

BANK OF FINLAND  
**BULLETIN**

---

FINANCIAL STABILITY

SPECIAL ISSUE • 2003



## Contents

Preface.....	1
Summary .....	2
International operating environment .....	5
Domestic operating environment .....	21
The banking and insurance sector .....	30
Infrastructure .....	48

Financial stability • 2003  
(Special issue, published annually)

**Editor-in-Chief**  
Matti Vanhala

**Steering Group**  
Heikki Koskenkylä  
Kari Korhonen  
Marianne Palva  
Kimmo Virolainen

**Authors**  
Sampo Alhonsuo  
Timo Iivarinen  
Esa Jokivuolle  
Risto Koponen  
Jenni Koskinen  
Pertti Pylkkönen  
Jukka Topi  
Jukka Vauhkonen

**Charts and tables**  
Eeva Korhonen  
Kati Salminen  
Petri Uusitalo  
Janne Villanen

**Edited**  
by the Bank of Finland's Publication and  
Language Services

**Subscriptions**  
Phone: National (09) 1831,  
International +358 9 1831  
Email: publications@bof.fi

**Printed**  
by Libris, Helsinki 2003

The contents of the Bulletin may be  
freely quoted, but due acknowledgement  
is requested.

ISSN 0784-6509 (print)  
ISSN 1456-5870 (online)

**Bank of Finland**  
PO Box 160  
FIN-00101 HELSINKI  
Phone: National (09) 1831,  
International +358 9 1831  
Fax: +358 9 174 872  
www.bof.fi

# Preface

One of the Bank of Finland's key statutory tasks is to participate in maintaining the reliability and efficiency of the payment system and overall financial system and participate in their development. These responsibilities are also an integral part of the ESCB's role in promoting the smooth operation of payment systems and the stability of the financial system within the euro area.

The Bank of Finland sees its role as the promoter of stability. Price stability, efficient and stable financial markets and solid public finances are all essential prerequisites of economic growth and employment. The various functions of the Bank of Finland all work to further these goals. Indeed, the Bank's success in achieving these goals is founded on a highly developed expertise in the monetary economy along with an effective network of partners both internationally and domestically. Efficient and open communication is an integral part of this success.

Since 1997, the Bank of Finland has published a biannual report on financial stability in the journals *Euro & talous* (in Finnish) and the *Bank of Finland Bulletin*. Repeated financial crises in different parts of the world along with the major structural changes to the financial markets have increased the need for analysis by the authorities, and by the central banks in particular, of both the development of the financial system and the attendant risks. The Bank of Finland

was one of the first central banks in the world to begin the publication of a regular stability assessment. The international trend, supported particularly by the IMF and the BIS, has led to the publication of extensive, in-depth stability analyses by central banks all over the world.

In bringing out the present report, the Bank of Finland is recognising the present international trend. The new stability report presents a more thorough assessment of the current state and future outlook for the financial system. The report will appear annually every autumn as a special edition of the *Bank of Finland Bulletin*. In addition, the Bulletin will continue to present updated biannual assessments of the development and stability of the financial markets.

Through its publications the Bank seeks to spread awareness of the functioning and outlook of the financial markets and to stimulate debate on the operations and role of the financial markets in Finland.

Helsinki, 15 October 2003

Matti Louekoski  
Deputy Governor of  
the Bank of Finland

# Summary

In early 2003, delayed recovery in the global economy and the prevailing uncertainties in the international arena have tested the risk tolerance of the international financial system. The sluggish economy has affected the performance of the financial sector in many countries and increased the vulnerability of the borrowing sectors. Growth is expected to accelerate gradually during 2003 and 2004 in the major economic areas. However, if growth were to turn out to be significantly weaker than expected, this would pose a threat to the stability of the international financial system, reducing demand for financial services and leading to increased loan losses. It could also result in a rapid fall in asset prices, such as share and property prices.

The current position and outlook for the banking sector varies considerably between market areas. In the United States, banks have so far withstood the strains of the sluggish economy fairly well, while the state of the Japanese banking sector continues to give cause for concern. The profitability of banks in the EU area weakened considerably during 2001 and 2002, although the picture varies from country to country. There are also major differences between individual banks in some countries. In Germany, the large banks in particular have suffered from deteriorating results. The German banks have already taken remedial action by, for instance, cutting costs and selling as-

sets. The recovery of the German banking sector is, however, overshadowed by the present weakness of the country's economy. The data available on the first half of 2003 suggests the profitability of banks in the EU area is improving compared with last year. The weakening profitability of earlier years notwithstanding, the capital adequacy of banks in the EU area has so far remained good. The Nordic banking sector is in better shape on average than the banking sector across the EU area as a whole, while in the Baltic States the volume of non-performing loans has remained low despite strong growth in lending, and capital adequacy in the banking sector is good. The insurance sector has suffered all over the world in recent years and remains one of the most vulnerable parts of the international financial system. The main reason for the problems of insurance companies has been the dramatic fall in share prices in recent years.

The risks affecting the domestic operating environment of the Finnish financial sector relate to the present uncertainty over global growth and consumer confidence. Despite the sluggishness of the economy, there have so far been few signs of an increase in credit losses in the domestic corporate sector. The good overall financial position of the sector and the low level of interest rates alleviate concerns over the durability of the sector, although the delayed recovery of the economy will probably result

in an increase in banks' credit losses on loans to the sector. The rapid growth in household debt cannot be overlooked, the most significant risks being related to a scenario where a strong rise in unemployment is coupled with a concurrent major fall in house prices.

The weakening of banking sector earnings, which began in Finland in 2001, has levelled off and operating profits for the early part of 2003 are almost at the same level as in the corresponding period in 2002. The present low level of interest rates is eroding banks' net interest income, as the linkage between lending rates and market rates is closer than that between interest on deposits and market rates. Finnish banks' credit losses nevertheless remain very small and their capital adequacy is strong. The banks' credit risks are currently small, and there is little likelihood in the short term of credit losses that could pose a risk to stability. Loans to households account for approximately half the lending stock of credit institutions operating in Finland, which emphasises the importance to the banks of the household sector. This year has seen intense price competition in lending, which carries the risk of weakened profitability and increased vulnerability in the banking sector if the banks' lending margin is insufficient to cover the risks.

An important phenomenon relating to banks' liquidity management is the structural change that has taken

place in their funding in recent years. Banks' lending stock has for many years been growing faster than their stock of deposits, and they are ever more clearly tied to market-based funding and international markets. Money market funding is by its very nature more subject to rapid fluctuations than are deposits.

In banking, as in other financial operations, the outsourcing of functions and the establishment of joint enterprises have become increasingly common and business operations have expanded into new areas. These have brought with them new forms of risk. From the perspective of financial market stability this trend underlines the importance of good contingency planning and crisis management capacity.

The Finnish insurance sector recorded a considerable drop in earnings in 2002 as a result of the poor performance of the share market. In addition to the problems on the investment side, the profitability of the core insurance activities of the non-life insurance companies in particular has also been weak. The solvency of the insurance companies deteriorated during 2002 and continued to decline during the first quarter of 2003. During the second quarter, rising share prices and declining interest rates have helped raise the earnings and solvency of the insurance companies. From the perspective of financial market stability, the insurance sector's key figures are on average satisfactory, although risks remain on the in-

vestment side in relation to price development on the bond and share markets.

The financial system infrastructure has operated reliably, although there is still a lot of work to be done in the further development of infrastructure in both payment and securities clearing and settlement systems in order to facilitate the deepening of the single market as hoped. Availability rates for the European System of Central Banks' TARGET payment system and for the Bank of Finland's real-time gross settlement system (BoF-RTGS), which is part of TARGET, continue to be very high, despite a higher incidence of disturbances than in previous years. Domestic credit transfer, ATM and card payment systems have also functioned reliably.

Sound operational reliability requires both planning for continuity of operations and an effective back-up system. Increasing attention has been given to improved specification and maintenance of such continuity and contingency plans.

The securities clearing and settlement system in Finland has become established as a highly reliable system. The merger between HEX and the Swedish OM has numerous implications for the infrastructure of the Finnish securities market. As an example, it can be seen as increasing efficiency and competitiveness, while on the other hand it also creates challenges for risk management, and for supervision in particular.

Current economic forecasts suggest continued stability for Finland's financial system. Stress test calculations conducted by the Bank of Finland indicate that the Finnish banking system's capital buffers could withstand both a couple of years of zero growth in the economy and a significant fall in asset prices. An extended recession in Finland as part of a broader European recession would, however, pose increasing problems for the banking sector. For example, credit losses would become much greater than they are today. Moreover, the stress tests were unable to take full account of the cumulative effects of possible shocks, which would potentially have a major impact in problem situations.

# International operating environment

In early 2003, the risk tolerance of the international financial system has been put to the test by difficulties in the recovery of the global economy and international uncertainties. The money and capital markets have, however, shown they can function well under difficult conditions. The prospects for the banking sector vary greatly according to market area, with the outlook for banks in the EU area having seemingly improved slightly after 2001 and 2002. As regards the financial system, it would be problematic if the growth of the real economy in major industrialised countries were to be significantly slower than expected. If growth expectations are not met, loan losses could increase and stock prices could fall rapidly.

Recovery of the world economy has been feeble, and the pick-up of growth continues to be overshadowed by many imbalances. The subdued economic development has hindered profitability growth in the financial sector in many countries and increased the vulnerability of the borrowing sectors, thus increasing finan-

ciers' credit risks. The subdued growth prospects were also shown in a decline of share prices until spring 2003. This decline further undermined the risk tolerance of the participants in the financial system.

The growth of the world economy is generally expected to recover in the second half of 2003 and recent forward-looking indicator data supports this assessment. According to several international forecasts (*Table 1*), growth is expected to accelerate further in 2004 in the major economic areas, excluding Japan. The possibility of slower-than-expected growth, however, remains significant and poses a threat to the stability of the international financial system. Slower-than-expected growth would hinder business in the financial sector by decreasing the demand for financial services. It would probably also lead to increased loan losses for banks and other financiers. If economic growth failed to meet expectations, the disappointment could also result in a rapid correction in asset prices, such as share and property prices.

Table 1.

Real GDP forecasts in the US, euro area and Japan, change, %								
	Bank of Finland (September)		IMF (September)		OECD (June)		European Commission (April)	
	2003	2004	2003	2004	2003	2004	2003	2004
United States	2.1	2.9	2.6	3.9	2.5	4.0	2.4	2.5
Japan	1.8	1.1	2.0	1.4	1.0	1.1	1.5	1.3
Euro area	0.5	1.4	0.5	1.9	1.0	2.4	1.0	2.3

Sources: Bank of Finland, IMF, OECD and European Commission.

Besides the hesitancy in economic development, the financial system has been increasingly influenced – especially since the terrorist attacks of 2001 – by several exceptional global developments and related risks. The Iraq crisis and related geopolitical tensions, along with the sars epidemic increased uncertainty in early 2003. However, the impact of these problems on the capital markets and other parts of the financial system has been minor.

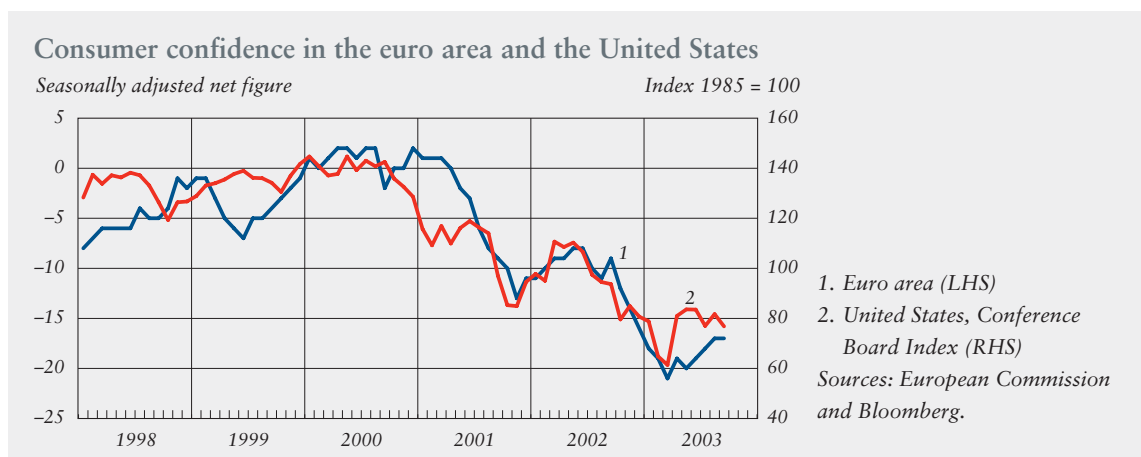
Recently, the development of housing and property prices has become a particular concern in the international economy. In many countries, housing and property prices have continued to rise steeply, in spite of the problems of the real economy, thus supporting the functioning of the financial system. From the viewpoint of the stability of the financial system, a rapid decline in these prices could constitute a problem.

Among the major industrial areas, the United States is expected to

grow fastest in 2003. According to indicator data, growth may even exceed expectations in the latter half of this year. However, the economic development of the US is overshadowed by long-term imbalance problems, such as the current account deficit, budget deficit and significant indebtedness of households. Consumer confidence in the US remains very weak (*Chart 1*) although the trough was passed after the war in Iraq ended. Uncertainty concerning private consumption has been exacerbated by concerns about the state of public finances.

In contrast, the economic outlook for Japan remains fairly bleak despite rapid growth at the beginning of 2003. Prospects are overshadowed by the nation's internal debt problems, delay in structural reforms and continued deflation. The minor growth foreseen for the country for this year and next is largely based on support by exports.

Chart 1.



## Euro area

Economic growth in the euro area is expected to recover slowly and not pick up until 2004. There is a risk that growth will be slower than expected, since the significant growth of budget deficits, among other factors, has increased uncertainty in the euro area countries.

From the viewpoint of the financial system, one of the main problems is the high level of indebtedness in the

euro area nonfinancial corporate sector (*Chart 2*), which impairs risk tolerance in the sector. Furthermore, pressures to lighten the burden of debt decrease companies' willingness to borrow. In recent months, however, there have also been positive signs from the condition of the corporate sector. Corporate re-ratings earlier this year point to a downturn in the rise of credit risks. Bankruptcies of rated companies have decreased from

Chart 2.

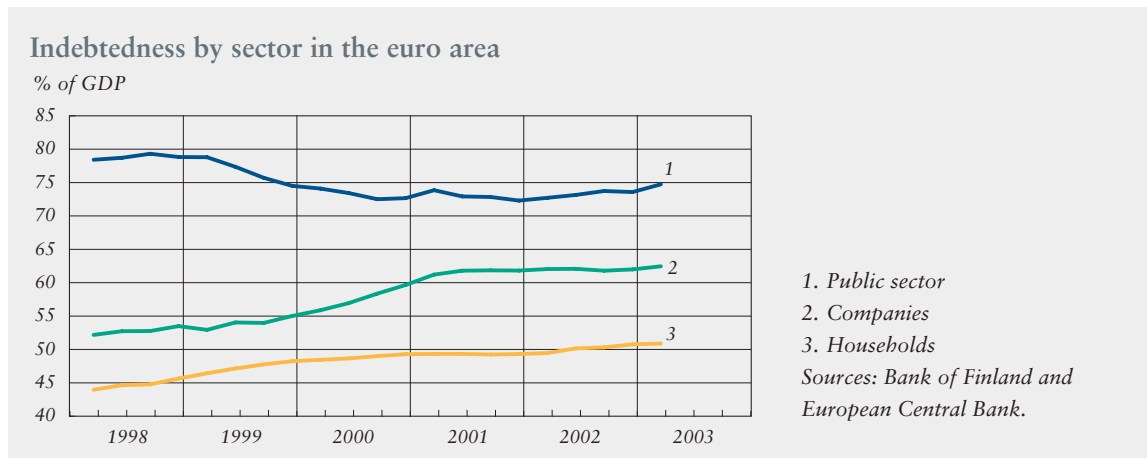
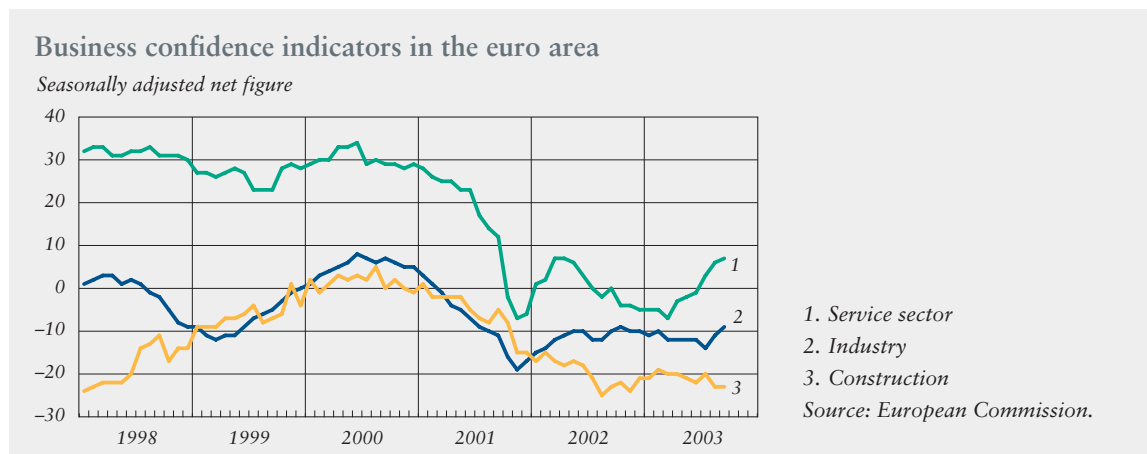


Chart 3.



the earlier part of the year. Similar developments are also indicated by the stock markets, which turned from protracted decline into rise in the second and third quarters of this year. Furthermore, corporate bond spreads have been narrowing since autumn 2002. Business confidence, however, remains below long-term average. Changes in the confidence of industrial and construction companies have been small (*Chart 3*). In contrast, services confidence has strengthened in the early part of the year.

Euro area households' debt ratio has risen slowly in recent years (*Chart 2*). In international perspective, however, this indebtedness has not been considered particularly problematic. Thus far, the slow rise of the unemployment rate since 2001 has not significantly affected the debt servicing ability of the household sector. Slower-than-expected economic recovery could, however, increase the amount of redundancies and thus un-

dermine households' ability to service debt. According to survey data, consumer confidence is significantly lower than its long-term average (*Chart 1*), which also has an influence on the demand for financial services.

#### Nordic and Baltic countries

In 2002, the real economy in Norway, Sweden and Denmark grew faster than in the euro area, while growth was slower in Iceland (*Table 2*). In early 2003, economic growth has generally been rather subdued in line with international developments, and prospects for the whole year are very moderate. Growth is expected to strengthen in the course of 2004, but problems in the recovery of the global economy could also depress economic developments in the Nordic countries below expectations.

In the light of bankruptcy statistics, companies from the Nordic countries have been becoming more vulnerable since 2000 and the number of bankruptcies has risen, particularly in Denmark and Norway. In early 2003, the number of companies filing for bankruptcy has risen in Norway and Sweden but has started to decline slightly in Denmark. However, given the price developments of quoted shares, the outlook for companies from the Nordic countries has improved since the spring.

Economic growth in the Baltic States has been quite robust in recent years and continued strength is expected also for 2003 and 2004. The

Table 2.

Change in real GDP in the Nordic and Baltic countries, %, IMF forecast 2003–2004			
	2002	2003 <sup>f</sup>	2004 <sup>f</sup>
Finland	2.2	1.3	2.6
Sweden	1.9	1.4	2.0
Denmark	2.1	1.2	1.8
Norway	1.0	0.6	2.3
Iceland	–0.5	2.3	3.7
Estonia	5.8	4.5	5.5
Latvia	6.1	5.5	6.0
Lithuania	6.7	5.8	6.2

<sup>f</sup> = forecast

Sources: IMF and Statistics Finland.

countries' accession to the European Union in 2004 will support their strong economic growth. In the long term, however, significant external deficits will increase the vulnerability of the Baltic States. When compared on an international basis, the debt ratio of the household and corporate sectors in the Baltic States continues to be low, but the situation will change rapidly as the level of indebtedness rises.

#### Money and capital markets and infrastructure

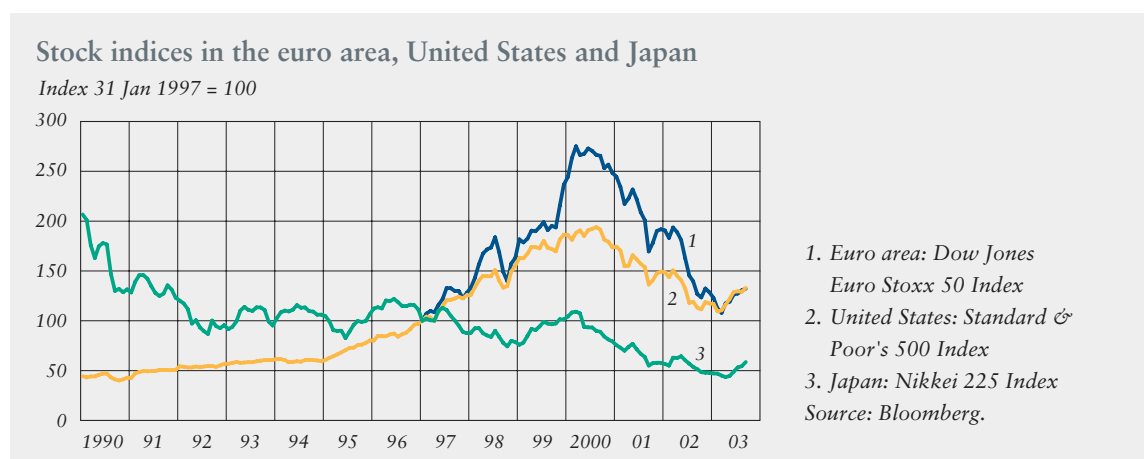
The money and capital markets have withstood economic difficulties and international uncertainty well. As regards the stability outlook, the most important questions are primarily related to the stock and bond markets. Particularly in the euro area, money market liquidity has remained high. A noteworthy trend in the United States has been a decline since 2000 in the number of corporate

bond issues outside the financial sector.

The major trend in international stock markets has been the decline in share prices, which has already lasted several years, although there have been indications that the turnaround has already been achieved in the second and third quarter of 2003 (Chart 4). A similar change is shown by indicators describing uncertainty in the stock markets. For example, the implied volatility in share prices calculated by option prices (Chart 5) has been higher in recent years than its long-term average. However, the decrease in uncertainty and the related decrease of risk aversion in the past few months have reduced fluctuation in the stock market.

The decline of prices and the uncertainty in the markets have not prevented the stock markets from functioning reliably and effectively. However, the developments of recent years have reduced market participants' risk

Chart 4.



tolerance, and problems could arise if economic development were slower than expected or if an increase in uncertainty caused by other reasons led to another rapid decline in share prices.

The protracted decline in share prices increased investors' interest in bonds. The main long-term interest rates declined rapidly, especially in the latter half of 2002 and the first half of 2003 (Chart 6). Bond issue activity also started to pick up in the

first half of 2003, and, in particular, there was an increase in euro-denominated issues by governments and financial institutions (Chart 7). Long interest rates started to rise rapidly in summer 2003, as assessments of economic development became more favourable. The rise of interest rates came to a halt in September 2003 without any immediate problems for the financial system. The markets are expecting long-term interest rates to

Chart 5.

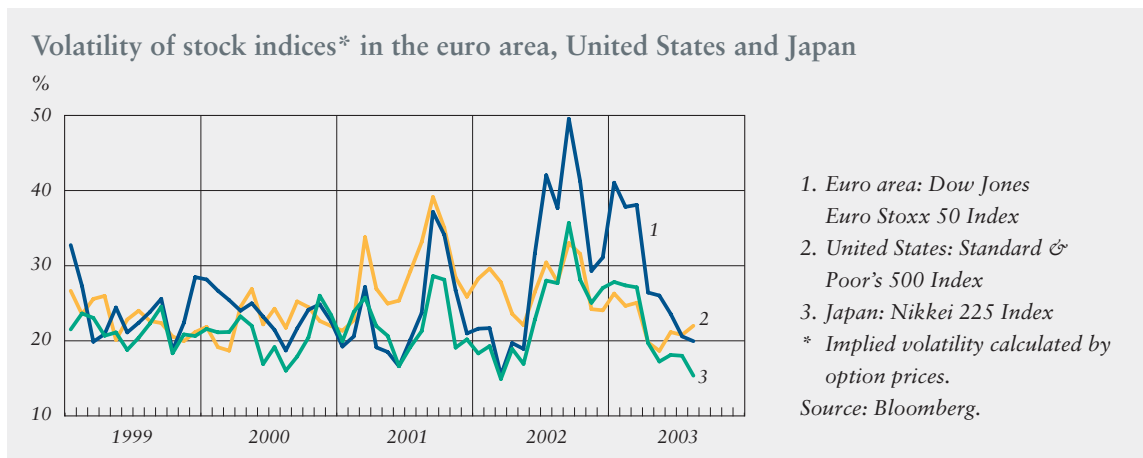
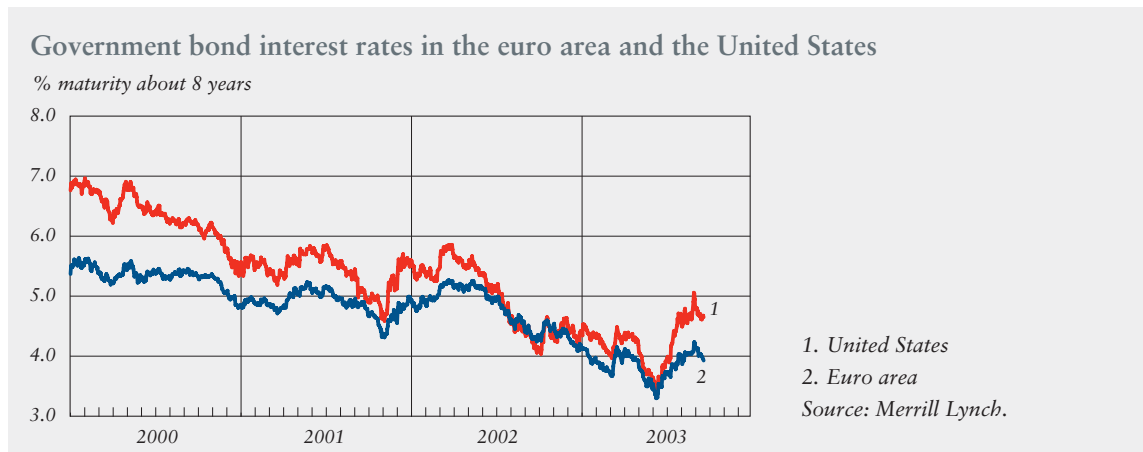


Chart 6.



keep rising until 2005. It is possible that this rise in interest rates will be particularly strong and abrupt. Such developments could be provoked by, for example, a change in market assessment of public finances.

In addition to the government debt of developed economies, investor attention has turned to corporate bonds and emerging economies' debt. These risky bonds were seen as potential sources of yields when the re-

turn potential of shares and low-risk government debt was considered to be declining. The rise in demand has narrowed the corporate bond spreads since autumn 2002, and this trend has continued in spite of a general rise in the interest rate level (Chart 8). Interest rate spreads on emerging markets' debt have also narrowed. Concern has arisen on whether these bonds are priced in a sustainable manner. After all, narrow spreads

Chart 7.

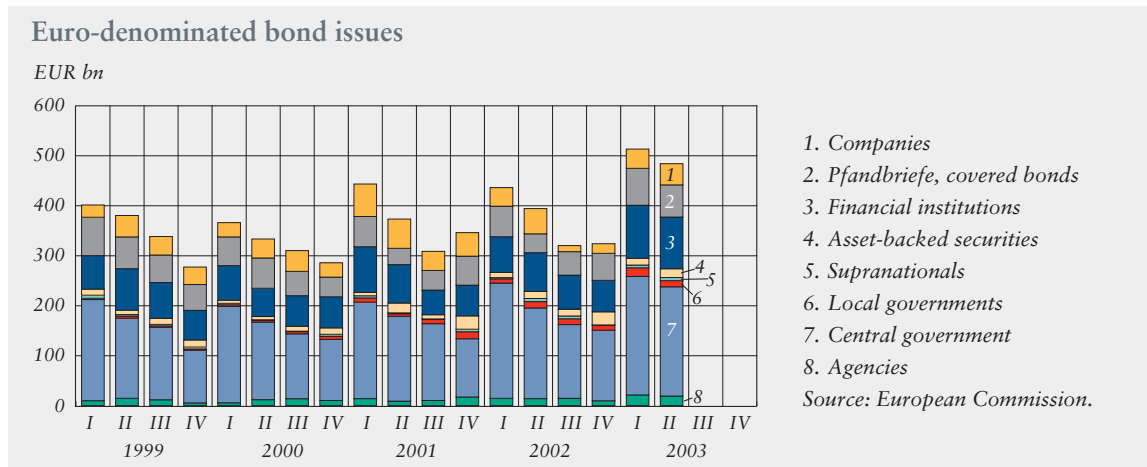
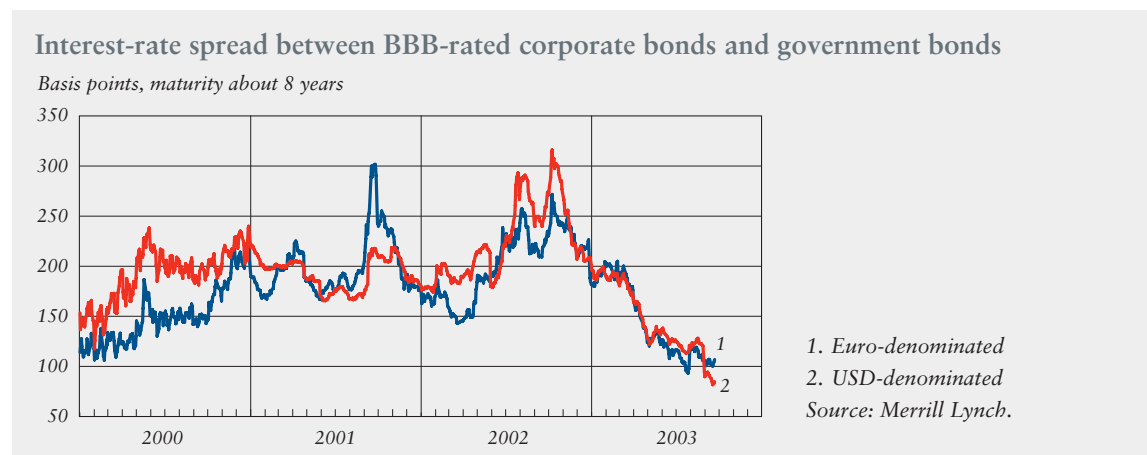


Chart 8.



indicate that investors consider the credit risks of corporate bonds, for example, to be low. Weaker-than-expected development of companies' results could prompt investors to increase their assessments of credit risks, which could cause corporate bond spreads to widen sharply.

Hence there are many possible downside scenarios related to a rapid decline in asset prices. Such a decline could put the stability of the financial sector to the test. These scenarios are particularly significant in the euro area, where there is uncertainty on the recovery of the real economy as well as developments in public finances in some euro area countries.

Viewed globally, payment systems and securities settlement systems have functioned reliably despite the difficult market environment. However, the increase in cross-border transactions will inevitably place greater pressure on liquidity management within the systems.

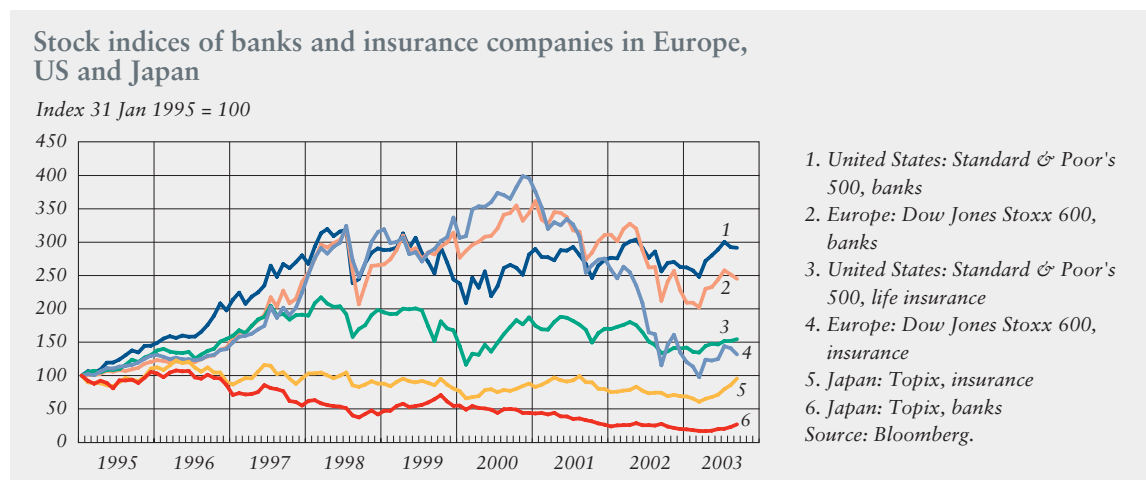
### Banking sector

Generally speaking, the banking sectors of the major market areas seem to have coped surprisingly well with the economic downturn. Banks' outlook, however, varies significantly from country to country. Furthermore, one should recall that, for example, loan losses are only shown in the banking sector after a delay.

In the United States, banks have so far withstood the strains of the sluggish economy fairly well and their stock price development has been fairly steady (*Chart 9*). The US Federal Deposit Insurance Corporation (FDIC)<sup>1</sup> has reckoned that the condition of the banking sector will remain good and the quality of banks' credit portfolios will continue improving. While long interest rates have declined in 2002 and in early 2003, the spread between long and short-term interest rates has remained fairly

<sup>1</sup> FDIC Outlook (Autumn) 2003.

Chart 9.



large, thus supporting banks' net interest income. When long-term interest rates rose in summer 2003, the spread between long and short-term interest rates started to rise as well. However, according to an assessment by the FDIC, rising long-term interest rates could entail new problems for banks. Among other things, high interest rates could decrease the demand for housing loans, decrease the value of mortgage-backed securities and other securities, and hinder the use of low cost core deposits as a funding source. Investment banks' results have also been better than expected in this difficult market environment and their outlook has brightened. Many investment banks are still adapting their activities in accordance with agreements made with US authorities, which were concluded once irregularities in accounting and stock analysis had been revealed.

The operations of Japanese banks continued to be unprofitable in the financial year ending in March 2003. According to the Japanese Financial Services Agency (FSA), the net loss of the largest banks (so-called City banks) amounted to ¥ 4,400 billion (about EUR 32 billion; ROA -1%). The loss grew slightly from the previous year. The capital position of the largest banks weakened slightly but remained satisfactory mainly due to share issues and deferred tax assets.

The largest sources of loss for Japanese banks were loan losses and the low market value of their share-

holdings. Both are rooted in the country's macroeconomic development, which has been unfavourable for a long period and whose prospects are still unclear. This has resulted, among other things, in the country's economy suffering protracted deflation. Since early summer, the significant rise in share prices has alleviated the banks' position.

The lengthy weakness of the Japanese banking sector has not turned into a systemic crisis, partly because of a well-developed safety net, an environment of low nominal interest rates and the strong external financial position of the country. Japanese authorities have launched a number of programmes of measures to deal with the problems in the banking sector. Its aims include a reduction in non-performing assets and loan losses. The actual effects of these programmes are so far unclear. The most recent special audit of the largest banks by Japan's financial supervisors revealed a need for significant increase in loan loss provisions.

#### EU area

In the past two years, there has been a considerable weakening in the profitability of banks in the EU area. This has mainly been caused by an increase in loan loss provisions and a decline in securities-related income. This occurred in the context of weak development in the economy and the stock markets. In some countries, another contributory factor has been

longer-term structural problems in the banking sector, such as over-capacity and inefficiency. The cost efficiency of banks varies greatly across countries.

However, data on large European banks from early 2003 (*Table 3*) points to an improvement in the banks' profitability and cost efficiency from the previous year. Profitability development has, however, differed between the banks in different countries, and also very much between individual banks within a single country. Furthermore, conclusions should be drawn carefully from semi-annual

results, as these may be influenced by temporary or seasonal factors.

Banks' development has been weaker in the euro area than in the rest of the EU area. The major German banks, in particular, have suffered a deterioration in their results. The position of the local banks, which have a central role in the German economy, remained stable in the aggregate.<sup>2</sup> German banks have introduced new plans to improve the efficiency of their operations, for example through cost cutting. Indeed, data

<sup>2</sup> Deutsche Bundesbank Monatsbericht (September 2003).

Table 3.

Cost efficiency, profitability and capital adequacy of 25 large banking and financial groups in the EU			
	1-6/2003	2002	2001
<i>Expenses, % of income</i>			
<i>Average</i>	60	63	62
<i>Average of 5 strongest</i>	45	47	46
<i>Average of 5 weakest</i>	74	81	80
<i>Return on Equity (ROE), %</i>			
<i>Average</i>	12.0	9.6	13.8
<i>Average of 5 strongest</i>	24.7	20.4	24.8
<i>Average of 5 weakest</i>	-1.0	-6.7	1.6
<hr/>			
	30 Jun 2003	31 Dec 2002	
<i>Capital adequacy measured by Tier 1 capital, %</i>			
<i>Average</i>	8.4	8.2	
<i>Average of 5 strongest</i>	12.7	12.3	
<i>Average of 5 weakest</i>	6.0	5.9	
<i>Total capital adequacy (Tier 1 + Tier 2), %</i>			
<i>Average</i>	11.7	11.4	
<i>Average of 5 strongest</i>	14.7	14.0	
<i>Average of 5 weakest</i>	9.8	9.6	
<hr/>			
<i>The table is based on the consolidated key figures of the following banking and financial groups in the EU area: Abbey National, ABN Amro, Banco Espirito Santo, Banco Popular, Bank of Ireland, Barclays, BNL, BNP Paribas, Commerzbank, Danske Bank, Deutsche Bank, Dresdner Bank, Erste Bank, FöreningsSparbanken, HVB, Jyske Bank, Lloyds TSB, Nordea, OP Bank Group, Rabobank, Royal Bank of Scotland, Sampo, SEB, Svenska Handelsbanken, Unicredito Italiano.</i>			

Sources: Interim reports and annual reports of banking and financial groups and calculations of the Bank of Finland.

from early 2003 does indicate an improvement in operational efficiency. Recovery of the entire German banking sector is, however, overshadowed by the weak economic situation of the country. Among the major euro area economies, France and Italy's economic development has also clearly weakened. However, these countries' banking sectors have so far withstood the economic downturn well.

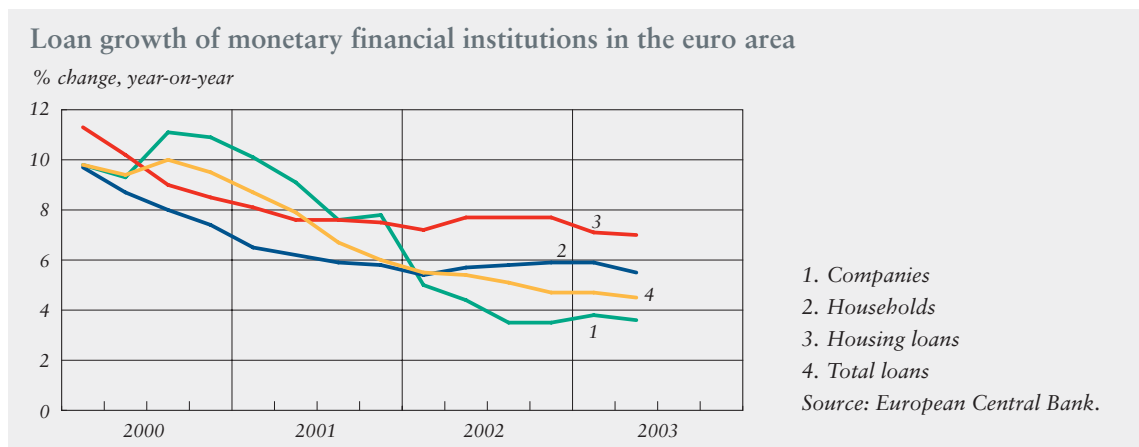
Weakened profitability notwithstanding, the capital adequacy of banks in the EU area has so far remained good or satisfactory. The banks suffering the largest losses have resorted to additional capital and the sale of risky assets in order to maintain a good capital position. In early 2003, the capital adequacy of large banks has improved slightly.

There has been a rapid deceleration in the pace of growth in lending by banks in the euro area (*Chart 10*), which is primarily due to reduced

willingness to invest in the context of weak economic development. According to the Eurosystem's bank lending survey, banks have to some extent tightened their lending criteria within the euro area during spring 2003. Particularly in Germany, the weakened state of the banking sector has, according to some assessments, led to a restriction in the amount of credit given to medium-sized companies in particular. In the light of data on the corporate sector and banks, particularly strong lending growth in the euro area does not seem very likely in the near future.

Cross-border links within the euro area banking system have increased since the creation of a euro area-wide money market, thus also increasing the direct channels of contagion for disturbances to the financial system. On the other hand, the broader spectrum of money market participants facilitates a greater diversification of risk and thus fosters sta-

Chart 10.



bility. In addition, the dispersion of disturbances is decreased by the increasing incidence collateralised money-market loans in the euro area interbank market. In many euro area countries, banks have links with insurance companies, which increases the risk of problems shifting from one sector to another.

#### **Nordic and Baltic countries**

On average, banks in the Nordic countries are in better shape than the EU area banking sector. In 2002, banks' profitability weakened in Sweden and Norway but improved in Denmark. In early 2003, the profitability of banks in the Nordic countries mainly improved. A major detractor from profitability in 2002 was the decline of commissions amid weak stock market development. Development of loan losses varied greatly in the Nordic countries, as net loan losses increased in some banks and decreased in others.

In the Baltic States, financial system growth in recent years has been largely dependent on the banks. The growth of new loans granted by banks to the private sector has been very rapid, which could give cause for concern over possible overheating and the correct pricing of risk. So far, the volume of non-performing loans has remained low and capital adequacy in the banking sector is good. The banking sector in the Baltic States is largely owned by Nordic banks, which should help ensure stability. In

recent years, financial supervision has undergone significant reform in all the Baltic States.

#### **Insurance sector**

The insurance sector worldwide has been suffering in recent years and remains one of the most vulnerable parts of the international financial system. This has been reflected in a general decline in insurance sector credit ratings and in the fact that the fall in share prices has been more marked in the insurance sector than in the banking sector in Europe as much as in the United States (*Chart 9*). The main cause of the problems experienced by insurance corporations has been the dramatic fall in share prices in recent years. The difficulties experienced by life assurance companies have been exacerbated by guaranteed-yield life insurance and pension schemes. The falling share prices have been particularly damaging for European life assurance corporations, whose equity investments were relatively much larger than those of life assurance corporations in the United States.

The general rise in stock prices during the second and third quarter of 2003 has, however, improved the capital adequacy and prospects of insurance companies. The improvement in market outlook may increase insurance companies' premium income, at least in the short term. The possibility of a renewed decline in share prices still constitutes a threat to the

insurance sector. However, the potential impact of a stock market fall has decreased as insurance companies have liquidated their share holdings.

The influence of interest-rate development on the insurance sector is not automatic, but depends on the maturity structure of the companies' investments. The rapid rise in interest rates during the summer months may have affected the capital adequacy of those insurance companies who had shifted their investments to bonds. Abrupt interest-rate rises may cause some insurance companies problems in the future, too. On the other hand, if interest rates remain low for long periods of time, this would put return-related pressure on insurance companies. Low interest rates would weigh on profitability especially in those life assurance companies whose insurance products carry a fixed return to the policy holder.

Within the insurance sector, particular care has been paid to the problems of reinsurance companies. The insufficiency of provisions set for increasing compensation claims has been a central factor decreasing the results and capital adequacy of many reinsurance companies.

### **Development of international regulation and supervision**

In recent years, authorities have paid extensive attention to the prevention and management of crises in the financial system. This development has been influenced by the proliferation

of crises in the banking sector and other parts of the financial system since the 1980s.<sup>3</sup> A major project aimed at crisis prevention is the Financial Sector Assessment Programme (FSAP) initiated by the IMF and the World Bank. Under the programme, the strengths and weaknesses of the financial system are assessed to promote stability in the member countries of the organisations. Another major development in crisis prevention has been the increased efforts by central banks in the macro-prudential analysis of the financial system. As part of that analysis, many countries have started to publish assessments on the stability of the financial system. These assessments are used to predict and prevent crises by identifying vulnerabilities in the financial system, disturbances with the potential to turn into crises, and transmission mechanisms of disturbances. As part of macro-prudential analysis, attention has been paid to stress tests, which are used to evaluate how the financial system would tolerate severe disturbances it could possibly be exposed to. The IMF has strongly promoted the publication of stability assessments and stress tests.

In international discussions on managing crises of the financial system, particular focus has been put on the possibility of liquidity disturbances and the role of the central banks in their management. In addition to the

<sup>3</sup> For example Andrew Crockett (2003) Central banking under test? BIS Papers No 18.

### Recent criticism of Basel II

In April 2003, the Basel Committee on Banking Supervision gave its most recent proposal for the reformation of the regulation and supervision of banks' capital adequacy (Basel II). Recently, this proposal has been severely criticised. In addition, the decision by US authorities to apply the new regulation only to the largest international banks on top of decisions by China and India not to respect the proposal at all have raised doubts as to the future of the reform. However, the recent criticism directed at the reform proposal has not been entirely as negative as has been suggested.

The decision by the United States to apply the capital adequacy reform to only a small proportion of banks has, according to some assessments, been considered a loss of authority by the Basel Committee and a setback to the global coverage of the reform. In Europe, the decision by the United States has been considered politically awkward, since the legislation being prepared in the European Commission is going to be applied to all banks and investment firms in the EU Member States. In practice, however, differences between the application of the reform in Europe and in the United States may remain relatively minor. It is likely that the banks applying the reform

will account for approximately 99% of the international activities of American banks and will be required to use the most advanced calculation methods for minimum capital requirements offered by the reform. In contrast, European banks have the option to use simpler calculation methods in conformity with Basel II, which are quite close to the requirements of the present regulatory (Basel I). The decision by China not to adopt Basel II has also been partly over-emphasised, as the country's authorities have already started to require banks to implement some recommendations in accordance with Basel II. When evaluating the criticisms that have been levied, it should be noted that very few of even the most ardent critics put the central aims of the reform in doubt. It is generally accepted that banks' capital adequacy requirements should be proportioned more specifically according to their risks and that efforts should be made to promote the development of banks' risk management systems. Nevertheless, the criticism may be considered significant. Its major areas include concerns about the excessive detail of the reform, implementation costs, incentives and a potential pro-cyclical impact.

From the viewpoint of the stability of the financial markets

and the general economy, the most significant concern may be the potential pro-cyclical effect. The new capital adequacy framework may not take the instruments used by banks to prepare for cyclical fluctuations and changes in companies' credit ratings sufficiently into account. Such instruments include provisions used as buffers against cyclical fluctuations and the diversification of risk by extending operations across countries and industries. In practice, taking the diversification effects into account requires that banks' own portfolio models of credit risk be accepted in capital adequacy calculation. For the time being, the Basel Committee was not ready for that.

The evaluation of the potential pro-cyclical effects of the reform is challenging, since the capital adequacy requirements proportionate to risks by nature always follow economic cycles to some extent. Hence, the potential disadvantages of strengthening cyclical changes should be measured against the advantages achieved through improved risk management and valuation. However, more thorough understanding of these concurrent effects remains a challenge both for researchers and authorities.

traditional crises experienced by the financial system, authorities have paid increasing attention to the problems of the financial system under exceptional conditions affecting the entire society, such as those caused by terror attacks or the materialisation of data security risks. Cross-border coordination and cooperation between authorities in crisis management has been promoted especially in Europe. Recent examples of that include the Memorandum of Understanding on high-level principles of cooperation between the banking supervisors and central banks of the European Union in crisis management situations, which entered into force in March 2003, and the Memorandum of Understanding on financial crisis management concluded in June 2003 by the Nordic central banks.

From the viewpoint of stability, significant international discussion is also being conducted<sup>4</sup> eg on the regulation and supervision of auditing, convergence of accounting standards, the principles governing the activities of credit rating institutions and financial analysts, and corporate governance. Interest in these areas has been sparked by the problems and irregularities which have surfaced in recent years, particularly in the United States, in the accounts of many large companies and in auditing as well as

financial analysis by a few investment banks. It is important that tangible progress is made, as the issues being assessed are crucial in reinforcing market discipline.

A key project in the area of international financial system regulation is the Basel Committee's reform of capital adequacy requirements (Basel II), which is planned to come into effect by the end of 2006 (see Box 1). In August, the committee published the responses received during the latest consultation. The results of the QIS3 field test to assess the quantitative impact of Basel II were also published earlier. These suggest there will on average be relatively little change to capital adequacy requirements as a result of the reform, although there will be clear differences between individual banks. On the other hand, the banks have clearly had difficulties gathering data for capital adequacy calculations according to the most advanced methods used in the QIS3 survey.

The insurance sector has also started an international reform of solvency requirements with the objective of achieving requirements for the whole of the EU area that take account of the actual risks of insurance corporations. A number of assessments suggest the present EU requirements are inadequate.

Under an EU regulation issued in 2002, International Accounting Standards (IAS) would become compulsory in 2005 for preparing the

<sup>4</sup> An important discussion arena is the Financial Stability Forum established by the G7 countries in 1999.

consolidated financial statements of all listed companies in the Member States. Member States may also allow or require that companies other than listed companies prepare their financial statements according to IAS. For the financial sector, the relevant aspect of the reform is the change to valuation practices, which means that a larger proportion of balance sheet assets are to be valued at their fair market value. Both Basel II and the IAS reforms are already having an impact on the operations of the banks and other companies in the financial sector. Both reforms require considerable system changes within companies.

From the viewpoint of the international financial system, efforts to increase information on the markets to transfer credit risk are crucial too.<sup>5</sup> The growth of these markets has caused concern on whether risks are transferred between the various sectors of the financial system to parties whose capabilities to manage credit risk are insufficient. Efforts to increase the regulation and supervision of reinsurance companies and hedge funds are also topical issues.

In the European Union, a discussion is being conducted on reforming the committee structure concerning

the regulation of the financial system. The new committee structure is already in force in the field of securities, but plans are being made on also extending it to banks, insurance companies and financial conglomerates. Improving the efficiency of regulation would be one possible answer to the challenges posed by EU enlargement. Enlargement creates pressure on the regulation and supervision of the financial system, while practical cooperation between authorities becomes increasingly intricate. In addition, enlargement makes both the various risk and effect channels as well as the web of links between various markets ever more complex, thus impeding regulation and supervision.

The working group of Nordic central banks which drafted the aforementioned memorandum of understanding on financial crisis management continues its work. The working group is examining particularly the impact of structural reforms in the Nordic financial system on crisis management from the point of view of the central banks.

---

<sup>5</sup> Credit risk markets have been examined, for example, by the Committee on the Global Financial System of the G 10 countries and the International Association of Insurance Supervisors.

# Domestic operating environment

The risks affecting the domestic real economy relate to global economic developments and consumer confidence. The good overall financial position of the corporate sector and the low level of interest rates alleviate concerns over a possible increase in credit losses, but the uncertain economic outlook is undermining demand for financial services. The growth in household debt cannot be overlooked, even though the threat of a growth in household credit losses over the short term is minor.

Finland's economic growth is generally expected to remain somewhat sluggish in 2003 (Table 4). Following protracted subdued growth, economic activity is forecast to pick up in 2004 in the wake of an improvement in the global economy. Growth is, however, expected to remain below the levels witnessed at the end of the 1990s. There is still a risk of slower-than-expected growth due to uncertainties in global economic activity, while Finland's economic outlook may also be affected by short-term fluctuations in the output of the information and communication technology (ICT) sector. Growth could also fall short of projections if the threat of unemployment begins to undermine household confidence.

## Corporate sector

Even though the corporate demand for bank loans picked up during 2002 and the early part of 2003, the gradu-

al increase since 1999 in the indebtedness of Finland's nonfinancial corporate sector relative to GDP has turned downwards (Chart 11). Indebtedness is still well below the levels seen at the beginning of the 1990s and fairly minor in global terms. The breakdown of corporate debt by creditor sector reveals considerable changes since the mid-1990s. There was initially a marked increase in foreign debt, but last year and this year its share has begun to diminish.

The sluggish economic outlook makes companies reluctant to invest and take out credit. Furthermore, companies take a fairly bleak view of their own prospects. Cyclical surveys<sup>1</sup> indicate that confidence in industry and other sectors is still below the long-term average. Industrial confidence has, however, improved from the trough at the beginning of the year. In addition, according to a survey<sup>2</sup> of bank managers during August and September, corporate demand for loans is expected to increase particu-

<sup>1</sup> The Confederation of Finnish Industry and Employers' business tendency survey (August 2003) and confidence indicator (September 2003).

<sup>2</sup> The bank barometer of the Finnish Bankers' Association (2003/III).

Table 4.

### Finnish GDP forecasts in September 2003, volume change, %

	2003	2004
Bank of Finland	1.3	2.9
Ministry of Finance	1.2	2.4
IMF	1.3	2.6

Sources: Bank of Finland, Ministry of Finance and IMF.

larly towards the end of the year, but also over the next 12 months.

The good overall financial position of the corporate sector and the historically low level of interest rates alleviate concerns over the tenacity of the sector in the present economic situation. Moreover, these factors will not limit future growth in corporate credit demand. Differences in individual companies' financial position and hence in their vulnerability mean, however, that delayed economic re-

covery is likely to increase the amount of credit loss arising from corporate loans in the domestic financial sector.

There are, for the time being, few signs of an increase in the amount of credit loss in the domestic corporate sector. The number of bankruptcy applications has decreased during January–August 2003 compared with the same period last year (*Chart 12*), whereas the number of payment defaults by companies

Chart 11.

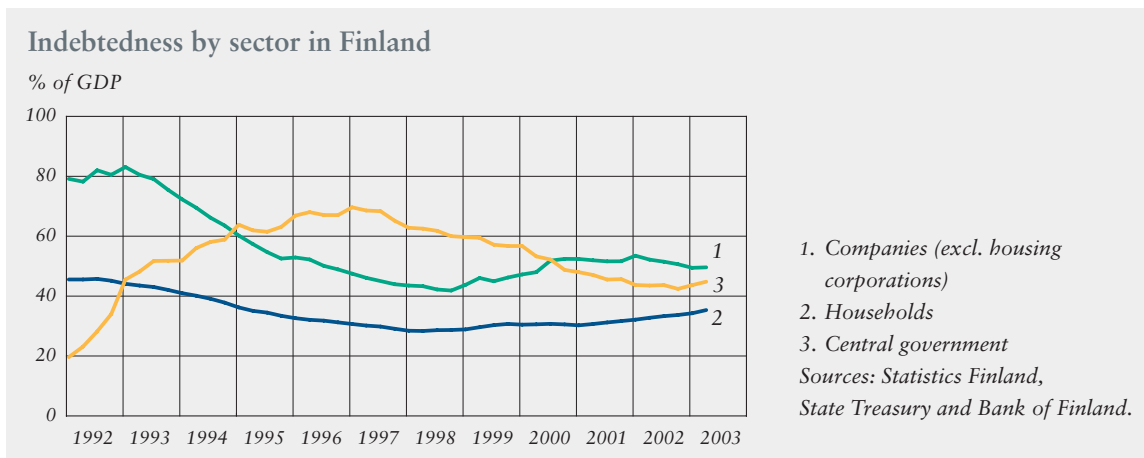
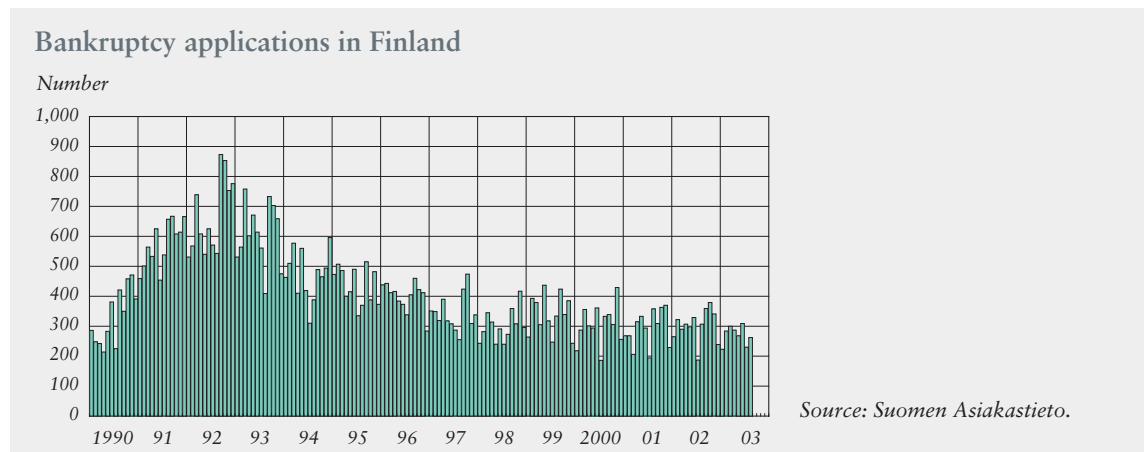


Chart 12.



rose by more than 10% during the first half of the year (Chart 16).

Another indicator of corporate sector outlook is share price performance, which is showing the first signs of improvement. The long-term downward trend of the HEX All-Share Index turned slightly upward during the second and third quarters of the year (Chart 13), although the increase remains well below the international trend.

Developments in sectoral share price indices (Charts 13 and 14) reveal differences in performance to date and in future prospects. The fall in share prices that began in 2000 affected particularly the telecommunications and electronics sector as well as service companies, the majority of which operate in the IT sector (the 'other services' sector of HEX Helsinki). In contrast, share performance in, for example, the forest industry and

Chart 13.

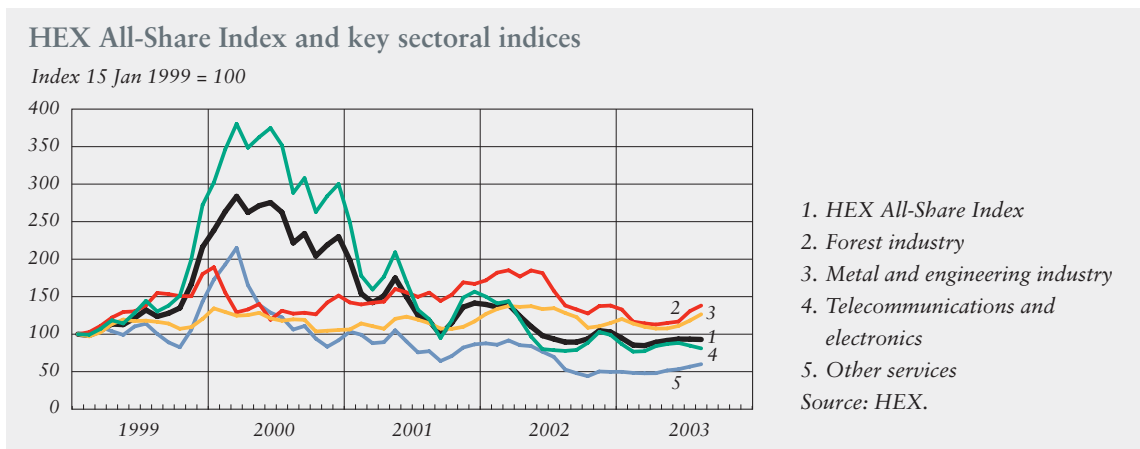
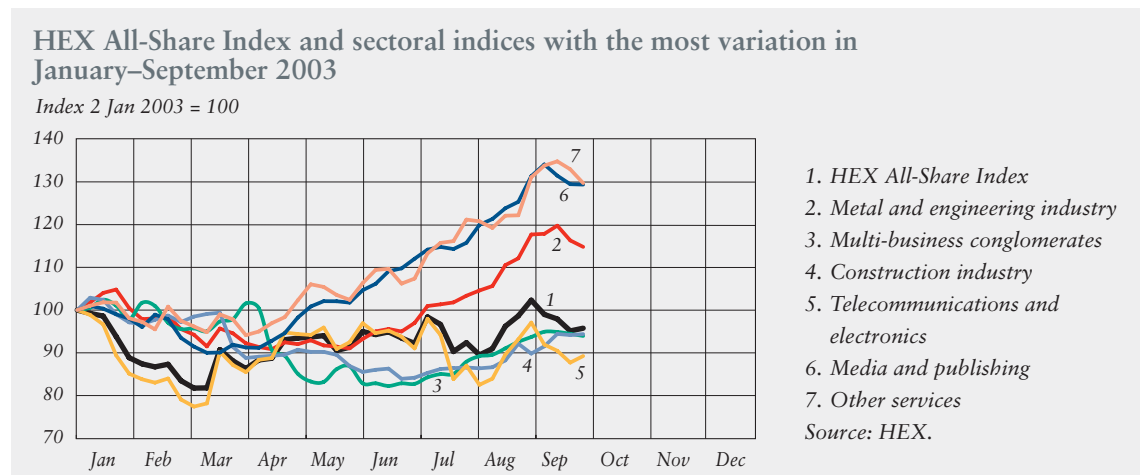


Chart 14.



the metal and engineering sector has been stable in recent years. Over 2003 as a whole, share price performance indicates a great deal of variation in the prospects for different sectors. The share performance of telecommunications and electronics companies deteriorated particularly at the beginning of the year, while performance was also poor in the construction industry and in multi-business conglomerates.

The corporate sector is also related to the property market, where the rise in the prices of office and business premises that had continued for several years gave way to a gradual decrease in 2002. According to data available for 2003, office property prices in Helsinki city centre have continued to decrease at a moderate pace.

### Household sector

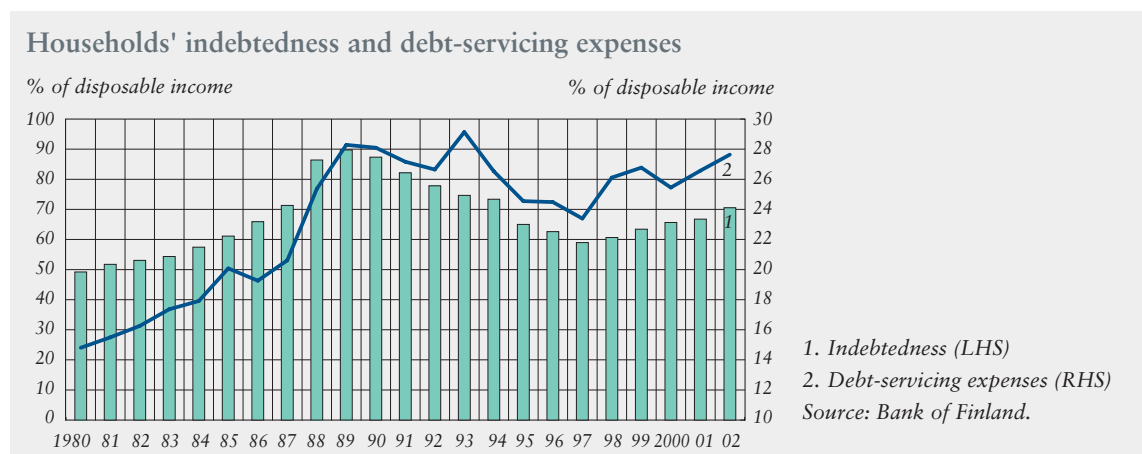
2001 and 2002 witnessed an increase in the indebtedness of the household sector relative to GDP (*Chart 11*) and

to disposable income (*Chart 15*). The rate of growth in credit to households granted by deposit banks has remained brisk over the course of 2003, and the entire stock of lending to the household sector has continued to increase. Despite this, the indebtedness of the household sector is still moderate in international terms.

Households' willingness to borrow continues to be sustained by consumers' confidence in their own economic situation,<sup>3</sup> favourable growth in real incomes and the still low level of interest rates. According to the results of a survey of bank managers during August and September, the banks are also confident in the durability of household demand for new loans. However, expectations of an increase in interest rates over the next two years, reflecting a global economic recovery, began to strengthen during the past summer. Higher inter-

<sup>3</sup> Statistics Finland's consumer survey (September 2003).

Chart 15.



est rates are expected to inhibit demand for household credit. Other factors with the potential to curb demand for credit are the recent news of an increase in redundancies and the gloomier outlook on the unemployment front.

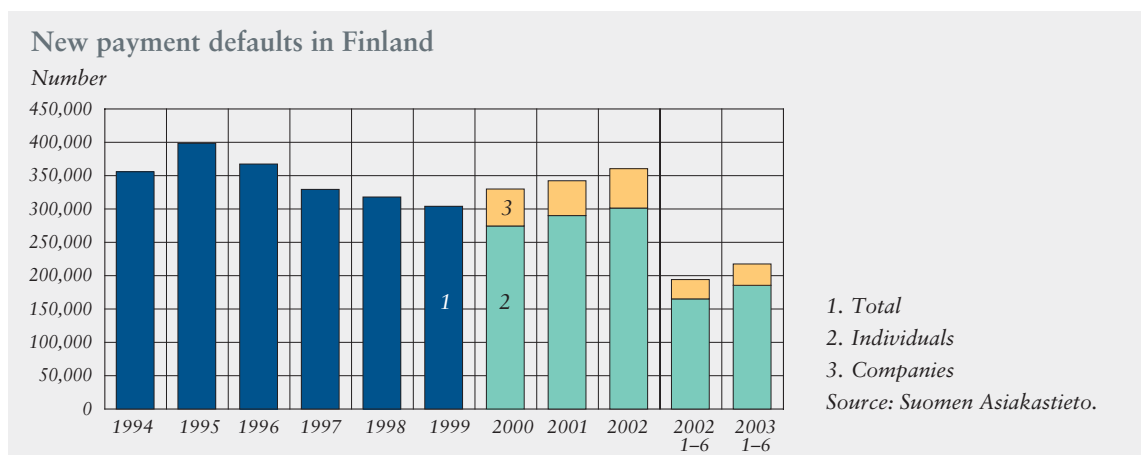
Despite the subdued economic situation, the threat of a rise in credit risks arising from households is relatively minor. Nevertheless, the number of payment defaults by households rose significantly during the first half of the year compared with the same period one year earlier (*Chart 16*). The greatest risks would mainly seem to be associated with a strong increase in unemployment and a concurrent major fall in housing prices. The unemployment rate is expected to rise slightly during 2003 and to begin a gradual decrease thereafter. It is possible that labour market performance will be weaker than expected, but even this would have only a limited impact on credit risks

in the banking system in the short run.

The pace of growth in Finnish housing prices has slowed slightly during the early part of 2003 compared with the surge witnessed in 2002 (*Chart 17*). Although the index for nominal housing prices has risen above the peak level of the late 1980s, housing prices relative to disposable income are close to the long-term average. It should be noted, however, that movement in housing prices is characterised by major regional variation, which increases the significance of local risks when evaluating the risk outlook for households.

International comparison shows that Finnish households bear relatively high interest rate risks, as the majority of Finnish housing loans are tied to short-term market rates. Large fluctuations in interest rates would thus rapidly affect households' ability to service their debts, if they have not provided for adequate buffers against

Chart 16.



interest rate risks when taking out the loan. This increases concerns that the indebtedness of individual households may be rather high in comparison with their long-term ability to service their debt.

Households' financial assets increased rapidly at the end of the 1990s (Chart 18), partially driven by a steep rise in share prices. Since 1999, the total value of financial

assets has remained virtually stable, although direct share investment has been replaced, to some extent, by investment in insurance and mutual funds, in particular. The increased indebtedness of the household sector was, to some extent, compensated by this growth in financial assets, although the impact of this is weakened by the fact that the majority of these assets are likely to have accumulated

Chart 17.

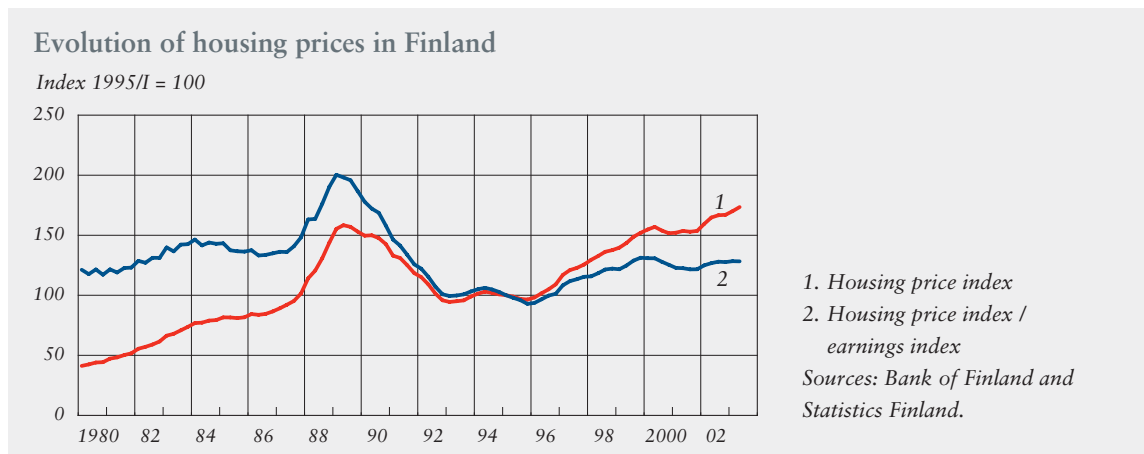
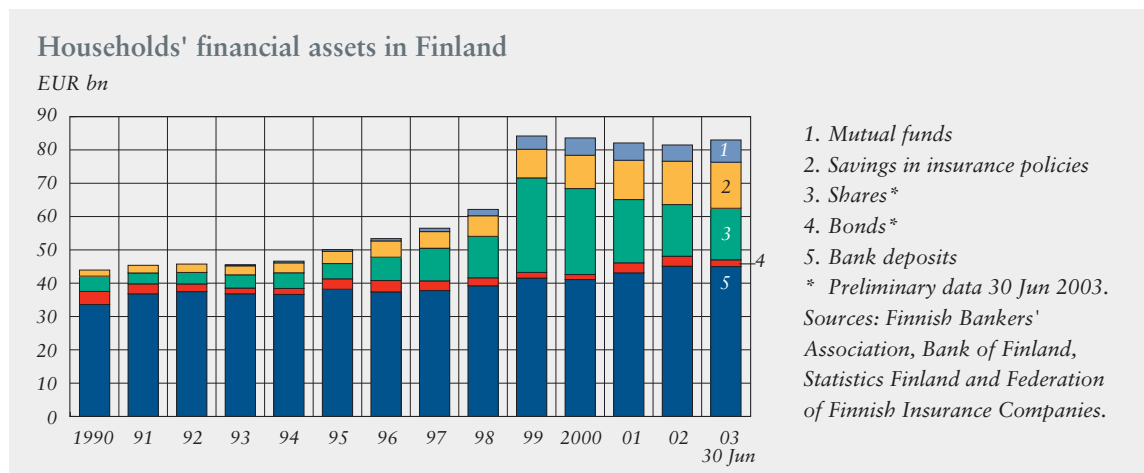


Chart 18.



to households other than those with the debts.

### Domestic capital market

From the point of view of financial intermediation, the domestic capital market has been subdued, notwithstanding an increase in government borrowing. During January–August 2003, companies have sought very little new financing on the market.

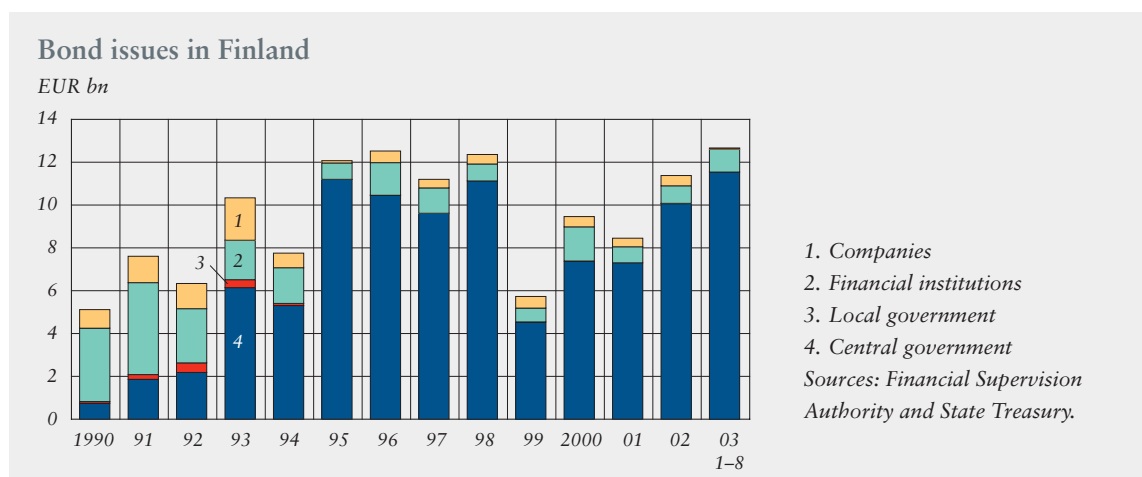
During the early part of the year, the domestic bond market has been dominated mainly by government bond issues (*Chart 19*). In fact, the value of government bond issues has already exceeded the corresponding value for 2002. Financial institutions were another major group of issuers. In contrast, the value of new corporate bond issues has remained very low.

There were no new listings on the Helsinki Exchanges during the early part of the year, and only a

small amount of new risk capital was raised via share issues. During January–August, the value of trading volumes on the HEX diminished by more than 25% from the previous year's level. Share trading began to shrink also in terms of volume, but an increase in the trading of warrants kept total trading volume on a slightly upward trajectory.

From the perspective of domestic investors, growth in mutual funds increases opportunities for portfolio diversification not only between companies and business sectors, but also between geographical areas. During January–August 2003, the capital expansion of mutual funds registered in Finland amounted to some 34%, bringing the total up to more than EUR 22 billion. This growth was partly driven by an increase in share prices, but the majority was accounted for by investors' net subscriptions.

Chart 19.



### Developments in domestic regulations and supervision

The revised Act on the Financial Supervision Authority entered into force in July 2003, extending the supervisory powers of the Financial Supervision Authority (FSA) to include the granting and withdrawal of authorisations. The accountability of the FSA was also improved in that the Parliamentary Supervisory Council now monitors the overall expediency and efficiency of the FSA's operations.

The revised Emergency Powers Act entered into force in August 2003, granting the government powers to regulate the financial market and the insurance sector in times of emergency. The act further places an obligation on certain key institutions to prepare for the maintenance of operations that are crucial for the functioning of the financial system in the event of an emergency.

The working group set up by the Ministry of Finance to revise the Act on the Bank of Finland submitted its proposal in May 2003. This suggests modifications to the provisions governing the Bank of Finland's capital and reserves and its distribution of profits. Specifically, the proposal is for a one-off transfer of EUR 1,085 million from the Bank to the government, and that, as a rule, the profits of the Bank be made available to the government in their entirety. The Bank of Finland's representatives on the working group voiced their dis-

senting views regarding the Bank's capital and the distribution of its profits, and these were duly entered in the memorandum of the working group. An adequate level of capital is crucial to the Bank in the management of potential crises affecting the financial system. The capital reduction suggested by the majority of the working group would also make it harder for the Bank to discharge its key functions within the European System of Central Banks.

The proposal of the working group also includes a provision on the right of the Bank of Finland to issue regulations on operational details relating to the administration, internal control and risk management of payment and settlement systems as required with respect to the implementation of ECB guidelines and instructions. Overall, the new provision is essential from the perspective of the Bank of Finland's practical oversight of payment systems; however, in the form currently proposed it risks becoming too limiting in the present rapidly changing operating environment.

In September, the Finnish Ministry of Finance submitted its own proposal, based on the work of the working group, for comment to the ECB. Here, the Ministry has revised the amount of the Bank's capital that would be transferred to the government, but the key points of the Ministry proposal are in line with the proposal of the working group.

In May 2002, the government set up a working group with the task of evaluating whether there is a need for legislative action to ensure an equal competitive basis for savings products on offer in Finland. The working group produced an interim report in February, in which it proposes that life insurance policies, shares in mutual funds, bank deposits and direct investments in shares should be regarded as mutually competitive products. The working group takes the view that the regulations on savings products should be harmonised primarily to increase competition between different sectors, especially where taxation is concerned.

In addition, steps should be taken to foster the harmonisation of principles governing product marketing and the terms and conditions of contracts. The final report of the working group is scheduled for publication before the end of 2003.

# The banking and insurance sector

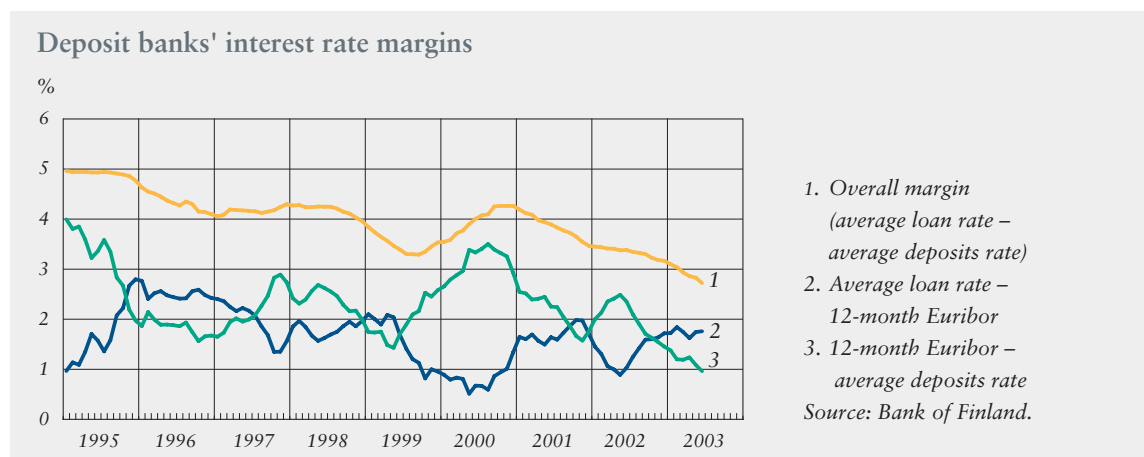
The weakening of banking sector earnings has levelled off, and operating profits for the early part of 2003 are almost at the same levels as in the corresponding period in 2002. For the first half of 2003, the consolidated earnings of banking groups and financial conglomerates were even better than a year ago. This is due, in particular, to the improved profitability of groups' life insurance business. Insurance companies' earnings weakened in 2002, but in 2003 developments in terms of both earnings and solvency have been more positive. The capital adequacy of the Finnish financial sector is good. The most important risks are related to the uncertainty of macroeconomic performance and to the potential spillover of shocks from abroad. According to stress test calculations made at the Bank of Finland, the banking sector's capital buffers would withstand clearly worse-than-forecast developments in the operating environment.

## Banking sector's profitability and capital adequacy

The operating profit of the banking sector (excl. Nordea) for the period January–June 2003 was slightly lower than in the corresponding period of 2002. When the banking business of the Nordea Group is taken into account, the sector's operating profit grew slightly in the first half of the year (Table 5).

The most negative development from the viewpoint of banks' earnings was the contraction of net interest income (difference between interest income and interest expenses). Net interest income accounts for about two thirds of banks' total income; hence, a weakening of this income item is strongly mirrored in financial results. Net interest income decreased because the lower level of interest rates was reflected more strongly in bank lending rates than in bank deposit rates, owing to interest linkages of banks' lending and depos-

Chart 20.



it stocks. Consequently, the development of market interest rates has narrowed the margin between bank lending and deposit rates, ie the overall margin (*Chart 20*).

Banks' other income in the early part of 2003 was, on average, at the same level as in 2002. Developments in other income, however, reveal major differences between banks. Excluding Nordea, banks' total income decreased somewhat over the last year. When the Nordea Group's banking business is included, the banking sector's total income increased slightly.

Uninterrupted growth in banking sector expenses for more than three years has, in the light of the most recent figures, come to an end. Underlying this positive trend is a wide range of measures to improve efficiency. The most important expense item, staff expenses, has continued to grow, but other expenses have been reined back, at least for the time being.

Loan losses (excl. Nordea) recorded in the early part of the year were virtually non-existent. In the period from January to June 2003, the Nordea Group's loan losses were

Table 5.

Operating profits of banking and financial groups (EUR m)						
	1-6/2003	1-6/2002	Change, %	2002	2001	2000
Nordea Group	959	702	36.6	1,547	1,928	2,435
*Nordea Group, banking	907	874	3.8	1,721	1,968	2,316
*Nordea Group, insurance	57	-164		-148	-67	94
*Nordea Bank Finland plc (Group)	914	669	36.6	1,378	2,573	1,718
*Nordea, retail banking in Finland	292	288	1.4	611	612	669
Sampo Group	211	425	-50.4	542	1,104	1,628
*Sampo Group, banking and investment services	112	151	-25.8	252	296	430
*Sampo Bank plc (Group)	84	109	-22.6	178	263	219
OP Bank Group	261	232	12.5	459	504	664
*OKO Bank Consolidated	104	47		96	111	167
Savings Banks (excl. Aktia), total	23	30	-23.6	59	72	62
Aktia Savings Bank plc (Group)	15	12	21.8	20	32	42
Local cooperative banks	17	16	4.4	33	36	39
Bank of Åland plc (Group)	8	7	13.2	14	17	21
Evli Group	2	-4		-5	-3	45
eQ Online Group	-1	-2		-2	-10	-18
1. Banks, other than Nordea, total	436	443	-1.4	830	945	1,285
2. Banks, Nordea + other, total	1,343	1,317	2.0	2,551	2,913	3,601
3. Consolidated: Nordea + Sampo + other, total	1,494	1,419	5.3	2,667	3,681	4,918

1. Sampo: banking and investment services.

2. Nordea: banking.

3. Nordea and Sampo: consolidated.

Sources: Banks' interim reports and financial statements.

clearly larger than in the other banking groups, but they were mainly related to Nordic countries other than Finland. Nevertheless, even Nordea's loan losses for the early part of the year account for only 0.26%, year-on-year, of the whole stock of lending and guarantees, which can be considered low by international standards. Banks' non-performing assets and zero interest lending were very small in June 2003 relative to lending and other commitments (*Table 6*).

The aggregate amount of consolidated operating profits grew from the previous year's level, mainly thanks to the Nordea Group's favourable performance (*Table 5*). Earnings development in early 2003 was boosted, in particular, by a strong improvement in the financial results of the various groups' life insurance companies due to share price increases. Comparison of earnings performance

with respect to the Sampo Group is complicated by large sales proceeds booked in early 2002 for the sale of the non-life insurance business to the If Group.

It seems that 2003 as a whole will be at almost the same level as 2002 with regard to earnings and profitability of banking and financial groups (excl. Nordea), provided, however, that there are no major surprises affecting developments in the latter part of the year. Performance by the Nordea Group in the early part of the year suggests a clear growth in operating profit compared with 2002 financial results. Measured by return on equity, profitability performance in banks and financial groups was variable in the first half of 2003 (*Table 7*). Return-on-equity ratios rose slightly, on average.

Measures to improve efficiency and better cost management are of in-

*Table 6.*

#### Banks' non-performing assets and zero-interest lending (EUR m)

	6/2003	Importance, currently
Nordea Group	836	0.57% of lending
Sampo Group, banking and investment services	65	0.5% claims on the public
OP Bank Group	215	0.7% of lending
*OKO Bank Consolidated	22	0.3% stock of lending and guarantees
Savings Banks (excl. Aktia), total	15	0.5% of lending
Aktia Savings Bank plc (Group)	15	0.6% of lending
Local cooperative banks	20	1.1% of lending
Bank of Åland plc (Group)	2	0.2% of lending
Evli Group	–	–
eQ Online Group	–	–
Other than Nordea, total	332	
Nordea + other, total	1,168	

Sources: Banks' interim reports and Bank of Finland.

Table 7.

Banks' profitability and cost efficiency			
	Profitability:		
	Return on equity (ROE), %		
	1–6/2003	2002	2001
Nordea Group	11.0	7.5	13.8
*Nordea Bank Finland plc (Group)	13.0	9.3	28.3
*Nordea, retail banking in Finland	41.0	38.0	35.0
Sampo Group	9.9	1.4	-15.3
*Sampo Group, banking and investment services	17.5	19.2	19.4
*Sampo Bank plc (Group)	12.5	14.3	
OP Bank Group	11.8	11.9	14.6
*OKO Bank Consolidated	23.6	10.0	13.0
Aktia Savings Bank plc (Group)	12.0	7.2	13.5
Bank of Åland plc (Group)	15.6	11.5	14.6
Evli Group	1.7	-6.1	-5.2
eQ Online Group	-5.3	-5.1	-21.3
	Cost efficiency:		
	Expenses, % of income		
	1–6/2003	2002	2001
*Nordea Group, banking	61	64	58
*Nordea Bank Finland plc (Group)	63	71	50
*Nordea, retail banking in Finland	53	49	49
*Sampo Group, banking and investment services	66	64	59
*Sampo Bank plc (Group)	71	71	61
OP Bank Group	61	61	55
*OKO Bank Consolidated	40	56	51
Savings Banks (excl. Aktia), total	71	63	57
Aktia Savings Bank plc (Group)	73	81	73
Local cooperative banks, total	68	68	64
Bank of Åland plc (Group)	68	69	64
Evli Group	91	111	100
eQ Online Group	111	112	172

Sources: Banks' interim reports and financial statements.  
(Savings banks and local cooperative banks do not publish figures for return on equity.)  
ROE percentages are not fully comparable.

Table 8.

## Banks' capital adequacy and buffers against losses

	Capital adequacy (Tier 1 + Tier 2), %		
	6/2003	12/2002	12/2001
Nordea Group	9.8	9.9	9.1
*Nordea Bank Finland plc (Group)	17.6	10.4	9.3
Sampo Group	17.3	17.3	12.7
*Sampo Bank plc (Group)	10.3	11.2	11.4
OP Bank Group	15.3	15.2	15.1
*OKO Bank Consolidated	11.4	11.1	12.8
Savings Banks (excl. Aktia), total	18.7	19.6	19.5
Aktia Savings Bank plc (Group)	12.8	13.1	12.5
Local cooperative banks, total	20.8	21.7	22.2
Bank of Åland plc (Group)	12.1	11.0	12.5
Evli Group	30.8	34.9	67.7
eQ Online Group	38.3	50.1	138.4
	Buffer for 8% capital adequacy EUR m		
	6/2003	12/2002	12/2001
Nordea Group	2,393	2,564	1,473
*Nordea Bank Finland plc (Group)	6,327	3,192	1,716
Sampo Group	1,208	1,167	659
*Sampo Bank plc (Group)	236	308	318
OP Bank Group	1,621	1,533	1,390
*OKO Bank Consolidated	288	251	343
Savings Banks (excl. Aktia), total	244	245	217
Aktia Savings Bank plc (Group)	89	95	71
Local cooperative banks, total	180	179	168
Bank of Åland plc (Group)	36	26	36
Evli Group	41	41	61
eQ Online Group	25	27	33
Other than Nordea, total	3,444	3,312	2,635
Nordea and other, total	5,837	5,877	4,108

Sources: Banks' interim reports and financial statements, Bank of Finland.

creasing importance to banks as a means of maintaining a good earnings and profitability performance (Chart 21). Over the last ten years, the banking sector has used a broad spectrum of measures to improve efficiency, such as halving both staff and branch size from the level seen in the early 1990s.

The banking sector's capital position is, in general, strong, and banks' capital adequacy ratios are, by international standards, good. Own funds have increased mainly thanks to positive financial results since the mid-1990s. Banks' notional capital buffer funds have also grown in recent years (Table 8).

However, the actual buffers are always smaller than the notional ones, because not one single company in the financial sector can afford to let its capital adequacy ratio fall close to the minimum requirements imposed. Moreover, different parts of

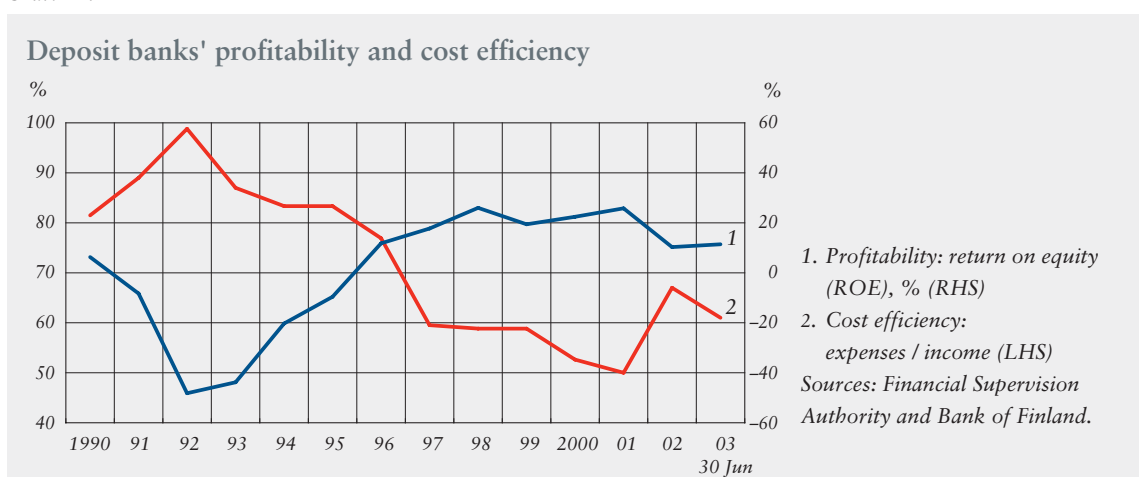
any group are in a different position to bear losses. Even losses that are relatively small from the perspective of the group as a whole may put a great strain on a group's structure.

### Risk outlook

Economic development is a key contributory factor to earnings and prospects in the banking and financial sector. Recovery of economic growth increases demand for financial services and strengthens economic agents' debt servicing ability. Development of asset prices is also linked with overall economic performance.

Current forecasts suggest that the macroeconomic operating environment will remain strong for banks over the next couple of years, thereby lending support to strengthening profitability and building adequate buffers against losses. Nevertheless, international evidence shows that in integrated financial markets problems

Chart 21.



may be transmitted from one country or institution to another very quickly and that a situation deemed good may suddenly take a turn for the worse.

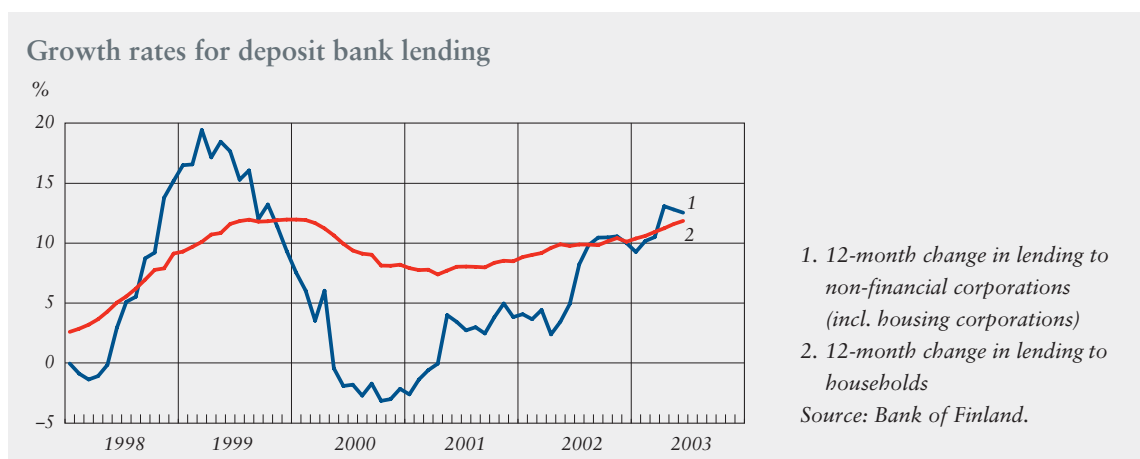
Banks' credit risks are currently limited, and, according to available data, the probability of near-term realisation of loan losses that would pose a threat to stability is small. The rate of growth of banks' lending to households has continued to remain brisk for several years. By contrast, the rate of growth of corporate lending was subdued in 2000 and 2001, but has subsequently accelerated appreciably (*Chart 22*). Of the lending stock of MFIs operating in Finland, household loans account for about one half, which also underscores the importance of the household sector for banks' credit risks (*Chart 23*).

Banks' credit risk exposures to the corporate sector are relatively evenly spread over the sector, and despite economic slowdown there are no special problem sectors in Finland

that would possibly have significant spillover effects on banks. Over the last ten years or more, banks have recorded most of their loan losses on exposures to strongly cyclical sectors, such as real estate and building. Credit risk exposures may grow in excess of their current levels if economic development remains weaker than forecast.

Banks are probably already preparing for future Basel II Capital Accord requirements in their practical business operations. In the new capital adequacy framework, credit risks associated with bank lending will be taken into account in a much more detailed manner than previously, which is likely to lead to bigger company-specific differences in the pricing of corporate lending. Interest rate margins on bank lending to non-financial corporations have already been growing moderately for more than one year. Conversely, the interest rate margin on housing loans to

Chart 22.



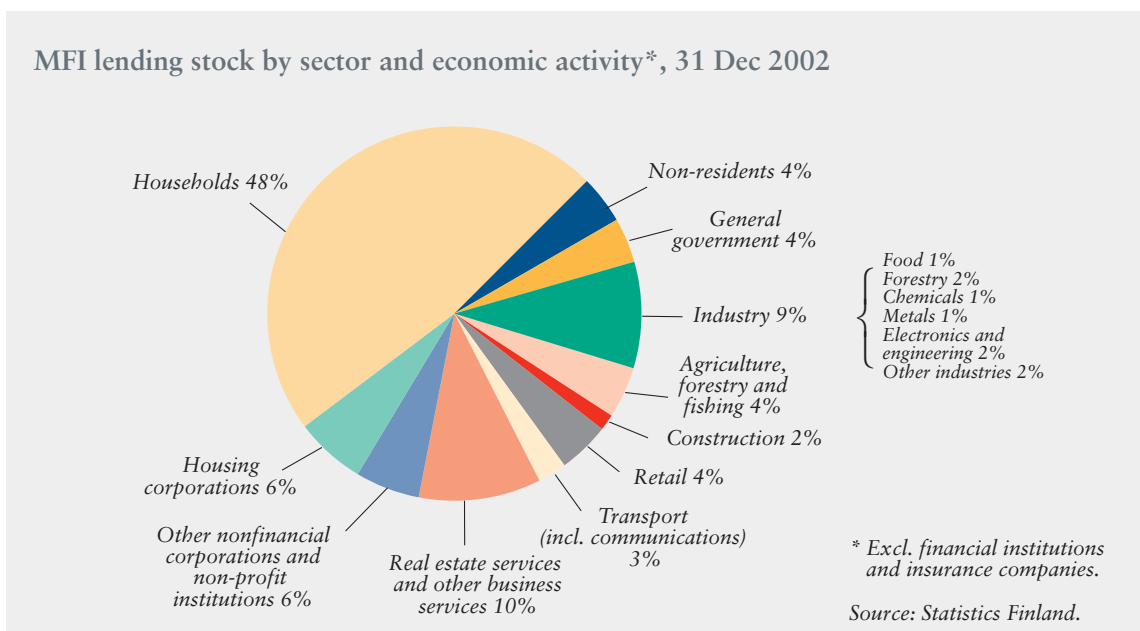
households has clearly narrowed over the last couple of years, which can be partly explained by the expected easing of capital adequacy requirements. Banks and financial groups are in an ongoing process of developing internal ratings-based approaches to gauging risks in addition to methods for calculating profitability that allow for a more detailed specification of risks.

Changes in the interest level have a dual effect on bank earnings. On the one hand, a low level of interest rates sustains demand for credit – especially housing loans – and improves banks’ net interest income. On the other hand, it has narrowed banks’ overall margins because of interest linkages between balance sheet items, thereby adversely impacting banks’ net interest income and finan-

cial results. The situation is likely to remain unchanged in the latter part of 2003, ie the stock of lending will continue to grow, but development of net interest income will be weak. However, differences between banks have grown recently, and some banks even managed to increase net interest income in the early part of 2003 by hedging against interest rate risk.

A potential rise in the interest rate level would improve banks’ net interest income, thereby also contributing to better earnings development. The Financial Supervision Authority has estimated that a one percentage point increase in the general level of interest rates would lead to a year-on-year increase of 14.3%, equalling approximately EUR 316 million, in the Finnish banking sector’s (deposit

Chart 23.



### Links between the banking and insurance sectors

The Finnish financial market is characterised by close links between the banking and insurance sectors, with the potential for major repercussions on the stability and efficiency of the financial system. Increasingly closer links between the banking and insurance sectors are an international phenomenon and related to the development and integration of the financial markets (financial diversification and conglomeration).

The economic rationale for close links between banking and insurance is primarily related to the existence of economies of scope: an increasingly wider range of similar services can be offered through a single distribution network. Diversification of income structures and service provision, improved efficiency and expansion in the markets are usually cited by companies as reasons for closer cooperation.

Convergence of banking and insurance may, in principle, take two forms. First, a bank and an insurance company may merge into the same group. Owing to restrictions imposed by the authorities, insurance business must, however, be conducted in a separate company within the group. A group typically includes a holding company that owns the subsidiaries engaged in both banking and insurance. Second, there is a model of cooperation where a bank and an insurance company access the same distribution channels to offer their services. The cooperation model does not necessarily require a holding structure; the bank and the insurance company may operate as separate companies without belonging to the same group. In Finland, there are examples of both forms of cooperation.

Nowadays, all large and medium-size banks or banking groups cooperate closely with an

insurance company or group. In Finland there are currently only two financial conglomerates as referred to in the Act on the Supervision of Financial and Insurance Conglomerates. Of these, Sampo, as far as its structure is concerned, has been a financial and insurance conglomerate since as early as 2000. Within the OP Bank Group, the OP Bank Group Central Cooperative Consolidated, which operates as the strategic holding company of the whole banking group, reformed itself into a financial and insurance conglomerate at the end of 2002.

Typical of the last two years have been sales by groups of their non-life insurance businesses; this has been the case with the Nordea and Sampo Groups. Non-life insurance business does not apparently reflect as important economies of scale and scope as do other banking and insurance operations. Similar trends have also been observed abroad.

The Sampo Group's insurance business is of relatively major significance. Technical provisions of insurance companies that belong to the Sampo Group represent approximately 20% of the whole Group's balance sheet. Life insurance business accounted for 44% of the Group's operating profit in the period January–June 2003. In addition, the Sampo Group has an important holding (38%) in the If non-life insurance company. For this reason, the profit or loss equivalent to the holding in the If Group (21% of the Sampo Group's operating profit for the period January–June 2003) must be taken into account in calculating the Sampo Group's operating profit.

The Nordea Group's life insurance business accounts for 8% of the whole Group's balance sheet and 7% of the Group's operating profit

(January–June 2003). In the OP Bank Group, technical provisions for life insurance business represent 6% of the Group's balance sheet and 5% of the Group's operating profit (January–June 2003).

Increasingly closer links between banking and insurance also imply risks. A key issue from the risk point of view is the scenario of a quicker and wider spillover of shocks and problems from one sector to another through group structures or other channels of cooperation. One example of contagion of risks is from 2001 and 2002 when adverse stock market developments triggered a dramatic fall in the earnings of life insurance companies. As shown by another example from Germany, problems can also be transmitted from the banking sector to the insurance sector.

In addition to holding structures and other forms of closer cooperation, links between the banking and insurance sectors have increased in line with the rapid expansion of the credit derivatives market. In the light of available data, insurance companies have in recent years increasingly been assuming credit risks traditionally associated with the banking sector. Although a wider spreading of risks is a positive trend, the potential transfer of risks to parties less capable of managing credit risks as competently as banks has remained a cause for concern. Increasingly closer links between banks and insurance companies emphasise the importance of diversified and thorough risk management skills at companies and large groups. With financial conglomerates becoming more and more widespread, the authorities need to adopt a more comprehensive approach to monitoring companies operating in the financial markets.

banks') combined net interest income.<sup>1</sup> On the other hand, a rise in the interest rate level would curb balance sheet growth, increase customers' debt service burden and lead to downward adjustments in banks' bond portfolios.

Banks' direct risks related to share price development are currently small. Market risks linked with share portfolio valuations are, however, potentially significant in large financial groups. These risks mainly exist in the insurance sector, notably in life insurance companies' equity holdings, but group structures provide a channel of contagion for the transmission of possible problems to banks (Box 2).

Banks' direct risks related to real estate holdings have diminished in re-

cent years, as banks and financial groups have managed to significantly reduce their direct real estate holdings dating back to the years of the banking crisis. In this area, there are, however, major differences between banking groups.

By contrast, banks' risks related to housing price development have grown because of a persistently strong demand for housing loans. Due to the distribution of the lending stock, banks' risks associated with housing prices are potentially large, but viewed from a historical perspective, the realisation probabilities are low. As regards housing price development, no major downward pressures are currently discernible. The possibility of a strong rise in unemployment, accompanied by a simultaneous steep fall in housing prices, would constitute a threat to the banks.

<sup>1</sup> FSA Newline 4/2003.

Table 9.

Assets and liabilities with different maturities of four banking groups as of 31 Dec 2002									
Net = assets net of liabilities (EUR m)									
	Up to 3 months				3 to 12 months				
	Nordea	Sampo	OP Bank Group	Aktia	Nordea	Sampo	OP Bank Group	Aktia	
Assets	81,381	4,697	2,798	683	25,160	1,613	4,020	290	
Liabilities	110,915	12,474	21,840	2,752	34,369	972	2,872	351	
Net	-29,534	-7,778	-19,042	-2,069	-9,209	641	1,148	-62	
% of balance sheet total	13	45	60	59	4	4	4	2	
	1 to 5 years				Over 5 years				
	Nordea	Sampo	OP Bank Group	Aktia	Nordea	Sampo	OP Bank Group	Aktia	
Assets	46,815	3,940	11,042	878	43,410	4,650	11,011	1,271	
Liabilities	18,079	1,646	1,448	8	16,562	136	700	11	
Net	28,736	2,294	9,594	870	26,848	4,515	10,311	1,259	
% of balance sheet total	13	13	30	25	12	26	33	36	

Sources: Banks' financial statements and appendices thereto (incl. on-balance-sheet items: assets and liabilities vis-à-vis central banks, credit institutions, the public, and general government, as well as certificates of claim and debt instruments issued to the public). Nordea: Nordea Bank Finland plc (Group); Sampo: Sampo Bank plc (Group); OP Bank Group: information on the Amalgamation of cooperative banks; Aktia: consolidated data.

Banking basically involves the converting of short-term funding into long-term lending, thereby exposing banks to liquidity risk (*Table 9*). An important phenomenon associated with liquidity risk and liquidity management is that banks' lending stock has already for many years been growing much faster than their stock of deposits (*Chart 24*). Thus, banks are more clearly than before tied to market-led funding and international markets. Examples from other countries show that no particular upper limit exists for the ratio between bank lending and deposits; hence, the lending stock can literally grow many fold relative to funding via deposits.

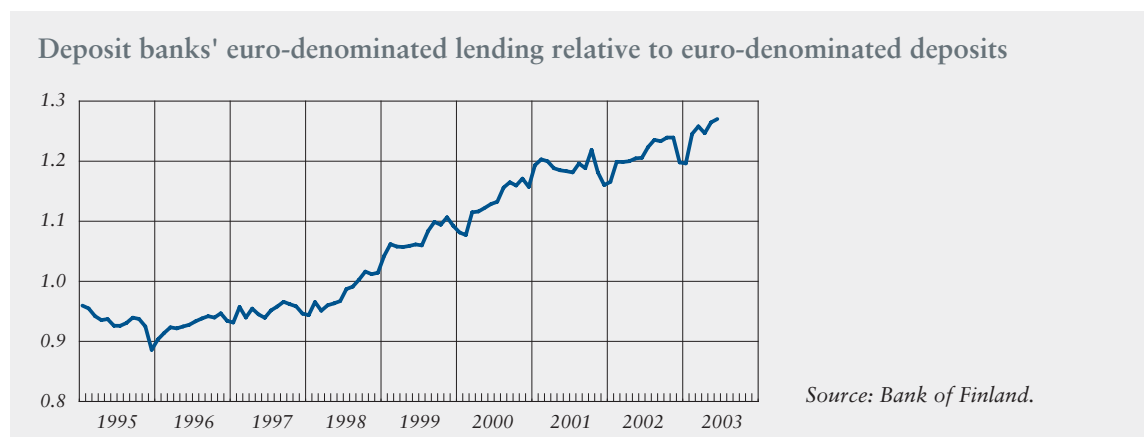
Increasingly closer links with international financial markets create both benefits and drawbacks from the viewpoint of the stability of the Finnish financial system. One of the advantages is that large financial groups, in particular, may access diversified and state-of-the art funding

sources. Funds raised in international markets, however, constitute the most sensitive item of funding, with no guarantee of continuity in the event of emerging problems or crises. Most of this funding is dependent on banks' credit ratings. Credit ratings for Finnish financial sector companies are currently in order, thereby posing no funding problems.

The operational risks to which banks and other financial sector companies are exposed comprise several factors, such as deficiencies and weaknesses in processes and systems, actions by staff members, external threats, risks pertaining to reputation, and legal risks.

Exploitation of new information technology constitutes an important element of operational risk, currently involving a range of significant issues from the perspective of the structure and stability of the financial system. Information technology-based solutions have an essential impact on the

Chart 24.



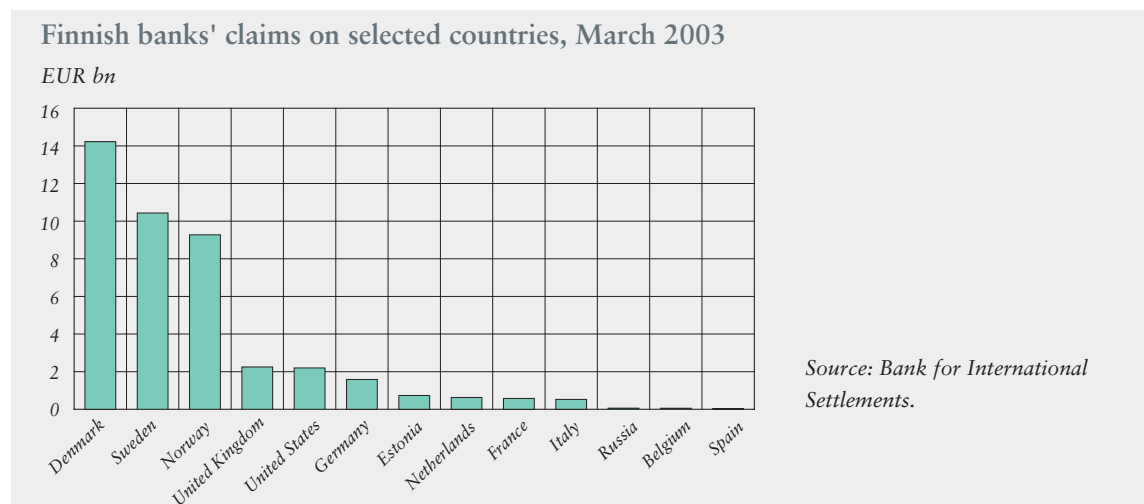
ability of the financial system to withstand shocks. For instance, many banks, outsource their electronic data processing functions or set up joint ventures aimed at both improving efficiency and developing new business. This activity may give rise to growth in operational risks. From the perspective of financial stability, outsourcing of operations and setting up of joint ventures emphasise the need for good business continuity and contingency planning and crisis prevention, even in areas outside the traditional financial system.

Banks and insurance companies have invested heavily in new technology in an effort to diversify and improve their investment services and Internet-based banking in particular and develop new services for customers. This calls for comprehensive management of operational risks in connection with information technology applications.

The most significant channels of contagion for foreign disturbances to the Finnish financial system are from the other Nordic countries. Foreign claims and liabilities of banks and group parent companies operating in Finland are by far the largest vis-à-vis Denmark, Sweden and Norway, which is an indication of the integration of the Nordic financial sector (*Chart 25*). Excluding intra-group items, foreign claims are of minor significance compared, for instance, with banks' lending to the public or funding.

The Finnish banking sector's claims on the Baltic States are still small, although some Finnish financial groups have subsidiaries and branches in these countries. Therefore, risks potentially arising from these sources are limited from the viewpoint of the Finnish financial system. Country risks in emerging economies are not particularly significant for the Finnish banking sector, but

Chart 25.



### Nordea Group's structural arrangements

In terms of balance sheet and market capitalisation, the Nordea Group is the largest financial group in the Nordic countries. Since the start of operations, the Group's structure has been based on several sub-groups and subsidiaries owned by a separate holding company. Of these, the largest – Nordea Bank Finland plc – was responsible for the whole Nordea Group's banking operations until summer 2003 and included, as independent subsidiary groups, the Swedish, Danish and Norwegian banking groups. Nordea Bank Finland plc has been registered in Finland and, hence, from the legal point of view a Finnish bank.

Nordea controls a market share of just under 40% of the Finnish financial market. Although Nordea does not have equally large market shares in the other Nordic countries, it still occupies an important position in each of the countries. At the close of business on 31 December 2002 the Nordea Group's balance sheet total amounted to EUR 250 billion and that of Nordea Bank Finland plc to EUR 226 billion.

In June 2003, the Nordea Group announced its intention to introduce measures for the simplification of its legal structure and to form a 'European company' for its banking operations. Cross-border mergers within the EU will be recognised under company law as soon as the relevant EU regulation becomes effective in October 2004. Nordea aims at pursuing operations as a single joint stock banking

company with branches in local markets in different countries.

Nordea has already started to alter its legal structure. In June, Nordea Bank Finland plc sold Nordea Bank Danmark and Nordea Bank Sverige to the whole Nordea Group's holding company Nordea AB via an internal deal. Another intra-Group deal involving the sale of Nordea Bank Norge is scheduled for autumn 2003. The holding company Nordea AB will be changed into a credit institution and merged with Nordea Bank Sverige; according to plans, the arrangement should be completed in early 2004. The other banks will be merged with the Swedish bank as soon as the establishment of a European company is legally possible. The new joint stock banking company will be domiciled in Sweden, with headquarters in Stockholm. As planned, the process should be completed as early as in 2005.

These changes in Nordea's structures will have major repercussions on the functioning of the Finnish and Nordic financial markets. First, they will directly affect banking supervision. According to the EC Directive on Credit Institutions, home country authorities are always responsible for banking supervision. Responsibility for supervision of Nordea's future European company will lie with the Swedish supervision authority (Finansinspektion). The Nordic supervision authorities are currently examining the requirements that Nordea's new corporate structure will impose on coopera-

tion between the authorities and, in particular, the expectations that host country authorities may have vis-à-vis the home country authority, Finansinspektion. In any case, the Finnish Financial Supervision Authority and the Danish and Norwegian supervision authorities would continue supervising the liquidity positions of branch networks in their respective countries as well as compliance with public interest requirements and procedures in the markets.

The second important area is deposit protection and its coverage in the Nordic countries. The level of deposit protection legislation varies from one Nordic country to another, and in the case of Nordea, there is, to date, no agreement applicable to the European company on the scope of deposit protection envisaged for the customer. The main principle of the deposit protection directive is that deposit protection provided by foreign branches should meet the level of protection offered in the home country, in this case Sweden.

The third aspect of significance is related to the stability of financial markets. Because of its size, Nordea is a key player in all Nordic and Baltic countries. From the viewpoint of financial stability, the smooth functioning of payment systems and the maintenance of normal contacts to the euro area are strategically important issues not only for Nordea itself but also for the Bank of Finland and the European Central Bank.

they may gain in importance in the next few years if the economic trends in Europe do not improve.

Tight pricing competition poses a strategic risk that banks and other financial sector participants need to manage well. Pricing competition in bank lending has been keen in 2003, even if recently the situation has eased somewhat from the early part of the year. With the current level of interest rates, lending volumes will grow, but this will not necessarily help banks improve their financial results. Tough competition will weaken bank profitability, thereby adding to the banking sector's vulnerability if lending margins are not adequate to cover the risks involved.

Properly aligned management systems and bonus schemes at banks and financial groups are of utmost importance when faced with a situation of tight competition for market share and falling earnings. From the risk point of view, it is a matter of serious concern if, for instance, bonus schemes in place at branches and sales outlets focus too strongly on lending and volume growth at the expense of risk management and profitability. A good corporate governance culture within financial institutions becomes increasingly vital for the prevention of problems. Ongoing structural change, establishment of new financial sector companies and outsourcing of functions pose a continuous challenge for corporate governance.

The ability of the financial system to withstand crises and the adequacy of buffers against losses can be analysed by using 'stress tests'. The purpose of these tests is to identify the combined effect of either individual risk factors or several negative shocks on the earnings and capital adequacy of financial sector companies. The sustainability of the Finnish banking system's capital buffers has been analysed at the Bank of Finland on the basis of the following hypothetical scenario:

- The Finnish economy would not grow at all for two years.
- Share and real estate prices would fall significantly from their current levels.
- Banks' balance sheets would stop growing.

Stress calculations indicate that the banking sector's buffers would suffice in the above situation characterised by an increase in loan losses, a pronounced deterioration in income development and downward adjustment of book values. It must be emphasised that stress test analyses are static by nature, incorporating no dynamic factors related to the behaviour of market participants, which are often of crucial importance in problem and crisis situations.

#### **Financial performance and solvency in the insurance sector**

The unstable operating environment over the last few years has been a major challenge for the insurance sector.

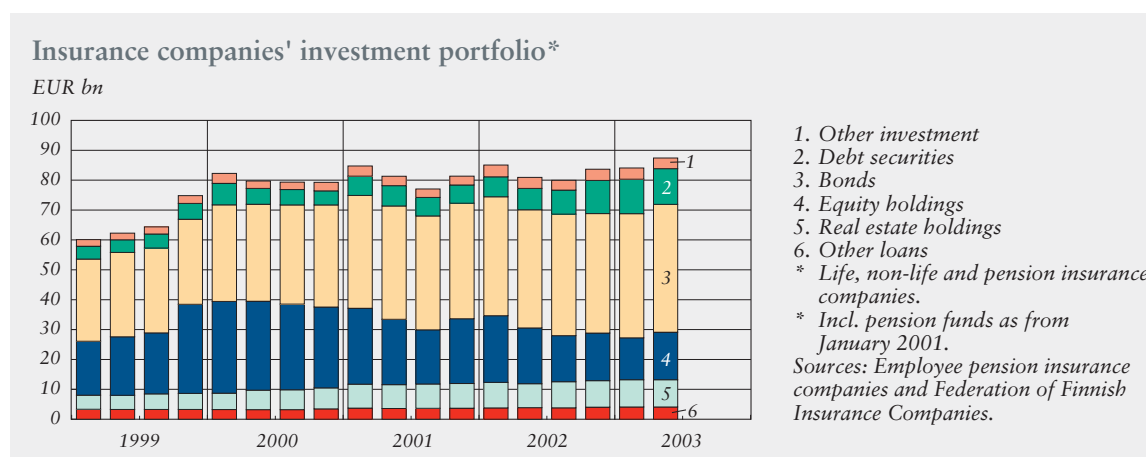
In addition to risks traditionally associated with the sector, risks from investment in particular have increased the challenges related to the operations of insurance companies. In an environment of falling interest rates, stock markets and other markets, too, have been tapped to an increasing extent in an effort to generate income from investment.

The structure of the investment business conducted by Finnish insurance companies has changed significantly since the introduction of the euro. With the internationalisation of investment, insurance companies' investment portfolios that were previously domestically focused have been very quickly diversified outside Finland, primarily to elsewhere within the euro area. In June 2003, more than half of investments by the insurance sector as a whole were already outside Finland. The spreading of country risk away from a single country dominance has improved the in-

surance sector's ability to bear investment-related risks.

At the end of 2002, equity holdings accounted for 22% and various fixed-income securities 64% of the investment assets of all insurance companies. The share of real estate holdings was 13%. The allocation of investments changed in the first half of 2003 towards a somewhat stronger emphasis on fixed-income securities (*Chart 26*). Insurance companies' earnings have weakened since 2000. Owing to the fall in share prices, 2002 and the first quarter of 2003 were exceptionally difficult for life and non-life insurance companies. The operating profit for 2002 of life insurance companies based in Finland was almost halved from the previous year (*Table 10*). The fall was even stronger in respect of the operating profit of non-life insurance companies. A positive feature for earnings performance in 2002 was that premiums written in both life insurance

Chart 26.



and non-life insurance business increased. The last two years have been difficult for employment pension insurance companies. Growth in premiums written by these companies has continued on a positive path in line with payroll growth, but their total operating profit<sup>2</sup> started to weaken as early as 2000, turning into a clear operating loss in 2001 and 2002. Mainly due to a steep fall in share prices, net investment income at current values remained distinctly weaker than the requirement for return on technical provisions; therefore, total operating profit has been weak over the last two years. The negative overall performance has reduced employment pension insurance companies' solvency margins accrued from previous years.

<sup>2</sup> Total operating profit differs from the profit posted for the financial year by employment pension insurance companies in so far as it takes into account net income from the insurance business, net investment income at current values and administration expenses related to the insurance business.

Insurance companies' financial results for 2002 can be considered poor and, in the long term, inadequate, considering that the operating environment for investment, in particular, continues to remain challenging.

In the course of 2003, growth in premiums written by insurance companies has been very subdued. Of the different insurance sectors, premiums written by employment pension insurance companies have developed most favourably in the first half of 2003, with a growth of just under 4% from the level of the previous year. At the same time, growth in premiums written by non-life insurance companies was only slightly more than 1%. Premiums written by life insurance companies in the first six months of 2003 remained just over 17% lower than last year. The interest shown in endowment insurance has diminished considerably. House-

Table 10.

<b>Operating profits in the insurance sector (EUR m)</b>			
	2002	2001	Change, %
<i>Life insurance companies, total</i>	284	532	-46.6
<i>Non-life insurance companies, total</i>	242	1,670	-85.5
<i>Employment pension insurance companies</i>			
<i>Total operating profit</i>	-1,026	-1,279	19.8
<b>Premiums written in the insurance sector (EUR m)</b>			
	2002	2001	Change, %
<i>Life insurance companies, total</i>	3,263	3,201	1.9
<i>Non-life insurance companies, total</i>	2,756	2,618	5.3
<i>Employment pension insurance companies, total</i>	6,427	6,180	4.0

Sources: Federation of Finnish Insurance Companies and employment pension insurance companies' press release concerning financial statements.

holds have diverted their insurance saving from life insurance products to personal pension plans. The growth of premiums written in connection with these products has remained strong, and notably demand for investment-related pension insurance products has continued to be brisk (+26%). Risks related to the development of premiums written by the Finnish insurance sector are mitigated by the considerable share of statutory insurance.

Rising share prices and falling interest rates prompted a more positive trend in the financial performance of insurance companies in the second quarter of 2003. There are, however, major differences in finan-

cial results between insurance companies, which is due to different allocations of investment portfolios.

According to available data releases for the first half of 2003, the results of life insurance companies, in particular, have improved substantially over the corresponding period of the previous year.

The solvency of insurance companies weakened in 2002 and this trend continued unchanged in the first quarter of 2003. In the second quarter, the solvency of the Finnish insurance sector improved due to a rise in share prices and a fall in inter-

<sup>3</sup> Solvency of insurance companies and pension funds as at 30 June 2003. Press release of the Insurance Supervisory Authority 4/2003.

Table 11.

Solvency of the insurance sector					
	6/2003	6/2002	Change, %	12/2002	12/2001
<b>Life insurance companies</b>					
Capital and reserves, EUR m	2,054	1,559	31.8	1,786	1,650
Solvency margin, EUR m	2,912	2,778	4.8	2,733	3,491
Solvency capital, EUR m	3,058	2,928	4.5	2,886	3,637
Solvency margin, of minimum amount, %	316.1	327.1		309.1	427.3
Solvency capital of technical provisions, %	14.6	15.2		14.4	19.5
<b>Non-life insurance companies</b>					
Capital and reserves, EUR m	1,146	1,104	3.8	1,230	1,079
Solvency margin, EUR m	1,811	1,939	-6.6	1,749	2,092
Solvency capital, EUR m	3,202	3,332	-3.9	3,131	3,444
Solvency margin, of minimum amount, %	434.0	443.8		420.1	481.3
Solvency capital of technical provisions, %	53.5	57.2		58.1	66.3
<b>Employment pension insurance companies</b>					
Capital and reserves, EUR m	189	172	9.7	181	168
Solvency margin, EUR m	6,752	6,240	8.2	5,940	7,220
Solvency margin, of minimum amount, %	309.2	320.6		306.4	352.3
Solvency margin of technical provisions, %	16.8	17.5		16.1	21.1

Reported figures for capital and reserves also include subordinated loans, if any.

Sources: Insurance Supervisory Authority's press releases dated 24 September 2002 and 29 August 2003.

est rates (*Table 11*).<sup>3</sup> At the end of June, the insurance sector's average solvency had recovered back to the level seen at the end of 2002.

Nevertheless, the amount of solvency capital is currently significantly lower than eg in 1999, when it peaked. Developments in the securities markets over the last few months have been characterised by dual trends: on the one hand, rising share prices continue to improve financial results and solvency, which, on the other hand, are weakened by developments in long-term interest rates that have been rising since the summer. In the long run, the rise in long-term interest rates will, however, facilitate the meeting of return requirements imposed by interest assumptions for investment in life and pension insurance companies.

On average, the key figures for the insurance sector are in order as far as the stability of the financial markets is concerned, but investment is still exposed to risks related to price development on the stock and bond markets.

# Infrastructure

The infrastructure of the financial markets is composed of payment systems, securities clearing and settlement systems and the rules and regulations that govern them. Although the most significant systems within the European Union and the euro area (including Finland) have, on the whole, functioned reliably, there is still considerable room for improvement in terms of their efficiency. In evaluating the efficiency and reliability of the systems, the key factors are operational stability and resilience, ie availability, and efficiency from the perspective of service providers, users and society as a whole.

A well-functioning and efficient payment and securities infrastructure is vital to the financial markets, as any disruptions in the system can hold significant detrimental implications for the real economy. The infrastructure can also transmit shocks between the domestic and international financial systems and markets, and the operational reliability of the infrastructure thus forms one of the cornerstones of stability underpinning the entire financial market.

## Payment systems

Payment systems can be divided, from the point of view of systemic risk, into the systemically important systems (eg foreign exchange and large-value payment systems) and other systems (typically retail payment systems). In general the payment systems have per-

formed reliably and thereby promoted the stability of the financial system, although they have not been entirely spared of problems. The prerequisites of sound operational reliability include adequate business continuity and contingency measures. The authorities and some market participants have put a great deal of effort into crisis and problem management, both on their own and on behalf of the market as a whole. It is to be hoped that, in the future, all market participants will emphasise continuity and contingency planning. Particular attention should be paid to specification and maintenance of such plans especially when market structures and operational models go through a period of important changes or when operators seek extensive cost savings.

There is, however, room for improvement in the efficiency of payment systems. In this respect, the most problematic aspect of the payment system infrastructure is arguably the cross-border retail payment system and cross-border credit transfers in particular. The European Parliament and the Council of the European Union have responded to these problems with a regulation on pricing, with the section on credit transfers coming into force in July 2003.<sup>1</sup> According to the Regulation, the charges for undertaking a cross-border payment may not exceed the charge levied for a corresponding

<sup>1</sup> Regulation (EC) No 2560/2001 of the European Parliament and of the Council of 19 December 2001 on cross-border payments in euro.

domestic payment. However, the cost to the banks of making a cross-border credit transfer remains higher than for transfers undertaken within national borders, providing banks with an incentive to find more efficient methods of processing cross-border credit transfers. In response, the banking sector has set up a single euro payments area (SEPA) initiative in order to improve the situation. The authorities are monitoring the development

of this euro-denominated payments project and are working themselves at eliminating the obstacles to progress.

TARGET<sup>2</sup> and Euro1<sup>3</sup> are the EU area's most crucial payment sys-

<sup>2</sup> TARGET, abbreviated from 'Trans-European Automated Real-time Gross Settlement Express Transfer System', is an EU-wide payment system, owned by the central banks, that processes euro-denominated payments. TARGET consists of the fifteen national Real-Time Gross Settlement systems (RTGS) and the ECB payment mechanism (EPM).

<sup>3</sup> Euro1, which is operated by the Euro Banking Association (EBA), is an EU-wide netting system for large and medium-value euro-denominated payments.

Chart 27.

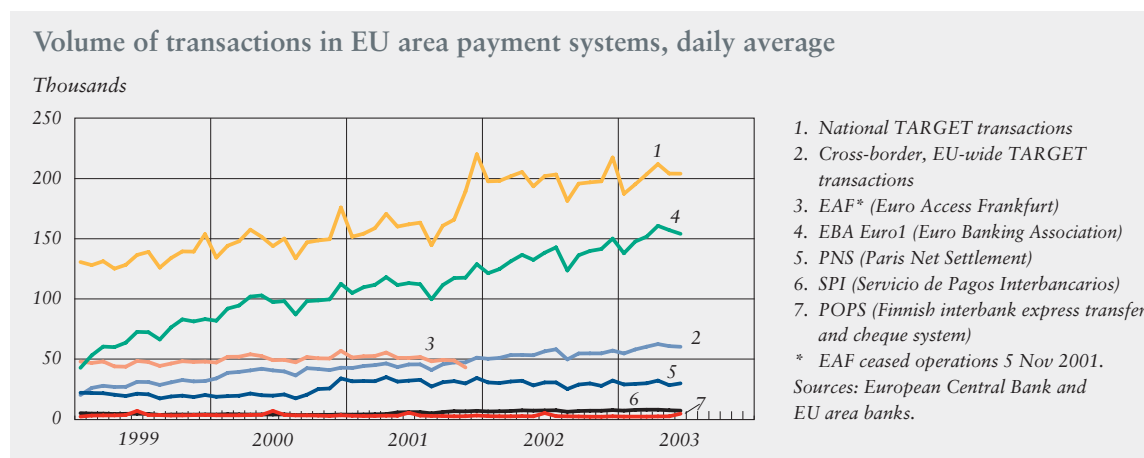
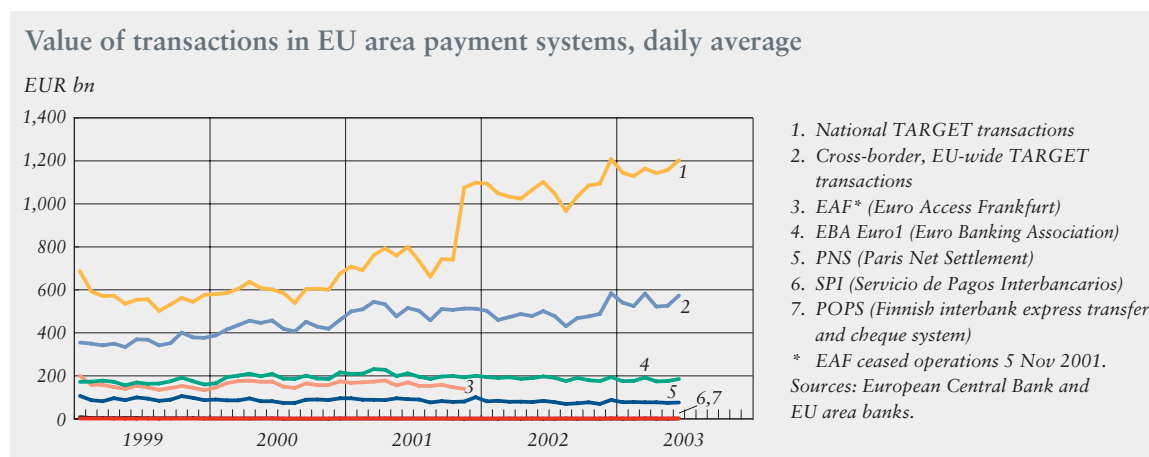


Chart 28.



tems. The turnover figure for payments transferred through these systems has grown relatively steadily since 1999 (Chart 27). The value of individual transactions processed by Euro1 (Chart 28) appears to have decreased, and consequently it is probably shaping into a system handling payments smaller than the average TARGET transactions. There do not, however, appear to be any changes discernible in the size or value of pay-

ments processed by the national large-value payment systems (Charts 27–30).

### Operational reliability of the payment systems

Generally speaking, the various funds transfer systems have operated fairly well, and the disruptions experienced have not had any particularly negative effects on stability. Even so, in purely volume terms, there have been several disruptions occurring within

Chart 29.

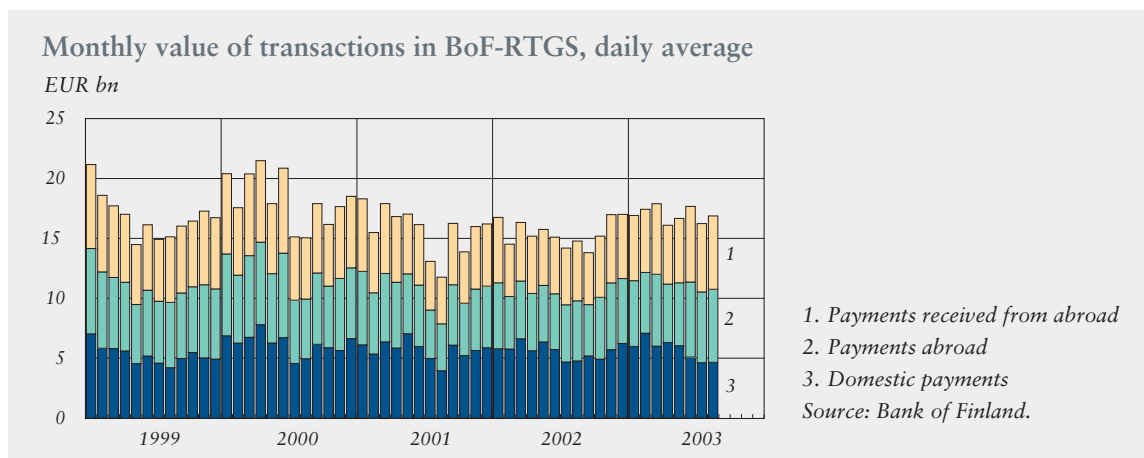
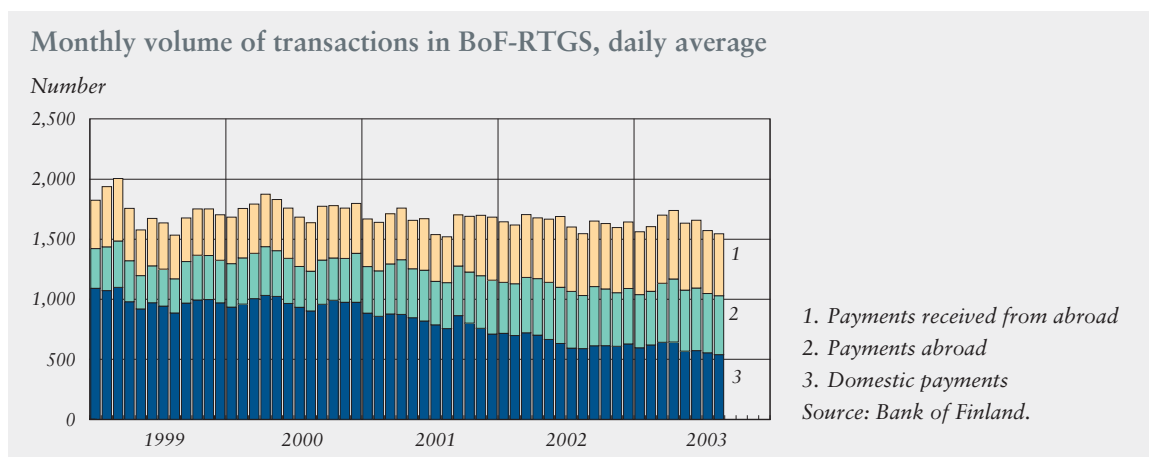


Chart 30.



the TARGET system in particular. Were these disruptions to prolong or multiply, they could give rise to liquidity and credit risks, and, in a worst-case scenario, even systemic risk. This is because they could inhibit the settlement of systemically important payments. The problems could also spread through the time-critical settlement to other payment and securities clearing and settlement systems.

Regardless of the disruptions, TARGET's availability rate was as high as 99.77% in 2002, which is a slight improvement on the previous year. BoF-RTGS, the Finnish TARGET component,<sup>4</sup> attained a record availability rate in 2002, at 99.97%. Even so, the BoF-RTGS's performance has not been beyond reproach in 2003, having suffered three separate incidents severe enough to bring the credit transfers between the BoF-RTGS and the other TARGET components to a halt, in addition to a few localised communication problems between the BoF-RTGS and participating banks' systems.

Continuity and contingency procedures have been drawn up to manage potential disruptions in the TARGET system. However, they allow for the processing of only a relatively small proportion of transfers. This can be considered a problem, as a notable proportion of payments

<sup>4</sup> The BoF-RTGS, as expressed in its name, is a real-time gross settlement system providing a real-time system under which each payment is handled individually.

handled by TARGET are significant either in terms of systemic risk, or to the banking sector in general, or otherwise significant from the banking sector's customers' point of view.

The internationally important Euro1 and CLS systems,<sup>5</sup> in addition to the domestic interbank funds transfer systems (POPS, PMJ as well as the ATM and card transfer networks), have – with the exception of a few minor disruptions – operated satisfactorily.

#### **Payment system liquidity**

Under the TARGET system, central banks grant intraday credit, which is crucial to the smooth functioning of the system. Within the BoF-RTGS, there have been no problems with the adequacy of liquidity. On average, there has even been a significant amount of unused liquidity within BoF-RTGS, when measured by maximum use of intraday credit limits. It appears that the banks also take an active approach to anticipating their liquidity requirements, by taking advantage of the flexibility of the limit arrangements (*Chart 31*).

When granting credit, the central banks require adequate collateral and have defined what constitutes eligible asset material. Over the medium term this material changes, meaning that banks have to adjust accordingly.

<sup>5</sup> The Continuous Linked Settlement (CLS) system foreign currency settlement system, through which FX transactions will be settled using simultaneous crediting and debiting in the books of the CLS bank.

In value terms, transactions, and thus liquidity needs, in BoF-RTGS tend to concentrate quite heavily at certain hours of the day due to the timetables of the key settlement

systems (including CLS, the Finnish Central Securities Depository's systems and Euro1 transfers) (Chart 32).

The period of greatest activity has occurred in the mornings immedi-

Chart 31.

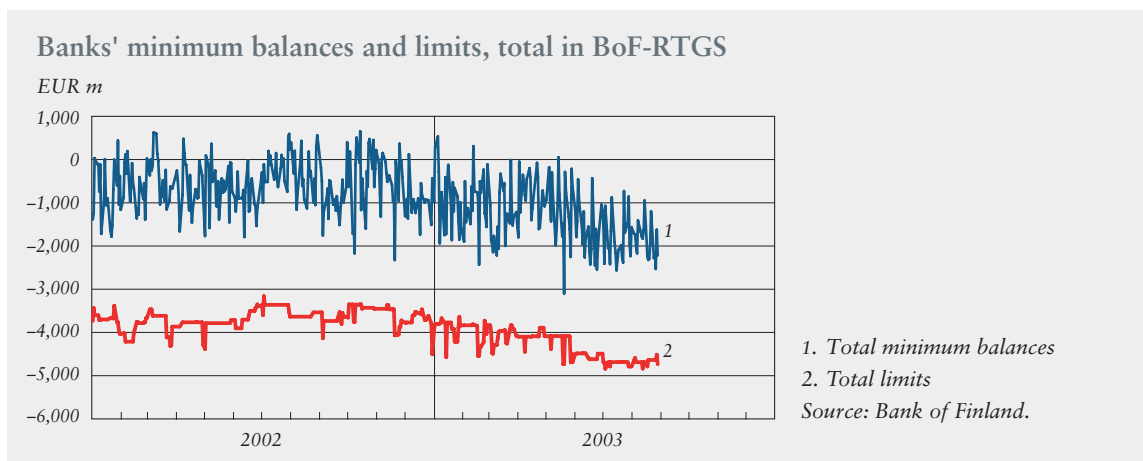
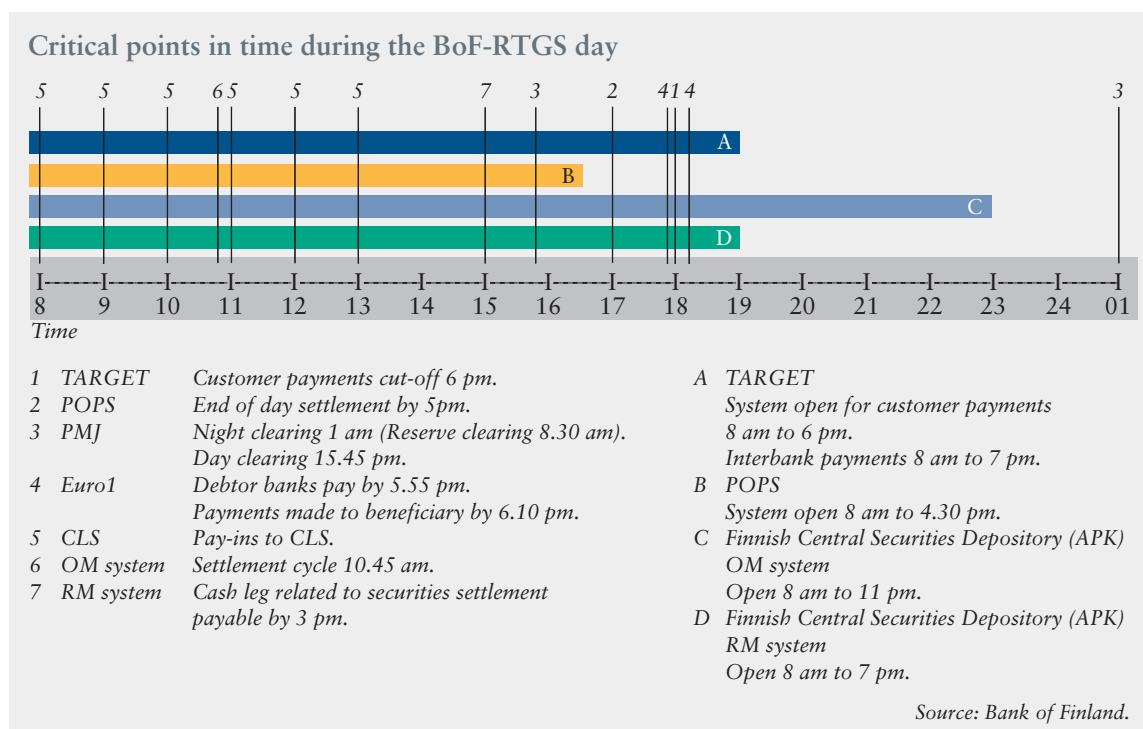


Chart 32.



ately upon BoF-RTGS start of business, and again in the middle of the day. There is very little fluctuation between months (*Charts 33 and 34*).

The Finnish systems are highly concentrated (*Table 12*), which results in one large counterparty's problems potentially being able to cause significant liquidity problems to the other participants. Concentration of

transaction settlement on certain times of the day and a small number of participants places considerable demands on the continuity and contingency arrangements of the systems and their participants.

#### Prospects for development

Payment systems are increasingly consolidated. A major reason behind

Chart 33.

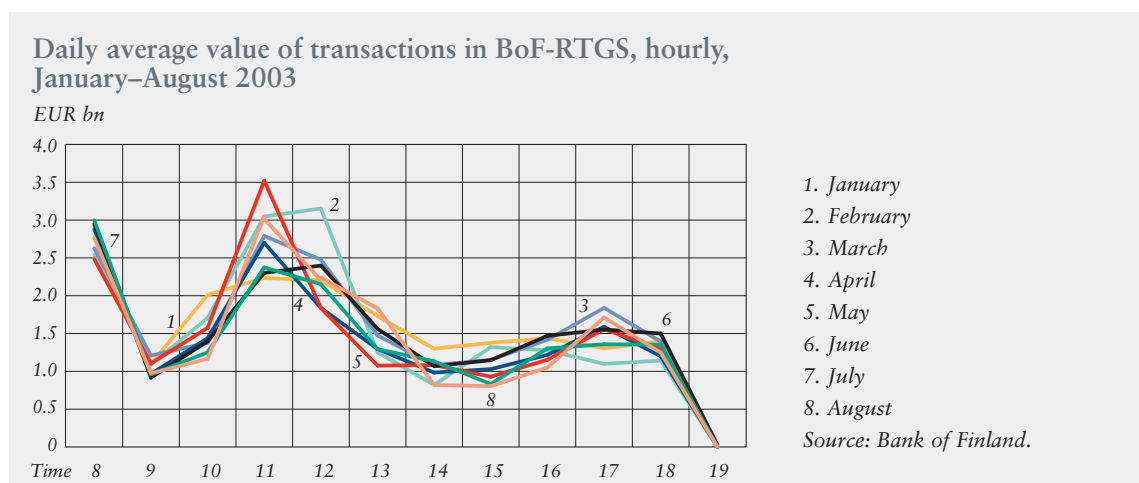
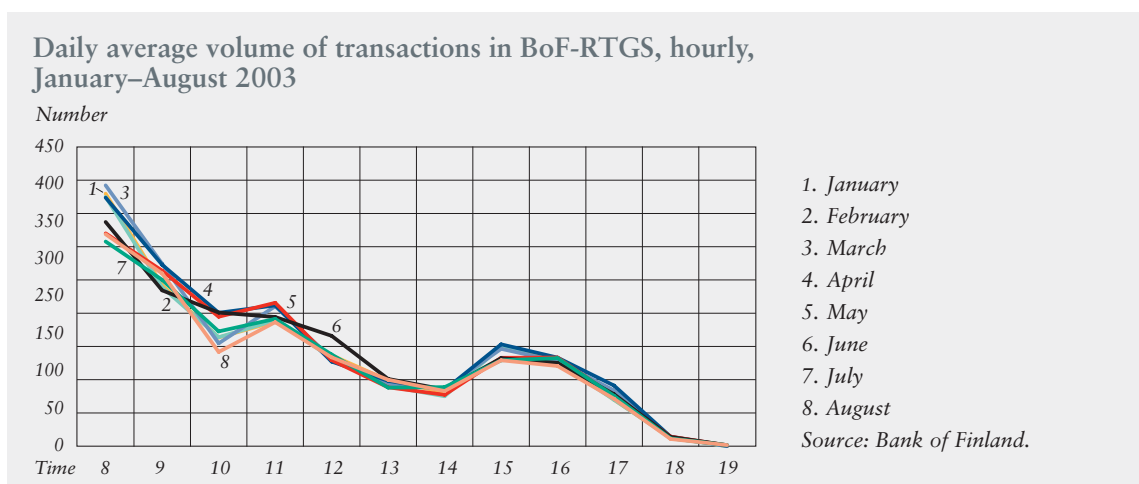


Chart 34.



this development has been the expansion and integration of the European Union and the hunt for cost savings.

The next generation of the TARGET system, TARGET 2, is a key project from the point of view of both the central banks and the functioning of the financial markets. The aim of the central banks is to create a cost-efficient and reliable system which responds to market needs more closely than the system available at the moment. The system is intended to be operational by the latter part of the decade.

TARGET 2 will be based on the National Central Banks' RTGS systems and a shareable platform for processing the RTGS payments of those countries that will not retain their own systems in the future. According to the Governing Council of the ECB, those RTGS systems that do not cover their costs according to the commonly agreed principles are to be phased out within four years of the introduction of the next generation system. In analysing cost-recovery, a public good factor will be taken into

account in order to include in the calculation the positive externalities generated by TARGET – such as reduction of systemic risk.

The planning of TARGET 2 is well under way. The development process aims to take the key user requirements into account. For reasons of competition, the central banks cannot subsidise TARGET 2, with the exception of public good. Thus the core services, the cost of which must be borne by all participants, must be carefully defined. This constitutes one of the key elements of the project at this stage.

As TARGET 2 is not due to commence operations for several years, the central banks must ensure the operational reliability of the existing system. This means paying particular attention to the successful processing of systematically important time-critical payments, in spite of the concentration of development resources on the TARGET 2 project.

The Bank of Finland must also decide whether it will become a participant in the shareable platform im-

Table 12.

Concentration and netting ratio of transactions in Finland, 2002			
	PMJ	POPS	BoF-RTGS
Five biggest market participants' share of transactions by value, %	99.4 <sup>1</sup>	92.2 <sup>1</sup>	81.3 <sup>2</sup>
Five biggest market participants' share of transactions by volume, %	99.4 <sup>1</sup>	97.7 <sup>1</sup>	81.2 <sup>1</sup>
Netting ratio, %	49,.0	Not available	Not applicable

<sup>1</sup> Aktia, Nordea, OP Group, Sampo, SHB.

<sup>2</sup> Nordea, OP Group, Sampo, SHB, Finnish State Treasury.  
Source: Bank of Finland.

mediately or whether it will keep and continue developing its own individual RTGS. In making this decision, the Bank must take into account many factors, including cost aspects as well implications regarding the service level to banks. It must also look into the effects of the decision from the perspective of crisis management. As the final choice will also affect the banks, their opinions will bear on the decision-making process. The decision itself is likely to be made in a year's time.

From the point of view of retail payment systems, the biggest problem is the inefficiency of cross-border payments, and cross-border credit transfers in particular. This inefficiency is seen as hindering cross-border trade and could have a negative effect on the reputation of the euro, as the citizens of the euro area have expectations of being able to make their cross-border payments as rapidly and as cheaply as their national payments. Because of the Regulation laid down within the EU, banks have had to reduce the charges made on cross-border payments. Despite this, the actual cost of making cross-border payments has remained the same, and will do so until banks are able to bring about cost reductions through greater efficiencies in their payment systems. Once the banks are able to improve the payment systems they will be able to bring about the required cost reductions, but the near future will continue to see banks in-

curing losses in cross-border payments. In order to reduce these losses, banks will have to apply cross-subsidisation and possibly find themselves making some degree of upward price adjustments to national credit transfer tariffs. The former has the effect of reducing pricing transparency, while the latter could damage the reputation of the euro. However, it remains clear that the Regulation has the effect of eliminating pricing-related obstacles to cross-border trade, and it can thus be regarded as important to the smooth functioning of the internal market. The Regulation also motivates banks to increase the efficiency of their payment systems and improve their interoperability at EU level, which then serves the interests of all involved.

The EU banking sector responded to the challenges of the Regulation by establishing a joint forum, the European Payments Council (EPC), through which came the creation of a comprehensive plan to improve the transmission of retail payments. This SEPA (Single Euro Payments Area) initiative contains plans for standardisation that would enable the straight-through-processing of payments<sup>6</sup> as well as plans regarding card payments and mobile telephone payments in addition to more general developments in electronic payments. The initiative also covers the establishment of a

---

<sup>6</sup> These include the International Bank Account Number (IBAN) and the Bank Identifier Code (BIC).

Pan-European Automated Clearing House (PEACH). The banking sector believes these plans will be completed in their entirety by 2010, with clear results visible already well before that. Successful completion of the initiative should see a considerable improvement in cross-border payments.

The SEPA project is a welcome development, but is not without its problems. One of the most significant is in the nature of the European Payments Council's decisions, in that they are only recommendatory in nature, and that the EPC does not possess the judicial powers to force individual banks to implement its decisions. What is certain is that the success of the SEPA project will require the full input of the entire banking sector. The pan-EU clearing house project (PEACH) can also be considered a potential source of difficulties. For example, it is still uncertain whether the project will be able to achieve critical mass. Furthermore, problems may flow from the monopoly position of PEACH as a European Union-wide entity, affecting both the pricing and service levels provided. Thus, the banks should pay particular attention to the governance structure and decision-making body of PEACH.

In order to achieve critical mass, the European Payments Council has set itself the goal of having the credit transfers, including national transfers, processed through the new EU automated clearing house, starting with those countries that currently do not

have a national automated clearing house. Finland is one of these countries, but it cannot be taken for granted that Finland will adopt such a system, as it already has highly efficient retail payment systems in operation. Banks operating within Finland must decide to what degree they wish to preserve these national retail payment systems, or whether they wish to transfer over completely to using the new clearing house. The Bank of Finland takes the view that, in deciding this issue, the banks should take into account not only the system's cost efficiency, but also its availability to both individual users and society as a whole. The possible transfer to using a new clearing house must not incur even the slightest weakening of the service levels currently provided by existing national payment arrangements.

### Securities clearing and settlement systems

The Finnish Central Securities Depository (APK), which is nowadays part of the HEX Group, has since 1997 played a central role in providing key securities clearing and settlement systems relevant to monetary policy implementation and domestic financial stability. As a consequence of structural changes, post-trading activities are now handled by the HEX Integrated Markets division of the merged company OMHEX (*Box 4*). The merger represents an important development in terms of both reliabil-

Box 4.

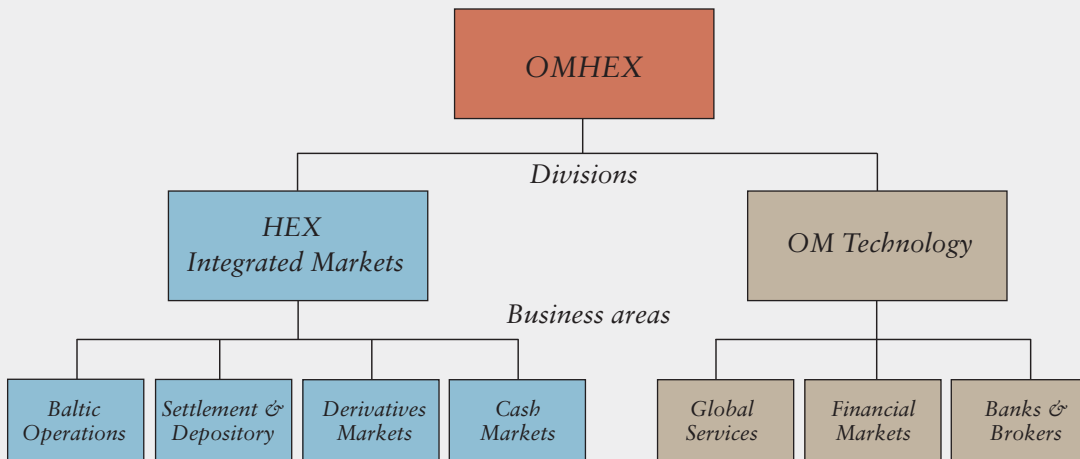
### OMHEX merger

The Swedish company OM and HEX's Finnish and Baltic area operations were merged on 4 September. Shares of the new company, OMHEX, are quoted on both the Helsinki and Stockholm stock exchanges. The new company's business operations are divided between two companies (Chart): OM Technology

and HEX Integrated Markets. The Helsinki-based HEX Integrated Markets is responsible for the Estonian, Finnish and Latvian central securities depositories, as well as the marketplace operations of the Stockholm stock exchange and HEX. OM Technology provides products and auxiliary services relat-

ed to transactions technology. The ownership reorganisation – aimed at efficiency gains – will have an impact on many of the technological solutions, including trading and post-trading systems, used in Finland and the relevant Baltic States.

### OMHEX organisation chart



Source: OMHEX AB.

ity and efficiency, and also with regard to regulation, supervision and oversight. To date, clearing and settlement systems have been reliable, but numerous ongoing projects are aimed at enhancing their efficiency.

### Operational reliability

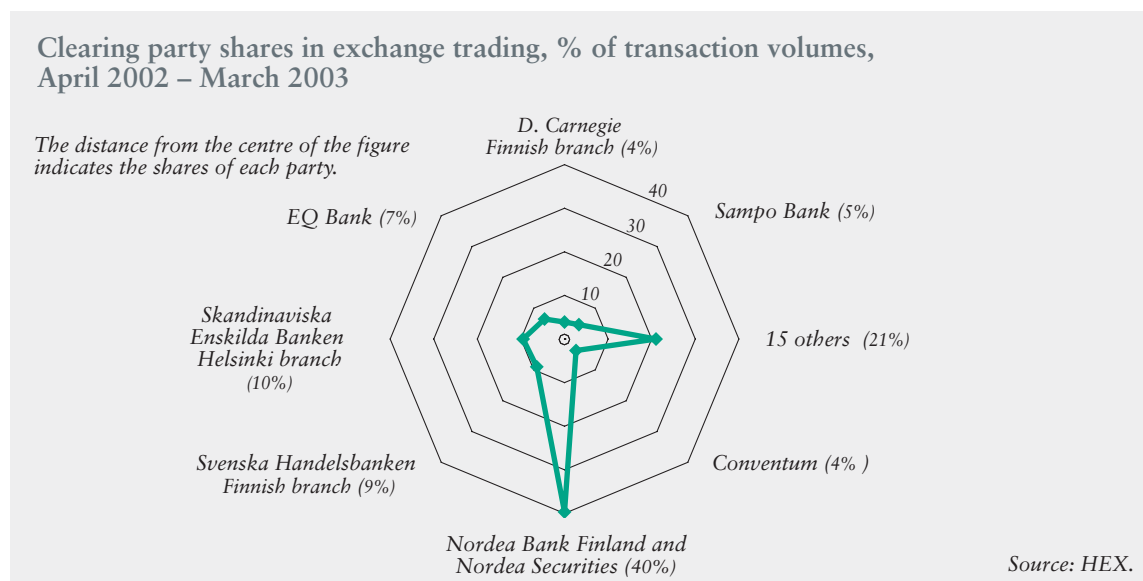
As part of its work within the ESCB, the Bank of Finland conducts an annual assessment of the Finnish securities clearing and settlement systems used by the Eurosystem against commonly agreed principles. The most recent study focused on the APK's system for debt instruments, in which the Bank of Finland's collateral assets are registered. While there have generally been no major problems regarding Finland's securities infrastructure, it can hardly be efficient to maintain and operate several parallel systems, as is the current practice. The links

approved for Eurosystem collateral transfers between central securities depositories are assessed periodically using the same criteria, albeit these links have been sparsely used so far.

The reliability and resilience of clearing and settlement systems is based largely on careful design and construction, which enable the elimination or containment of risk realisation losses. Due to the cyclical nature of securities clearing and settlement operations, many of the associated risks recur periodically, at least once a day. For example, the credit risks between clearing parties that naturally arise in the settlement process are obviated in Finnish systems by delivery of securities against payment in central bank money.

Stock exchange trades have generally been executed within the allotted time (average success rate for the

Chart 35.



last 12 months: 99.35%). The availability of clearing and settlement systems has also been high, although there have been some disruptions in communication linkages. However, continuity and contingency planning has generally been adequate to ensure customers a high level of service. Management of national disturbances has developed in the course of dealing with multifaceted disturbance situations, although effective tools for controlling and managing operational risks are, as yet, still only at the drawing board stage, both in Finland and globally.

The fundamental operational challenge still facing the Finnish securities infrastructure is the high degree to which post-trade processing has become centralised (*Chart 3.5*). Payment data on clearing parties also suggests a high degree of concentration when measured by the value of settlement transactions, although an exactly corresponding breakdown by value is not available from the securities settlement systems. Serious problems among the key parties would disrupt completion of the clearing and settlement process.

In the context of revamping their national infrastructure, US supervisory authorities have defined a key system participant as one that regularly clears at least 5% (in value terms) of all transactions.<sup>7</sup> The systems provided by such key financial institutions are required to be exceptionally resilient.

<sup>7</sup> Interagency Paper on Sound Practices to Strengthen the Resilience of the U.S. Financial System. 7 April 2003.

European authorities are presently drafting minimum requirements for the reliable and efficient operation of securities clearing and settlement systems. These are to apply to both national and international central securities depositories as well as key market participants involved in post-trading activities. Thus, partial responsibility for the reliable and continuous performance of APK systems will also rest with the clearing parties and custodian banks.

The new requirements will not necessarily eliminate problems related to dispersed responsibility, especially in respect of outsourced services and certain jointly owned network-based systems. In a worst case scenario, such problems can obstruct or prolong the resolution of disturbances, in which case some participants' settlements may be delayed or even prevented. When these situations get out of hand, some participants may experience liquidity problems and the whole system can be put at risk.

The merger between OM and HEX can be seen as a positive development in terms of system reliability, as one of the aims is to take advantage of OM's high-level technological know-how in HEX's Finnish and Baltic area operations. However, before new projects are launched, those in progress should be brought to completion in a controlled manner. A primary task for this year is to replace – again in a controlled manner – the present equities clearing and settlement

system (referred to as the OM system) and auxiliary services with a new clearing and settlement system (HEXClear). In the current operating milieu, too little attention has been paid to Finnish systems for handling bonds and money market instruments. Another priority should be to combine all instruments in the same clearing and settlement system and a technically unified national register.

At present, there is only one settlement cycle a day in the equities clearing system. The associated settlement risk is borne by the clearing parties, since the APK does not guarantee trade execution before covering funds are transferred. Since this risk is well understood, a clearing fund has been established to cover possible losses. However, it is difficult to accurately predict the magnitude of such losses and hence difficult to judge the adequacy of the fund. The change-over to the HEXClear system will reduce these risks or at least give the APK more time to resolve any problems that may arise. Notwithstanding the existence of the fund, in an extreme situation the APK could still be forced to bear some of the risk with the support of its parent company.

The HEXClear system will reduce the risks involved in equities clearing and settlement because the daily schedule will be more flexible than before. Even though the DVP requirement ensures simultaneous delivery of securities and payments, it does not obviate all effects on other

system participants in the event that a single clearing party is suddenly short of liquidity. On the other hand, the flexibility afforded by the HEXClear system and revised market practices should not be allowed to result in a general delay in clearing time on the settlement day. Therefore, the authorities, in designing new regulations, will seek to incorporate incentives favouring payment and securities transfers as early in the day as possible. The Bank of Finland and the Financial Supervision Authority are monitoring the launch of the new system and the associated risks.

Though subjected to various user tests over the last few months, the technological solutions entailed in the new equities clearing and settlement system give rise to a number of technological risks. One task that may prove to be particularly challenging is the blending of the new technology with some large participants' older-generation internal systems based on batch processing.

Marketplace structures and the related operative risks vary across Europe. The risk arising from the uncertainty of delivery of cash and corresponding securities can be shifted from transacting parties and the central securities depository to a central counterparty (CCP).<sup>8</sup> In most of the large marketplaces, clearing of on-exchange

<sup>8</sup> The CCP is positioned between the transacting parties – as seller vis-à-vis original buyer and buyer vis-à-vis original seller – and guarantees execution of the transaction. Thus, each of the original transacting parties has a contractual relationship with the CCP instead of with the other party.

and OTC trades is now handled via CCP services. In Finland, as in the other Nordic countries, such a change has not yet taken place in the cash markets, although some outline plans have been sketched in. Hence, in the Nordic countries transacting parties and custodian banks currently bear the credit risks associated with globally operating remote members.

Increasing integration and planned technological projects are improving conditions for making use of CCP services in the Nordic countries and the Baltic States. The announced intentions of HEX and OM to offer CCP services could attract and facilitate entry for new participants in these markets. Because a CCP bears members' market risks, which shift rapidly, and sizeable credit risks, it is crucial for the smooth overall operation of the financial system that an institution providing CCP services be aware of the risks involved and that it give high priority to risk control,

based eg on stress testing aimed at improving predictability. Adopting a CCP arrangement would bring changes to Finland's market culture, as the market participants have little experience of direct membership in CCPs in other marketplaces.

#### System liquidity

The cash leg related to the settlement of debt securities, ie the RM system, is executed on a credit transfer basis between the central bank accounts of the APK and those of the account operators, ie direct clearing parties. The same principle applies to the forthcoming HEXClear system. At present, the account operators themselves execute the liquidity transfers in the RM system and the APK effects the net payouts resulting from the equities clearing process. In recent months, liquidity transfers to the APK systems have accounted for about 2–5% of BoF-RTGS payments, in both value and volume terms (*Table 13*).

Table 13.

Payment inflows to execute the cash leg by related to securities settlement vs total Bof-RTGS payments, Jan–Aug 2003						
	EUR bn			Number		
	RTGS	OM + RM	%	RTGS	OM + RM	%
Jan	456	14	3	35,060	1,026	3
Feb	435	22	5	32,723	1,104	3
Mar	464	15	3	36,328	1,142	3
Apr	401	14	4	35,511	994	3
May	428	19	4	34,873	1,046	3
Jun	464	10	2	35,373	987	3
Jul	467	11	2	36,834	1,032	3
Aug	440	10	2	32,988	964	3

Source: Bank of Finland.

Account operators' intraday use of liquidity is closely tied to the characteristics of the clearing and settlement systems and the APK clearing schedules (Charts 36 and 37). Payments both to the settlement system and from it to those account operators who had a net credit position have gone smoothly.

It is critical that payments to the system go smoothly in the current equities clearing system because these

can be executed only once a day. For this reason, operative disturbances at the time of payment execution can cause delays in participants' payment transactions (Chart 36). For the most part, it has been possible to execute payments on schedule, by 10.30 am, although, as the chart indicates, in the early part of the year payments intended for OM clearing were slightly delayed on a few occasions.

Chart 36.

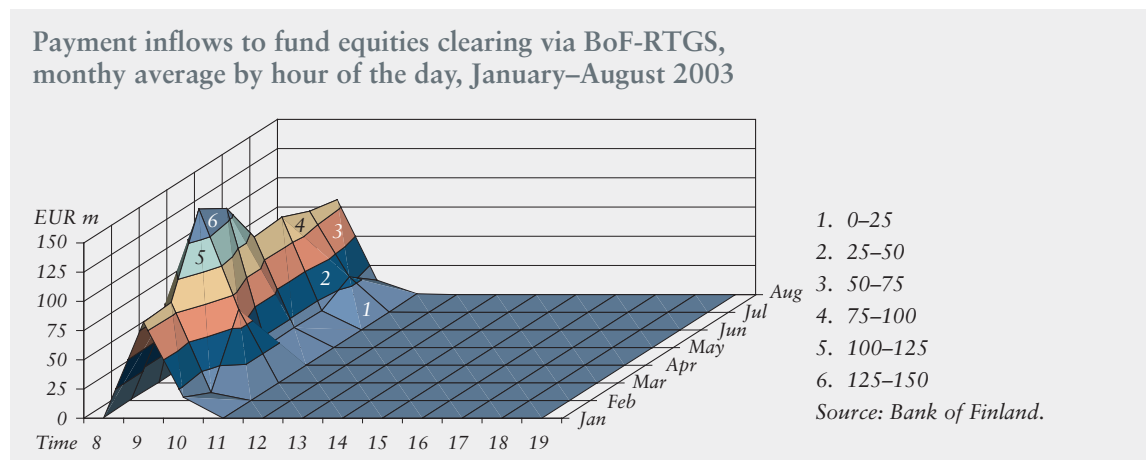
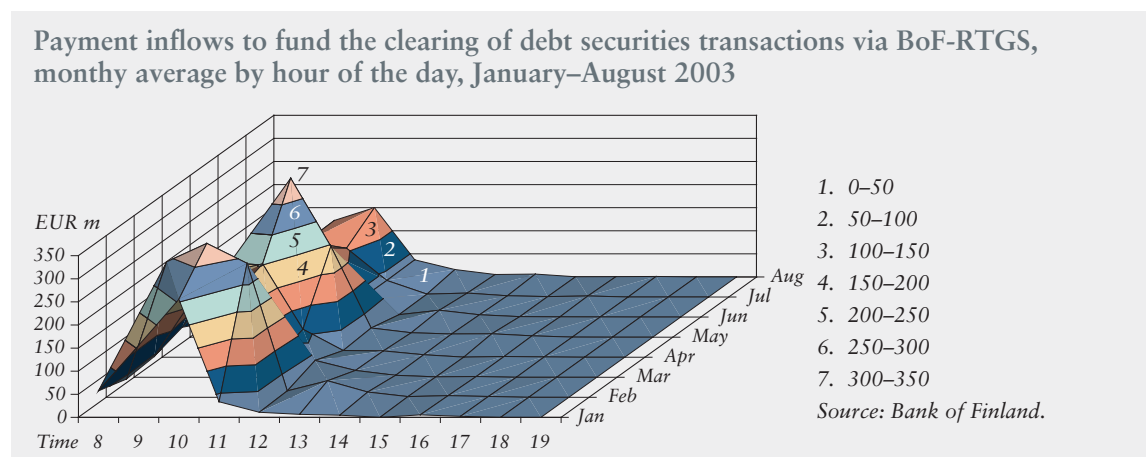


Chart 37.



The bulk of payments for settlement of money market transactions are also executed in the morning (Chart 37). Operative disturbances in information systems may delay the normal accumulation of payments in the settlement system, as occurred on 14 February (Chart 38), but as a rule nearly all payments are executed by 3 pm on the settlement day. In the APK it is technically possible to transact up until 7 pm, when necessary.

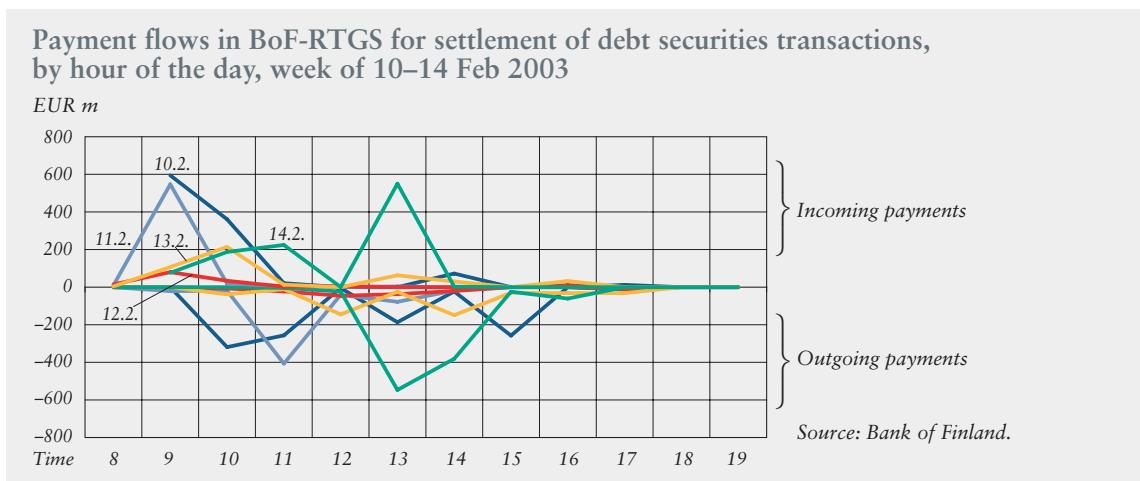
Introduction of the HEXClear system will enable account operators to manage their liquidity more flexibly and increase the stability and efficiency of equities clearing and settlement. Due to changes in the clearing process, however, it is still difficult to estimate the effects of the new system on total liquidity needs. To ensure adequate liquidity, great care has been taken in studying liquidity guarantee arrangements, including consultations over the possible use of Sweden's new sys-

tem as a model. The APK is responsible for the operative reliability of the chosen model and the related risks.

The APK and its account operators are obliged to use central bank money in liquidity transfers. In many European countries clearing parties' intraday liquidity management has been made more flexible via new clearing processes and related night-time settlement effected in central bank money. Similar changes that would increase the flexibility of the overall system are not currently planned in Finland, as clearing and settlement have functioned smoothly within the present opening hours of BoF-RTGS.

The fundamental aspirations behind the merger between the Swedish OM and HEX may affect the clearing parties' intraday liquidity needs, as may future system updates. Participants' requirements are bound to increase, inter alia because of a possible

Chart 38.



increased attractiveness of the market area. The national central banks, as service providers for the new group structure, will have to be prepared for increased operative needs.

#### **Development prospects**

The OMHEX merger, which is designed to improve infrastructural effectiveness and reduce costs, is, as referred to above, also aimed at more comprehensive integration of Nordic and Baltic area securities exchange and post-trading activities. Nevertheless, real efficiency gains can be achieved only through widespread cooperation. At present, trades must be settled in their respective national central securities depositories. The biggest single challenge is that OMHEX must currently do its development work without the input of the VPC, the Swedish equivalent of the APK. The VPC's absence also creates the risk that, with the possible liberation of investment and post-trading services over time and the resulting right for investors to choose their settlement location, a large proportion of the overall post-trading activity could move out of the OMHEX Group's systems. Thus, politically desirable competition would increase the risks associated with investment in post-trading systems.

Previously, operators of European marketplaces viewed Helsinki – after expansion into the Baltic area – as a good launch pad to the northern European markets. However, due to extensive pressures to restructure

their home market operations the key operators had to focus on their own often lengthy bilateral negotiations. The lack of progress among these players generated as a side effect uncertainty over the direction in which the HEX Group should be developed. Among the most positive factors so far regarding the OMHEX merger are the abating of confusion over structural developments, and improvements in competitiveness and development prospects in the northern European markets.

The merger includes plans for operative and managerial centralisation of the Swedish OM's operations and HEX's operations in Finland and the Baltic area, as well as the shared use of common systems. The focal points of development have for the most part been clarified, whereas organisational changes are still in progress. The challenges to completion of the ongoing projects are formidable, due primarily to the vast volume differences across the new company's post-trading services in different countries and outstanding legislative discrepancies. HEX has had to reallocate its already scarce key resources to plan and implement the changes required by the merger. At the same time its Baltic operations, which were undergoing a development phase, seem to have remained somewhat detached from the overall plan. Realisation of the merger plan will require close monitoring and a significant development input in connection with possible technical

problems in the Latvian and Estonian central securities depositories and their as yet uncompleted continuity and contingency plans.

The absence of CCP services has significantly weakened prospects for the Nordic-Baltic region as a marketplace. HEX itself carries a strategic risk, while the market participants may be bearing partially hidden risks vis-à-vis their least well-known remote members. The reallocation of resources among tasks associated with integration and structural reorganisation, and the related cost savings, may nonetheless enable the marketplace to develop otherwise highly expensive CCP services.

### Developments in regulation and oversight, and the role of authorities

One of the Bank of Finland's statutory tasks is to promote the reliability and efficiency of payment and settlement systems and participate in their further development. The available tools include oversight, operative participation in payment systems, development of regulation, oversight and crisis management methods (in cooperation with the Eurosystem and other authorities) and cooperation with market participants.

Oversight procedures are under constant development, inter alia so as to be increasingly based on global or euro area standards. Central banks evaluate private systems against these standards and, if shortfalls are identi-

fied, require corrective changes. They also apply, at the minimum, the same principles to their own systems.

One example of a global standard for payment systems is the Core Principles for Systematically Important Payment Systems drafted by the G10's Committee on Payment and Settlement Systems (CPSS). In 2001, the IMF carried out assessments of TARGET as a whole, Euro1, and the Bank of Finland's TARGET component. The conclusion was that the last two met the principles fully, while TARGET as a whole broadly met them but was in need of some further development.<sup>9</sup> EU area central banks have also evaluated their own TARGET components, and the findings are to be published in due course.

Examples of EU and euro area standards are the *Oversight standards for euro retail payment systems* and the report *Electronic money system security objectives* developed by the Eurosystem. The aim is to assess retail payment systems in terms of these standards during 2004.

In Finland, a working group on the Act on the Bank of Finland has issued a report containing a proposal on the Bank's right to issue regulations on details regarding the management, internal monitoring and risk control of payment and settlement systems.<sup>10</sup>

<sup>9</sup> The IMF report is posted on its website ([www.imf.org](http://www.imf.org)).

<sup>10</sup> Developments in domestic regulation are covered above in the chapter on the domestic operating environment.

The European Commission is preparing a new legal framework for payments in the internal market. Besides the creation of a single payment area, the aim is also to promote more uniform competitive conditions and stability. The Commission intends to issue during the course of 2003 a communication containing the main principles of the legal framework and proposals for the texts of many of the regulations.

Central banks have a natural role to play in developing the payment systems that they operate and are also well placed to promote the development of private systems. While doing so, they serve as intermediaries in promoting and strengthening cooperation. Such efforts are beneficial, because a prerequisite for optimal payment system solutions is that participants are able to network and cooperate effectively, which can be difficult, since they also compete with each other.

A major challenge for Finland's infrastructure is posed by the need to organise the oversight and supervision of OMHEX. In contrast to the banking sector, the concept of consolidated oversight and supervision does not exist in this area, nor are there any directives that would promote cooperation. Particularly problematic is the fact that the Swedish parent company is not presently subject to any kind of public supervision. One might well ask how oversight and supervision can be organised so as to ensure the authorities are able to exchange information and manage pos-

sible crises. This might well require legislative changes, as was the case in the banking sector. For this reason, it is essential that Finnish and Swedish authorities conclude a legally binding MOU addressing the multidimensional question of division of oversight and supervisory responsibilities vis-à-vis the new company. In principle, arrangements like those concerning oversight of the Euroclear group could be introduced into the central banks' oversight of securities clearing and settlement systems. It would also be natural to include the concerned Baltic area authorities in such a cooperative oversight scheme.

With integration of the financial markets, it has become clear that the infrastructure for securities clearing and settlement is in need of extensive development. The importance of this has been noted in reports produced for the European Commission that emphasise the potential efficiency gains from further integration. Analyses have also been carried out on the significant benefits to the real economy that would derive from an upgraded infrastructure. National central securities depositories have encountered criticism concerning their modes of operation, as their present bilateral linkage models have been too slow to generate the expected efficiency gains. In particular, the reports of the Giovannini Group,<sup>11</sup> set up to ad-

<sup>11</sup> Cross-Border Clearing and Settlement Arrangements in the European Union (November 2001) and Second Report on EU Clearing and Settlement Arrangements (April 2003).

vise the Commission and propose practical solutions to improve market integration, are adding to the pressure for ownership restructuring in this area, and the authorities may well decide to intervene using their regulatory powers.

On the other hand, regulation, supervision and oversight in the area of securities clearing and settlement systems follows on the heels of a great deal of prior development in payment systems. The ESCB and the Committee of European Securities Regulators (CESR) are presently working on European regulations on the basis of globally oriented recommendations by the CPSS and the International Organization of Securities Commissions (IOSCO). Previously published recommendations have focused quite narrowly on the reliability of central securities depositories, registers and settlement systems. The new standards additionally pay more attention to infrastructural service providers' risk profiles, transparency, and governance. On the other hand, authorities have attempted to deepen the concept of a system that is significant in terms of systemic risk. European regulations are also specific as regards oversight and the responsibility of public authorities to work together. Market participants have been consulted on the new European standards and the results are currently being analysed.

Another problem that has surfaced is that recommendations on settlement systems have not dealt as thoroughly as necessary with CCPs, whose use is spreading. For this reason, the G10 countries are continuing work on the above-mentioned regulatory proposals as a means of improving global standards for CCPs' risk management. Among the topics being scrutinised are entry criteria for such systems, financial resources, legal risks, and means of collecting margin-call payments. These standards, too, will eventually be presented for comment to market participants.

# Organisation of the Bank of Finland

15 October 2003

## PARLIAMENTARY SUPERVISORY COUNCIL

**Olavi Ala-Nissilä**, Chairman, **Eero Heinäluoma**, Vice Chairman, **Ilkka Kanerva**,  
**Arja Alho**, **Janina Andersson**, **Sirkka-Liisa Anttila**,  
**Mari Kiviniemi**, **Martti Korhonen** and **Ben Zyskowicz**

Anton Mäkelä, Secretary to the Parliamentary Supervisory Council

## THE BOARD

<b>Matti Vanhala</b> Governor	<b>Matti Louekoski</b> Deputy Governor	<b>Sinikka Salo</b> Member of the Board	<b>Pentti Hakkarainen</b> Member of the Board
----------------------------------	---	--	--

Heikki T. Hämäläinen, Secretary to the Board

## DEPARTMENTS AND OTHER UNITS

<b>Economics</b> Antti Suvanto	<b>Financial Markets</b> Heikki Koskenkylä <i>Harry Leinonen</i> <sup>*)</sup>	<b>Research</b> Juha Tarkka <i>David Mayes</i> <sup>*)</sup>	<b>Market Operations</b> Pentti Pikkarainen
<b>Communication</b> Antti Juusela	<b>Payment Instruments</b> Urpo Levo	<b>Statistics</b> Martti Lehtonen	<b>Payments and Settlement</b> Mauri Lehtinen
<b>International Secretariat</b> Kjell Peter Söderlund <i>Olli-Pekka Lehmussaari</i> <sup>*)</sup>	<b>Personnel</b> Aura Laento <i>Anton Mäkelä</i> <sup>*)</sup>	<b>Development and Budget</b> Terhi Kivilahti	<b>Information Technology</b> Armi Westin
<b>Internal Audit</b> Taina Kivelä	<b>Legal Affairs</b> Arno Lindgren	<b>Publication and Language Services</b> Antero Arimo	<b>Administration</b> Esa Ojanen
	<b>Management Secretarial Staff</b> Heikki T. Hämäläinen	<b>Institute for Economies in Transition</b> Pekka Sutela	<b>Security</b> Veli-Matti Lumiala

<sup>\*)</sup> *Adviser to the Board*

Branch offices: Kuopio, Oulu, Tampere and Turku.

The **Financial Supervision Authority** functions as an independent body in connection with the Bank of Finland, with Kaarlo Jännäri as Director General.

**Suomen Pankki**

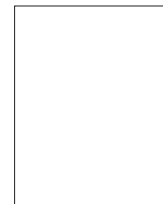
**Bank of Finland**

PO BOX 160, FIN – 00101 HELSINKI, FINLAND

Tel +358 9 1831, fax +358 9 174 872, email publications@bof.fi

**Subscriptions to the Bank of Finland Bulletin and changes in address details**

<b>Old address details</b>
Company
Name
Address
<b>New address details/subscriptions</b>
Company
Name
Address
New subscription <input type="radio"/> Cancellation <input type="radio"/> Number of copies



SUOMEN PANKKI  
BANK OF FINLAND

PO BOX 160  
FIN – 00101 HELSINKI  
FINLAND

