



The Swedish Financial Market

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Introduction

The financial sector is today an important part of the social infrastructure. A large number of services, which society would have difficulty managing without, are carried out in the financial sector. It is often said that the financial system performs three main tasks. These are converting savings into financing, managing risk and supplying efficient means of payment.

- Financing. The financial sector takes part in channelling money from savings to investment. This enables the financing of important projects and thereby benefits society, while households are able to smooth their consumption over the different phases in life. Banks and securities markets contribute to fulfilment of the financing function.
- Risk management. Financial markets, insurance companies and banks enable companies and individuals to redistribute risk and protect themselves against various types of financial risks.
- Payment services. By supplying payment services the financial sector enables efficient financial transactions. Charge cards, credit cards and account transfers are now common, which means that goods and services can be exchanged in a flexible and economical manner.

Households' and companies' financial services requirements are met either through the various securities markets or through specialised *intermediaries*, for instance, banks, insurance companies, finance companies and others.

There are many different types of participant in the securities markets. In order for a securities market to arise, it is necessary to have both *issuers*, i.e. those who issue securities, and *investors*, i.e. those who are willing to invest money in these securities. Examples of issuers are companies that issue shares on the *stock market*, and the central government, mortgage institutions, companies or municipalities that issue bonds, bills and certificates in the *fixed income market*. The investors can comprise, for instance, *private persons*, who use shares and securities funds as a form of saving, but they can also be large *institutions* such as insurance companies and the banks. There are also a number of specialised intermediaries in the securities markets in the form of securities trading companies. These can both pursue



trade in their own name on behalf of clients and trade on their own behalf, often in the capacity of *market maker*. Being a market maker involves a commitment to set two-way prices, i.e. to be prepared to both buy and sell securities and thereby guarantee the *liquidity* of the market. It is mainly banks participating in the foreign exchange market that are active here. Trade in the securities markets can be conducted in different ways. Trading over the telephone is the most common method in the fixed income market, while share trading has long been conducted electronically on the stock exchange.

However, not all financial business is conducted via the securities markets. The Swedish financial sector is to a large degree characterised by intermediation, i.e. financial services are supplied by specialised middlemen – *intermediaries*. One reason for this is that there can be economies of scale in using intermediaries. Another important reason is a phenomenon usually referred to as *asymmetric information*. Normally, households and companies have access to private information about themselves that it is difficult or costly for an outsider to verify. The borrower *himself* has the best knowledge of his ability to repay; the insurance policyholder *himself* knows best what his risk propensity is, etc. A fundamental condition to enable the securities markets to function is that the relevant information is available to all of the participants in the financial sector on fairly equal terms. When this is not the case, i.e. when *the information is not symmetrically distributed* – a need for intermediaries arises, e.g. banks, mortgage institutions, insurance companies, finance companies, etc. These may specialise in solving different information problems, such as credit risk assessment, monitoring of and collecting information on borrowers and insurance policyholders. This means that companies' and households' financing needs are mainly fulfilled by financial institutions and that they seldom need to turn to the fixed income market. Indirectly, companies and households constitute large lenders via savings in banks, mutual funds and insurance institutions.

The role of the Riksbank in the financial system

Alongside the objective of maintaining price stability, the Riksbank shall also *promote a safe and efficient payment system*. As well as issuing banknotes and coin, the Riksbank also administers a system for facilitating large payments between the banks. The fact that the Riksbank participates in a system for payments between the banks and that the interbank market is also used to implement monetary policy is a direct reason why the Riksbank



has an interest in the successful functioning of the payment system and in the stability of the participating banks. However, there is also a more fundamental welfare interest in maintaining stability in the payment system. A crisis in the financial system, which were to lead to the breakdown of some essential function, could entail very large costs for society in the form of slower economic growth. Payments are a central element of all economic activity. The importance of making payments can be compared with the importance of roads, electricity and telecommunications networks functioning properly. A breakdown in one of the central functions of the financial system could entail long-term damage in the form of slower growth and lower employment. This means that it is strongly in the interests of society to have a stable financial system.

This means that the Riksbank must be well prepared to confront signs of a build-up of risk in the financial system. This includes producing both more in-depth analyses, such as in the Financial Stability Report, as well as more general descriptions of the financial sector. The publication "The Swedish Financial Market" aims to describe in an easily comprehensible manner the market's structure and method of functioning, thereby providing an outline of the system as a whole. A natural definition has been to describe the most important securities markets and the most important market participants based in Sweden, which can be used by Swedish savers and investors.



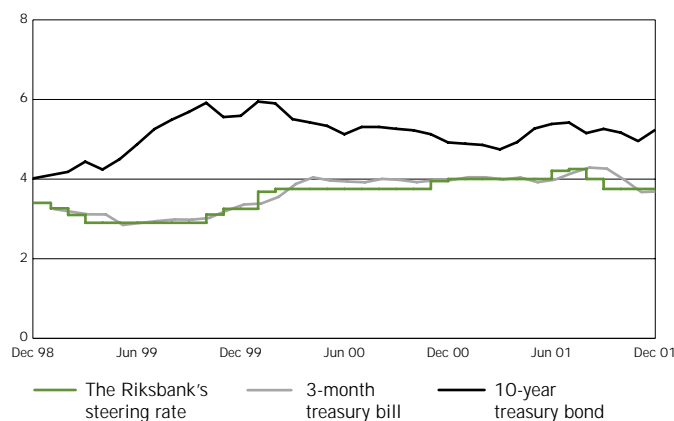
The securities market

The securities market is an umbrella term covering the various markets in which interest-bearing securities and equity are traded. Foreign currency also comprises a financial asset that can be bought and sold, not merely for transaction requirements, but also for investment purposes. As a complement to these markets, there are what is known as derivative instruments, which can be linked to interest-bearing securities, as well as shares and foreign currencies. In this publication, the term money and bond market in figures and tables refers to the domestic Swedish fixed income market in Swedish krona.

The fixed income market

Securities issued and traded on the fixed income market are normally divided up according to time to maturity. A security that will fall due within a year is termed a *money market paper*, while a security with a longer time to maturity than one year belongs on the *bond market*. The concepts of short-term interest rates and long-term interest rates also follow this division. Short-term interest rates are normally interest rates on loans to be repaid within one year. The money market is therefore defined as comprising trade in securities with a

Figure 1. Domestic interest rates
Per cent



Source: The Riksbank.

maturity of up to one year. The bond market, on the other hand, comprises trade in securities with a maturity longer than one year, at a long-term interest rate.

Short-term interest rates point to the monetary policy direction for the economy and are at the same time indicators of the market's assessment of monetary policy for the immediate future. Long-term interest rates provide a picture of the expected inflation rate and reflect, for instance, long-term confidence in economic policy.

Issuers and investors in the fixed income market

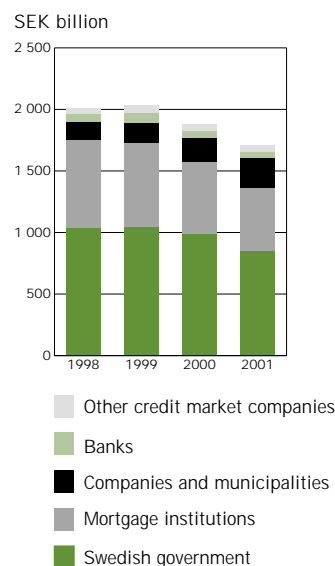
The largest borrowers on the fixed income market are the central government, via the Swedish National Debt Office, and the mortgage institutions. The treasury bills issued by the Debt Office hold a completely dominant position among market instruments with a short time to maturity. Treasury bonds account for approximately one half of the outstanding volume of securities with a longer time to maturity in the fixed income market.

Table 1. Fixed income market issuers

SEK billion	1998	1999	2000	2001
Money market				
Swedish government	231	250	271	230
Mortgage institutions	55	88	79	43
Banks	20	36	19	18
Other financial institutions	16	18	16	16
Companies and municipalities	48	59	62	90
Total	370	451	447	397
Bond market				
Swedish government	808	796	719	623
Mortgage institutions	657	591	505	462
Banks	46	44	39	31
Other financial institutions	40	38	40	42
Companies and municipalities	93	107	129	154
Total	1 644	1 576	1 432	1 312

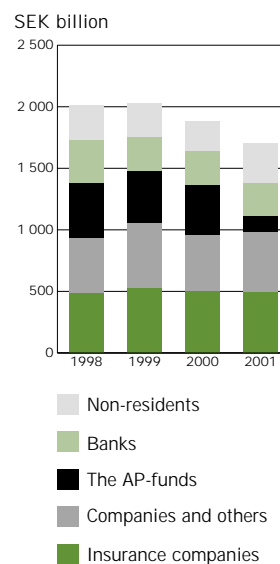
Sources: The Swedish National Debt Office, Statistics Sweden and the Riksbank.

Figure 2. Fixed income market issuers



Sources: The Swedish National Debt Office, Statistics Sweden and the Riksbank.

Figure 3. Fixed income market investors



Sources: Annual reports (the AP-funds), Statistics Sweden and the Riksbank.



Corporate borrowing in this market fulfils only a minor part of the companies' borrowing requirements.

The Swedish National Debt Office's long-term borrowing in the fixed income market aims to finance the central government debt, while the short-term borrowing is partly to facilitate to aid in managing fluctuations in central government borrowing requirements. The composition of the Swedish National Debt Office's loan portfolio is also aimed at achieving a relatively low borrowing cost.

The mortgage institutions use borrowing to finance their lending to the non-financial sector, which in turn is mainly used to finance loans to purchase property.

Among the investors in the fixed income market, the National Pension Funds (the AP funds) and insurance companies have previously had the largest holdings. During 2001 the AP funds' holdings on the Swedish fixed income market were reduced from SEK 405 billion to SEK 131 billion. New investment regulations for the AP funds were introduced in connection with the pension reform and came into force on 1 January 2001. The new regulations entail greater flexibility and provide an opportunity for investments in more types of asset than before. The investment concentration of most of the funds has been moved from a strongly national, fixed-income base to a more global, equity-oriented base. Another significant factor with regard to the reduction in the AP funds' holdings on the fixed income market is that Swedish bonds to a market value of SEK 155 billion were transferred to the Swedish National Debt Office. This transfer on 1 January 2001 was compensation for the burden the pension reform would place on the central government budget. The insurance companies have long had large, relatively unchanged holdings on the fixed income market. The majority of their investments comprise bonds. Companies and banks are the dominant investors in securities with a short time to maturity, i.e. treasury bills and certificates. Foreign investors hold around 19 per cent of the outstanding volume in the market. More than 60 per cent of the foreign investors' holdings comprise treasury bonds.

Reduced market borrowing

The total outstanding amount in the fixed income market declined during 2001. The market has developed towards smaller outstanding volumes in recent years; this primarily applies to treasury bonds and mortgage bonds. The central government's lower borrowing requirement in recent years has resulted in the treasury bond stock falling to around SEK 623 billion towards



the end of 2001, the lowest level since the mid-1990s. The fact that the central government's borrowing requirement has declined increases the scope for private credit demand on the market. This means that from what was largely a source for financing central government budget deficits, a market with scope for other borrowers has now been created.

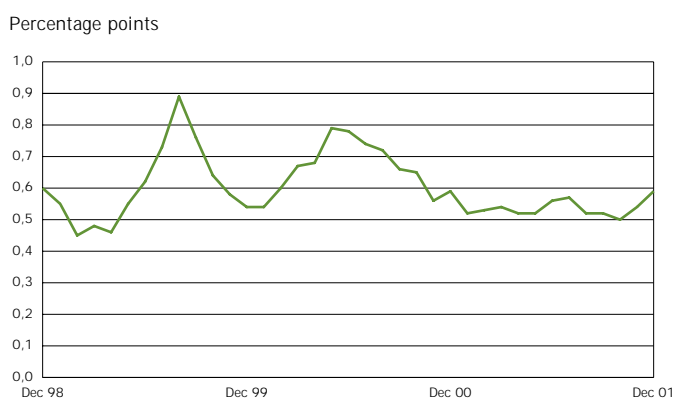
In recent years there has also been a significant growth in the market for corporate bonds. However, the outstanding amount is as yet fairly limited, SEK 146 billion at the end of 2001. The number of outstanding mortgage bonds has fallen heavily during 2000 and 2001, to SEK 462 billion. One reason for this is that fewer of the institutions' borrowers have chosen to bind their loans for a longer period. The institutions then tend to adapt their own borrowing to shorter maturity times.

The central government and the mortgage institutions also reduced their borrowing on the money market, which is small compared with the bond market. The treasury bill stock declined to SEK 230 billion, while the mortgage institutions' borrowing via certificates fell to SEK 43 billion, which is a very low level compared with the 1990s. The mortgage institutions have in recent years financed their operations to an increasing degree via borrowing on foreign markets and from their parent bank.

Trade and turnover in the fixed income market

By virtue of their volumes and their very low level of risk, the central government's securities have become market leaders. Treasury bills dominate trading in the Swedish money market. Active trading in the bond market is mainly conducted in treasury bonds and a number of standardised

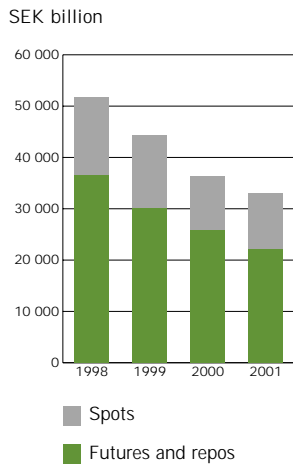
Figure 4. Spread between 5-year treasury bond and mortgage bond rates



Source: The Riksbank.



Figure 5. Turnover in the fixed income market



Source: The Riksbank.

'benchmark' loans issued by mortgage institutions.

The interest rate difference between treasury bonds and mortgage bonds reflects both the higher credit risk for mortgage bonds and the often poorer liquidity they offer. During 1999 the difference in the rates increased, which can be explained at least partially by a poorer liquidity in mortgage bonds as a result of lower volumes. With a few deviations during individual months, a gradual decline in the interest rate difference to around 0.5 percentage points has occurred during 2000 and 2001. As a result of the central government's lower borrowing requirement, the treasury bond stock has fallen and investors' interest in mortgage bonds has thereby increased.

The turnover on the money and bond markets is very high. During 2001 the Riksbank's *primary dealers* (certain banks and securities companies appointed to function as counterparties in the Riksbank's market operations) had a total turnover of approximately SEK 33,000 billion, which was nevertheless a decline of around 10 per cent on the previous year. Approximately SEK 22,000 billion, i.e. around 67 per cent, concerns trade in derivatives and repos.

Issue techniques in the securities market

Treasury bills and treasury bonds are issued through tenders in which the Swedish National Debt Office's approved dealers participate. These dealers comprise a number of banks and securities companies with which the Debt Office has signed agreements. Under these agreements, the dealers undertake to act as



market makers – see above - and to make bids on all issues. The Riksbank's appointed primary dealers, which with a few exceptions comprise the same circle as the Swedish National Debt Office's dealers, undertake to make bids in the Riksbank's repo transactions.

Mortgage institutions issue their certificates and bonds with the aid of banks and securities companies. They enter into agreements with different banks and stockbrokers regarding "on tap" sales. This involves current sales that can be adapted to times when market terms are favourable. The companies often have an agreement with banks concerning a loan programme, for both short-term and long-term market borrowing, and are prepared to issue under this programme at certain pre-determined interest rates.

In addition to the public bond market with issues aimed at a large circle of investors, there is a market for what is called private placements. These are usually bond loans that are placed entirely with one or a small number of investors. The terms of the loans can then be tailored to a large extent to the investors' requests. It has become increasingly common for companies to choose this form of bond borrowing.

Trade structure

The market for treasury bonds and mortgage bonds has been, and largely remains, a broker-based telephone market, what is known as an OTC ("over the counter") market. This also applies to treasury bills. OTC trading involves two parties outside the stock exchange, dealing over the counter. The brokers set both buying rates and selling rates for trading between themselves and with clients. Rates are announced directly on Stockholmsbörsen (the Stockholm Stock Exchange). Clients do not trade directly, but deal with the broker as a counterpart.

May 2001 saw the introduction of an electronic marketplace for interbank trading in certain Swedish treasury bonds. Electronic trading in interest-bearing instruments is quite common in international terms. The previous telephone trading did not allow for parties other than participating banks to have insight. The degree of transparency will increase gradually as an increasing number of participants take part in electronic trading and the system is extended to include more loans. At present it includes three treasury bond loans with two, five and ten years to maturity respectively. Trade in the new system will be cheaper for the participating banks. The electronic trading already accounts for more than 50 per cent of the total interbank trading in treasury bonds.



A majority of the market makers in treasury bonds also act as market makers in mortgage bonds. Corporate bonds and certificates, on the other hand, are less liquid and trade in the secondary markets in these securities is less extensive. It is unusual to have two-way prices listed for these.

The Stockholm Bond Exchange, SOX, which is linked to Stockholmsbörsen, is mainly used for trading in bonds by small companies and private persons. Turnover in the SOX market fell to SEK 4 billion during 2001, from SEK 7 billion in 2000. At the end of 2001 there were 322 loans from 21 issuers quoted on the SOX list with a market value of SEK 34 billion.

Derivatives of interest-bearing securities

Trade in forwards and options, known as derivatives, in which investors can adjust their risk level in various investments, now represents the greater part of the turnover in the markets. Stockholmsbörsen AB, which is part of the OM AB and currently also comprises the former OM Räntebörsen AB, organises trading in both shares and derivatives. In the derivative market Stockholmsbörsen is an authorised exchange and clearing organisation for trade in Sweden in both interest-related and equity-related derivatives. The short interest-related derivatives traded on the exchange have six-month treasury bills or three-month deposits (an investment of liquid funds between banks with a duration of three months) as underlying instruments in the contracts. The assets behind the long interest-related derivatives, on the other hand, are treasury and mortgage bonds. As a rule, contracts are written in units of SEK 1 million. In addition to the standardised instruments, there are interest-related OTC derivatives. These are generally designed by banks and securities companies to meet the requirements of the individual customer. The volume of derivatives traded within the OM Group based on Swedish interest-related instruments amounted to approximately 7 million contracts in 2001, an increase of 31 per cent from 2000.

Another category of derivatives is swaps, which are normally used to manage risk exposure when borrowed funds are converted from one currency into another (exchange rate swap) or from one interest rate to another (interest rate swap). Swaps also feature in active debt management to modify a debt portfolio's cash flows. Swaps are arranged and mediated internationally by large banks, but also occur in the domestic market. Swap trading is now very widespread.



The overnight and repo markets

Efficient overnight and repo markets are a major and important component of the Swedish financial system. The overnight market for short-term intrabank lending/deposits is used in particular to manage daily fluctuations in the banks' liquidity.

The Riksbank governs the overnight lending rate and aims to keep it in line with the monetary policy repo rate. The deposit and lending rates set by the Riksbank – known as the interest rate corridor – lie symmetrically on either side of the repo rate and state the rate at which the Riksbank is prepared to accept deposits from the banks and grant them loans respectively. In December 2000 it was decided that the interest rate corridor would have a breadth of 150 base points, i.e. the deposit and lending rates would be 75 points below and 75 points above the repo rate respectively. From this moment the corridor changes as the repo rate changes and has ceased to be an instrument for monetary policy signalling. The difference between the deposit and lending rates is sufficiently large to give the banks an incentive to operate in the overnight market. Banks with surplus liquidity invest in the market and banks with a liquidity shortage borrow. The alternative for the banks of investing surplus liquidity in the Riksbank or borrowing from the Riksbank would prove much more costly. Besides banks, the operators in the overnight market include mortgage institutions and large manufacturing companies. However, these normally receive less favourable interest rates than the interbank rates. The Swedish National Debt Office participates on the same terms as the banks and can, for example, use overnight operations to parry effects of budgetary fluctuations on liquidity. No collateral is offered on the overnight market, but there are credit limits. However, if the banks wish to borrow from the Riksbank, they are obliged to offer collateral in the form of certain securities.

Repos ("repurchase agreements"), which are basically loans with securities as collateral, act as a complement to the overnight market. They carry less risk as collateral is required. In its simplest form, a repo involves an owner of securities transferring them for a specified period to another party, thereby borrowing capital which the other party lends by "buying" the securities. Repos can also be used for taking positions in interest rate futures, e.g. with the objective of increasing the returns on a securities portfolio.

The stock market

Companies that expand usually need extra capital. The risks connected with lending to expanding businesses mean that the companies' capital needs cannot be fully met on the fixed income and credit markets, at least not at a reasonable cost. Instead, these companies can issue shares that they sell to investors willing to take a risk – risk capitalists or a broader general public. For the shareholders, the higher risk is compensated by the prospect of a share in the company's future profits. To ensure that the mediation of risk capital between company and investors occurs as efficiently as possible, it is sometimes advantageous to turn to an organised marketplace for shares, a *stock exchange*. By becoming listed on the stock exchange, the share becomes more transparent. This is partly due to the stock exchange's requirement for information and partly due to increased scrutiny of the company's operations and management by investors, analysts and media. Trading on the stock exchange also makes the share easier to value and to sell, which reduces uncertainty for a potential investor. It also means that the companies' costs for capital will be lower. In addition to Stockholmsbörsen AB, a number of lists have been introduced in recent years for shares that are traded locally through stockbrokers or on smaller marketplaces. The earlier exchange monopoly was abolished in 1993 and since then there has been free competition. A number of small marketplaces, such as Aktietorget and Nya Marknaden have in this way developed to a point where they now provide small companies with risk capital. However, the overwhelming majority of share trading is still through Stockholmsbörsen.

Table 2. The ten most sold shares on Stockholmsbörsen in 2001

Company	Turnover, SEK billion	Per-cent	Turnover in number of shares, millions	Per-cent	Number of deals closed, thousands	Per-cent	Market value ¹ as of 28 Dec 2001, SEK billion	Per-cent
Ericsson	1 326	33,2	21 784	46,3	2 102	19,8	461	16,1
Nokia	492	12,3	1 986	4,2	1 052	9,9	53	1,8
Skandia	264	6,6	2 791	5,9	518	4,9	78	2,7
Nordea	149	3,7	2 495	5,3	147	1,4	166	5,8
AstraZeneca	145	3,6	306	0,6	204	1,9	204	7,1
H&M	144	3,6	785	1,7	308	2,9	158	5,5
Securitas	93	2,3	509	1,1	147	1,4	68	2,4
Handelsbanken	77	1,9	518	1,1	139	1,3	110	3,8
Telia	76	1,9	1 435	3,0	298	2,8	140	4,9
SEB	75	1,9	800	1,7	149	1,4	67	2,3
Total	2 843	71,2	33 409	71,0	5 062	47,6	1 504	52,7
Total "A" and "O" lists,	3 994		47 044		10 628		2 856	

¹ Applies only to the shares listed on Stockholmsbörsen AB.

Source: Stockholmsbörsen AB.

Issuers in the stock market – listed companies

At the end of 2001, there were 305 companies listed on Stockholmsbörsen, which was a net reduction of six companies over the year. Both very large corporations and very small companies from both the financial sector, e.g. banks, and the non-financial sector, e.g. industrial companies, are listed on Stockholmsbörsen. Approximately one third of the turnover on the stock exchange during 2001 was in the Ericsson share.

The exchange's "A" list contains the actually listed companies. The "O" list contains smaller companies, where only some of the share stock is traded on the stock market. The former "OTC" list is now included in the "O" list.

Investors in the stock market

According to the shareholder statistics compiled by Statistics Sweden, Swedish households' holdings of all listed shares amounted to 13.7 per cent at the end of 2001. Non-financial companies' holdings totalled 7.7 per cent, which is a reduction since the early 1990s, when non-financial companies were still the largest shareholder group. At the end of 2001 the financial companies' holdings amounted to 30.7 per cent. This category includes the securities funds, comprising ten per cent, which are in turn owned by households. The central government's holdings totalled 9.5 per cent, with the AP-funds accounting for 3.8 percentage points of this. Foreign owners held 35.1 per cent, which is a slight reduction from December 2000.

Table 3. Shareholdings in listed companies, allocation per sector, December 2001

Sector	Percent	SEK billion
Non-financial companies	7,7	220
Financial companies, of which	30,7	876
<i>Banks, financial institutions, etc</i>	2,7	77
<i>Securities funds</i>	10,0	285
<i>Investment companies</i>	6,2	176
<i>Insurance companies</i>	11,8	337
Public sector, of which	9,5	270
<i>Swedish government</i>	5,5	156
<i>Municipalities and county councils</i>	0,2	6
<i>Social security funds</i>	3,8	109
Households	13,7	391
Households' non-profit making organisations	3,4	98
Non-residents	35,1	1 003
Total	100,1	2 858

Source: Statistics Sweden.



Table 4. The ten most active members of Stockholmsbörsen AB

Member	Type ¹	Turnover ² SEK billion	Per- cent	Number of trans- actions ² , thousands	Per- cent
Enskilda Securities	B	718	8,9	2 221	9,9
Carnegie	C	673	8,4	1 164	5,2
Svenska Handelsbanken	A	649	8,1	2 335	10,4
Morgan Stanley	D	610	7,6	447	2,0
UBS Warburg	C	519	6,5	582	2,6
Förenings-sparbanken	A	458	5,7	2 214	9,8
Deutsche Bank	C	410	5,1	374	1,7
Alfred Berg	C	394	4,9	701	3,1
JP Bank	A	329	4,1	1 116	4,9
Goldman Sachs	D	298	3,7	212	0,9
Total		5 059	63,0	11 366	50,4
Stockholmsbörsen total		8 024		22 551	

¹ A = Swedish bank; B = Swedish securities company; C = foreign-owned;

D = remote access participant, i.e. member with domicile outside Sweden

² Includes shares ("A" and "O" lists), subscriptions rights, convertible debt instruments and New Market. Double counting.

Source: Stockholmsbörsen AB.

Members of the Stockholmsbörsen

All trade in Stockholmsbörsen is conducted through its *members* and both large and small investors have to go through one of these members in order to buy or sell shares. The members consist of banks and securities companies that have a licence from Finansinspektionen (the Swedish Financial Supervisory Authority) to conduct securities trading and that fulfil the stock exchange's membership requirements. These include a requirement that all who trade in the marketplace should have some knowledge of stock market laws, corporate financing and economics. In addition, the stock market has an organisation for supervision of trading. Stockholmsbörsen currently has around 70 members who participate in share trading and who together have approximately 600 authorised stockbrokers with access to the marketplace.

Many of the stock market members now supply services for ordering via the Internet. This form of trading can often offer customers lower transaction costs than trading via securities companies and banks.

Trade structure

Since 1990 trading on the stock market has been completely automated, which means that trade is conducted directly from terminals at the members' offices. Trade is conducted through the electronic trading system SAXESS (Stockholm Automated Exchange). This system consists of a central computer linked to workstations located in the members' premises. A broker



can continuously monitor events in the market, such as the deals closed and orders placed by other member companies, while sitting at his/her workstation. The central computer and workstations communicate with one another via direct links. The system is also used today to link trading on Stockholmsbörsen with Köpenhamns Fondbörs in Denmark, Islands Börs in Iceland and Oslo Börs in Norway, within the framework of the Nordic stock market collaboration known as NOREX.

After a buyer or seller has given a transaction order to his/her bank or securities company, the order is forwarded to a broker and entered into an order book in SAXESS. Buyers and sellers are brought together in the order book and the share transaction is implemented. The orders are sorted according to price and time. The highest purchase and lowest sale prices come at the top of the list in the order book. If the price of several orders is the same, they are sorted according to the time they were registered in the system. The length of time the order remains in the system depends on whether there is a corresponding order with which to close a deal in the order book. As soon as a buyer is prepared to pay a higher price or a seller is prepared to accept a lower price, there is a change in the rates in the order book. The basic unit for order administration in SAXESS is a *trade block*. A trade block corresponds to approximately one half of a base amount for shares registered on the "A" list and a quarter of a base amount for shares listed on the "O" list. To handle orders equivalent to less than one trade block, each order book is divided up into two different levels: a trade block market and a small order market. When deals are concluded, the information is sent to VPC, the Swedish central securities depository, where the deal is settled. Settlement entails the shares being registered in the buyer's VP account and being deregistered from the seller's account. At the same time, payment is made via the buyer's and seller's banks. The time from when a deal is concluded until a deal has been fully implemented and settled is usually three trade days.

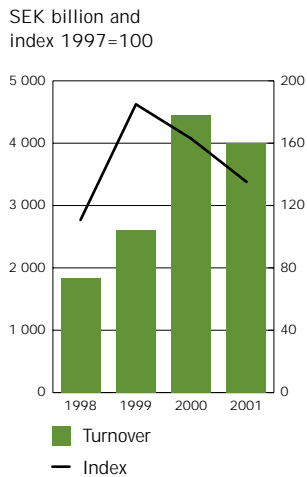
Table 5. Trading in shares on Stockholmsbörsen

	1998	1999	2000	2001
Listed shares				
Total turnover, SEK billion	1 830	2 609	4 456	3 994
Year-end market value, SEK billion	2 413	3 717	3 583	2 856
Index change	10	66	-12	-17
Number of listed companies at year-end	276	300	311	305
Risk capital supply, SEK billion	8	22	104	8

Source: Stockholmsbörsen AB.



Figure 6. Turnover and Allshare index on Stockholmsbörsen



Source: Stockholmsbörsen AB.

There is also a lively market outside of the stock exchange's automatic system. Manual trading occurs outside the system during the exchange's opening hours and there is also trading after the exchange closes. There are not many transaction executed outside the system, but they often involve very large amounts. Bonds, convertible debt instruments, premium bonds and derivative instruments are also traded on Stockholmsbörsen.

Turnover and index development on Stockholmsbörsen

The turnover in share trading on Stockholmsbörsen declined by ten per cent during 2001, to SEK 3,994 billion. The total value of the stock exchange fell by a good 25 per cent over the year – to SEK 2,856 billion. The turnover speed, i.e. how large a part of the stock market value is sold during the year, was higher than ever, at 134 per cent. The number of deals concluded in share trading was 10.6 million, which is a reduction from the 13.8 million during 2000. The Allshare index showed a decline of 17 per cent during 2001. The Allshare index is the index that replaced the stock exchange's former general index and has its base year set at 1995.

The volume of new issues and stock exchange introductions is usually strongly dependent on the general price trends. The weak trend on Stockholmsbörsen during 2001 means that both the volume and amount of new issues and stock exchange introductions has declined. The stock exchange's contribution to new capital was SEK 8 billion, which can be compared with approximately SEK 20 billion on average during the period 1991-99. During 2000, which was an extreme year in many aspects, the total was SEK

104 billion (the larger part of this capital was attributable to Telia's introduction onto the stock exchange).

Equity-related derivatives

The vast majority of trading in options and futures as equity derivatives in Sweden takes place through Stockholmsbörsen. The equity-related products offered by Stockholmsbörsen refer almost exclusively to Swedish shares and the stock exchange's own share index. Trading is conducted through contracts written in units of 100 shares. The number of contracts amounted to approximately 55 million in 2001, compared with 48 million in 2000.

The foreign exchange market

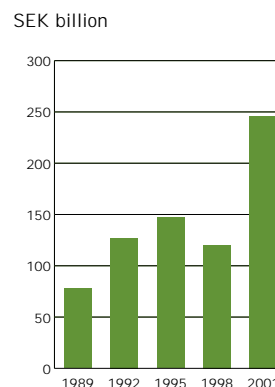
Trade in foreign currency is conducted both with the aim of acquiring means of payment for purchases of goods and services and to enable various types of capital transactions between different countries. Financial intermediaries – mainly banks – operate in the foreign exchange market, either on behalf of clients or on their own account. Their clients comprise companies, institutions and private individuals.

The global trade in currencies is very large. According to a survey for April 2001, the turnover in the global foreign exchange market amounted to an average of approximately SEK 12,000 billion a day. Turnover in the Swedish foreign exchange market amounted to approximately SEK 240 billion¹ a day.

The above-mentioned survey, which was coordinated by the Bank for International Settlements (BIS), defines the foreign ex-

¹ The figures regarding global and Swedish foreign exchange trading are not really comparable, as the former is not adjusted for double reporting.

Figure 7. Turnover in the Swedish foreign exchange market



Source: The Riksbank.

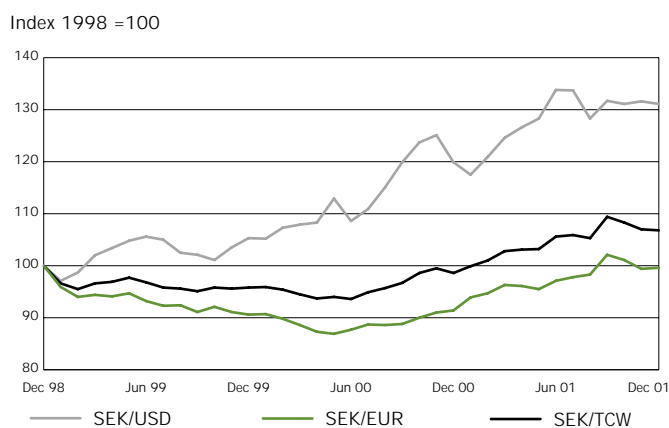


change market as spot trading and trading in FX swaps and outright futures. Spot trading refers to purchases or sales of currency with immediate delivery. However, this type of deal comprises only around 25 per cent of the turnover in the foreign exchange market in Sweden. Instead the market is dominated by various currency derivatives, mainly swaps, which account for approximately 70 per cent of the turnover. Forward transactions also exist, accounting for five per cent of trading. A swap contract involves agreeing to buy a currency today and sell it back at a later date. Swaps thus consist of two transactions, one in the spot market and one forward exchange. A forward transaction refers to a purchase or sale of a currency with delivery at a later date.

In the Swedish spot market, the most sold currency pair is SEK/EUR, accounting for almost SEK 19 billion or 31 per cent of the total turnover. The most important currency pair in the swap and futures market is SEK/USD, with a share of SEK 72 billion, or 42 per cent of the turnover. The amounts refer to daily averages during April 2001.

The figure below shows the development of the exchange rate index for the Swedish krona against the euro, the US dollar and the TCW (Total Competitiveness Weights) index. The exchange rate index is a means of measuring the value of the krona against another currency or, as in TCW, against a basket of currencies. The TCW index is based on average aggregated flows of processed goods for 21 countries. In the figure, the index has been set at 100 at the end of 1998 for all three series. Therefore, an index value above 100 for the period after 31 December 1998 means that the krona has weakened, while an index value below 100 indicates that the krona has strengthened.

Figure 8. Development of the exchange rate index



Source: The Riksbank.

Financial intermediaries

Financial intermediaries include *banks, credit market companies and intermediaries in the insurance and securities markets.*

Table 6. Financial institutions' balance sheet totals and assets at end 2001

SEK billion	Balance sheet total/ Investment assets ¹	Lending to the general public	Other lending	Interest-bearing securities	Shares	Other
Banks	3 133	1 345	898	425	160	305
Mortgage institutions	1 210	1 126	57	4	8	15
Other credit market companies	468	307	25	104	4	28
Securities companies	51	6	12	2	10	21
Insurance companies	1 782	46	20	741	861	114
The AP funds	563	-	-	208	346	9
Securities funds	800	-	-	179	569	52
Total	8 007	2 830	1 012	1 663	1 958	544

¹ Refers to the market value of the investment assets for insurance companies, the AP funds and securities funds.

Sources: Statistics Sweden, annual reports and the Riksbank.

Banks

In the Swedish market, the four largest limited bank companies, Föreningsparbanken, Handelsbanken, Nordea and SEB together account for approximately 85 per cent of the banks' balance sheet total. In addition to the limited bank companies there are savings banks and co-operative banks in the Swedish market.

At the end of 2001 there were a total of 128 banks operating in Sweden. These were comprised of 26 public limited banking companies, 77 savings banks, 23 foreign-owned banks and 2 co-operative banks.

The banking sector's operations are governed by the Banking Business Act. This legislation is aimed at protecting depositors' money and thereby the stability of the financial markets. A "deposit guarantee" has the purpose of strengthening consumer protection for the general public's deposits in banks. Deposits of up to SEK 250,000 are protected in the event of bankruptcy. To finance the deposit guarantee system, the banks have to pay fees to the state, which are then deposited in funds to cover any future potential claims.



Table 7. The ten largest banks and bank branches in Sweden, balance sheet totals at end 2001

SEK billion	
Handelsbanken	946
SEB	707
Föreningsparbanken	500
Nordea Sverige	476
Danske Bank ¹	139
Postgirot Bank	85
Skandiabanken	30
ABN AMRO ¹	26
GE Capital ²	24
Dexia ²	23
Total 10 largest	2 956
All banks	3 133

¹ Foreign branches

² Foreign subsidiary banks

Source: The Riksbank.

Most Swedish banks offer a comprehensive range of services, including asset management and payment services in addition to granting loans and accepting deposits. They also trade in currency and interest-bearing securities on behalf of their customers as well as on their own account. Almost all of the banks offer their customers facilities for doing banking business via the Internet.

In addition, the banks serve an important function as payment intermediaries. Their daily discharge of payment instructions, e.g. paying out a loan or crediting a deposit to a household's deposit account, leads to large fluctuations in the banks' liquidity. The banks' trading in securities also contributes to this. The banks can parry these fluctuations by using the Riksbank's deposit and lending facilities. Differences in liquidity between the banks can be evened out in interbank trading.

The banks' assets mainly comprise lending to the general public² and other financial institutions, but also include assets such as interest-bearing securities.

Deposits from the Swedish general public and non-residents comprise just over one third of the banks' liabilities. In addition, the banks have liabilities to both Swedish and non-resident financial companies, as well as debts in the form of securities issued and equity.

The banks belong to the largest group of credit providers among the credit institutions³. They are responsible for almost half of all lending by credit institutions to the general public.

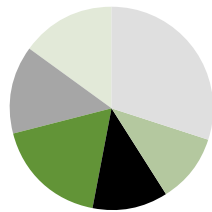
The majority of the banks' lending to the general public, approximately 50 per cent, is

² General public here includes non-financial companies, households, municipalities and county councils.

³ Banks and credit market companies together comprise the group of credit institutions.



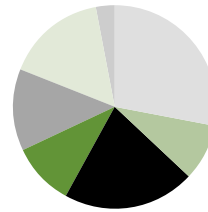
Figure 9. The banks' assets at end 2001



- Lending to Swedish general public 30%
- Lending to foreign general public 11%
- Foreign banks 12%
- Swedish financial institutions 18%
- Interest-bearing securities 14%
- Other 15%

Source: The Riksbank.

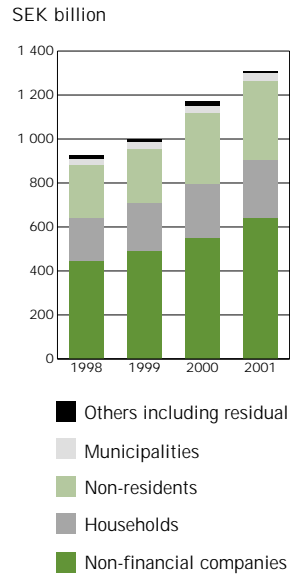
Figure 10. The banks' liabilities at end 2001



- Deposits from Swedish general public 28%
- Deposits from foreign general public 9%
- Foreign banks 21%
- Swedish financial institutions 10%
- Issued securities 13%
- Other 16%
- Shareholders' equity 3%

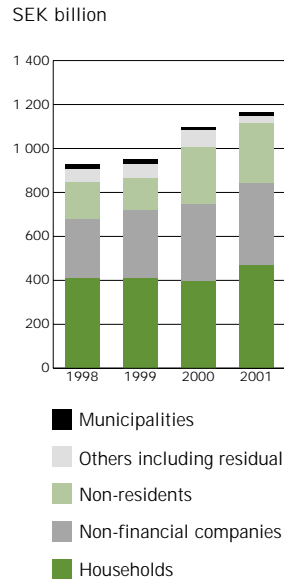
Source: The Riksbank.

Figure 11. The banks' lending according to borrower categories



Source: The Riksbank.

Figure 12. The banks' deposits according to depositor categories



Source: The Riksbank.

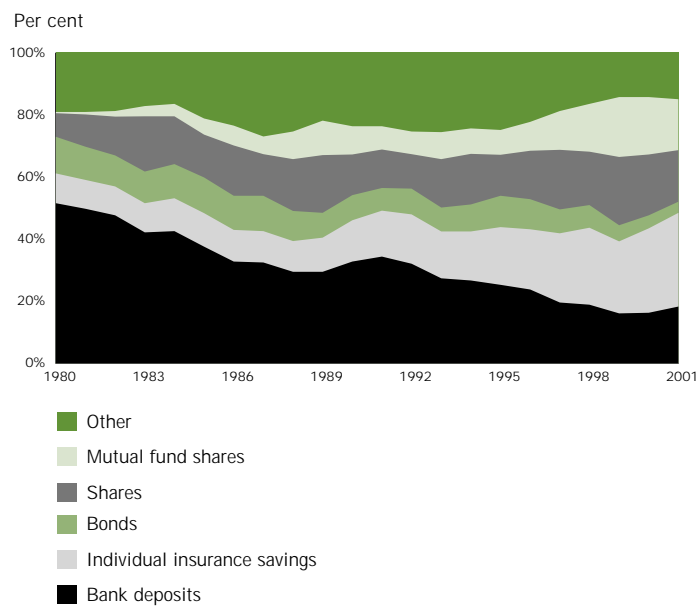


to non-financial companies and approximately 20 per cent is to households. Lending to non-residents amounted to SEK 359 billion at the end of 2001, which corresponded to 27 per cent of the total lending to the general public.

Deposits in the banks totalled SEK 1,164 billion at the end of 2001. The largest part, 40 per cent, comprised deposits from households. Deposits from non-financial companies and non-resident lenders accounted for 32 per cent and 23 per cent respectively.

Households' deposits thus play an important role for the banks' financing. However, households have for some time increased their savings in other forms, such as shares, funds and insurance policies, which has been at the expense of bank deposits. Bank deposits now comprise barely one fifth of households' financial assets.

Figure 13. Households' financial assets 1980-2001

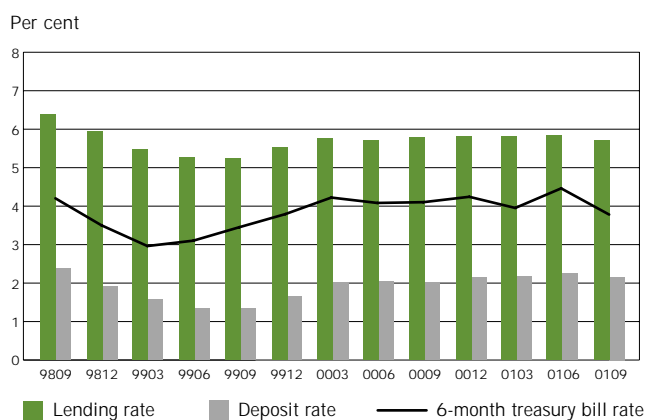


Source: Statistics Sweden.



When setting their interest rates on both deposits and loans to the general public, the banks follow changes in the money market rates. Factors such as the borrower's ability to repay and competition for savings from other banks and other forms of saving also affect the final interest rates.

Figure 14. The banks' average deposit and lending rates and the treasury bill rate



Source: The Riksbank.



Groups in the Swedish financial market

The operators in the Swedish financial market are described in this publication from an institutional perspective. As a result, banks, mortgage institutions and other financial operators are discussed separately. In practice, however, the major operators in the Swedish financial market are often conglomerates with companies in several areas of operation. The aim of the following outline is to describe the operations of the largest financial groups, both in the Swedish financial market and internationally.

Table 8. Large groups with operations in the Swedish market at end 2001

SEK billion	Number of employees	Balance sheet total	Market value	Lending to general public	Operating profit
Nordea	32 423	2 251	165	1 284	17 619
Handelsbanken	9 239	1 175	110	800	11 208
SEB	20 696	1 163	73	635	6 151
Föreningssparbanken	16 068	960	69	662	8 039
Danske Bank	17 564	1 949	125	1 170	14 340
Skandia	7 447	611	78	21	-2 104

Note. Refers to the groups' entire operations, i.e. the operations in all companies and countries.

Sources: Annual reports.


Nordea

Nordea is the largest financial group in the Nordic countries, both in terms of balance sheet total and market value. It offers a full range of services, with retail banking (households and companies) as its largest business area.

Nordea consists of a Swedish holding company that owns banks in Finland, Sweden, Denmark and Norway via a Finnish parent company. In Denmark and Norway Nordea also conducts property and liability insurance operations through the company Tryg-Baltica. In November 2001 it acquired Postgirot. In addition to the core business in the Nordic countries and branches in large international financial centres, Nordea has a majority holding in the Polish Bank Komunalny and a minor holding in the Russian International Moscow Bank.

Handelsbanken

Handelsbanken is the leading operator in the Swedish lending and deposit market and Sweden's second largest bank in terms of balance sheet total. Like Nordea, it offers a full range of services.



Handelsbanken consists of a Swedish parent bank, the Swedish mortgage institution Stadshypotek⁴ and minor office businesses in Denmark, Norway, Finland and the UK. It is the fourth largest bank in Finland and the fifth largest in both Denmark and Norway. In the UK it holds a small market position as yet. During 2001 a subsidiary bank was established in Poland. Handelsbanken also has minor branches and representative offices in large financial centres.

SEB

SEB is Sweden's third largest bank in terms of balance sheet total and focuses mainly on large companies and institutions in Sweden and the other Nordic countries. SEB, like the other major Swedish banks, offers a full range of products.

SEB consists of a Swedish parent company and a number of Swedish and international subsidiaries. The group's operations have become increasingly international, following the acquisition of the German bank BfG (now SEB) and an increased ownership in banks in the Baltic countries. In addition to offices in Sweden, Germany and the Baltic countries, the group has operations in the other Nordic countries, the UK, Luxembourg and Switzerland.

Föreningssparbanken

Föreningssparbanken offers a full range of services and focuses mainly on the market for private persons and the market for small and medium-sized companies.

Föreningssparbanken consists of a Swedish parent bank, through which the traditional banking operations in Sweden are conducted, and its subsidiaries and associated companies. Föreningssparbanken also has a well-developed co-operation with a number of independent and part-owned savings banks in Sweden. In addition to its operations in the Swedish market, Föreningssparbanken is active in the Baltic countries and in other Nordic countries, partly through its majority-owned subsidiary Hansabank in the Baltic countries and FIH in Denmark.

Danske Bank

Danske Bank is the largest bank in Denmark and consists of a Danish parent bank, which in addition to its operations in Denmark, has both subsidiaries and branch offices abroad.

⁴ Stadshypotek owns Handelsbanken's old mortgage institution Handelsbanken Hypotek.

The Swedish banking operations are conducted through a number of provincial banks, including Östgöta Enskilda Bank. In the Swedish market, Danske Bank is also involved in business with large corporations, asset management and insurance. Danske Bank also has operations in Norway through Fokus Bank. The major part of the group's operations are in Denmark and the Swedish business contributes only around 3 per cent to the bank's profits. Around 8 per cent of the bank's total assets are in Sweden.

Skandia

Skandia operates in more than 20 countries in life insurance and liability insurance, asset management and banking operations. The group, which was previously active in liability insurance in particular, has expanded its operations to become a global savings company with its main focus on mediating different types of savings products. Skandia consists of a Swedish parent company and a number of Swedish and foreign subsidiaries. The greater part of its operations are outside of Sweden; only around 8 per cent of the Skandia Group's total sales stem from the Swedish market.

In Sweden, Skandia is market leader in life insurance savings and also active in fund savings without insurance protection. Some of Skandia's products are distributed through Skandiabanken, which also conducts traditional banking operations. In addition, Skandia is part-owner in the liability insurance company If.

Table 9. The large groups' operations in special companies

Group	Bank	Mortgages	Fund management	Investment bank	Insurance
Nordea	Nordea Sverige	Nordea Hypotek AB	Nordea Hypotek AB	Nordea Securities AB	Nordea Liv
Handelsbanken	Handelsbanken	Handelsbanken Hypotek AB & Stadshypotek AB	Handelsbanken Fonder AB	Conducted within the bank	Handelsbanken Liv and SPP
SEB	SEB	SEB Bolån AB	SEB Fonder	Enskilda Securities AB	SEB Trygg Liv
Förenings-sparbanken	Förenings-sparbanken	Spintab AB	Robur AB	Conducted within the bank	Robur Försäkring
Danske Bank	Östgöta Enskilda Bank and the provincial banks	Conducted within the bank	Firstnordic Fonder AB	Danske Securities AB	Danica
Skandia	Skandiabanken	Conducted within the bank	Skandia Fonder AB	–	Skandia Liv and SkandiaLink

Source: Annual reports.



Credit market companies

The credit market also includes what is known as credit market companies. These intermediaries specialise in a limited area of operations and, unlike the banks, they are not allowed to accept deposits. The most important credit market companies are *mortgage institutions* and *finance companies*.

Mortgage institutions

The mortgage institutions' main operations comprise real estate financing, focusing primarily on residential properties. Loans are secured mainly with real estate mortgages or municipality sureties. State credit guarantees are also used. The mortgage institutions are the largest sub-group in the credit market companies group, accounting for just over 70 per cent of the group's total balance sheet.

In the Swedish market there are a total of 10 mortgage institutions. Most of them are owned by banks, but two are owned by the state – SBAB and Venantius AB.

Stadshypotek AB and AB SPINTAB are the largest institutions and together account for just under 60 per cent of the group's total balance sheet.

Outstanding loans by mortgage institutions to the general public amounted to SEK 1,126 billion at the end of 2001. Lending to single-family dwellings and multi-family dwellings together comprised the largest part, just over 85 per cent. Lending to tenant-owner apartments has more than doubled during the period since 1998. Contributory factors here are the higher market prices and the conversions of rental properties to tenant-owner properties that have occurred during the period, resulting in an increased demand for housing financing.

Figure 15. The mortgage institutions' balance sheet totals at end 2001

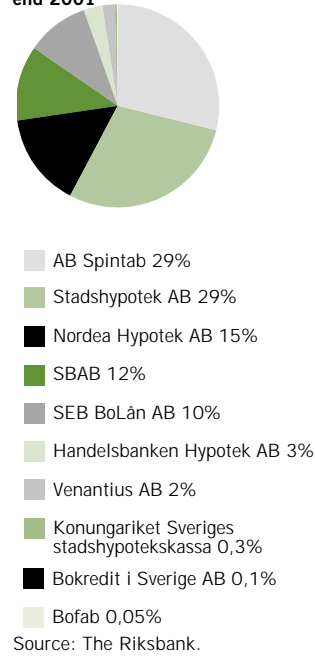


Figure 16. The mortgage institutions' lending to the general public

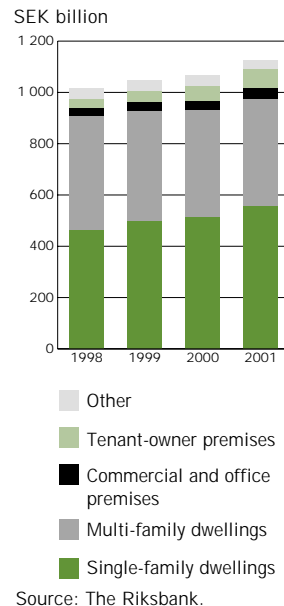
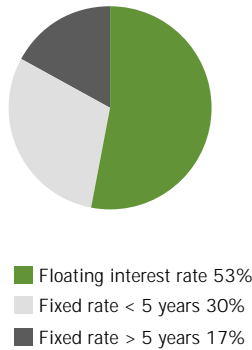


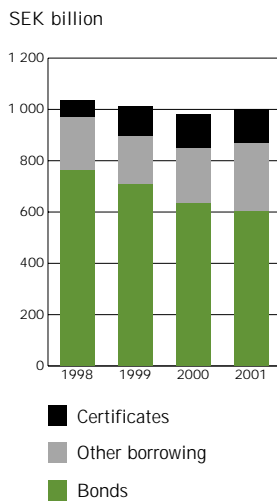


Figure 17. The mortgage institutions' lending according to original fixed interest period at end 2001



Source: The Riksbank.

Figure 18. The mortgage institutions' borrowing



Source: The Riksbank.

Both the level of the market rates and the customers' expectations of interest rate trends on both short and long market rates influence the customers' choice of period for fixing loans, and this in turn governs the financing structure of the mortgage institutions. The share of loans with mortgage institutions at a floating interest rate now comprises 53 per cent of the total lending to the general public. Loans with a fixed period of five years and longer and loans with a shorter fixed period comprise 17 per cent and 30 per cent respectively of total lending.

The mortgage institutions mainly finance their credit granting by issuing bonds and certificates on the market. Their borrowing is primarily from large asset managers, such as the AP funds, the insurance companies and the banks. The mortgage institutions also borrow from domestic companies and households, for instance through private bonds, as well as borrowing on foreign markets.

Other credit market companies

Other credit market companies include *finance companies* and *corporate* and *municipality-financing institutions*.

Finance companies offer various forms of financing to companies and households, such as leasing and factoring (companies), promissory note loans and credit card accounts (households). Financial companies are often owned by non-financial companies and serve as a complement to the companies' ordinary operations, through the financing operations offered to the company's customers. The Swedish banks also own finance companies. There are a total of over 60 finance companies operating in the Swedish market.

The finance companies mainly finance their operations through loans from other financial institutions, in particular the banks. Some larger finance companies also find financing by issuing certificates on the securities market.

Corporate and municipality-financing institutions focus on granting loans to trade and industry or certain parts thereof. They finance their operations by issuing bonds, certificates and promissory notes.

Outstanding loans to the general public by the finance companies and corporate and municipality-financing institutions amounted to SEK 307 billion at the end of 2001, which can be compared with the banks' lending at the same point in time, totalling SEK 1,345 billion.

Intermediaries in the insurance and securities markets

In addition to banks and specialised credit market companies, the financial intermediaries also include *insurance companies, the AP funds, securities funds* and *securities companies*. These are particularly important as investors and trustees in the securities market.

Insurance companies

Insurance companies comprise life insurance companies, liability insurance companies and contract insurance companies.

Life insurance companies provide compensation when an insured person is injured, dies or reaches the age of retirement. In the traditional life insurance companies, the return is guaranteed in advance. In unit-linked life insurance companies the return is instead determined by the yield on the individual

Table 10. The ten largest in the group other credit market companies, balance sheet totals at end 2001

SEK billion	
Svensk Exportkredit AB	150
Kommuninvest i Sverige AB	48
Landshypotek AB	35
Nordea Finans Sverige AB	29
Handelsbanken Finans AB	29
Volvofinans AB	24
SEB Finans AB	22
Föreningssparbanken	
Jordbrukskredit AB	19
ABB Credit Finans AB	10
Telia Finans AB	9
Total 10 largest	375
Total other credit market companies	468

Source: The Riksbank.

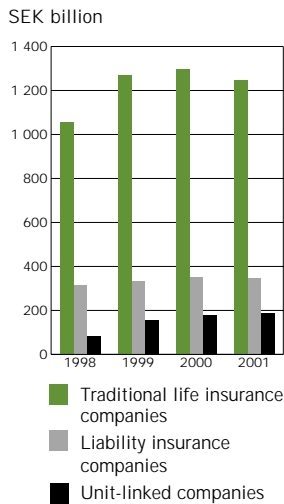
Table 11. Number of insurance companies in Sweden at end 2001

Nation-wide companies	138
Liability insurance companies	91
Traditional life insurance companies	28
Mutual fund companies	14
Contract insurance companies	5
Local companies (liability companies)	291
Foreign secondary establishments	32
Total	461

Source: The Swedish Insurance Federation.

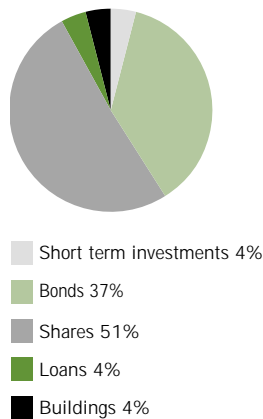


Figure 19. The insurance companies' investment assets



Source: Statistics Sweden.

Figure 20. Life insurance companies' allocation of investment assets at end 2001



Source: Statistics Sweden.

funds. Liability insurance companies compensate for damage to property and pay damages to a third party. Property and liability insurance comprises an important part of liability insurance. Contract insurance comprises supplementary insurance protection for employees and is based on labour market agreements. Contract insurance policies are administered by special insurance companies.

Insurance companies are either limited liability companies or mutual companies. Unlike the limited liability companies, the mutual companies are owned by their insurance policyholders. New legislation introduced in 1999 enables the conversion of mutual insurance companies to dividend-paying limited liability companies. So far, however, only one of the mutual insurance companies, Handelsbanken Liv, has been converted.

The total investment assets of the nationwide life insurance and liability insurance companies amounted to SEK 1,782 billion at the end of 2001. The life insurance companies' investment assets comprised just over 80 per cent of this.

The insurance companies' capital is mainly invested in equity and bonds. The amount invested in shares has increased over a period of time and now comprises approximately half of the capital managed. Just over one third is invested in bonds. Only a minor part is invested in property.

State-owned pension funds

The Swedish pension system consists of two parts. One part is a "pay-as-you-go" system, where pensions paid out are financed by current charges. The other is a premium



reserve system, where pension disbursements are financed with money paid into funds during the period of earnings and where the pension policyholders themselves choose the fund manager. Of the guarantee pension of 18.5 per cent, 16 percentage points are managed under the "pay-as-you-go" system and 2.5 percentage points under the premium reserve system.

The foremost task of the AP funds is to manage pension funds within the framework of the "pay-as-you-go" system, which is managed by the First, Second, Third, Fourth and Sixth AP funds. The Seventh AP fund manages funds in the premium reserve system, in competition with private fund management companies. This fund also includes the pension money for those people who refrained from choosing a manager for their premium reserve pension.

The First, Second, Third and Fourth AP funds have identical investment regulations, which include the stipulation that investments can be in any instruments on the capital market and that some of the assets may be invested globally. The Sixth AP fund has the most flexible investment regulations, but is not allowed to invest abroad. The Seventh AP fund, like the first four, can invest abroad.

At the end of 2001, the AP funds' total investment assets amounted to SEK 563 billion.

Securities funds

Saving in mutual funds in Sweden has developed over the space of more than 30 years and during this period it has grown to more than SEK 867 billion in managed capital as at the end of 2001.

In addition to mutual funds, there are interest funds that invest in interest-bearing securities and mixed funds that invest in both shares and interest-bearing securities. Hedge funds differ in this respect in that their management involves a relatively large amount of freedom with regard to investment strategies and financial instruments, e.g. derivatives.

Table 12. Mutual fund wealth

SEK billion	1998	1999	2000	2001
Equity funds	365	592	595	522
Interest funds	104	116	123	162
Mixed funds	121	169	205	154
Hedge funds	-	-	-	28
Total	591	877	924	867

Source: The Swedish Mutual Fund Association.



Table 13. The ten largest fund managers, assets managed at end 2001

SEK billion	
Robur	263
Nordea (incl. Treviso)	162
SEB	159
Handelsbanken (incl. SPP)	99
Skandia/Carlsson	37
Länsförsäkringar WASA	32
Folksam/KPA	17
Brummer & Partners	17
Banco	14
Firstnordic	9
Total 10 largest	809
Total	867

Source: Swedish Fund Statistics.

Funds can be managed with varying degrees of activeness. Index funds are an example of funds that are often passively managed, but there are exceptions. More active management aims to achieve a higher yield than the index.

In recent years, there has been an increase in pension saving in funds. The new premium reserve system involves managing the allocated resources for the premium pension in securities funds. There are also alternatives linked to mutual fund saving for private pension schemes.

The total fund wealth amounted to SEK 867 billion at the end of 2001. Mutual funds comprised 60 per cent of this total, interest funds comprised 19 per cent and other funds 21 per cent.

The funds are administered and managed by fund management companies. Such companies normally offer a large number of funds with different investment focus. The bank-owned fund management companies dominate the Swedish fund market. The four largest companies, owned by the largest banks, together account for almost 80 per cent of the fund market. These companies have a distribution channel through the bank offices.

The formal buying and selling of fund shares takes place between customer and fund management company. Fund management companies linked to insurance companies have gained an increasing share in the mutual fund market in recent years as a result of the growing interest in choosing funds for pension saving.



Securities trading companies

The securities trading companies' main functions are to conduct trade in securities in their own name on behalf of customers, for a commission, and to buy and sell securities on their own account as market makers. Being a market maker involves offering two-way prices at which they are prepared to both buy and sell securities, thus guaranteeing the liquidity of the market. A licence is required from Finansinspektionen (the Swedish Financial Supervisory Authority) both for trading on commission on behalf of customers and for trading in financial instruments on the company's own account. These companies are also able to extend credit to customers in connection with securities transactions and administrative services, and to accept deposits, to a limited extent, in payment for these services. The companies also participate in market issues of securities.

The securities trading companies, like the commissioned operations of the banks, perform the important function of mediating between buyers and sellers. They also maintain markets by quoting two-way prices on the securities markets. Trading is conducted in both shares and interest-bearing securities.

There are around fifty securities trading companies in the Swedish market. As these companies do not take positions – other than intraday as a rule – in the securities in which they trade, their aggregate balance sheet total is relatively small; just over SEK 50 billion at the end of 2001.

Laws and corporate forms in the financial sector

Banking business in Sweden can be conducted either in the form of limited liability companies, savings banks or co-operative banks. The **Banking Business Act** regulates operations for all bank forms and contains joint regulations on what banks may and may not do, how the supervision of banks should be conducted, etc. The Banking Business Act also contains special regulations for bank limited liability companies, while the formation and organisation of savings banks and co-operative banks is regulated in special laws. One of the most important laws governing banking operations is the **Capital Adequacy and Large Exposures (Credit Institutions and Securities Companies) Act**. This stipulates the size of the capital buffer a bank must hold in relation to the risks it undertakes. The capital adequacy rules are the result of research and negotiations at international level under the auspices of G10 and the EU.


A **credit market company** is a limited liability company or an economic association that has a licence to pursue financing operations. Credit market companies are often specially-oriented towards particular types of credit granting. The most important credit market companies are mortgage institutions and finance companies. A crucial difference from the banks is that credit market companies are not allowed to accept deposits. The operations of credit market companies are regulated by **the Act on Financing Operations**. Like the banks, these companies are covered by the capital adequacy rules. Both banks and credit market companies are examples of **credit institutions**.

At present, both the capital adequacy rules and the operating regulations for banks and credit market companies are being revised. For instance, there is a proposal to abolish the banks' monopoly on deposits.

Examples of other laws that have a bearing on banks and credit market companies are **the Consumer Credit Act**, which primarily regulates the marketing of credit services, and **the Act on Deposit-Guarantee Scheme**, which is aimed at safeguarding depositors' money in accounts up to a total of SEK 250,000.

Private **insurance operations** are regulated in two fundamental legislative blocks. **The Insurance Business Act** establishes the game rules for operations and **the Insurance Contracts Act** regulates the relationship between insurance company and policyholder.

The Insurance Contracts Act contains regulations on forming insurance companies in Sweden, operations within these companies and their supervision. The commercial law regulations distinguish between liability insurance and life insurance, operations that shall in principle



be conducted in different companies. Policyholders are protected through a requirement to provide information and a clear delimitation between shareholders' equity and insurance policyholders' capital, as well as a negotiated right to profits. As of 1 July 1995, the Swedish insurance business legislation has been adapted to the EC Council Directives regarding life insurance and non-life insurance, and with effect from 1 January 1996 the EC regulations for annual reports and consolidated reports have been incorporated into Swedish law. With effect from the year 2000, the opportunities for Swedish insurance companies to hold shares in other companies have been liberalised and adapted to EC law.

The Insurance Contracts Act regulates the legal relationship between insurance company and policyholder – and others who are to be covered by the insurance. The act applies to life insurance, accident insurance and sickness insurance, but not to liability insurance. The most common liability insurances for individuals are instead governed by **the Consumer Insurance Act**, which was introduced in 1981 to strengthen consumers' rights in relation to insurance companies.

A **securities trading company** is a limited liability company with a licence to pursue securities trading in accordance with **the Securities Business Act**. Securities business can entail, for instance, trading in financial instruments on the company's own account or in their name but on behalf of customers, as well as mediating contacts between buyers and sellers of financial instruments, management of other parties' financial instruments or providing guarantees or other participation in the issue of shares, etc. Like the credit institutions, securities trading companies are embraced by the Capital Adequacy and Large Exposures (Credit Institutions and Securities Companies) Act. Trade in securities is also regulated in the Financial Instruments Trading Act and the Insider Act. It is also affected by the Securities and Clearing Operations Act and the act on systems for settlement of obligations on the financial market.

A **securities fund** is a fund that consists of securities and other financial instruments, and that has been formed through an infusion of capital from the general public and is owned by those who have provided this capital. A securities fund is neither a limited liability company nor an economic association that acquires and manages financial instruments. The management of a securities fund, like its sales and the redemption of shares in the fund, is carried out by a **fund management company**. The assets of the securities fund are kept by a securities depository, which also handles incoming and outgoing payments. This depository is usually a bank or other credit institution. Fund management companies and securities depositories operate independently of one another.



The financial infrastructure

Payments and transfers of financial assets between different institutions and market places require various forms of payment instruments, as well as technical and administrative systems. These markets, instruments and systems, including the companies that run them, together comprise *the financial infrastructure*.

There are two main categories of transactions: payments and transactions with financial products. Before a final payment or exchange of securities for money can be made, the transactions have to be checked and liabilities and claims need to be calculated. This is called *clearing* the transaction. Clearing is normally carried out by a *clearinghouse*. After clearing, the money (or securities in a securities transaction) must be transferred from the payer's account to the recipient's account. This process is called *settlement* and is executed through a settlement system.

Payments are divided into different categories depending on their nature and characteristics. Two fundamental categories are *retail payments* and *large-value payments*. A large-value payment is normally an urgent payment, usually exchanged between banks or other participants in the financial market. Retail payments are less urgent and involve relatively smaller amounts exchanged mainly between non-financial companies and households. When a retail payment is made, one or more banks acts as payment intermediary on behalf of a customer for a payment that has arisen in the customer's transactions. There are no exact limits, in terms of amount, as to what constitutes a retail payment and what is a large-value payment. For instance, some companies make payments of sufficiently large amounts to be classified as large-value payments, although banks act as intermediaries.

In principle, the settlement of all payments takes place through the banks' accounts in the Riksbank's RIX system. This comprises direct payments between banks, the final settlement of payment orders from bank customers and payments arising from transactions in financial products.



Large-value payments

The Riksbank has long made it possible for banks and certain other participants to settle their payment obligations to one another. As of 1990, these operations are carried out in the *RIX* system for the settlement of large value payments, primarily between the banks. Retail payments can also be settled through RIX, in an aggregate form. In addition to the Riksbank, which owns and runs the system, there are currently around 20 institutions participating in RIX⁵. RIX consists of two separate systems: *K-RIX* for the settlement of payments in Swedish krona and *E-RIX* for the settlement of payments in euro. The members of the RIX system can also act as clearing banks for non-members, normally smaller banks.

Settlement in the RIX system is based on the principle of *real-time gross settlement*, which involves immediate settlement of payments one by one on condition that the payers have sufficient liquidity. If this is not the case, the payment order is placed in a queue until the paying bank has sufficient liquidity. To ensure that payments are settled smoothly, the banks can cover their liquidity requirement through intraday borrowing from the Riksbank. All such borrowing requires collateral.

During 2001, payments to a total average value of SEK 444 billion per day were settled through the RIX system. This corresponds to one fifth of Sweden's GDP. The transactions behind the settlements correspond to very large gross amounts, as the Swedish clearing houses net inward and outward payments on behalf of their participants. The resulting net amount is then settled in the RIX system. Figure 1 shows that the value of the transactions varies considerably between the different parts of the financial infrastructure.

Retail payments and Bankgirocentralen

Retail payments can be divided into two categories; *cash payments* and *account-based payments*. When an individual or a company initiates a payment, they use either banknotes and coin or funds held in a bank account. An account-based payment involves a transfer from the payer's account to the payee's account. Cash payments still account for a very large percentage of the transactions made, although they have declined in importance. In December 2001, the general public's holdings of banknotes and coin amounted to SEK 97 billion.

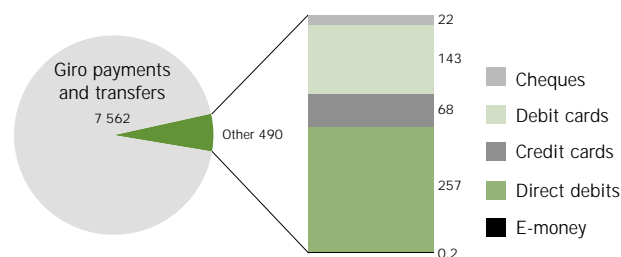
⁵ The RIX participants consist of nine Swedish-owned banks, seven branch offices of foreign banks, Bankgirocentralen BGC, VPC, Stockholmsbörsen, the Swedish National Debt Office and the Riksbank. Gjensideige NOR Sparebank will participate via remote access.



The Riksbank has a monopoly on the right to issue banknotes and coin, while *Pengar i Sverige AB* (PSAB) is responsible for the distribution of banknotes and coin to the banks. PSAB was formed as a wholly-owned subsidiary of the Riksbank in 1999, with the aim of making the distribution of cash more efficient. The Executive Board of the Riksbank has decided to sell PSAB, after dividing it into two separate operations. The commercially-oriented part of the operations, which is responsible for transporting and counting daily takings from the retail trade, will be transferred to a private owner. The other part, which comprises, for instance, storage, delivery and receipt of banknotes and delivery of coin, is closely connected with the banking system and the Riksbank will examine the possibility of transferring this operation to the commercial banks.

Account-based transactions account for the major part of the total value of transfers. Those with money deposited in bank accounts have access to the infrastructure through the possibility of withdrawing cash, using payment cards and making giro payments or using other payment methods directly linked to these accounts. Previously, cheques were often used for payments in Sweden, but they are no longer a common method of payment. All of the payment instruments⁶ are based on the same principle of transferring money from the buyer's account to the seller's account. If the buyer and seller have their accounts with the same bank, the transaction can be processed internally within the bank. Otherwise, a payment transaction arises between two banks acting on behalf of their customers.

Figure 21. The use of account-based retail payment instruments in Sweden, value of transactions in 2000, SEK billion

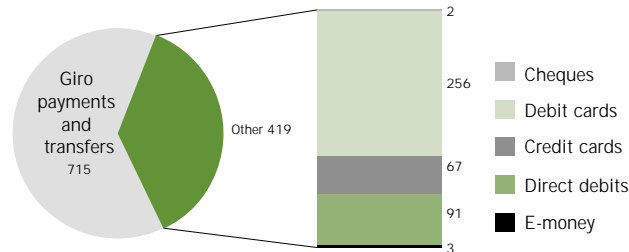


Source: The Riksbank.

⁶ A payment instrument is usually defined as the instrument that allows the payer (the buyer) to transfer a value to the payee (the seller).



Figure 22. The use of account-based retail payment instruments in Sweden, million transactions 2000



Source: The Riksbank.

In recent years, customers have called for more convenient means of payment, at the same time as the banks have tried to reduce the costs associated with managing retail payments. This has led to an increased use of electronic methods of payment and to the banks adjusting their charges to encourage customers to use these methods.

A new payment instrument has come onto the market recently, *e-money*. These are prepaid instruments that do not necessarily have any link to an individual bank account. The value, the digital units, can be stored in the actual instrument either in a microprocessor built into a plastic card, a *smart-card*, or in the memory of a computer, as *network money*. The cash card model is mainly intended for use as a replacement for banknotes and coin in transactions involving small amounts in retail outlets. Most smart card systems, including the Swedish “Cash” system, do not require any direct communication with the issuing bank for authorisation of payment. Direct connection only occurs when downloading digital value units into the card.

To summarise, it can be said that account-based payments differ from cash payments on two main points:

- A need for intermediaries between the buyer and the seller arises.
- The time difference that arises between closing the deal and the final settlement of the payment.

The need for intermediaries in turn leads to a requirement for a special infrastructure to process payments from the transaction stage to the final settlement. In Sweden a central element in this process is *Bankgirocentralen BGC AB* (BGC).

BGC was launched in 1959 by the Swedish banks and is now owned by Nordea, SEB, Handelsbanken, Föreningssparbanken, Skandia Banken, Danske Bank, Länsförsäkringar and Bankaktiebolaget JP Nordiska. The



system has undergone many changes over the years. At the start, all transactions were paper-based. Today, only electronic transactions are processed. Paper-based giro payments, that are primarily initiated by households, are handled by Privat Giro, which is a separate company and functions as a system which feeds into the Bankgiro system. The Bankgiro system is based on bank giro numbers that are linked to a bank account. Notification and sorting of payment orders is carried out centrally.

In rather simplified terms, one can say that BGC's management of both transactions mediated through its own system and those that come to BGC after passing through other systems follows one or more of the stages below:


- I. Authorisation: comprises both checking the authenticity of the transaction and that sufficient funds are available in the account. This in turn requires a switch function, i.e. that the system transports information on the transaction to the right address or account and that the transaction is debited.
- II. Clearing: this is the actual compilation of transactions between two parties (*bilateral clearing*⁷) or several parties (*multilateral clearing*⁸). Both types exist.
- III. Settlement: the final discharge of claims and liabilities in the RIX system, i.e. through the banks' accounts with the Riksbank. BGC sends in information for settlement transactions to RIX. After settlement is complete, the exchange function is used again to credit the recipient customer's account.

Today's rapid developments on the payment market, with new instruments and channels for payment, such as the Internet and telephone banks, require that the infrastructure develops at the same rate. In the autumn of 1999, BGC introduced a new technical platform that provides, for instance, more rapid clearing and settlement processes.

There are also other systems that supply information on transactions to BGC's system for further processing. A system that deserves closer description because of its size is the Postalgiro system, *Postgirot*. This is an internal system for transfers between accounts in Postgirot Bank. It has been a competing system, as the size of the account stock has been very large for historical reasons. During the year 2000, the Postgirot and Bankgiro systems mediated 56 per cent and 44 per cent respectively of the total number of transfers/giro payments. In the same year, Postgirot Bank became a participant in the

⁷ Bilateral clearing entails the participants' liabilities and claims being set off against one another in pairs.

⁸ Multilateral clearing entails the participants' liabilities and claims being set off against all other participants to create a single net amount for each participant to pay or receive.



Bankgiro system and at the end of 2001 it was acquired by Nordea. Participation in BGC means that bankgiro numbers can now be connected to Postgirot Bank's account numbers and, with a few exceptions, it will be possible to send transactions between the systems.

Transactions with financial products

VPC AB (VPC) is the clearing house that clears and settles transactions with shares and interest-bearing securities. The securities nowadays rarely exist in a physical form, but are instead electronically registered with VPC.

In 1986 came a proposal to computerise the management of securities. The new system would decentralise responsibility for keeping account records to the banks and securities trading companies, known as account-holding institutions.

Shares and interest-bearing securities are handled separately in individual settlement processes; the so called *guarantee* or *money market settlement*. VPC manages the final transfer of the security from the seller's account to the buyer's account, while the final payment is made in the RIX system. The payment is made on multilateral net settlement basis, i.e. the participants' opposite transactions are netted against one another to reduce the final settlement amounts.

In connection with the abolition of the legal monopoly on the notary function, the central government, the Confederation of Swedish Enterprise and the Stockholm Chamber of Commerce sold their holdings in VPC. Since 1999, 98.6 per cent of VPC has been owned by Föreningssparbanken, Nordea, SEB and Svenska Handelsbanken. The remaining 1.4 per cent is owned by other securities institutions.

VPC now has more than 1,100 affiliated issuers, 500 of which are listed on a stock market or marketplace, and approximately 3.5 million investors, who have around 3.8 million securities accounts.

Stockholmsbörsen AB, a wholly-owned subsidiary of *OM AB*, manages the clearing of standardised derivative contracts.

Stockholmsbörsen acts as an intermediary, a so-called *central counterparty*, between buyers and sellers and takes on the *counterparty risk*. Counterparty risks arise in all areas of financing trading and refer to the risk that a counterparty will fail to fulfil its payment obligations in a financial transaction. One means of managing counterparty risk is to allow an institution, in this case Stockholmsbörsen, to go in as a central counterparty, which means that all transactions registered are replaced by two new



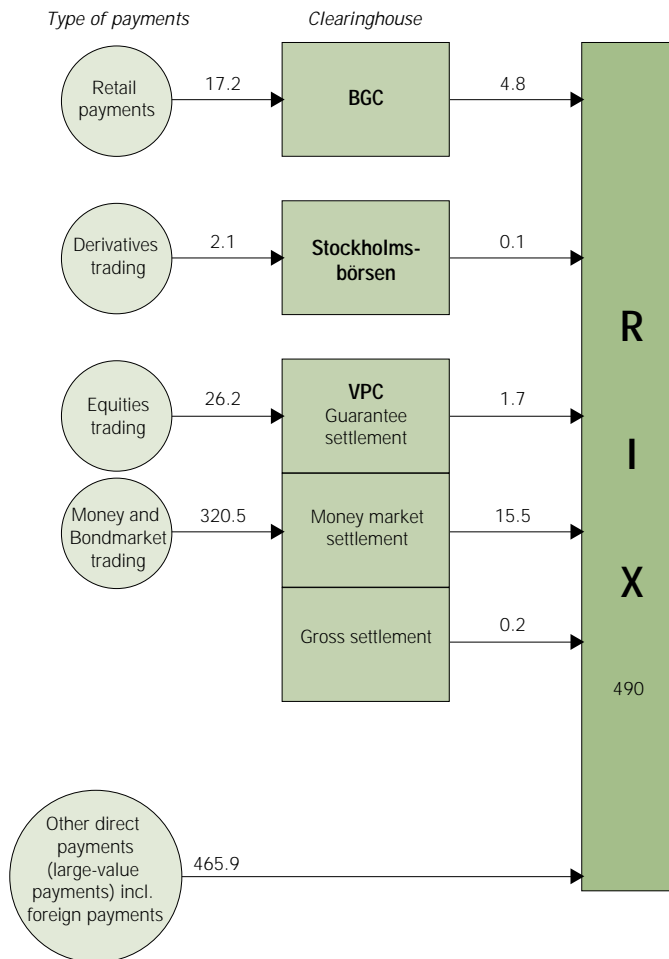
transactions, where the central counterparty is the seller to all buyers and the buyer to all sellers. This at the same time entails a risk concentration to the central counterparty, which means the latter needs to have the financial strength and risk management routines to be able to manage the possible default by a member. Transactions registered within a certain time period are gathered together and netted against the central counterparty. After clearing, any exchange of securities is made in the VPC system, while the final settlement of payments is made in the RIX system. When the final settlement is made, participants only need to have liquidity corresponding to their net position.

During 1997 Stockholms Fondbörs and the OM Group merged. Investor now owns 17 per cent of the company and the Swedish state owns just under 10 per cent.



Chart 1. Payment flows in the Swedish financial infrastructure

Average amounts per day in SEK billion



Note. The amounts entered for BGC, VPC guarantee settlement and VPC money market settlement are the daily averages calculated for March 2001. The amount entered for Stockholmsbörsen corresponds to the total premiums and charges per transaction. This is high during the final week of March, as it contains the accumulated payments for the March OMX futures.

Sources: The Riksbank, BGC AB, VPC AB and Stockholmsbörsen AB.

Statistical appendix

The credit institutions' lending to the general public

SEK billion	Total	Banks	Mortgage institutions	Other credit market companies
1998				
Mar	2 096	869	1 007	220
Jun	2 155	922	1 006	226
Sep	2 155	910	1 010	235
Dec	2 190	925	1 017	248
1999				
Mar	2 224	952	1 018	254
Jun	2 254	972	1 026	255
Sep	2 264	971	1 033	260
Dec	2 313	999	1 050	265
2000				
Mar	2 372	1 055	1 058	259
Jun	2 399	1 076	1 057	265
Sep	2 468	1 131	1 062	276
Dec	2 523	1 170	1 070	284
2001				
Mar	2 628	1 244	1 085	299
Jun	2 701	1 293	1 101	308
Sep	2 766	1 341	1 112	313
Dec	2 748	1 310	1 128	310

Source: The Riksbank.

Balance sheet totals and market shares of the credit institutions at the end of 2001

	Balance sheet SEK billion	Market share Per cent
Banks	3 133	65
Mortgage institutions	1 210	25
Other credit market companies	468	10
Total	4 812	100

Source: The Riksbank.

The banks' assets at the end of 2001

	SEK billion
Lending to Swedish general public	951
Lending to foreign general public	359
Foreign banks	367
Swedish financial institutions	563
Interest-bearing securities	425
Other	468
Total	3 133

Source: The Riksbank.

The banks' liabilities at the end of 2001

	SEK billion
Deposits from Swedish general public	894
Deposits from foreign general public	271
Foreign banks	660
Swedish financial institutions	302
Issued securities	393
Other	504
Shareholders' equity	109
Total	3 133

Source: The Riksbank.



The banks' lending to and deposits from the general public

Lending SEK billion	Non-financial companies	House- holds	Munici- palities	Non- residents	Other inc. residual	Total
1998	443	197	28	239	19	926
1999	491	214	35	246	13	999
2000	546	246	32	325	21	1 170
2001	638	267	33	359	13	1 310
Deposits SEK billion	Non-financial companies	House- holds	Munici- palities	Non- residents	Other inc. residual	Total
1998	269	408	21	169	59	926
1999	311	410	19	141	67	948
2000	350	398	15	255	78	1 096
2001	375	468	17	271	33	1 164

Source: The Riksbank.

The banks' average deposit and lending rates and the treasury bill rate

Per cent	Lending rate	Deposit rate	Treasury bill rate 6 month
31-12-1998	5,94	1,91	3,49
31-03-1999	5,47	1,57	2,95
30-06-1999	5,27	1,34	3,09
30-09-1999	5,23	1,34	3,44
31-12-1999	5,53	1,65	3,78
31-03-2000	5,76	2,02	4,21
30-09-2000	5,71	2,04	4,07
31-12-2000	5,79	2,01	4,09
31-12-2000	5,82	2,15	4,23
31-03-2001	5,8	2,17	3,94
30-06-2001	5,84	2,26	4,45
31-12-2001	5,72	2,16	3,78

Source: The Riksbank.

Balance sheet totals and market shares of the mortgage institutions at the end of 2001

	Balance sheet totals SEK billion	Market shares Per cent
AB Spintab	348	29
Stadshypotek AB	347	29
Nordea Hypotek	180	15
SBAB	147	12
SEB BoLån	124	10
Handelsbanken Hypotek	36	3
Venantius AB	23	2
Konungariket Sveriges stadshypotekskassa	4	0,3
Bokredit i Sverige AB	1	0,1
Bofab	1	0,05
Total	1 210	100

Source: The Riksbank.



The mortgage institutions lending to the general public

SEK billion	1998	1999	2000	2001
Single-family dwellings	463	499	511	555
Multi-family dwellings	443	428	418	419
Commercial and office premises	35	35	37	40
Tenant-owner premises	33	44	58	75
Other	40	42	44	37
Total	1 014	1 048	1 068	1 126

Source: The Riksbank.

The mortgage institutions' borrowing

SEK billion	1998	1999	2000	2001
Certificates	66	115	130	136
Bonds	762	708	634	604
Other borrowing	210	188	216	263
Total	1 038	1 011	980	1 003

Source: The Riksbank.

Issuers and investors in the fixed income market

Issuers SEK billion	Swedish government	Mortgage institutions	Banks	Other credit market companies	Companies and municipalities	Total
1998	1 039	712	66	56	141	2 014
1999	1 046	679	80	56	166	2 027
2000	990	584	58	55	192	1 879
2001	853	505	49	58	244	1 709

Investors SEK billion	The AP funds	Insurance companies	Banks	Non- residents	Companies and others	Total
1998	451	481	346	289	447	2 014
1999	421	520	281	271	534	2 027
2000	405	500	278	239	457	1 879
2001	131	492	268	332	486	1 709

Sources: Statistics Sweden, annual reports (the AP funds) and the Riksbank.

