk.

Systemic risks arise when one bank encounters serious problems with credit, liquidity or technical disturbances that generate substantial credit or liquidity problems for other banks. A clear example of how systemic risks arise and one that highlights the central importance of the payment system's construction is a situation where the inability of one bank to settle its payments spreads as a domino effect to other banks. In that bank A defaults on its payments to bank B, the latter is unable to settle its payments with bank C and so on. In such a situation, banks B, C and others face failure even though their only problem is that bank A cannot meet its commitments. Banks can guard against this by building up large reserves or by maintaining access to alternative borrowing facilities. It may not be commercially sound, however, for a bank to hold reserves that are sufficient to cope with every contingency. Systemic shocks are liable to occur primarily in connection with very large payments between intermediaries. This is because the domino effects can potentially be serious, particularly when the transactions are so large that a default or delay on just one payment from a counterparty can threaten both the institutions concerned and the infrastructure of which they are a part. As an indication of the size of interbank payments it can be noted that the Riksbank's central payment system, RIX, in which transactions between financial institutions are settled, has a daily turnover of about SEK 300 billion, made up of about 1,500 transactions. In other words, every five days RIX's turnover adds up to the equivalent of Sweden's annual GDP.

Systemic risks arise when one bank encounters serious problems with credit, liquidity or technical disturbances that generate substantial credit or liquidity problems for other banks.

Considering the cost of external effects in a market normally requires State intervention in some form, for example information, regulation, coordination of inputs or direct financial undertakings. It is up to the Riksbank to act, together with other authorities (primarily the Financial Supervisory Authority and the Ministry of Finance), as an adjunct to the market so that the payment system functions satisfactorily for the economy and, above all, so that systemic risks are taken into account.

The Riksbank is responsible for the functioning of the payment system

The function of the Riksbank in the payment system is specified in the Riksbank Act, which states that, besides being responsible for foreign exchange and credit policies (i.e. monetary policy), the Riksbank shall promote a safe and efficient payment system (see Box below). The Riksbank has a longstanding, active operational responsibility for some strategic functions in the mediation of payments. Besides supplying banknotes and coins, the Riksbank manages the RIX system, in which interbank payments are cleared and settled and which also provides borrowing facilities for the banks. In that all interbank payments are channelled through the RIX system, the Riksbank acts as the hub of Sweden's payment system and as the *banks' bank*.

A central system for large payments is a traditional central bank facility and is linked to the banks' accounts with the central bank. Short-term liquidity problems can be managed with intraday credit via these accounts, which are also used for the final settlement of interbank claims and liabilities. In addition, a system is needed for monetary policy operations. In that the Riksbank's overnight lending and deposit facilities are available but with a margin to the market rate, it is more profitable for the banks to balance their books by borrowing from each other in the interbank market. Efficient interest rate formation therefore requires that the interbank market functions properly. It is also the banks' operations in this market that lead to sizeable credit positions between them.

Another, more fundamental reason why the central bank manages the national payment system is that the system can then provide participants with liquidity in the event of a shortage. A supply of liquidity is needed continuously but the need is particularly great in the event of systemic crises. A central bank has a unique qualification for acting as guarantor of its country's means of payment, it can produce liquidity, *print money*, which is a great advantage when carrying the risks involved in maintaining a central payment system. The provision of liquidity is a very important instrument in the management of systemic crises. That is why the Riksbank is entitled by law to act as lender of last resort, that is, to extend financial support to financial firms with liquidity problems if the stability of the financial system is threatened.

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OVERSIGHT FUNCTION OF CENTRAL BANKS

In international parlance, central bank work on promoting the security of the payment system is known as oversight, as distinct from supervision, which denotes the scrutiny of individual institutions and is undertaken in Sweden by the Financial Supervisory Authority. Article 22 of the Riksbank Act specifies the function of the Riksbank in the payment system as being "to oversee the stability of the payment system". Oversight can be said to concern a system or market, while supervision concerns the stability of each institution. Oversight can be said to involve a continuous follow-up together with a forward-looking component so that, if possible, the work yields indications of problems that might arise in the payment system. In practice, however, the distinction is less straightforward because supervision requires a picture of tendencies in the systems or markets in which the individual institutions operate, just as an overseers need to monitor the stability of some key financial institutions. This naturally leads to some overlapping in the work of central banks and supervisors and underscores the importance of cooperation between these authorities.

As the State's commitment, via the Riksbank as well as other authorities, is primarily motivated by the need to manage systemic risks, it is only natural that the Riksbank focuses on matters to do with risks and security. The operational responsibility for the RIX system means that to some extent the Riksbank also acts as an ordinary producer of a financial service. This means that it is also natural to consider efficiency and costs. Work on the RIX system is undertaken in consultation with the banks but it is the Riksbank that lies behind efforts to increase efficiency while maintaining or improving stability, e.g. technical innovations and facilities for continuous settlement. When it comes to the construction of the payment system, the goal of stability inevitably tends to conflict with cost efficiency in that measures for enhancing stability normally involve costs. In view of the drastic consequences that system risks may have, the Riksbank, like most other operators of payment systems for large payments, invests resources in the reduction of such risks.

When working to reduce risks it is important to consider any untoward effects of the measures that are taken. Transferring risks from private agents to the State raises the problem of moral hazard, i.e. that private agents tend not to make full allowance for the risks involved in their operations, which means that their behaviour is more risky than would otherwise have been the case. As far as possible, a transfer of risks to the State should be avoided. This is one of the reasons why the Riksbank now requires collateral on its loans to banks. Previously the banks had an unrestricted right to borrow from the Riksbank, which meant that any liquidity shortage could be covered immediately by borrowing more. Today, the banks must first provide collateral. If a bank has liquidity problems and can neither borrow in the market nor provide collateral for a loan from the Riksbank, it must request a loan on special terms. It is then up to the Riksbank to assess whether the situation is such that the stability of the system is threatened. The current borrowing arrangements based on collateral have made it clear that the latter form of liquidity support is a last resort. It also means that uncollateralised borrowing is allowed only if the Riksbank approves a specific exemption from the regular arrangement.

In that RIX is a system for *large-value payments* and such transactions entail large risks, for stability it is important that the Riksbank essentially concentrates its analysis on these payments. This also implies a need to monitor systems for handling securities; besides the fact that the amounts involved are very large, these systems are also crucial for an efficient securities market and for the Riksbank's other major function—monetary policy. The relevant Swedish securities systems are the OM system, managed by the OM Group, and the VP system, managed by VPC (the Central Securities Register).[1] These systems handle large values and settlement is arranged via the RIX system. Deficiencies in systems of this type can have substantial negative repercussions in financial markets, a circumstance that has received attention not least in the context of central bank cooperation.

As regards the Central Securities Register (VPC), the Riksbank also has an interest in ensuring that the transfer and pledging of ownership rights are arranged promptly and reliably. This is important in that all regular borrowing from the Riksbank has to be fully collateralised with securities that are booked on VPC accounts.

Retail payments (small-value transactions by households and firms) lie outside the operative responsibility of the Riksbank because the systemic risks associated with these systems are not as considerable as for large-value payments systems. But there may still be good reasons for some public regulation and oversight of this field, for instance as regards consumer protection and competition. However, it is primarily not the Riksbank but other authorities and other organisations that have the task of scrutinising consumer interests and competitive conditions in the

1 The OM system registers securities quoted on the OM Group's exchanges and the VPC system registers shares listed on the Stockholm Stock Exchange and other Swedish securities.

field of payments. Still, the Riksbank does have a more limited function as an overseer even of retail payments, above all as regards systems—mainly Bank Giro and Data Clearing[2]—that are linked directly to the RIX system. The Riksbank sees to it that the general construction of such systems fulfils reasonable requirements for stability as well as for transparency of costs and the time required to complete payments. This is important for maintaining public confidence in the payment system, which in itself is an important aspect of stability.

The Riksbank and the financial system

So far this account has focused on the functions of the Riksbank in the payment system. There are reasons, however, to be concerned with the financial system in a wider sense. This has to do with the construction of the payment system, which can be said to largely consist of two components: infrastructure and financial firms.

The *infrastructure* consists of the technical and administrative systems whereby payments can be executed between financial firms and other economic agents as well as between different financial firms. The infrastructure also includes systems for making transactions with financial assets. The infrastructure comprises marketplaces in which financial assets are traded, clearing systems in which payments are compiled and settlement systems for registering and completing pledging and ownership transactions concerning financial assets.

Normally only *certain financial firms* have access to the infrastructure of the payment system, which means that in order to use the system, other agents have to turn to these firms. The firms in question are the banks and certain clearing houses that administer and undertake payments. In that it is these firms which support the infrastructure, the infrastructure cannot be analysed in practice without analysing the operations of individual agents. Moreover, the legal framework refers in the first place to the financial firms, not to the systems that constitute the infrastructure.

A serious disturbance in the payment system is normally occasioned not by matters to do with the construction of the infrastructure but with, for example, a bank suspending payments. The default of a clearing house could likewise cause such a disturbance but in this case the domino effects arise in the first place if the clearing house is a counterparty in the payment system, which most clearing houses are not.[3] The probability and magnitude of such shocks, which from the viewpoint of the payment system can be described as external, cannot be influenced at all substantially by how the systems for trading, payments and handling securities are constructed. However, these systems can contribute to financial stability if they are constructed so that *(a)* the ways in which payments and securities transactions are processed and settled do not add to the counterparty risks that are unavoidable in all commercial activities, and *(b)* external shocks can be managed without the systems collapsing.

A serious disturbance in the payment system is normally occasioned not by matters to do with the construction of the infrastructure but with, for example, a bank suspending payments.

Systemic risks may also arise without the payment system being involved in the spreading mechanisms. An example of this is a shock, such as a major, unexpected change in the macroeconomy, that causes financiers to withdraw funds from both solvent and insolvent institutions because they are uncertain whether the shock has hit the particular institution in which their funds are invested. The actual withdrawal of funds is liable to cause greater problems

2 Data Clearing is used for a number of major purposes in the Swedish market for retail payments, e.g. interbank transfers and payment transactions by card or cheque. Data Clearing and Bank Giro are both administered by the BankGiro Centre (BGC).

3 In the Swedish payment system the only clearing house that acts as a central counterparty is OM. The implications of this for the Riksbank's oversight are considered in Chapter 2 in the section on the payment system's infrastructure.

than the shock as such because institutions normally have difficulty in liquidising assets at short notice.

In order to watch out and allow for shocks that may trigger systemic crises, the Riksbank cannot concentrate solely on the payment function. Consideration must also be paid to the agents that act in the system as well as to the operations of these agents in other segments of the financial sector. Payment system risks are essentially associated with large, mainly financial, payments. The Riksbank is therefore primarily interested in the financial agents that execute and mediate these payments.

The central enterprises in the payment system are the banks and it is therefore these institutions, particularly the major banks, that are the focal point of the Riksbank's analysis of the financial system. Systemic crises are liable to be triggered by a bank suspending payments, so it is the risk of this that the Riksbank needs to analyse and, as far as possible, preclude. The Riksbank has to have sufficient competence concerning banks and financial system to fulfil its statutory functions in the financial system.

There are also the above-mentioned external shocks that may occur as a result of more general problems of confidence in the financial system. Such problems may be elicited both by banks as well as by other types of financial institution, e.g. clearing houses, exchanges and securities companies.

Disturbances in a single institution are capable of threatening the functioning of the payment system but the most serious threats arise if many institutions are hit simultaneously or if confidence in the financial system as whole is undermined. Historical experience has shown that such threats mainly occur in connection with substantial changes in the economic environment in which financial firms operate.

The financial crisis in Sweden in the early 1990's was in part a consequence of such macroeconomic events. Examples of these events are the marked fluctuations in asset prices in the late 1980's and the subsequent sharp fall, large shifts in the rate of price increases and the growing stock of debt in the household and business sectors. If macroindicators of this type had been monitored more closely, the crisis could have attracted attention earlier, economic policy could have been adjusted and political measures could have been taken to check the crisis and its effects. The Riksbank works on macroindicators of this type in connection with its oversight of the payment system's stability. In this context it is important to underscore that the risk of systemic threats arising is reduced by a consistent macroeconomic policy and price stability. A clear link accordingly exists between the Riksbank's inflation target and its activities for safeguarding the stability of the financial system.

The risk of systemic threats arising is reduced by a consistent macroeconomic policy and price stability.

PART I · CHAPTER 2

The Riksbank's oversight of payment system stability

The analytical work at the Riksbank is undertaken with reference to three aspects of the payment system: the infrastructure (the systems for making transactions with money and securities), the financial firms that play a central part in the payment system, and the financial regulations. The purpose of the work is to identify market failures and help to rectify them. In the analysis of the payment system's infrastructure, oversight focuses on large-value payments and the securities transactions associated with these. The analysis of financial firms (the banking system) focuses on the long-term earning potential of these institutions and the risks that may arise in financial institutions and lead to systemic shocks. The analysis of institutional risks focuses in particular on disturbances that may have to do with substantial macroeconomic changes. This analysis provides a foundation for a state of readiness for potential financial crises; besides the knowledge about the financial institutions, this includes a specific procedure for how the Riksbank is to act in the event of a financial crisis in an institution or in the system as a whole. This analysis is also of value for the Riksbank's participation in the work of achieving appropriate and internationally competitive regulations for the financial sector.

In order to fulfil its function of promoting a safe and efficient payment system, the Riksbank needs to monitor and analyse tendencies in much of the financial system. The task includes the promotion of changes which enhance safety and efficiency. There is a need here to analyse tendencies that concern the financial system's structure and, where necessary, opposing changes that may counter a positive development. This work comprises:

1. Working for decreased systemic risks and increased efficiency in the payment system's *infrastructure*. This mainly refers to the management of the technical and administrative systems whereby financial assets flow between institutions and market places.

2. Continuously monitoring *financial firms* of central importance for the payment system and their functions in the financial system. This also includes a greater understanding of how their operations are affected by macroeconomic tendencies.

3. Continuously analysing the objectives and instruments for *financial regulation* in the light of how the market is working and developing. This analysis provides a foundation for the Riksbank's participation in the creation of appropriate and internationally competitive regulatory structures for the financial sector.

In its practical efforts to support and contribute to the development of the financial infrastructure and financial firms, the Riksbank participates actively in the debate. A basic principle for this work is that any problems are to be managed mainly by the market.

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The focus on systemic risks means that the Riksbank is not generally accountable for every service and function in the financial system. It is up to the individual agents to produce and be responsible for the great majority of functions and services, including the major part of risk management. Moreover, there are other authorities—the Financial Supervisory Authority, the Competition Authority and the National Board for Consumer Policies, for instance—with specified areas of responsibility pertaining to the financial system.

Analyses of the payment system's infrastructure focus on systems for large-value payments

The infrastructure of the payment system comprises systems for making payments and transferring rights to securities. The Riksbank has an operative function in the *payment system for large payments* in that it provides the RIX system. In this function the Riksbank works simultaneously on issues of efficiency and stability, its aim being both to enhance technical functions and to develop issues that have more to do with policy. Since the early 1990's much of the policy work has had an important foundation in the international cooperation that is arranged in the relevant committees of the Group of Ten and the European Monetary Institute.[4] The work in the EMI has also included technical issues, for instance the TARGET payment system and the development of methods for cross-border pledging.

The work of the Riksbank on systems for *retail payments*, for example the bank giro system (BGC), is more limited, the reason being that the sums handled in these systems are not normally so large that a disturbance might trigger a systemic crisis. Still it is natural for the Riksbank to monitor these systems for risks and transparency both because these systems and payments of these types are finally settled in RIX and because stable systems for retail payments are of importance for public confidence in the payment system as a whole. A loss of confidence is liable to threaten stability as well as efficiency. The threat to stability has to do with the risk of runs and the threat to efficiency lies in the possibility of a widespread shift from payment intermediaries and established, efficient channels to those that are less efficient—in the first place a change to a cash society—leading to a substantial loss of output.

The field of retail payments is undergoing a rapid technical development that includes, for instance, various forms of electronic payment and means of payment and, as a result, structural changes that may also ultimately affect other parts of the financial market. There is reason for the Riksbank to clarify the extent and ways in which this raises new, relevant issues.

Clearing houses are an important category of agents in the financial infrastructure. They function as preparatory systems for the RIX system, accepting and compiling payment orders stemming from different types of debt instrument, for instance those connected with trading in securities. Depending on how a clearing house's system is constructed, payment obligations are then netted between counterparties, either bilaterally or multilaterally. Bilateral netting involves balancing two agents' direct claims and liabilities, while multilateral netting involves balancing the mutual claims and liabilities of a larger number of agents, with the result that each agent is assigned a balanced claim on or liability with the system as a whole. The payment commitments that the clearing houses have compiled and netted are then settled in the RIX system. As far as the Riksbank is concerned, the most important clearing houses are VPC, OM and, to some extent, BGC, in that they all

4 The G-10 is a co-operative forum of central bankers from eleven of the world's leading economies. EMI is the European Monetary Institute, the organisation which will become the European Central Bank (ECB) when the European Monetary Union starts. The working groups on payment systems are the G-10 Committee on Payment and Settlement Systems (CPSS) and the EMI Working Group on Payment Systems (WGPS).

directly affect the Swedish financial system. There is also reason to monitor the international clearing houses ECHO and Ecu Clearing, which are indirectly linked to the Swedish financial system via the participation of Swedish banks.

VPC (Central Securities Register). The Riksbank cooperates closely with VPC on a number of issues, of which the most important is the development of the VP system in that payments from trade in securities are settled in RIX. For efficient money and bond markets, this settlement process has to be smooth. It is particularly important that settlement is not disrupted because an agent has difficulties with payments. In the event of such a situation (which has not yet occurred), VPC would currently resort to unwinding, which involves excluding all claims and liabilities of the failed party from the settlement and calculating new net positions between the remaining players. Recent insights concerning systemic risks and the way infrastructures work have shown that unwinding may be a source of systemic disturbances. The Riksbank is therefore conducting a dialogue with VPC with a view to enhancing the safety of the system.

The way VPC functions is also important for the Riksbank in other respects, one being pledging routines. As a rule, all borrowing from the Riksbank has to be collateralised. As most Treasury and housing securities are registered on accounts in the VP system, it is important that the VP system has quick and reliable routines for this. The speed of the routines is particularly important now that the Riksbank requires collateral for both intraday and overnight borrowing. Intraday loans need to be available at very short notice so that payments from the RIX system are not delayed because a player is temporarily short of liquidity.

OM. Compared with VPC, the involvement of the Riksbank in the operations of OM are somewhat more peripheral but OM's payments from trade in derivatives are likewise settled in RIX. While the volume of settlements is normally rather limited, at times it may be substantial, particularly in connection with large market movements. OM plays a part in the formation of interest rates by clearing the standardised interest rate derivatives that are traded in the interbank market. A more general issue of stability is also involved in monitoring the operations of OM in that this institution takes up a position as a counterparty in every transaction between members and customers.[5] This involves a concentration of risks to OM, risks that are managed by obtaining collateral and holding reserves. In the event of such a large shock that OM collapses, this concentration of risks might give rise to a widespread systemic disturbance that hits other parts of the financial system.

ECHO and Ecu Clearing. Currently and in relation to the volumes of payments that affect the RIX system directly or indirectly, these two international clearing houses—for currency trading and ECU payments, respectively—are of more limited interest to the Riksbank. But as some major Swedish banks participate in the systems, there is reason to follow developments. In different ways, moreover, both systems represent future possibilities. The ECHO system is an example of how netting can be used to reduce exposure to the type of credit risk, often referred to as "Herstatt risk",[6] that is involved in the settlement of currency transactions. With the changeover to the single European currency, Ecu Clearing is expected to become a more important payment system than at present. The most complex matter connected with these international clearing houses concerns the establishment of safety routines that function in all the judiciaries that will be involved because banks from different countries participate.

5 This arrangement results in a procedure that differs somewhat from the way in which clearing houses usually handle payments; OM takes up a position as the counterparty of both the creditor and the debtor in a transaction—the debtor acquires an obligation to OM and OM acquires an obligation to the creditor.

6 More accurately known as foreign exchange settlement risk, due to the delivery of one currency in a transaction not coinciding with the delivery of the other. The related phenomenon associated with securities trading is the failure of delivery versus payment (DVP). It has been recognised for a long time that the time lag between payment and delivery of currencies is a major risk factor for the international financial system. The huge sums that are now being exchanged and the relatively long interval—normally two to four days—before final settlement is achieved in practice mean that it is the rule rather than an exception that exposures continuously exceed the total capital of the banks.

The efficient operation of the financial system calls for marketplaces that function properly. Marketplaces perform an important function by making the pricing of financial products more transparent and by reducing the transaction costs for trading in these products. The principal Swedish marketplaces are the Stockholm Stock Exchange for equity, OM for derivatives and the interbank market for trade in interest rates and currencies. Matters that concern the Riksbank are the transparency of pricing and an integration of marketplaces with clearing houses that precludes unnecessary risks. This integration makes it possible to shorten the settlement cycle, which is the time lag between an agreement to trade and the settlement of the transaction, at present often two to three days. During this interval there is a risk that agreed trades cannot be completed, with the result that players may be obliged to remain in undesired positions in financial assets. In that these risks are directly related to the duration of the settlement cycle, any shortening of the cycle represents a reduction of risk. For the proper economic functioning of the financial system it is important that the whole chain from trading, via clearing, to settlement—the financial infrastructure—is efficient and safe for all parties. A liquid and efficient domestic market for risk capital is of importance, not least, for the supply of capital.

Analyses of financial firms focus on bank groups

Oversight, supervision and regulation have traditionally been sharply focused on institutions. The law has recognised institutions of different types and allowed them to offer certain specified services and prohibited others. Deregulation and technical innovations have afforded new ways of managing financial risks and offering new financial services. A notable change is that earlier limits to the range of operations for different institutions have shifted or disappeared. The large groups have widened their range of operations, new forms of organisation have been introduced and earlier distinctions between industries and operating fields have become blurred. It follows that the competent authorities, besides focusing on individual institutions, need to consider the various activities in which institutions are engaged, i.e. the earlier institutional approach needs to be accompanied by a functional approach. This appraisal is beginning to leave its mark on the regulatory work of the authorities, both nationally and internationally.

Fig. I:1 illustrates the differences between as well as the inter-relatedness of the functional and institutional approaches. It indicates the operations or functions in which institute A, institute B and so on are involved. An institutional approach starts from an analysis of each institution and the combination of operations in which it is engaged, while a functional approach starts from an analysis of each function, or type of product, that is provided by different financial institutions. An assessment of the market conditions for each function, together with an appraisal of which institutions have each function as a major activity, yields an overall picture of how the market is developing.

For the Riksbank's work with the financial system it is natural to focus the analysis on the markets for particular financial functions. The group of institutions that concerns the Riksbank may then differ with the function that is being analysed. In many instances it is the banks that are then in focus as the major players but in some cases it may be other financial institutions. In an analysis of the market for different forms of saving, for example, some insurance companies are important.

The functional approach does not mean that the Riksbank has no need to assess the outlook for individual institutions. Instead, this approach provides a foundation for the closer analysis of individual institutions that is required, not least, in situations where the Riksbank has to decide whether to provide liquidity on special terms.

A shared need to work in various contexts with both a functional and an institutional approach means that the work of the Riksbank naturally overlaps that of the Financial Supervisory Authority. This is particularly evident in the Swedish environment, where the "system" consists of relatively few institutions. The cooperation and exchange of information with the Financial Supervisory Authority and the Ministry of Finance are therefore a natural and important aspect of the Riksbank's work and competence in this field.

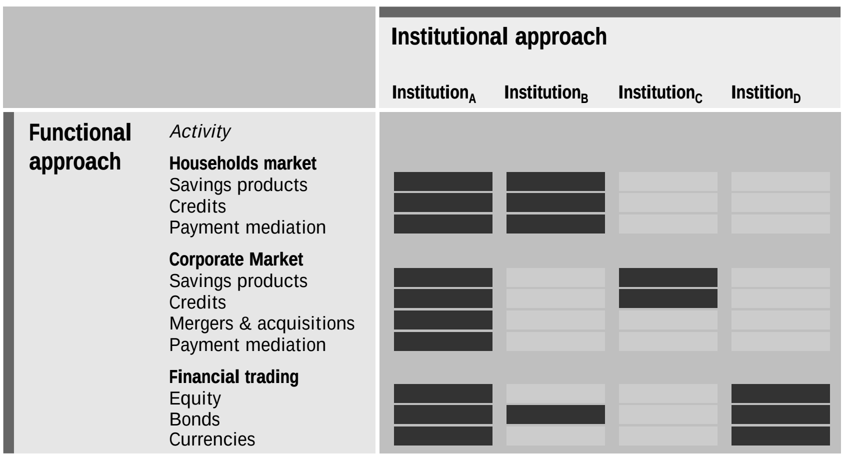
The Riksbank aims to prevent or limit effects of financial crises

In the analysis of financial firms, the Riksbank focuses on the major bank groups. The growing element of specialised institutions and the blurring of institutional boundaries mean that other institutions may be of particular importance for a certain segment or function of the financial market. Banks today operate with a very broad assortment of products for which the competitive situation is liable to differ. The institutions that are relevant may differ with the function that is being analysed and they may include non-banks. This makes it important to study each market segment or function separately in order to assess what the future has in store for each component of the financial system. This analytical field, referred to here as *market analysis*, concerns future earning power, which includes strategic risks, i.e. the risk a firm runs of not being competitive. An overall assessment of the analyses of functions that are relevant for the major bank groups yields a forward-looking picture of their strategic situation.

By itself, however, a market analysis does not provide a comprehensive picture of the state of health in the bank sector. To a greater extent than for other firms, the balance sheet, assets in particular, is particularly important for a bank's viability. A matter of particular concern is the credit positions to which banks expose themselves through their lending, as well as in the form of the "Herstatt risk" associated with currency transactions. To this should be added the institution's market risks, though these are probably less substantial than credit risks in the present context in that increasingly sophisticated systems are being developed for the management of market risks. This analytical field, referred to here as *risk analysis*, includes the analysis of, for example, sizeable structure shifts in total assets and liabilities. The approach in the risk analysis is primarily institutional because it is financial problems of individual institutions that are liable to result in systemic shocks.

The risk analysis relates to systemic risks in the financial system. These systemic risks are of three types, of which one stems from the effects that

Figure I:1.
Functional and institutional approaches



macroeconomic and structural shocks may have on the whole of the financial system. This refers, for example, to the bank sector's total credit position with the real-estate industry. Another type of systemic risk has to do with the institutions' mutual positions. A third type concerns a crisis in the form of a loss of confidence. Impaired confidence or perceived affinities, warranted or otherwise, between different institutions or markets can cause problems in the financial system to spread more widely than should normally be the case.

The Riksbank concentrates in the first place on *(a)* drawing attention to signs of a crisis as early as possible, *(b)* contributing as far as possible to preventing crises, and *(c)* mitigating negative effects if they do occur. The Riksbank's state of readiness for potential financial crises can be seen as a form of insurance against major threats to the stability of the financial system. Fulfilling the tasks this state of readiness requires calls for knowledge about and an understanding of the financial system. The market and risk analyses outlined above are the basis for the information the Riksbank needs in the event of a crisis in the financial system. The work on these analyses is undertaken with a view to the information that is likely to be needed in the event of a crisis. This work therefore has to be connected with the practical readiness routines that are built up jointly by the Ministry of Finance, the Financial Supervisory Authority and the Riksbank.

In the light of the above, the Riksbank's analysis of financial firms can be said to consist of three components:

1. General monitoring and oversight, undertaken in the form of market analyses.
2. Knowledge from risk analyses about exposures in individual institutions as well as in the "system".
3. A state of readiness for potential financial crises.

Financial regulations should counter systemic risks

The Riksbank's analysis of the financial system also involves participating in the development of the financial regulations that, directly or indirectly, affect the financial system. The aspects in which the Riksbank is primarily interested are regulations that affect how the various sub-markets function and that are directly relevant for agents in the market for payments.

Much of the legislation concerning financial operations is intended to counter systemic risks. The analysis of systemic risks that was outlined above is the main starting point for the Riksbank's regulatory approach. In its assessments of proposed rule changes, for instance in statements on proposed legislation submitted for consultation, the Riksbank focuses primarily on how the changes affect systemic risks.

Another important principle is that regulations should be restricted to conditions that markets are not capable of managing on their own, i.e. the regulations should aim at preventing or rectifying some form of market failure. If there is a prospect of market agents tackling the problem on their own, the Riksbank considers that instead of the operations being regulated, it is better that the market produces its own solutions. The approach to "Herstatt risks" is an example of how the central banks have clarified a problem and given the market a chance to tackle it before resorting to regulation.

Considering the rapid pace of change, internationalisation and the numerous innovations in the financial sector, regulations have to be continuously reviewed. A starting point here for the Riksbank is that regulations should not prevent or impede the use of innovations that can improve the financial system's efficiency and stability. Moreover, regulations in Sweden must be competitive in an international context. At the same time it is necessary to ensure that innovations for improving efficiency do not have destabilising consequences.

The Riksbank also endeavours to improve the financial system's transparency. The risk of financial crises can be reduced by transparency. As regards the pricing of financial services, moreover, transparency is important for efficiency and competition in financial markets. Examples of measures to enhance transparency are the improved semiannual reports that banks are now required to publish, thereby giving outsiders better opportunities of making correct assessments.

The Riksbank is able to influence financial regulation in various ways. This can be done directly in that the Riksbank Act entitles the Governing Board to call on the Riksdag (Sweden's parliament) or the Government to make statutory amendments or other measures. This opportunity was used relatively recently when the Governing Board requested the Government to make provisions so that supplementary collateral pledged for financial market clearance is not recoverable in the event of bankruptcy.

Regulation can also be influenced by the Riksbank in its statements on draft legislation submitted for consultation as well as on instructions issued by the Financial Supervisory Authority. In this context it is particularly important to analyse how new regulations affect matters to do with confidence in the payment system, as well as its stability and efficiency.

Another way in which the Riksbank works on regulation is by participating in international fora—EU/EMI work and various G-10/Basle groups, for instance—where results may have a direct impact on Swedish regulations. This is particularly the case, of course, with EC directives, which each member state is required to implement. At national level, Riksbank officials frequently act as experts or specialists in public enquiries. While they do not formally represent the Riksbank in such contexts, it is only natural that particular attention is paid to matters that are relevant for the Riksbank.

PART II

The competitive situation of banks

Part I of this report outlined the Riksbank's oversight of payment system stability. Particular attention was drawn to the importance of monitoring tendencies in the bank sector because the financial system is based on banks. An account was also presented of the analytical work, which starts from a functional perspective when focusing on future profitability and from an institutional perspective when concentrating on risks. Part II of the report surveys the competitive situation for the bank sector in Sweden.

Competition affects risks

The Riksbank's function of promoting financial stability makes it important to study the competitive situation in the bank sector. Increased competition leads to pressure on profitability and firms have greater difficulty in maintaining the level of profits their shareholders expect. Such a situation obliges firms to cut costs or try to broaden operations. The bank sector is no exception but compared with other types of business, banking and other financial operations involve a higher degree of financial risk. Accepting certain risks and offering services that reduce customers' risks are a natural ingredient in banking. The level of the risks taken by banks is clearly linked to the expected return on the operations in question. This provides an opportunity for banks to deal with pressure on profitability by increasing their financial risks. Experience shows that increased competition has contributed to banking problems in many countries.[7]

Experience shows that increased competition has contributed to banking problems in many countries.

Banks may deliberately take increased risks in order to conceal a lack of success in their operations and thereby achieve a better reputation.[8] Besides considering the projects they are financing, bank managements keep an eye on the profitability of their competitors, which is evident from share prices. Banks that are less profitable than others, with a low valuation on the stock exchange, may decide to expand their lending activities to achieve at least a temporary improvement in their performance. The strategy may be particularly tempting for bank managements that feel they are being "punished" more for poor profitability when other banks are doing well than for a really poor performance that is part of a general trend.

In a survey presented by the Centre for the Study of Financial Innovation, a London-based "think tank", 600 players in the UK financial market were asked to identify the greatest threats to the financial sector. According to the responses, the greatest threat came from surplus capacity and low cost effectiveness because banks are then obliged to take greater risks in order to maintain an acceptable level of profits.[9]

Increased competition may also tend to generate an increase in bank lending in an attempt to maintain market share. Studies show that for banks, size carries weight as a selling point.[10] The endeavour to maintain a market position has been found to be an important factor behind mergers and acquisitions in EU countries.[11] Competition can therefore lead to a battle for market share that entails a rapid expansion of credit and thereby increased risks.

In that risk-taking and long-term viability in banking are linked to competition, analyses of the competitive situation for the Swedish bank sector are one of the important sources that the Riksbank uses to identify potential future threats to financial stability.

The fact that strong competition entails certain risks does not mean that the Riksbank sees competition in the bank sector as a drawback. Competition is necessary for economic efficiency and to meet the needs of consumers. It also provides an impetus and promotes innovations. In that this applies to risk management, competition can have a positive effect on banking risks. Swedish banks also face international competition, particularly in the European Union's single market for financial services. The social importance of competition and the support for competition that is enshrined in both EU and national laws mean that any negative effects that competition may have on banking risks cannot justify restrictions on competition in order to protect the bank sector.

Any negative effects that competition may have on banking risks cannot justify restrictions on competition in order to protect the bank sector.

An analysis of the competitive situation also provides a picture of the environment in which banks are operating and how this might affect them in the years ahead. This picture provides a foundation for the more detailed analysis of financial markets and risks that was outlined in Part I.

The discussion below begins in Chapter 1 with an assessment of the competitiveness of Swedish banks, primarily compared with a selection of European banks. This relative competitiveness of the Swedish banks is crucial for their survival in an increasingly competitive market. A lack of competitiveness would suggest a possible tendency to take increased risks as a way of meeting the pressure on profitability that the growing competition may entail. This is followed by a discussion of two major tendencies that have been identified internationally as signs of increased competition for banks: internationalisation and a diminishing importance of banks as financial intermediaries.

Internationalisation, discussed in Chapter 2 below, is of interest in two respects. For one thing, internationalisation tends to be taken for granted without presenting any factual evidence or assessing its true importance. For another, the existence or threat of international competition may have a major bearing on the banks' competitive environment. Chapter 3 describes how the position of banks as financial intermediaries is tending to decline on account of non-bank competition from other financial firms and from products that are substitutes for traditional bank products. The response of banks to this threat is also considered. Chapter 4 links competition and risks in the bank sector to the macroeconomic environment, where changes have been found to be of major importance for banking risks. The conclusions from Part II are then summarised in Part III together with an overall assessment of how competition affects risks in the bank sector.

7 See e.g. Davis, E.P. (1995), *Debt Financial Fragility and Systemic Risk*, Clarendon Press, Oxford, pp. 235–6.

8 Rajan, R.G. (1994),"Why bank credit policies fluctuate: a theory and some evidence", *Quarterly Journal of Economics* (May), pp. 399–442.

9 Orton, I. (1996), "Bankers fear overcrowding risks", *European Banker 124* (April), p. 8.

10 Rhoades, S.A. (1983), "Market share as a source of market power: implications and some evidence", *Journal of Economics and Business*, pp. 343–65.

11 Van der Venner, R. (1996), "The effect of mergers and acquisitions on the efficiency and profitability of EC credit institutions", *Journal of Banking and Finance*, *20*, pp. 1531–58.

Competition even with just a few players

In assessments of competition, the number of firms in an industry and the degree of concentration are often considered as indicators of the intensity of competition. Competition is expected to be better if the industry consists of a large number of firms and none of them has a dominant market share. This issue is particularly relevant for the Swedish bank sector in view of the increased concentration that has resulted from mergers and acquisitions. It has been argued that the major banks may develop a monopolistic or oligopolistic behaviour. Against this it has been said that shares of the national market are not relevant in this context because the financial market is so international. The discussion of concentration and competition should acknowledge that competition also comes from firms in other countries.

Besides the argument above that competitive pressure is exerted by foreign firms, it is also of interest to analyse concentration from the approach to competitive pressure that is commonly referred to as contestable markets.[12] Briefly, even with a small number of players, a market may display efficient pricing and cost minimisation. This presupposes there are no barriers to entry or exit. The extent to which this applies to the Swedish bank market is discussed in the Box below.

12 Baumol *et al*. (1982), *Contestable Markets and the Theory of Industry Structure*, Harcourt Brace Jovanovich, New York.

ENTRY AND EXIT BARRIERS IN THE SWEDISH BANK MARKET

In this context it should be noted that, as mentioned in Part I, banks are active in markets for many different financial services and these markets differ as regards both the competitive situation and the barriers to entry and exit. The discussion below, however, is conducted in fairly general terms.

- The scope for cross-border trade and the operations of niche banks suggest that entry to the household market does not require a large investment. Moreover, the investment for starting a new business largely consists of financial capital, rather than real estate and equipment; *sunk costs* are therefore low. A factor that has helped to reduce bank establishment costs is technology, above all the possibility of providing bank services via the telephone and the Internet. This does not apply, however, if the aim is to conduct traditional banking with a broad range of products and a branch network for a wide range of customers. The entry and exit costs for this are higher, as is illustrated by the fact that Den Danske Bank paid the comparatively high rate of 90 per cent above the market value when, by taking over Östgöta Enskilda Bank, it acquired Sweden's last remaining *small branch network*.
- Much research has been done to identify *economies of scale* in traditional banking (operations mainly based on lending financed with deposits). There is relatively good agreement that, except for very small banks, economies of scale are not appreciable. As regards what is commonly known as wholesale banking (e.g. securities trading and financial services aimed at large companies), however, there is reason to believe that the economies of scale are larger. On the other hand, trading in securities and currencies can be conducted without a physical presence, which means that the entry and exit costs are very small.
- Another important aspect is what it costs consumers to switch banks. Banks can influence these *consumer switching costs* by adopting various strategies that tie customers to them: a subsidiary for house mortgage

loans, capital management, and discounts for loyal customers. Moreover, the reputation of major banks may also render customers less sensitive to prices, though the introduction of the deposit guarantee system may make this form of confidence less important. Technical innovations may also make it easier to switch banks. Telecommunication facilities for using a number of bank services tend to weaken the link to a particular branch and thereby to a particular bank. It is also becoming easier to compare different banks' products and prices. Physical distance to a branch will probably also become less important when choosing a bank.

- Existing banks can attempt to *create barriers to entry* via explicit or implicit cooperation agreements, e.g. on access to a joint payment system.
- Another strategy has been *cross-subsidisation*—high receipts from one service have been used to lower the price of other services or provide them free of charge. This has become less possible in that new, specialised institutions are active in certain segments of the market, where they offer only the services that are most profitable. The possibility of standardising products, e.g. loans to households, also makes cross-subsidisation more difficult.

An overall assessment suggests that the importance of barriers to entry and exit in the bank market has diminished, though some barriers still exist. Relatively high competition should prevail in many market segments because in those segments where competition is limited at present, there is the threat that potential competitors will enter the market if pricing gives them a chance.

One segment where there is some risk of competition remaining limited, even if it grows in general, is bank services for small firms, though all the major banks have expressed a strong interest in this target group.

As pointed out further on, one of the main advantages banks have in competition with non-bank players and for broadening their own operations is the branch network. The importance attached to this network is exemplified, as mentioned earlier, by Den Danske Bank's comparatively high bid for Östgöta Enskilda Bank. It is then understandable that banks are interested in mergers as a way of reducing the number of branches without cutting local ties. This is evident in the merger of Swedbank (Sparbanken Sverige) and Föreningsbanken. Examples of attempts to expand operations via a more efficient utilisation of an existing branch network are provided by Handelsbanken's acquisition of Stadshypotek and S-E-Banken's acquisition of Trygg-Hansa. A bank that closes branches unilaterally may be losing one of its main competitive advantages, though this advantage is offset by the higher costs a branch network entails relative to competitors that offer bank services through other channels.

The view presented here, that the intensity of competition in an industry is not necessarily associated with the number of firms and their size, is an important ingredient of the analysis in Chapter 1 below. Even if foreign competitors do not feature prominently in certain segments of the bank market, as discussed in Chapter 2, the threat from them may be sufficient to push prices down and strengthen competition. Similarly, the threats, discussed in Chapter 3, from non-bank financial enterprises and from substitutes for bank products may improve competition. With a view to promoting competition, this approach also suggests the importance of analysing existing barriers to entry and exit in the bank market. For competition, these factors may be as important as the degree of concentration, for example.

PART II • CHAPTER I

The competitiveness of banks

A comparison of the competitiveness of Swedish banks relative to a selection of banks from other European countries suggests that the Swedish banks are well equipped for increased European competition. For 1996 the Swedish banks show the highest profitability and are most cost-effective. Loan losses are comparatively low and the semiannual results for 1997 show that they may still be falling. In terms of their capital base, the Swedish banks are a good bit above the European average.

An overall assessment of the current competitiveness of Swedish banks is presented below. The discussion is based on comparisons with respect to four factors that are highly important for the ability to compete:

- Capital strength, measured as capital adequacy.
- Profitability—the return to the bank's financiers in relation to the capital they have invested.
- Cost efficiency.
- Loan loss level—the level of loan losses in relation to the bank's loan portfolio.

For the short run, the first two factors provide a satisfactory picture of a bank's financial situation. Good capitalisation and adequate profitability suggest that there are no immediate financial problems. Good profitability, moreover, implies an accumulation of capital that renders the bank more resistant to problems. The other two factors—cost efficiency and the level of loan losses—affect a bank's financial position in the longer run. Poor cost efficiency and high loan losses are both liable to lead to poor profitability in the first place and subsequently, if the problems are sufficiently serious, to an erosion of the capital base.

The first factor, capital strength, is not as self-evidently important as the others for earning power. A large stock of capital, by definition, has a negative effect on profitability if profitability is measured as the return on equity. On the other hand, a large capital stock provides a buffer in the event of financial problems and thereby improves long-term viability. A large capital stock may also decrease a bank's financing costs because it influences the risk premia required by creditors to supply the bank with borrowed capital. In that the Riksbank is ultimately concerned with risks in the bank sector, the most important of the factors considered here, at least in the short run, is the value of a bank's equity.

The competitiveness of Swedish banks relative to banks in other countries is of interest to the Riksbank because it considers that competitive banks do not need to take unduly large risks in order to survive. What matters is that the most dominant banks in the Swedish market are competitive; in this context it is irrelevant whether their owners are Swedish or foreign. At present, however, the owners of the dominant banks are mainly Swedish residents and the discussion below is therefore conducted in terms of the competitiveness of *Swedish* banks. It is these banks that are currently most important for the Swedish payment system.

Competitive banks do not need to take unduly large risks in order to survive.

The indicators are discussed in terms of their development over time and how the development of these indicators for the Swedish banks compares with the development of the indicators for a selection of banks from other countries. This benchmarking provides a standard with which to measure the expected performance of Swedish banks. Without it, one would largely have to make do with relative comparisons between the Swedish banks.

A general picture of bank competitiveness can be provided by a comparative analysis of sectoral indicators in different countries. A more detailed account calls for a functional analysis using the approach outlined in Part I, whereby the banks' strengths and weaknesses in different operations are judged separately. Such analyses will be presented in future reports. The more general picture presented here is of value as a starting point for the subsequent discussion of internationalisation and the decreased importance of banks as intermediaries.

Comparing banks – benchmarking

The process of internationalisation, which will be accentuated with the move to a European monetary union, is turning the bank system in Sweden into a part of a larger European system. International benchmark studies are therefore needed to determine whether Swedish banks are sufficiently well equipped to cope successfully with the international competition.

The countries selected are those where domestic banks are perceived to be potential competitors with Swedish banks. Banks are considered to be potential competitors if their country of origin is relatively close, geographically, to Sweden. Another criterion is that banks in that country demonstrate or can be expected to demonstrate an interest in competing internationally. The countries selected for the study are Belgium, Denmark, Finland, France, Germany, the Netherlands, Norway and the United Kingdom.

The group of banks have been selected so that they represent about 80 per cent of the assets in their respective national banking system. The banks selected in each country have been aggregated to form groups that are commensurate with the Swedish banks as a group.[13] Foreign banks were excluded from each national group. The comparisons are based on the latest available data, which refer to 1996. The averages presented in the charts are simple, unweighted arithmetic means.

Capital strength – financial resilience

In international work on bank regulation, capital strength has been regarded as perhaps the most important component of a sound bank. This view is expressed in the international standards for capital adequacy, which stipulate in brief that the capital of a bank must be equivalent to at least 8 per cent of its risk-weighted assets (see Box on p. 25). In that capital adequacy is measured in relation to asset risks, for a regulator it is a more relevant indicator of a bank's capital strength than a conventional measure of solvency. Shareholders and other market agents are of course more concerned with other indicators of the capital base.

In international work on bank regulation, capital strength has been regarded as perhaps the most important component of a sound bank.

13 The group of Swedish banks consists of Föreningsbanken, Handelsbanken, Nordbanken, S-E-Banken, Swedbank (Sparbanken Sverige) and Stadshypotek.

CAPITAL ADEQUACY STANDARDS

The capital adequacy standard requires that a bank's capital base be equal to at least 8 per cent of its risk-weighted assets. The assets in this instance are measured in relation to the level of risk they represent. For this, assets are divided into four categories, which are measured at rates of 0, 20, 50 and 100 per cent, respectively. Assets in the 0 category, for example, require no capital cover at all. Those in the 20 category are weighted for risk at 20 per cent of their value and so on. Examples of assets in each risk category are claims on sovereigns and Swedish local authorities in the 0 category, claims on financial firms in the 20 category, claims secured by house mortgages in the 50 category and claims on non-financial firms and unsecured credits in the 100 category.

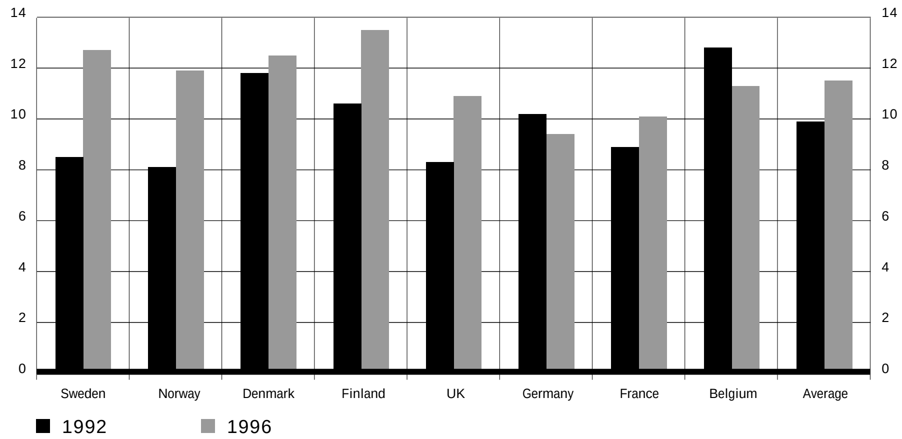
The comparatively small number of risk categories leads to some anomalies. The degree of capital cover required, for example, for unsecured loans to households is the same as for credits to large companies such as Ericsson. Another problem is that measurements are made at a particular time, normally at the end of each quarter, and sizeable changes may occur in the interval without showing up in the reports. But the capital adequacy standard of at least 8 per cent does have to be fulfilled on a continuous basis.

At just over 12 per cent, the capital adequacy of the Swedish banks is satisfactory and above the average for the reference group. Capitalisation has improved markedly since 1992, when it was just above the stipulated level of 8 per cent.

The level of a bank's capitalisation represents a trade-off between a high return on capital and having satisfactory reserves in the event of financial problems. It is debatable whether the level of capitalisation for the Swedish banks is unduly high for the rate of return and, if so, whether profits in excess of the optimal level should be distributed. Consistent behaviour along these lines would lead to lower levels of capitalisation and larger risks in the bank system.

There are several conceivable explanations for the size of the banks' capital. One is that the level of dividends is generally low, though rising, among Swedish listed companies and that generated profits tend to be retained. Another is that high dividends or buying back issued shares may be regarded as an excessively defensive strategy. A third explanation

Figure II:1.
Capital adequacy ratio.
Per cent



Source: Bankstat.

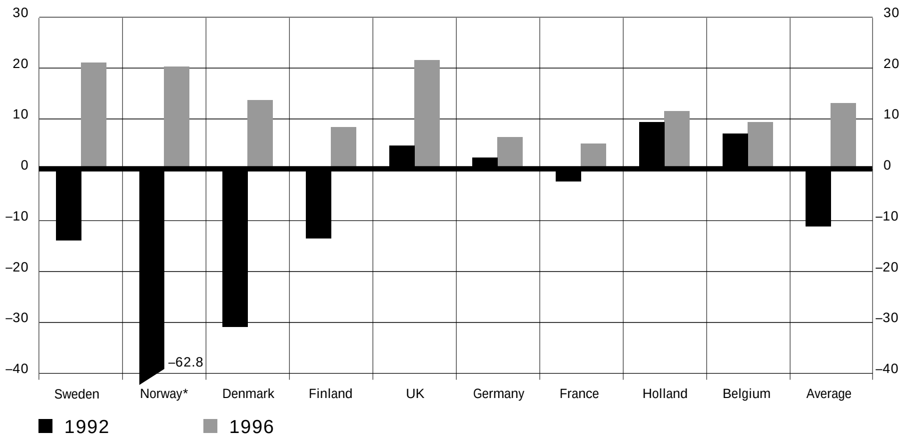
may be that when loan losses are low, banks prefer to accumulate capital as a buffer for years when losses are higher. In view of the cyclical variation in loan losses, it can be said that banks set aside the risk premiums they earn on loans in good years so as to be able to draw on them in lean years. Considering the growing competition in the Swedish bank sector and the need for investment this may entail, it can be seen as natural that the banks retain a comparatively large share of their capital. The turn of the millennium and the changeover to EMU will also require substantial investment. As most of the major banks have been involved in merger discussions, moreover, it is reasonable to assume that capitalisation has been maintained at a high level for such contingencies. The need to improve credit ratings after the financial crisis has been great and high capitalisation is an important factor here. Thus, the high capitalisation has several conceivable explanations and it can be noted that the banks' choice of capital stock appears to be a good deal above the statutory standard of 8 per cent.

High profitability

Profitability is measured in the first place as the return on equity. For each national group of banks, the return on average equity in 1996 represents an improvement from 1992 (Fig. II:2).

Of all the countries in the comparison, the return on equity in 1996 was highest for Sweden, closely followed by the United Kingdom and Norway. It can be noted that even in the worst year of the bank crisis in Sweden, the Swedish banks had a rate of return that was less negative than in the other Nordic countries. The marked improvement for the Nordic countries (apart from Finland) can be interpreted in light of the fact that the financial crisis had a purging effect of the financial crises, in the sense that the banks were obliged to tackle problem loans and incorporate losses in their accounts. As a result, the quality of the remaining credits is either good or, if not, then adequate provision has been made for them. Since the financial crisis, moreover, a greater element of prudence may have been established as well as better routines for credit assessments in connection with new loans.

Figure II:2.
After-tax return on equity.
Per cent



* The after-tax return on equity in 1992 amounted to on average –62.8 per cent in the Norwegian banks. This has not been drawn in full in order to avoid scale difficulties.
Source: Bankstat.

To some extent the financial crisis may have acted as a “purge”.

The Swedish banks restored a positive return in 1994 (Fig. II:3), which suggests that the financial crisis was then coming to an end. In that year the profitability of the Swedish banks had already risen above the average for the reference countries. Fig. II:3 also shows that the return on equity in the bank sector is liable to fluctuate widely from year to year and that the current high levels cannot be taken for granted.

In this context it should be noted that the return on equity does not necessarily indicate whether or not a country’s banks are internationally competitive. Good profitability may also be a sign of weak competition in the domestic bank system. As mentioned earlier, competition appears to be relatively intense in at least some segments of the Swedish bank market. Moreover, to judge from the analysis presented further on, concerning the ongoing internationalisation and increased competition from alternatives to bank products, competitive pressure seems to be growing.

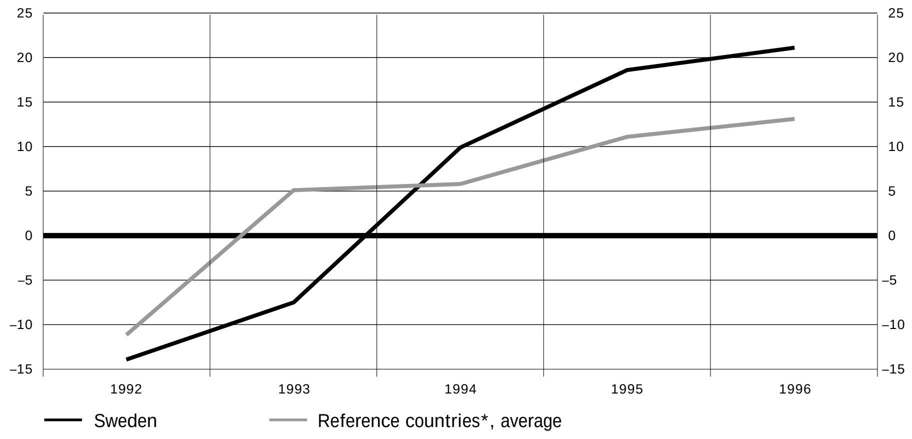
Cost-efficient banks

In an increasingly competitive bank market, an important factor for long-term viability is a bank’s cost effectiveness. A bank with costs that are low relative to income runs less risk than otherwise of being tempted to take increased risks in order to achieve acceptable profits.

In general, a firm can be regarded as inefficient if the ratio of costs to income is higher than that for other firms with similar operations. This cost-to-income ratio, C/I, can be used as a measure of a bank’s cost effectiveness.[14] For the comparison in Fig. II:4, loan losses have been excluded from costs. In that loan losses reflect the quality of a bank’s credit assessments and this can be seen as a feature of banking efficiency, there is a case for including loan losses in costs. The drawback is that loan losses constitute a cost that is different in kind to overheads. Moreover, loan losses primarily mirror credit assessments that were made in earlier periods. A C/I ratio excluding loan losses is accordingly a better approximation to the usual concept of cost efficiency, i.e. the ability to manage overheads; it also reflects

14 Note that the C/I ratio refers to operating income and costs.

Figure II:3.
After-tax return on equity.
Per cent



* Norway, Denmark, Finland, United Kingdom, Germany, France, Holland and Belgium.
Source: Bankstat.

contemporary efficiency to a greater extent than if loan losses are included.

The Swedish banks have the lowest C/I ratios; measured in this way, their cost efficiency can thus be regarded as good (Fig. II:4). Sweden's ratio was clearly the lowest even in 1992. The low C/I ratio for the Swedish banks during the financial crisis is one reason why their profitability did not deteriorate to quite the same extent as for banks in the other Nordic countries during their financial crises.

The low C/I ratio for the Swedish banks during the financial crisis is one reason why their profitability did not deteriorate to quite the same extent as for banks in the other Nordic countries during their financial crises.

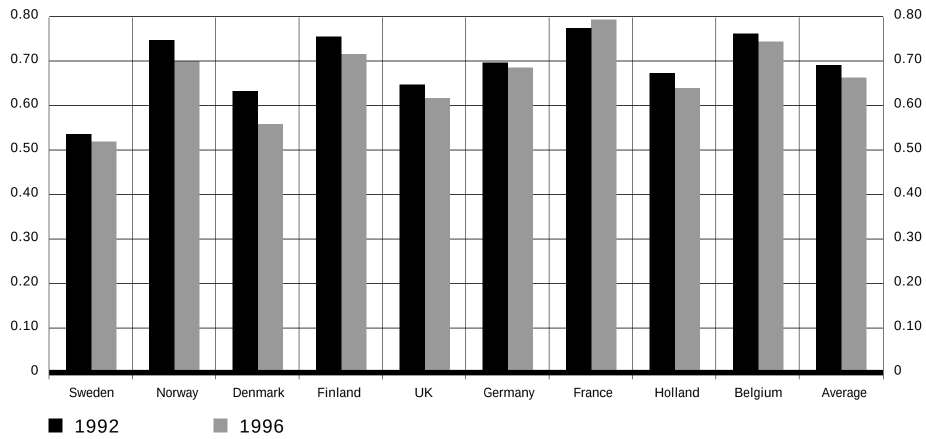
A drawback with the C/I ratio is that it is unaffected by the level of risk. High earnings can be achieved by accepting a level of risks that is untenable in the longer run and this should be borne in mind when making comparisons of this type. A rapid improvement in the C/I ratio may therefore be a warning of increased risks just as much as a sign of increased cost efficiency (cf. the section on loan losses). Another drawback with the C/I ratio is that cost intensity naturally varies between operations of different types.

The ability of banks to keep costs down can also be assessed by looking at the development of certain categories of costs. Staff costs may be of particular interest in that they make up a large share of bank overheads and often offer a potential for improving efficiency. Adjusting these costs to changes in income is relatively difficult because branch staffing can be varied to only a limited extent to cope with the work load. Moreover, staff cuts are associated with costs and often take a comparatively long time.

For the Swedish banks, staff costs accounted for 51 per cent of overheads in 1996. Swedish banks have been continuously reducing their personnel in recent years. From 1991 to 1996 the number was cut from about 45,000 to about 39,000 persons. To establish that a real reduction that enhances efficiency has been undertaken, however, the cuts must be related to the change in the scale of operations. The number of employees is shown in relation to operating income in Fig. II:5.

For the five major banks, operating income per employee shows some improvement in recent years. A trend towards lower staff intensity is evident for the independent savings banks. All three categories—large banks, independent savings banks and other banks—have improved their operating income per employee since 1994.

Figure II:4.
C/I ratio (ratio of operating costs before loan losses to operating income)



Source: Bankstat.

Another indicator of cost efficiency is the change in branch networks. From 1992 to 1996 the total number of branches has decreased by 15 per cent, from 2,910 to 2,483 branches. Virtually the whole of this reduction has been made by the five large banks, which is to be expected in that these are the banks with such a large branch network that a reduction is feasible.

Judging from these indicators, the Swedish bank sector appears to be cost efficient in an international comparison and should be well equipped to deal with the growing international competition. This competition will probably come primarily from the largest and most efficient international banks. In order to meet this competition, the large Swedish banks should therefore be competitive in relation to these international banks.

Low loan losses

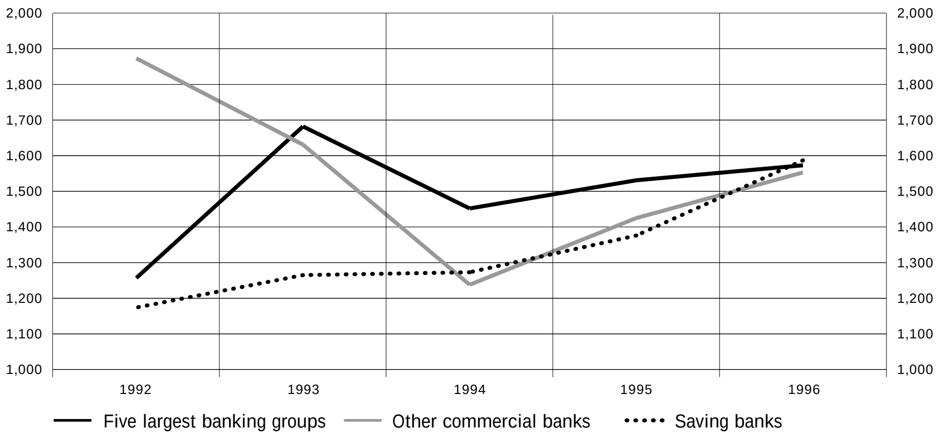
The level of loan losses is an indication of how banks manage risks. This level is largely a reflection of the quality of credit assessments. The loan loss level is measured in relation to the total loan portfolio.

The Swedish banks show up well in the European comparison (Fig. II:6). In 1996 it was only the Norwegian, British and Dutch banks that had a lower loan loss level than the Swedish banks. The Swedish banks' loan losses are tending to fall still further in 1997, which may give a further improvement in this indicator.

In 1992 the Swedish banks had the highest level of loan losses but because of their high level of efficiency, the return on equity was not lower than in other countries hit equally hard by a financial crisis. It should be added that the level of loan losses is highly contingent on accounting principles which are used. The definition of loan losses may vary between countries; even in the same national accounting system, provisions for expected loan losses may differ from bank to bank.

While the loan loss level can be seen as an indicator of the quality of a bank's credit assessments, losses occasioned by a financial crisis in which macroeconomic shifts have been a major factor need not necessarily represent inadequate risk management. The decisions to provide credit may have been rational and based on an assessment of reasonable risks at the time, even if this subsequently proves not to be the case when the losses are primarily caused by unpredicted external changes. In the Swedish case, however, a substantial proportion of the loan

Figure II:5.
Operating income per employee in different bank categories.
SEK 1,000's



Sources: Statistics Sweden and the Riksbank.

losses must be attributed to poor assessments of credit risks. It can therefore be said that the improvement in loan loss levels in recent years indicates that the Swedish bank sector has strengthened its ability to assess credits, given the economic environment in which they are now operating.

The improvement in loan loss levels in recent years indicates that the Swedish bank sector has strengthened its ability to assess credits.

Large loan losses need not necessarily imply that the quality of a bank's credit assessments is poor. They may also represent a deliberate policy involving high risk premia and thereby an appropriate pricing of the risk involved. This is discernible in the bank's profitability, measured as the return on equity, because in this indicator the level of loan losses is related to income.

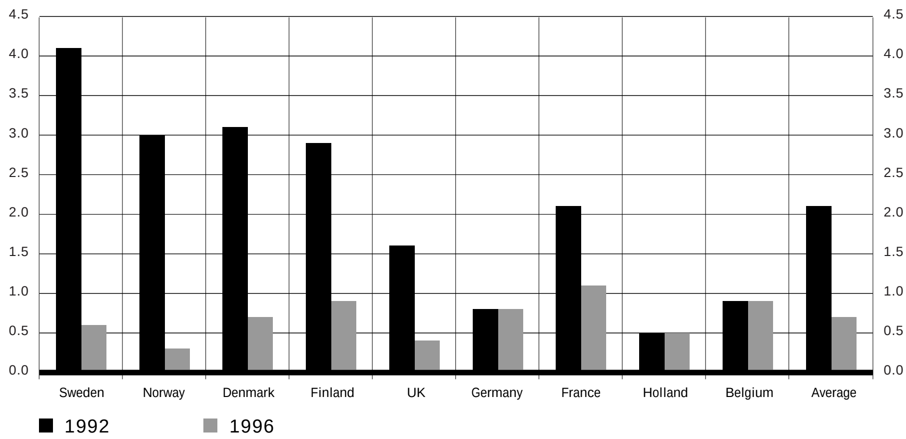
A drawback with loan losses as an indicator of the ability to manage risk is, as mentioned earlier, the time lag between the credit assessments and the losses. Moreover, the extent to which loan losses occur is contingent on macroeconomic developments. In order to avoid the problem of these time lags, the level of risk can be measured instead in the distribution of a bank's assets by the risk categories that are used to measure capital adequacy. A diminishing ability to achieve reasonable profit levels can prompt a bank to boost income by increasing the risk in its loan portfolio, for instance by relaxing the criteria for credit assessments. An increased risk relative to income can therefore be an indication that a bank has become more vulnerable.

In the wake of the financial crisis, the banks reduce the level of risks in their portfolios; this has been followed by some increase, mainly in 1996 (Fig. II:7).[15] Loan losses fell to low levels in 1995 and 1996 and the financial crisis is a thing of the past. The banks have achieved good rates of return and good levels of capitalisation at a time when credit demand has been slack and competition has grown. In this situation it may be natural to raise the level of portfolio risks as a way of increasing the rate of return.

Since 1996 a distinction had been made between credit risks and market risks. Market risks arise from banks' holdings of and trading in financial instruments, e.g. the risk that the value of securities will be altered by interest rate movements (interest rate risks). The weighted element of market risk in total assets is comparatively small, about 4 per cent. In

15 This is indicated by the increase in the risk-weighted component for risk category D and the decrease for risk category A, implying a portfolio shift to items in higher risk categories.

Figure II:6.
Loan losses in relation to loan portfolio.
Per cent

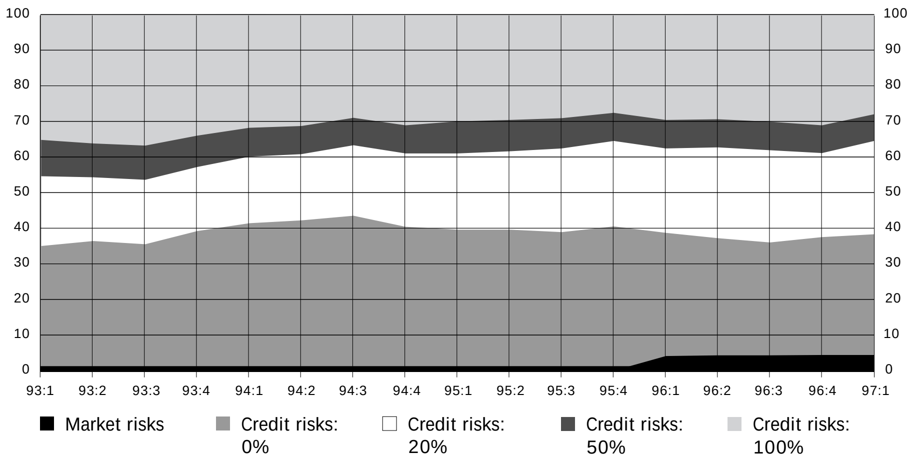


Source: Bankstat.

relation to the balance-sheet total weighted for risk (total assets multiplied by their risk factors), the weighted market risk component is about 9 per cent. In other words, of the capital that banks are required to hold to cover risk, 9 per cent refers to market risks and 91 per cent to credit risks. The greater importance of credit risks compared with market risks in this context warrants the Riksbank's attaching greater importance to credit risks in the analysis of risks in the bank sector.

It should be noted that the risk categories for capital adequacy do not allow for any sectorwise diversification or concentration. Even though banks which lend primarily to a particular sector of the economy, a particular type of firm or a particular geographical region are particularly vulnerable to economic shocks that have the general effect of weakening creditworthiness in their specific segment of lending, are taking on considerable risk, the capital adequacy requirements do not reflect this.

Figure II:7.
Bank assets broken down by capital adequacy risk categories



Note. The capital adequacy risk classes are explained in the Box on p. 25.
Source: Financial Supervisory Authority.

PART II · CHAPTER 2

International competition

The Swedish bank market is exposed to international competition. Appreciable signs of this competition have been found to date mainly in what is usually referred to as wholesale banking, e.g. trade in financial instruments. International competition in the household market has been fairly limited, though some signs of an increase have also been noted recently both here and in the market for small firms. It is mainly Nordic competition that has grown in the latter segments. Another indication is a sharp increase in the number of notifications of cross-border transactions. All this suggests that wholesale banking is internationalised and that the sector for households and small firms is becoming more *Nordicised*.

The internationalisation of the bank sector began when the banks started to follow their domestic corporate customers into the outside world. Banks established a presence in money and capital markets abroad so as to be able to meet the needs of corporate customers and extend their own financing facilities. Besides building up a network of correspondent banks, the banks have established representative offices, branches and subsidiaries. Internationalisation has accordingly occurred mainly in such operations as securities trading and large-scale corporate finance. Services to households and to small and medium-sized firms have been provided in the traditional way via the branch networks of the local banks.

Since the mid 1980's, an international wave of deregulation has given financial agents wider opportunities of diversifying portfolios. It is the possibility of investing outside the home market that has mainly contributed to the effectiveness of this diversification, which has therefore also contributed to the increased internationalisation.

The EEA Agreement and subsequent membership of the European Union have brought Sweden into the single European market. The legal framework for the single financial market has aimed at creating a level regulatory playing field, with harmonised rules and regulations for financial markets and thereby an avoidance of regulatory arbitrage. The most important principles are freedom of establishment (a single passport) and home-country supervision. Another central matter is the right to conduct cross-border operations, i.e. to operate without a physical presence.

The competitive situation for Swedish banks is considered below. The importance of foreign players in the Swedish market is discussed, while the presence of Swedish banks in markets abroad is considered only briefly, except that the subject of the final section of this chapter is the activities of Swedish banks in the Nordic market. The discussion concerns the extent to which the Swedish bank market has been affected by international competition. If this competition grows, the profitability of Swedish banks will come under pressure. In such a situation it is conceivable that one or several banks try to counter by taking increased risks.

Foreign banks in Sweden for more than a decade

Foreign banks have been permitted to establish subsidiaries in Sweden since 1986 and branch establishments have been permitted since 1990. Today, the operations of foreign banks in Sweden are conducted mainly by branches, while subsidiary operations have decreased. A number of foreign banks that set up subsidiaries initially now have branches instead. One reason is that, for banks whose business is mainly with large companies, a branch is more suitable because commitments with large customers need to be backed by significant capital resources.

Around the turn of 1996 subsidiaries in Sweden were established by Dexia (formerly CLF Kommunbank) and GE Capital. Another example of an offensive investment via a subsidiary is Den Danske Bank's acquisition of Östgöta Enskilda Bank. The customers on which these subsidiaries concentrate, e.g. local authorities and private individuals, differ from the segments that the foreign banks have previously been interested in.

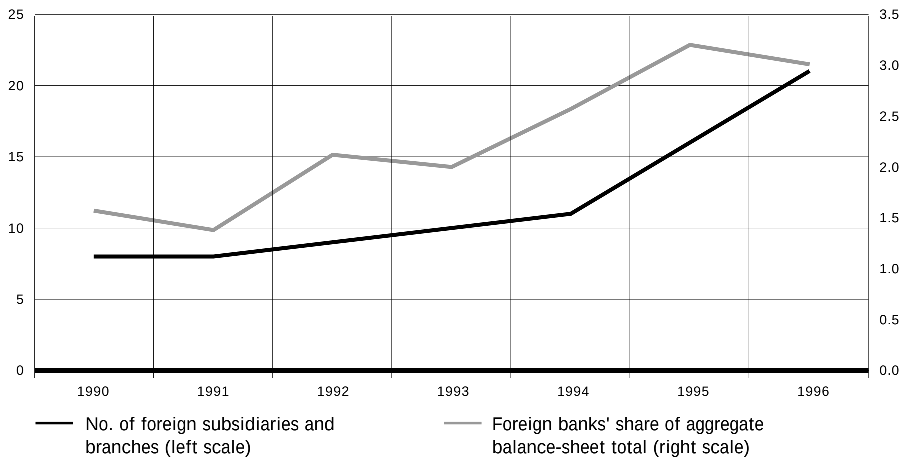
An important aspect of branch operations in the present context is the principle of home-country supervision. This means that while Swedish subsidiaries of foreign banks are supervised by the Financial Supervisory Authority, branches are not. In the context of stability it is therefore important to have good cooperation with other countries' supervisors and central banks.

Foreign competition, measured as foreign-owned banks' share of the Swedish banking system's aggregate balance-sheet total, has doubled in the 1990's but is still very low (Fig. II:8). This indicator, however, is misleading because the foreign banks have tended to specialise in certain operations and therefore do not compete over the whole range of bank products. It is more relevant to consider their operations in functional terms, as described in Part I, and study their importance for each function.

As regards bank operations such as household loans and deposits or services for small and medium-sized firms, the foreign competition to which Swedish banks are exposed is still rather limited. In the household sector at the end of 1996, foreign banks had only 0.43 per cent of loans and deposits. Since then, however, both GE Capital and Den Danske Bank have established a presence in this segment (in the latter case in what appears to be a major venture in Sweden) and this could lead in time to increased competition.

The evidence to date of international compe-

Figure II:8.
Foreign banks in Sweden.
Number and market share



Source: The Riksbank.

tition in Sweden has concerned specific financial market operations, above all trade in financial instruments, an activity in which not only banks but also institutional investors and securities companies play an important part. Trade in shares, for example, includes a large contingent of international players, one reason being that the Stockholm Stock Exchange was the first stock exchange in the world to be opened for remote trading. Although it opened in 1993, it was not until some way into 1994 that the first remote traders joined. At the end of 1996 the 45 members of the Exchange included 12 remote participants and another 9 were foreign-owned members operating from Stockholm.

The evidence to date of international competition in Sweden has concerned specific financial market operations, above all trade in financial instruments.

As regards corporate lending and deposits, the foreign banks' share is rather modest, e.g. 4 per cent of lending at the end of 1996. The statistics do not distinguish between small and large companies. In that the established foreign banks have mainly concentrated to date on large companies, their market share in this segment is probably considerably larger than indicated by the statistics for the corporate sector as a whole. This suggests that international competition in the large companies segment may be more substantial.

Cross-border operations –doubled in two years

The EU regulations concerning the right to conduct cross-border operations without a fixed business abode in the European Economic Area include a stipulation that the home-country supervisor is to notify the host country supervisor that an institution intends to conduct such operations. In recent years the number of *notifications* of cross-border operations received by the Financial Supervisory Authority has risen sharply, which is a clear signal of a growing international interest in the Swedish market.

Table II.1.
Notifications to the Financial Supervisory Authority of foreign institutions' intention of conducting cross-border operations in Sweden

Year	1994	1995	1996
No. of notifications	15	22	33

Source: Financial Supervisory Authority.

The notifications are to specify the category of operations the institution intends to conduct. An examination of the notifications shows that the categories largely belong to the traditional operations of foreign banks in wholesale banking. However, the exact composition of the operations is difficult to determine because they are specified in rather general terms and many institutions state that they intend to undertake most or all operations (possibly for precautionary reasons). But it is worth noting that a good many notifications specify operations that have more to do with the household sector, e.g. selling insurance; this may point to a future increase in competition in this segment.

Impetus to internationalisation from EMU

In the event that Sweden participates in the euro area, the most notable effect for the banks would be the loss of income from foreign exchange transactions. The banks' own assessment is that 20 per cent of this income would disappear. As Sweden will probably not be joining the euro area from the start, these effects belong to the future. An outsider position is likely to be costly for Swedish banks on account of direct expenditure on facilities compared with banks located in the euro area. This has to do with an expected demand from euro-denominated products, which will entail large additional costs for developing systems and technologies. The Banking Federation of the European Union has estimated that for the banks, the additional cost of the changeover to the euro will be in the interval ECU 8–10 billion over three to four years, which is equivalent to about 3 per cent of the banks' operating costs. If the changeover were to be a slow process, however, so that banks have to distribute products denominated in euro as well as national currencies, the cost could be 50 per cent higher. It seems probable that Swedish banks will face a corresponding increase in costs, with the attendant competitive disadvantages, as long as Sweden remains outside the euro area.

In the market for Swedish kronor and interest-bearing treasury paper, international competition is strong but under present conditions the Swedish banks have considerable competitive advantages over foreign players. The Swedish banks have access to a broad spectrum of domestic institutional investors, which makes it easier to place large sums and provides a better understanding of the patterns of domestic supply and demand in the money and currency markets. The expertise that Swedish banks have about domestic monetary conditions also facilitates an understanding of interest rate movements and thereby of price movements in money as well as currency markets. All this means that they are often able to offer competitive prices, which naturally generates business and thereby income.

In a situation where Sweden participates in the euro area, these advantages would disappear. But the Swedish banks would still have a better understanding of the creditworthiness of Swedish securities denominated in euro. In the euro area the pricing of securities issued by a national treasury will be determined by the creditworthiness of the nation itself. Moreover, the market for treasury paper issued by participants in the euro area will become considerably larger and more like the US market in terms of size and efficiency. Experience from the United States indicates that under such conditions, size and a physical presence are important competitive advantages for banks. If the euro becomes a major world currency that rivals the US dollar as a reserve currency, the volume of currency transactions with countries outside the euro area may grow appreciably, with positive effects for banks in the euro area.

All in all, trade in currencies and interest-bearing treasury paper is already highly internationalised but a single European currency will accentuate this trend. This will be accompanied by fundamental changes in the competitive situation and in order to compete successfully in this market segment, the Swedish banks will have to develop certain characteristics. Examples of such characteristics are size and an approach that covers the whole of the euro area. This has to do with the necessity of understanding the monetary conditions surrounding the euro and the need for a good picture of the patterns of supply and demand that underlie price movements in money and foreign-exchange markets.

Trade in currencies and interest-bearing treasury paper is already highly internationalised but a single European currency will accentuate this trend.

It is more uncertain how Swedish participation in the euro area would affect the intensity of competition in the markets for households and for small and medium-sized firms. An adoption of the single currency would probably accentuate the signs of increased internationalisation and growing competition that are already evident in Sweden's bank sector. In particular, the single currency, with the attendant elimination of differences in exchange rates and interest rates, would make the pricing of financial products more transparent. The ongoing, rapid development of technology will probably also facilitate price comparisons between highly-standardised products.[16] All this will probably lead to increased competition and thereby pressure on prices. The magnitude of the effects is difficult to estimate, not least because cultural and emotional ties may make it difficult for foreign agents' to establish themselves with Swedish households.

16 E.g. house mortgage loans and other secured loans.

Nordic area, a new home market

In the 1980's the major Swedish banks went in for internationalisation by building up subsidiaries, branches or representative offices throughout the world. This was done mainly so as to be in a position to offer adequate services for the large Swedish multinational companies and to acquire funding for the bank. The latter was at least as important as the former in view of the large deficits on Sweden's current account and the principle that the government was to refrain from net borrowing in foreign currency. The resultant strong demand for corporate borrowing in foreign currency made financing abroad important for the banks. This diversification abroad ceased with the bank crisis and foreign operations were greatly reduced by the banks that decided to return to their traditional operations.

Today there are signs of a new wave of internationalisation. A characteristic feature of this is that banks in the Nordic countries are entering each other's markets. The following are examples of this:

- Nordbanken's planned merger with Merita will result in a large Nordic universal bank. Statements suggest that the bank will continue to expand in what has been defined as its home market—the Nordic and Baltic countries. The merger is of interest as the first instance of a cross-border merger of two major banks.
- With the acquisition of Östgöta Enskilda Bank, the Swedish offensive by Den Danske Bank has acquired a new dimension. The acquisition has increased Den Danske Bank's branches in Sweden from 3 to 29 and the plans to establish branches in every major Swedish city suggest that a further ten or so branches may be added. At the time of the acquisition, Den Danske Bank declared that its corporate programme would now be enlarged to include small and medium-sized firms.
- Besides Den Danske Bank and Merita, operations in Sweden have also been established by OKO, Den Norske Bank, Unibank and Kreditkassen.
- Handelsbanken is investing in the Nordic bank market with the declared aim of being a traditional, universal bank with a branch network. Today Handelsbanken has fifteen branches in Norway, twelve in Finland and two in Denmark.
- Swedbank (Sparbanken Sverige) has been buying into the Nordic market and now owns 25 per cent of Aktia in Finland and almost 5 per cent of Bikuben Girobank in Denmark. Swedbank has also obtained options for a substantial holding in the subsidiaries for mutual funds and insurance of Sparebankgruppen in Norway as well as for 7 per cent of Fokus Bank.
- S-E-Banken has built up branches in Oslo, Copenhagen and Helsinki, primarily aimed at large and medium-sized firms and also for share and bond trading. Recently, moreover, S-E-Banken acquired Ane Gyllenberg, a Finnish banker in the field of capital management, e.g. with 17 per cent (the second largest share) of the Finnish market for mutual funds.

Today there are signs of a new wave of internationalisation. A characteristic feature of this is that banks in the Nordic countries are entering each other's markets.

Swedish banks have also displayed an interest in expanding in the Baltic region by acquiring business connections in the Baltic countries and in Poland.

The Swedish operations of banks from other Nordic countries are still rather modest. Of all the foreign subsidiaries and branches in Sweden at the end of 1996, 30 per cent were from other Nordic countries but they had no more than 19 per cent of the aggregate balance-sheet total for foreign banks. In this context it is worth noting that most of the large Nordic banks have declared that they regard the Nordic area as their "home market" (banks in Norway, however, still have a somewhat more domestic profile).

This ongoing *Nordicisation* includes a drive to attract business in the traditional markets comprising households and small businesses.[17] Apart from the planned merger of Nordbanken and Merita, this has been evident to date mainly in the operations of Swedish banks but there is also the clear example of Den Danske Bank's acquisition of Östgöta Enskilda Bank. In this respect there is a difference between *Nordicisation* and internationalisation. It probably has to do with the perception of the Nordic area as a relatively homogeneous market, with low cultural barriers, and an intention among Nordic banks of expanding in this new *home* arena to gain strength for the prospect of increased international competition. The current evidence of *Nordicisation* may be a sign of expectations of a future increase in international competition.

The ongoing *Nordicisation* includes a drive for the traditional markets comprising households and small businesses.

A large potential for increased *Nordicisation* may exist in the form of increased competition between the banks, as well as through the integration of marketplaces, examples of which are OM's links with the derivative exchanges in Norway and Finland and the cooperation between the stock exchanges in Stockholm and Copenhagen. At the same time it may seem surprising that it has taken so long to get this far and that the pressure from Nordic competition in the bank sector is not greater than it is. This probably has to do with the previously regulated national markets in these countries and the fact that when deregulations had made cross-border competition easier about a decade ago, financial crises some years later obliged the banks to concentrate on surviving in the short run rather than acting strategically with plans for future expansion. Today the banks have not only left the crisis behind them but also appear competitive and financially strong, which suggests there may be a potential for offensive action.

Besides indicating increased competition in the Swedish market, this account of growing Nordic competition shows that a number of Swedish banks are tending to expand in the region. This indicates that the banks can be expected to counter any pressure on profitability in the Swedish market with increased income from operations abroad. This can reduce any propensity to take increased risks.

17 In this context it may be worth mentioning that Nordic banks were the first to withdraw from the Swedish market in the late 1980's.

PART II · CHAPTER 3

Competition in traditional banking

The banks are encountering increased competition in their core operations (lending and deposits) but have proved to be both competitive and innovative, with the result that they have largely managed to retain customers. Probable explanations for this are an extensive branch network, information to customers and the broad range of products. Looking ahead, it seems probable that margins from lending and deposits will narrow. The pressure is being felt chiefly as regards deposits, because competition in the market for lending to small and medium-sized customers has been weaker. Many of the services that generate commission income are also exposed to competition. An increased share for commission income shows that the banks have been successful in finding new sources of income now that new competitive conditions have reduced the potential income from their core operations. The broader range of bank services may make banks less vulnerable to financial market shocks despite smaller margins.

Traditionally, the banks played a very important role as financial intermediaries, accepting liquid deposits and transforming them into less liquid credits. In this capacity the banks have taken credit and liquidity risks as well as interest rate risks, in that their assets generally have a longer maturity than their liabilities. Today there are signs of an ongoing change in the banks' traditional role in the process of transforming savings into consumption and investment. More and more services and functions associated with saving are facing competition from new products supplied by other financial and non-financial firms. In addition, large firms are increasingly obtaining finance directly in the securities market instead of borrowing from a bank. As regards savings, there is an increased demand for non-liquid instruments such as pension savings. This has to do with lower compensation levels in and greater uncertainty about the future construction of public social security systems. As a result, individual saving has gained ground at the expense of traditional collective savings, thereby favouring the market for private savings and the financial firms that operate there.

More and more services and functions associated with saving are facing competition from new products supplied by other financial and non-financial firms.

Disintermediation is a common term for the tendency for deposit and loan customers to switch from traditional bank products in favour of others, e.g. insurance saving and investment in funds that are off-balance sheet, or to turn to other financial or non-financial institutions. The phenomenon is more prominent in other countries where capital markets are more well developed, e.g. the United Kingdom and, above all, the United States.

At present the stronger competition from insurance companies, security companies and niche banks has mainly affected bank deposits. This is exerting pressure on banks' net interest income because deposit margins becomes lower and interest costs higher as relatively cheap deposits are replaced by more costly forms of financing. The new players can specialise in just a few products and gain market share by pricing them at their cost. Moreover, many of them do not have to finance the large branch network that is a typical feature of major Swedish banks. This restricts possibilities for the banks' traditional practice of cross-subsidising products, i.e. using income from profitable deposits and lending to finance other services that are provided *free*. The banks are accordingly obliged to price their product range more transparently.

On the assets side, the main sign of disintermediation is that large corporate loans disappear from bank balance-sheets as companies borrow directly in capital markets. This tends to depress interest income and undermine the close relationships that traditional lending established between banks and large companies.

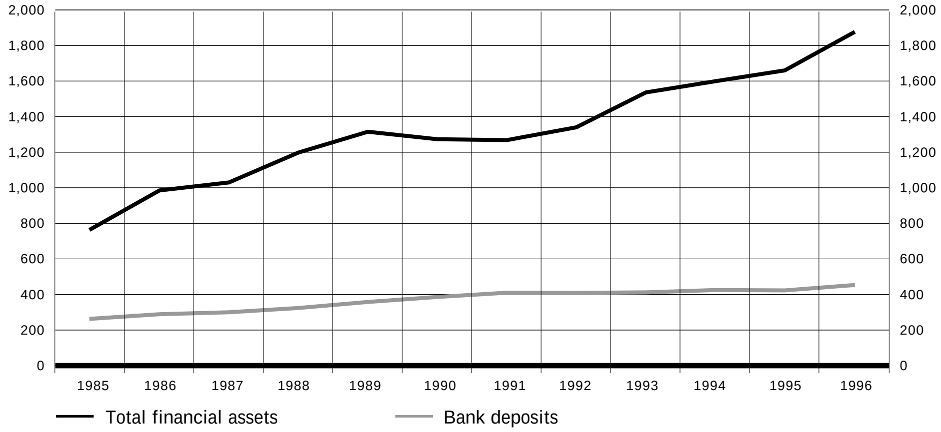
The challenge for the banks will be to offset the growing pressure on net interest income with commission income generated off the balance sheet. The banks will have to develop the appropriate characteristics for this and that entails considerable changes. The characteristics in question are considered in this chapter.

Wider market for savings products

For the traditional universal banks, doing business in the market for savings has become tougher in the 1990's at the same time as household saving has been rising strongly and provided a growing market for savings products. The market growth has mitigated the negative effects of the increased competition and the decline in deposits relative to other savings products. The increased saving is a function of structurally-related macroeconomic changes with widespread consequences for the allocation of household income between saving and consumption. The following factors have had major effects on this allocation:

- The 1990–91 tax reform reduced the economic advantage of financing consumption with loans and made saving more advantageous.
- A sharp drop in the rate of inflation in 1992 caused a marked increase in the real interest rates that households expected and experienced, thereby contributing to a negative trend for lending and a positive trend for saving.

Figure II:9.
Household sector: bank deposits and total financial assets. SEK billion



Source: Statistics Sweden.

- Budget consolidation entailed cuts in social security systems that included lower compensation levels, thereby increasing the personal saving incentive. Higher unemployment probably also contributed to growing uncertainty.

- Demographic changes are accentuating the trend as the group aged 45–65 years is growing and people in this group generally have relatively good incomes, a low maintenance burden and a large need to save for the longer run.

These factors have been favourable for banks and other financial firms by generating a greatly increased volume of savings for them to manage. Although bank deposits fell continuously from 1985 to 1996 as a share of households' financial assets, in absolute terms they rose (Fig. II:9). But the fall in the share has been substantial, which is a clear indication that savers are finding alternatives to bank deposit accounts.

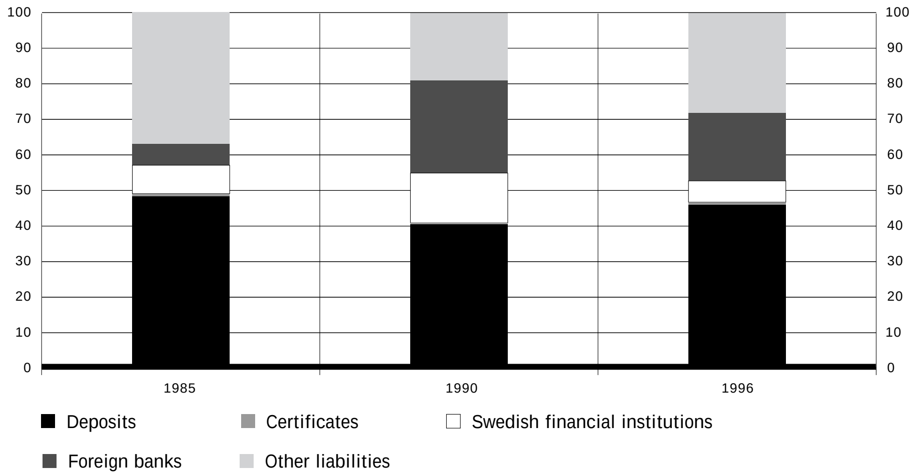
With the absolute increase in deposits, the level of deposits as a share of total bank liabilities did not change appreciably in this period (Fig. II:10). The rising trend in the volume of savings has modified the extent to which the withdrawal of savings from bank balance-sheets has affected the structure of bank financing and thereby net interest income. Consequently the effects of disintermediation on profitability—a shift from cheap financing with deposits to more costly market financing—will not show up until loan portfolios grow appreciably and saving falls. All else equal, the combination of an increased volume of lending and decreased deposits will exert pressure on the banks' interest margins and thereby on their profitability. This might ultimately have consequences for financial stability by eroding the banks' financial resilience to potential shocks. To date, however, the banks have been very successful in countering the downward trend in deposits by offering alternative products, so at present there is no cause for concern.

Competition for household savings has grown in the 1990's due to a combination of factors that stem from the following:

- A larger supply of alternative forms for saving, leading to stronger competition between the saving products that customers are offered.

- A larger number of players competing for capital in the form of savings.

Figure II:10.
Sources of bank financing.
Per cent of total financing



Source: The Riksbank.

The *first* phenomenon is partly a result of households' greater awareness about saving, particularly since the mid 1990's. This has led to a fall in the share of household assets that consists of bank deposits. A variety of instruments are competing for household savings. As a share of households' financial assets, bank deposits have decreased from 34 per cent in 1985 to 24 per cent in 1996 (Fig. II:11), which again is a clear indication of disintermediation. In the same period insurance saving rose from 9.5 to 16.4 per cent. The type of saving that expanded most in 1996 is directly-owned shares and mutual funds, for which the share of households' financial assets rose 5.2 percentage points during 1996 to 29 per cent. The increase can be connected with the strong upward trend for share prices that began in Sweden in 1996, thereby contributing to an increase in asset values and also attracting an increased flow of savings to the stock market. Another form of saving that has grown in recent years but which does feature in the balance sheets of bank groups, where it would contribute to their financing, is private bonds issued by financial institutions. Their share of households' financial assets in 1996 was about 5 per cent, whereas in 1995 it had been negligible.

The *first* phenomenon is partly a result of households' greater awareness about saving, particularly since the mid 1990's.

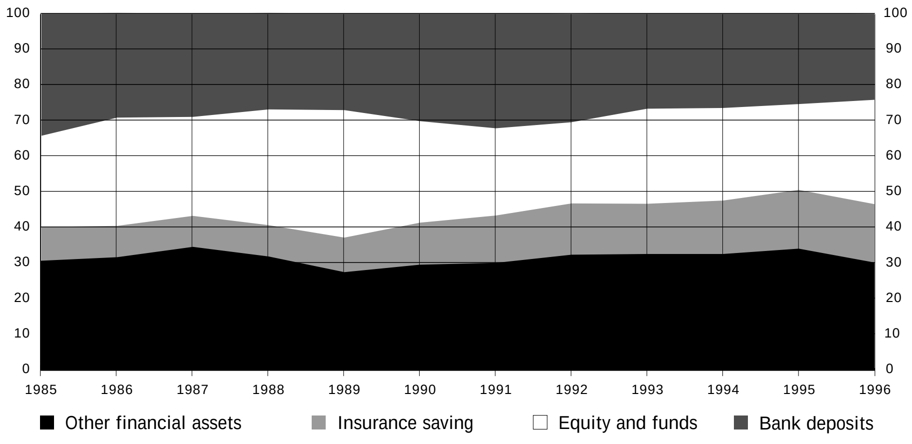
The *other* factor that has added to the intensity of competition in the banks' traditional deposit function is the larger number of players in the market. The newcomers are predominantly small niche banks, which have specialised primarily in deposits on favourable terms.

The *other* factor that has added to the intensity of competition in the banks' traditional deposit function is the larger number of players in the market.

The following are some factors that have contributed to the establishment of new banks:

- Prior to 1990 bank permits were issued subject to the condition that new banks were demonstrably needed. Since then there have been no restrictions on bank establishments provided certain objective criteria are fulfilled.
- The removal of operational restrictions has meant that since 1991 banks and insurance companies are permitted to own each other's shares and belong to the same group. This has

Figure II:11.
Household sector: structure of financial assets.
Per cent of total



Source: Statistics Sweden.

enabled banks and insurance companies to compete with each other by providing services and products that used to be restricted to one or the other of these institutional categories.

- The State bank guarantee that was in force from 1992 to 1996 eliminated the risk of doing business with new banks.

In December 1992 the niche banks as a group had 1 per cent of total household deposits, while in December 1996 their share was 5 per cent. The increased competition from alternative instruments for saving and the larger number of players in the deposits market have tended to depress margins in the deposit market (Fig. II:12).[18] The picture should be interpreted with some caution because short-run changes in the deposit margin may be occasioned by the fact that the reference rate (for six-month T-bills) has varied more than the deposit rate. The narrow margin in the past six quarters indicates that the competition also affects the rates that households are offered for bank deposits. The growing competition accordingly tends to increase the banks' interest costs.

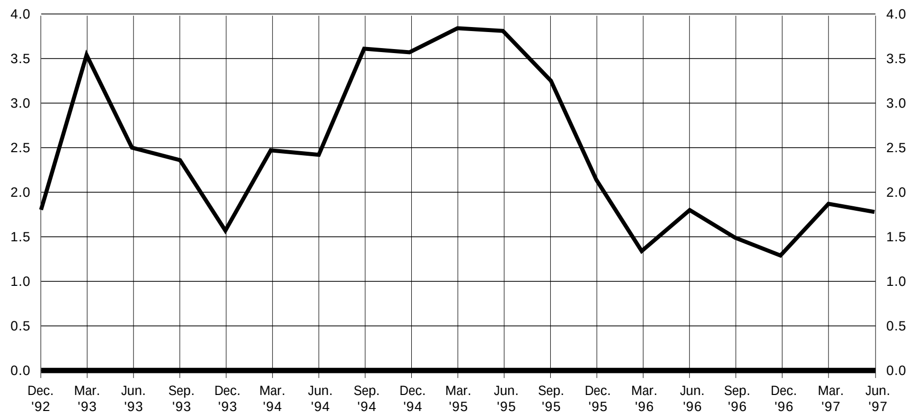
Another factor behind the changing pattern of saving is the shifts in savers' preferences over the range of assets. These preferences are mainly conditioned by changes in expected and actual yields. This phenomenon has not affected competition to the same extent but it has influenced the conditions that producers of saving products have to consider.

Another factor behind the changing pattern of saving is the shifts in savers' preferences over the range of assets.

A major reason why the flow of savings to instruments other than bank deposits has been accentuated in the past two years is the strongly rising trend in Swedish share prices, which has been fuelled by the fall in Swedish interest rates. The easing of the Riksbank's monetary stance, with lower inflation expectations paving the way, contributed to this. The actual and expected return on bank saving has dropped markedly, accompanied by a sharp increase for various forms of saving in shares. Savings have therefore been channelled mostly to shares, mainly at the expense of bank deposits and other interest-bearing assets.

18 The margin, derived from the Riksbank's analysis of average lending and deposit rates, is the difference between the average of banks' deposit rates at each quarter-end and the six-month T-bill rate on that date.

Figure II:12.
Deposit rate margin (gap between average deposit rate and six-month T-bill rate). Percentage points



Source: The Riksbank.

If interest rates rise again and alter the relative rates of return for different categories of asset, some of the savings that are now being channelled to the stockmarket will probably be redirected to interest-bearing assets. That they will find their way to deposit accounts is less probable, however, because the tendency for savers to prefer the high-yield instruments for each asset category is expected to continue. In that case a change in the relative rates of return would mean that most of the savings that are channelled back to interest-bearing assets will be placed in money market funds or private bonds. This in turn implies a continuation of the trend away from bank deposits even if the flow of savings to the stockmarket were to be redirected to interest-bearing assets. From this it can be concluded that the change in saving behaviour is structural rather than a temporary phenomenon of a cyclical nature.

Banks have handled the new conditions successfully

The new competition encountered by banks in the savings market has come to date from insurance and securities companies. The banks have responded by broadening their operations to include new products, such as insurance saving, as well as by developing and enhancing existing products, such as asset management. The banks have utilised their competitive advantages in the form of a branch network and established customer relationships. The programmes for customer loyalty that banks have introduced are an example of this; customers who utilise a certain number of products are offered beneficial treatment, e.g. lower borrowing rates. The banks have been very effective in competing in the most exposed market segments (Table II:2).

Table II:2.

The banks' market share of market segments

Per cent	1995	1996
Fund insurance	48	47
Fund management	80	83
Trade in equity options	57	63
Stockholm Exchange turnover	33	36

Sources: Banks' annual reports and share statistics from the Stockholm Stock Exchange's quarterly reports.

The statistics for the first half of 1997 show a further accentuation of the shift to saving instruments that do not feature on bank balance-sheets. At mid-1997 the capital in mutual funds totalled SEK 434 billion,[19] an increase of 115 billion or 36 per cent since the beginning of the year and more than the annual increase in 1996. Most of the increase or SEK 92 million came from equity funds. The net amount invested, i.e. excluding appreciation, totalled SEK 49.1 billion,[20] which increased the capital in these funds by 15 per cent from the turn of 1996. Of the capital at mid-1997, 67.7 per cent was invested in equity funds, 13.5 per cent in mixed funds and 18.9 per cent in money market funds. The four largest bank groups have managed to maintain their dominant position in the fund market, their share at mid-1997 being 83.5 per cent of total fund capital. This is mirrored in the structure of their income, where other income (primarily commissions) is of growing importance (Fig. II:13). During the first half of 1997 the four largest bank groups increased their commission income by 24 per cent, while net interest income fell 5 per cent. These figures indicate that the banks are successfully adapting to the altered conditions in the market for savings.

Prior to the ongoing merger of S-E-Banken and Trygg-Hansa there had been few instances in Sweden of large banks merging with insurance or securities companies.[21] Instead the banks have built

19 Source: Svensk Fondstatistik AB.

20 Source: Fondbolagens Förening.

21 The acquisition of Gota by Trygg Hansa-SPP is an exception but was rather short-lived. Instead, the large insurance companies have established banking subsidiaries.

up internal insurance operations and have been active in securities for a long time. This has to do with the very liberal Swedish legislation in the 1990's as regards permitting bank groups to use subsidiaries for operations outside traditional banking. In the merger of S-E-Banken and Trygg-Hansa it is underscored that saving is a market where a broad range of products is needed so that customers can be offered a full selection of alternatives. In view of this market's potential growth, insurance products are likely to be of increasing importance for the banks.

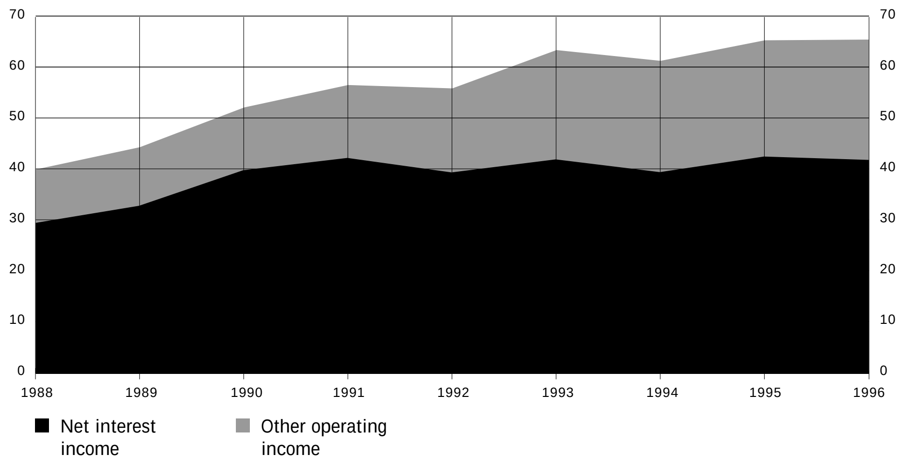
In conclusion, saving is tending to leave traditional deposit accounts in favour of instruments that do not feature on bank balance-sheets. The increased supply of saving products is an important factor, intensifying competition in the market for savings and contributing to the drain on bank balance-sheets. Shifts in the relative yields of interest-bearing assets and shares have accentuated the trend. At the same time, new players have broken into the domain of traditional banking, thereby exerting pressure on margins and market shares. To date, however the banks have done well in this more competitive environment, no doubt mainly as a result of established customer relationships and extensive branch networks.

In that saving has risen in absolute terms, the outflow from bank balance-sheets has not yet had any sizeable impact on the structure of bank financing. The effects on profitability will therefore not show up in full until lending grows appreciably and saving falls. In future the level of traditional bank deposits is likely to be lower and less stable. This implies relatively higher financing costs, with effects on net interest income that must be offset with other income.

In the context of payment system risks these tendencies may be positive in that, all else equal, they should reduce the size of bank balance-sheets. This reduces credit risks in that the banks have smaller loan portfolios and the aggregate credit risks in the financial system are spread over a wider circle of investors and partly disappear from the bank system. A negative result might be that banks lose income and tend to take increased risks. This need not occur, however, if the banks manage to counter the pressure on net interest income by increasing their other income. If they are successful, as many signs suggest, disintermediation should have a positive effect on the stability of the bank sector.

It should also be noted that the banks still have a unique role in the market for savings in that the cen-

Figure II:13.
Net interest income and other operating income in the bank sector.
SEK billion



Source: Statistics Sweden.

tral function of deposits on account in the mediation of payments has meant that only banks have access to the payment infrastructure, in the first place the RIX system, which is used for all interbank payments in Sweden.

Less competition in the lending market

Lending to the non-bank sector is beginning to recover from the fall that started in 1992 (Fig. II:14) and largely had to do with the financial crisis and the factors that are mentioned in the introduction to the section on savings. For lending, the impact of these factors has been the opposite in this period. The falling trend for bank lending is partly explained by the transfer of real-estate loans to the housing institutions, whose lending has changed less markedly (Fig. II:14).

The housing institutions are tending to concentrate on first-mortgage loans and are taking over such loans from the banks. Lending has therefore decreased in importance for parent banks and been transferred to other group companies.

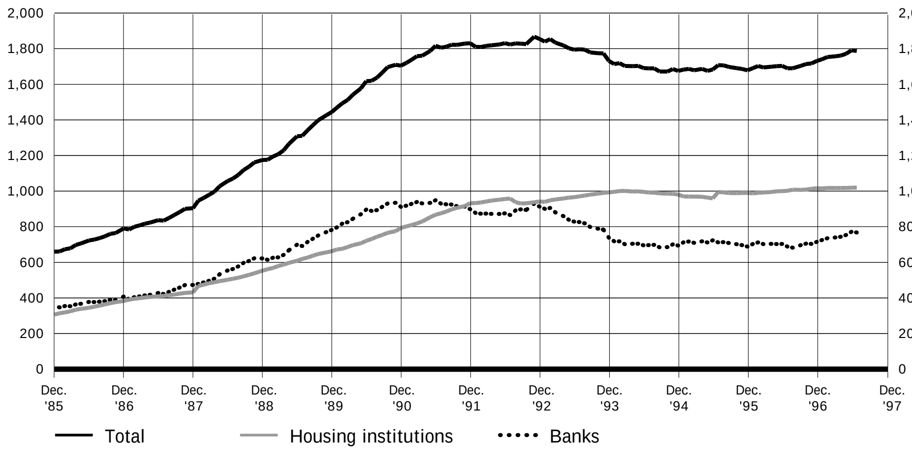
With the acquisition of Stadshypotek by Handelsbanken, in December 1996 the four large bank groups controlled about 90 per cent of the market. At that time they had about 94 per cent of bank lending, a fall of about 4 percentage points since 1992. The fall is largely explained by the fact that niche banks increased their market share in this period from 1.5 to 5 per cent.

The banks continue to dominate the lending market. The impact on margins from increased competition has therefore been less marked for lending (Fig. II:15). But even here there are signs of some pressure on margins, perhaps mainly as a consequence of lower interest rates. The milder pressure on prices in the lending market, particularly for lending to households, is probably an effect of high barriers to entry and lower interest rates. Margins for corporate lending are consistently below those for lending to households because the size and financial competence of firms give them a stronger negotiating position.

The impact on margins from increased competition is less marked for lending.

Both lending to small and medium-sized firms and unsecured loans to households are markets where competitive pressure will probably be relatively low in the medium run. There are signs, however, that

Figure II:14.
Lending by banks and housing institutions to non-bank sector.
SEK billion



Source: The Riksbank.

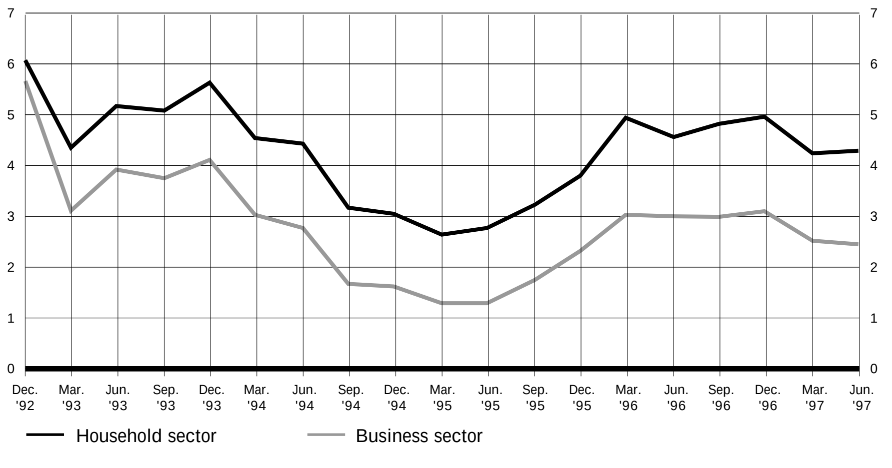
even the market for consumer credit is being broken into by niche players using unconventional approaches. GE Capital, for instance, is already cooperating with SBAB in financing top-mortgage housing credits and with various retail chains to establish channels for the distribution of consumer credits. Cooperation of this type is perhaps the strategy that newcomers will adopt to enter markets that were previously the preserve of banks by virtue of their established customer relationships and distribution networks. Another factor that is tending to break down entry barriers in these traditionally protected markets is the development of technology, which is providing new distribution channels[22] that will ultimately have consequences for competition and thereby for margins. The banks, however, have been well to the fore in technology so as to counter potential competitors at an early stage. But as high initial costs are associated with the development of systems and techniques, in recent quarters this has exerted upward pressure on bank costs. At the same time, new technology can ultimately help to cut staff costs, for example, and this could have a positive effect on bank profitability.

In the market for housing credits there are signs that competition has grown and that this tendency may be accentuated in the future. First-mortgage housing loans are relatively standardised products in the sense that their price is virtually the only distinguishing feature. As a means of gaining market share, the primary instrument is therefore the price. It is customary at present for agents in this market to offer a discount of up to 30 basis points in order to retain existing customers and attract new ones. The combination of a weak volume trend (cf. Fig. II:13) and low barriers to entry on account of the standardised products indicates pressure on profitability in this segment.

In conclusion, compared with the market for savings, competitive pressure does not seem to be as strong in the lending market, particularly as regards consumer credits, as can be seen from market shares as well as pricing. With new technology and new niche players, however, in the longer run competition will probably also grow in this segment, leading to increased pressure on prices. In the market for housing loans, however, competition is already strong

22 E.g. telephone banks and Internet banks.

Figure II:15.
Gap between deposit and lending rates for household and business sectors. Percentage points



Source: The Riksbank.

and is likely to go on increasing on account of the standardised nature of these products.

As mentioned in the introduction to this chapter, disintermediation affects bank assets primarily because lending to large firms is displaced by direct corporate borrowing in capital markets. This tends to depress interest income and undermines the close relationships that traditional lending establishes between banks and large firms.

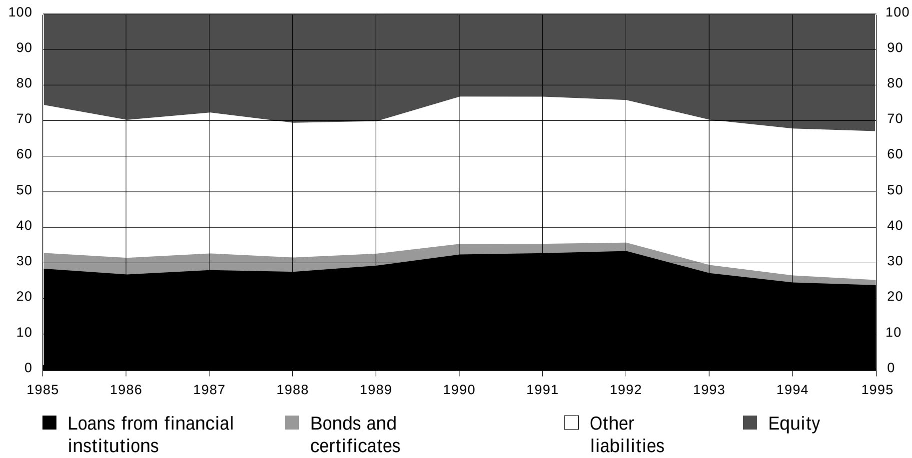
The banks' share of corporate financing has decreased (Fig. II:16). Bank loans have been replaced mainly by equity financing in connection with the marked recovery of profit levels since the move to a flexible exchange rate in November 1992. The money and bond markets have been of marginal importance as a source of finance for the non-financial sector; their share has been around 4 per cent for a long time. Thus, lending to large firms does not show a greater tendency than before to shift away from bank balance-sheets, though for these firms the share for market financing is no doubt proportionally greater than indicated in Fig. II:16. The statistics unfortunately do not permit a distinction between the financing structure of large firms and that of small and medium-sized firms.

If securitisation becomes more prevalent in Sweden, it may become important for the Riksbank to monitor. In particular there is a need to consider the effects this might have for the level and distribution of credit risks in the Swedish financial system. Another phenomenon that needs to be monitored for the same reasons is the extent of trade in credit derivatives, which are used to redistribute credit risks from banks, for example, to other investors in return for a payment.

EMU leads to increased capital market financing

Banks traditionally perform the important economic function of being relatively cost-efficient in providing finance in the form of credits for households as well as for small and medium-sized firms. Large firms have the alternative of obtaining finance directly in domestic and international capital markets, given that this is cost efficient and fulfils these borrowers' other requirements. Direct access to capital markets, however, is restricted to large issuers and requires a credit rating from a firm of international repute, e.g. Moody's or Standard & Poor's. Large issues are

Figure II:16.
Financial structure of non-financial firms. Shares, per cent



Source: Statistics Sweden.

necessary to make the paper attractive to institutional investors so that its liquidity is good and also to achieve cost efficiency (large costs are involved in obtaining a rating and in setting up the extensive legal framework that is required).

As noted in the previous section, there are no signs at present of an increased use of market financing in Sweden. There is reason to suppose, however, that the move to a single European currency, which eliminates the exchange risk in securities issued in a member state, will cause European capital markets to become more like those in the United States, where for a long time firms have been tending to replace bank loans with capital-market financing. Bank loans accounted for 35 per cent of corporate financing in the United States in 1977 but in 1994 the figure had fallen to 22 per cent.[23] The corporate bond market is expected to grow in Europe and could attract more as well as smaller firms as a consequence of the single currency.

Three competitive advantages are needed for a bank to compete successfully for direct capital market loans: a close customer relationship with the issuer, competence in credit assessments and an appropriate currency when arranging the issue. A study by the Federal Reserve Bank of New York in 1991 found a strong correlation between the national currency of the investors and the home currency of the bank handling the issue. If the issue is denominated in the bank's home currency, a broad base of investors, *placing power*, is of key importance for placing the securities and for efficient secondary trading. Another advantage over competing banks from other countries is familiarity with domestic monetary conditions and thus a feeling for how the price of the issued security will develop. The structure of the commissions involved when a bank manages a bond issue is based on the price the bank can obtain when the bonds are distributed to the secondary market. With access to good placing power in the same home currency as that of the bond, it will be easier for the bank to obtain the optimum price.

Three competitive advantages are needed for a bank to compete successfully for direct capital market loans: customer relationships, competence in credit assessments and an appropriate currency denomination.

A single European currency will fundamentally change competitive conditions in Europe in that banks in the home country of the issuer will lose the advantage of having the same currency. The advantage of being familiar with domestic monetary conditions will also disappear. But local banks will continue to have the competitive advantages of close customer relationships with local firms and the better ability to make credit assessments that local knowledge confers. These advantages will probably be of most importance with respect to medium-sized firms and are no doubt of less consequence for attracting business from multinational companies.

In conclusion, the introduction of a single European currency will probably result in European capital markets becoming larger, more efficient and more like those in the United States. This in turn means that smaller firms will also gain access to market financing. In the long run one can therefore expect a greater degree of disintermediation even as regards lending. In order to compete successfully as market financing becomes increasingly important, Swedish banks will have to develop such facilities as good placing power at a European level as well as a good insight into the monetary conditions that will pertain with the euro. Size will probably be important for this, as well as a perspective that covers the whole of the euro area. It is also conceivable that banks aiming for strong regional ties (e.g. Scandinavia) will be successful in the market for medium-sized regional firms.

Increased securitisation would imply decreased

23 Edwards, F.D. & Mishkin, F.S. (1995), "The decline of traditional banking: implications for financial stability and regulatory policy", *Federal Reserve Bank of New York*, *Economic Policy Review* (July), p. 27.

interest income for Swedish banks but could also generate increased commission income. Perhaps the greatest threat from disintermediation lies in the dissolution of the close customer relationships connected with traditional bank loans. Bank earnings and profits may be affected but probably not so much that this by itself would lead to problems with profitability.

PART II · CHAPTER 4

Competition and the macroeconomy

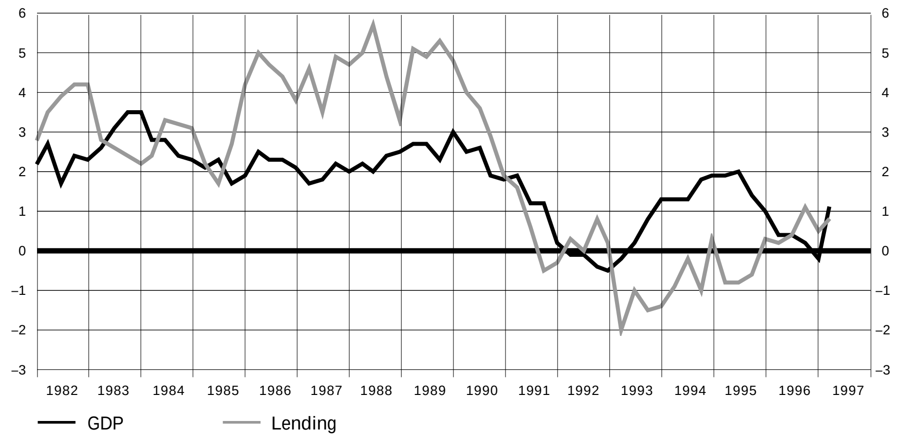
Competition in the bank sector can induce banks to take increased risks, above all in the provision of credit. An aggressive lending strategy, with an increased volume and/or lower lending rates, is a way of coping with the competition. Tendencies in the provision of credit and interest rates may indicate that banks are beginning to compete in this way. At present there are no indications that competition has led to the banks taking increased risks.

Macroeconomic indicators

Risks in the financial system are influenced by the economic situation as a whole. Bank profits vary with the economic cycle, mainly because loan losses follow a clear cyclical pattern.[24] In its oversight of the financial system, it is then only natural that the Riksbank considers macroeconomic effects. When widespread loan losses begin to show up in banks' loan portfolios and in their profit and loss accounts, the situation may already be critical, so that all that remains is to mitigate any damage done by the crisis. Macroeconomic indicators can be used to draw attention to potential future problems, thereby aiding timely action before a crisis has taken hold of the financial system.

24 A study at the Bank of England shows that the cyclical variation in loan losses is greater than in income. *Bank of England Banking Act report for 1994/95*, pp. 7–8.

Figure II:17.
GDP growth and lending by banks and housing institutions.
Quarterly change, per cent



Sources: Statistics Sweden and the Riksbank.

When widespread loan losses begin to show up in banks' loan portfolios and in their profit and loss accounts, the situation may already be critical, so that all that remains is to mitigate any damage done by the crisis.

Risk-taking is a natural part of banking. Banks generate profits by using their know-how to price risks. When setting lending and deposit rates, for example, banks can and must allow for expected changes in the macroeconomy. If a bank misjudges the macroeconomic future and incurs increased loan losses as a result, this does not necessarily mean that the financial system is threatened. Such a threat arises only when many institutions take excessive credit risks simultaneously.

There are several ways in which banks can encounter financial problems on account of macroeconomic changes. This will be described in more detail in our next report. The present discussion concerns a more limited aspect, namely how macroeconomic developments may affect the risk that growing competition causes banks to increase their risks. Experience from the financial crisis in the early 1990's and the indications that existed at that time of increased risks in the bank sector provide an opportunity of studying how the indicators developed in an actual crisis. Moreover, by comparing the current position of the indicators with their positions during the financial crisis, an assessment can be made of whether tendencies to take increased risks exist today.

No increase in bank lending risks

Banks exposed to growing competition can improve their profitability via increased lending. This may mean that loans are provided for high-risk projects or for borrowers who have difficulty in repaying them. To the extent that the risks are not priced by adding an appropriate premium, the bank will be liable to incur considerable loan losses.

An indicator of whether the expansion of credit is proportional to the economic situation can be constructed by relating the volume of lending in the financial system to GDP growth. When lending rises faster than GDP, the aggregate burden of debt in the economy grows faster than the funds that are available for debt repayment. This makes the bank sector more vulnerable. In the period before the bank crisis, bank lending rose much more rapidly than GDP (Fig. II:17). Today, on the other hand, the

Figure II:18.
Asset prices and personal debt.
Index and per cent

Source: Bank for International Settlements.

growth of lending is moderate and below the GDP growth rate.

Another indication of increased risks in the bank sector is a simultaneous increase in the flow of credit and asset prices. Rising asset prices entail a fall in their direct return or in the payment flows the assets generate relative to their value. Investors can either accept a lower return in the short run or switch to projects with a higher element of risk. Both alternatives entail increased risks for banks, in the first case because decreased income from the assets reduces the ability to repay loans and in the second because lending carries higher risks. The latter, however, is not a problem provided loans are priced in relation to their risks. Strong competition in the lending market implies a risk that this will not be the case.

Another indication of increased risks in the bank sector is a simultaneous increase in the flow of credit and asset prices.

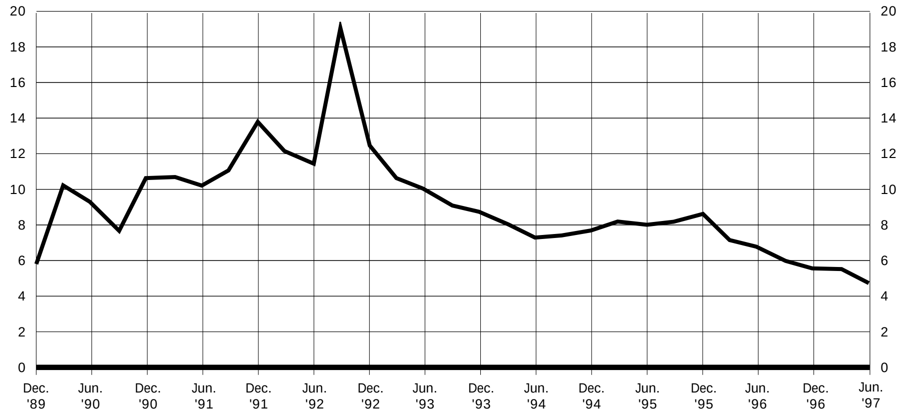
In addition, there is the risk of lending creating a bubble in asset prices, e.g. an increase in asset prices that reflects speculation rather than the potential return. The rapid increase in asset prices from the mid 1980's to 1990 was accentuated by a strong expansion of credit (Fig. II:18). Today, asset prices are rising again but private debt is unchanged. This indicator likewise provides no sign of an increased level of risk in bank loan portfolios.

Interest rates are important for the health of the financial system. When real post-tax interest rates are high, only investments with a high return can be financed. As such investments usually carry more risks than those with a lower return, bank portfolios may contain a relatively large proportion of high risks.[25] In that high real interest rates should entail a shift from household borrowing to saving, the combination of high real interest rates and increased lending is a strong indicator of increased risks in the bank sector. An expansion of lending in this situation make it probable that, on average, the loans provided by the banks become more risky.

Real interest rates were low in the period leading up to the financial crisis (Fig. II:19). This indicator accordingly gave no clear signals of increased risks in the bank sector. It is rather the case that low real interest rates contributed to the strong expansion of lending in the late 1980's. When the real interest

25 Mishkin, F.S. (1994), "Preventing financial crises: an international perspective", *NBER Working Paper 4636* (February).

Figure II:19.
Lending rate adjusted for expected inflation.
Per cent



Source: The Riksbank.

rates then rose steeply in the early 1990's, this accentuated the crisis by making interest payments appreciably more costly. Today, the real interest rates that firms encounter are relatively low compared with the early 1990's and there is no substantial increase in lending so this indicator does not currently point to increased risks.

On the whole macroeconomic indicators do not point at present to increased risks. Lending by the bank sector as a whole has been moderate. Macroeconomic data suggest that the price of loans is not under pressure at present, so there are no signs that the banks are not obtaining full compensation for risks.

PART III

Financial system stability —conclusions

The Riksbank's functions in the financial system

There is broad agreement about the importance of a stable financial system, not least because the opposite clearly entails social costs, as we have seen in the recent bank crisis. But the financial system must be allowed to evolve so that it contributes to economic development and growth. This calls for orderly arrangements for taking risks. Financial legislation, oversight and supervision are therefore tending to permit more flexibility within specified limits. There is also a tendency to make market agents increasingly accountable for controlling both themselves and each other.

The Riksbank is interested in financial developments primarily in the context of one of its two main functions—promoting a safe and efficient payment system.

The payment system broadly consists of two components: *infrastructure* and financial firms. The infrastructure consists of the technical and administrative systems whereby financial transactions are arranged and completed. It includes marketplaces as well as systems for clearing and settlement, including the registration of ownership and pledged rights to financial assets. Another aspect of the infrastructure is the legal framework that regulates these activities. For the payment system, the central *financial firms* are those that operate inside the framework of this infrastructure, i.e. mainly banks and some clearing houses. In that the infrastructure is maintained by these firms, it cannot be analysed in practice without also analysing individual players. Moreover, it is the financial agents, not the infrastructure as such, that are the primary target of the legal framework.

The Riksbank operates directly in the infrastructure of the payment system by providing a settlement system for large payments, the RIX system. RIX is the hub of the Swedish payment system in that it handles all interbank payments.

A central function in the payment system is performed by the banks, which manage flows of liquidity throughout the economy. This makes it important for the Riksbank to monitor the markets and activities which affect conditions for banking operations. With the accelerating pace of change in the financial system, this task is becoming increasingly complex.

The Riksbank can work on these issues by participating actively in the debate on developments in the financial system. The Riksbank considers that problems are to be managed in the first place by the market but the existence of systemic risks also makes it necessary for the competent authorities to act more directly. In the event of a crisis that threatens stability, for example, the Riksbank is ready to take an active part in coordinated public efforts to overcome the crisis or mitigate its effects. *One* instrument for this is the possibility, as a last resort, of providing credit without full collateral in order to support liquidity.

In the event of a crisis that threatens stability, for example, the Riksbank is ready to take an active part in coordinated public efforts to overcome the crisis or mitigate its effects.

The function of promoting a safe and efficient payment system makes the Riksbank accountable for overseeing this system. The implications of this responsibility are outlined in Part I of this report. In that a functional payment system, as well as an efficient monetary policy, call for a financial system that functions properly, the work of the Riksbank on payment system efficiency and safety includes an analysis of the stability of central features of the financial system in a wide sense.

Competition's effects on risks

Growing competition can lead to increased risk-taking but this does not mean that the Riksbank has a negative view of competition in the bank sector. On the contrary, competition is essential for achieving economic efficiency and meeting the needs of consumers. Any negative effects of competition do not therefore justify restrictions on competition.

The comparison in Part I of competitiveness in the bank sectors of a number of European countries suggests that Swedish banks are in a good position to meet the European competition. The indicators put Sweden ahead in terms of profitability as well as cost effectiveness and among the leaders as regards loan loss levels. A further improvement is conceivable both in cost effectiveness and, in the short run, as regards the level of loan losses. Loan losses to date in 1997 have been lower than the year before but the level this represents may not be sustainable in the longer run. When the economic cycle turns downwards, loan losses can be expected to grow. However, the increase in loan losses that is associated with a normal downturn is a regular feature of banking and should have been allowed for by bank managers as well as owners. A further improvement in cost effectiveness may be achieved when the current mergers, which involve all the major Swedish banks, show up in profits. This assumes that these institutions do in fact manage to cut costs as planned. The capital adequacy of the Swedish banks is also among the highest in the reference group. However, capital strength is not as important for competitiveness as the other indicators. In this respect the banks need to find a reasonable trade-off between the return to shareholders and the capital reserve for meeting any future financial problems. The overall assessment is that the competitiveness of Swedish banks is good. At present the risk of Swedish banks taking drastically increased risks in order to counter competition does not appear to be great.

At present the risk of Swedish banks taking drastically increased risks to counter competition does not appear to be great.

The extent to which the Swedish bank sector can be said to be exposed to international competition is discussed in Part II, Chapter 2. Today, competitive pressure is at work in certain segments of the bank sector, above all in such activities as securities trading and investment banking. In other activities, such as lending and deposits for households and for small and medium-sized firms, there have been fewer signs of internationalisation to date. But even in these activities, international competition is tending to grow, as indicated both by a rising number of notifications of cross-border trading and by the major Nordic banks' broad offensives in other Nordic countries. A further impetus to increased international competition will come from EMU. If Sweden does not join the euro area Swedish banks may be at a disadvantage in relation to European competitors. This is because they would have to handle double currencies and would not have the euro as their home currency, which may be a drawback in wholesale banking.

The banks have also proved to be strong in meeting competition from other financial firms and from financial alternatives to deposits and credit. The competition for savings from securities companies and insurance products has been countered by the banks successfully providing these products too. Compared with other financial institutions, banks have the competitive advantage of being able to offer a broad spectrum of financial services through branch networks. They have used this advantage by offering services on favourable terms to loyal customers.

A risk associated with the broadening of bank operations is the lack of familiarity with the new products and markets. This is therefore an aspect that needs to be included in the Riksbank's analysis.

A positive effect of broader banking operations is that risks are spread over more sources of income. With a wider range of products from which to earn income, banks are less vulnerable to changes in demand for certain products. An example of this is that saving in private bonds has been largely replaced by saving in securities funds. The banks have simply exchanged one source of income for another. This in turn can lead to a more stable profit level, which is important in the context of risks.

Competition between bank deposits and saving in securities funds and certain insurance products, as well as securitisation and direct corporate financing in the securities markets, means that products which feature in bank balance-sheets give way to products that do not. As a result, a smaller share of bank income comes from the gap between deposit and lending rates. In that loan losses are proportional to the size of loan portfolios, a larger share of income from off-balance-sheet products reduces the vulnerability to large losses. This also reduces the payment system effects of a bank failure. A positive effect in this respect for payment system risks presupposes that the banks do in fact compete successfully for the new product categories and refrain from taking increased risks as a way of maintaining income. To date the banks appear to have succeeded in this. It should also be noted in this context that the disappearance of savings and financing from bank balance-sheets does not mean that the risks are eliminated; they are transferred instead from the bank system to other players.

While the banks up to now have coped with the increasingly broad competition, the removal of institutional barriers and the emergence of alternatives to bank products does put the banks under increased competitive pressure. Together with the ongoing internationalisation, this means that in the coming years competition in the bank sector can be expected to grow.

While the banks up to now have coped with the increasingly broad competition, the removal of institutional barriers and the emergence of alternatives to bank products does put the banks under increased competitive pressure.

The effects of growing competition should be assessed in relation to the banks' total earnings potential in the years ahead. Bank profits have improved considerably since the financial crisis, largely as a result of decreased loan losses. These losses are now so low that the level is unlikely to be sustainable in the longer run. Low demand for loans, traditionally the core bank product, has limited the possibility of raising bank income. In the 1990's demand for new credit has been flat even during upward phases of the economic cycle. Recently, however, credit demand has shown signs of rising, though it is still too early to tell whether this is a temporary phenomenon or the beginning of more substantial growth. As regards other bank products, there are likewise many signs of increased competition and smaller margins, e.g. the tendencies to cut fees for mutual-fund management. Low nominal interest rates can also make it difficult for banks to maintain a wide gap between deposit and lending rates.

A weakening of bank earning power can contribute to increased risks in that higher risk exposure is a common way of boosting earnings, at least in the short run. In lending operations this resort involves providing loans at a higher level of risk; in trading it may amount to adopting more risky strategies. An analysis of earning power and the associated risks is therefore an important component of the Riksbank's analysis of risks in the bank sector. Growing competitive pressure makes this all the more important.

If decreased earning power were to be accompanied by a continuation of high capitalisation, the return on bank equity would decline. The probability of increased risks would then be strengthened on two fronts: banks would be obliged to take increased lending risks in order to meet performance requirements and shareholders might call for a reduction of equity capital, which would render banks more vulnerable to financial problems.

The conclusions presented above, concerning competitive pressure and its effects on banks, disregard macroeconomic forces. They refer to structural changes in the bank sector and conceivable tendencies in a number of bank-specific factors regardless of the future course of economic activity and other macroeconomic parameters. However, the structural changes' impact on risks in the financial system is dependent on the macroeconomic environment; the risks considered here could therefore take on different proportions if essential economic tendencies were to take a turn for the worse. The macroeconomic indicators that pointed to increased risks in the bank sector in the run up to the financial crisis do not herald any such tendencies today.

It is therefore concluded that from these viewpoints the stability of the financial system is currently good. In other respects, too, stability seems to be satisfactory at present.