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# BANK OF FINLAND

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# BULLETIN

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2001 • Vol. 75 No. 1



- Monetary policy and economic outlook
  - Challenges facing the Finnish labour market
  - Systemic risks in the Finnish financial markets
  - The Financial Supervision Authority and international cooperation
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**T**he slowdown in the US economy has clouded the prospects for the world economy. Signs of a marked downturn in US economic activity first emerged towards the end of 2000, and the view that the US economy was growing at a slower pace than originally expected gained strength in the opening weeks of 2001. The Federal Reserve cut the federal funds target rate by 50 basis points in early January in between the regularly scheduled meetings of the Federal Open Market Committee. The target rate was lowered by a further 50 basis points at the end of the month. Great uncertainty surrounds the outlook for the US economy in the near term and it is unclear how severe and long the slowdown will be.

The US economic slowdown has implications for the entire world economy. The effects are already visible in many emerging Asian economies, which are fairly dependent on developments in the US economy. A key factor contributing to the weaker economic outlook for these countries has been a fall-off in demand for electronics products.

There was also a renewed slowdown in the Japanese economy in the final months of 2000, partly because of fading growth in the US economy. Besides external factors, the outlook for the Japanese economy is overshadowed by weak domestic demand, banks' non-performing loans and a large public debt. In February the Japanese central bank cut its discount rate in two steps by a total of 0.25 percentage point, lowered the target level for the overnight call rate by a small margin and announced measures aimed at supporting the smooth functioning and stability of the country's financial markets.

The direct impact of the slowdown in the US economy on growth in the euro area economy is likely to be less pronounced than in many other economic regions. Exports account for under a fifth of euro area GDP. The effects on the general level of confidence could be considerable, however. On the other

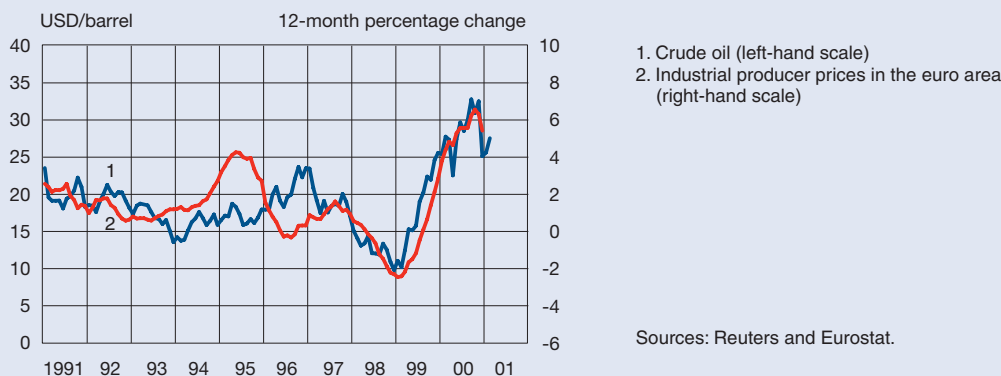
hand, planned tax cuts in several countries will help to boost domestic demand in the euro area in 2001 and 2002, and this could partly offset the weakening of growth of export demand.

Despite slowing, euro area inflation has remained above the ECB's price stability target. The fall in oil prices towards the end of 2000, which was partly due to the slowdown in the global economy, has helped to ease inflationary pressures. The strengthening of the euro has operated in the same direction. As a result, the risks to price stability in the medium term have become a little more evenly balanced in recent months. The Governing Council of the ECB has left the Eurosystem's official interest rates unchanged since the beginning of October 2000, and so the differential vis-à-vis official rates in the United States narrowed by one percentage point in January. Although the Eurosystem's official interest rates have not changed, market rates in the euro area have moved lower in line with expectations of a rate cut.

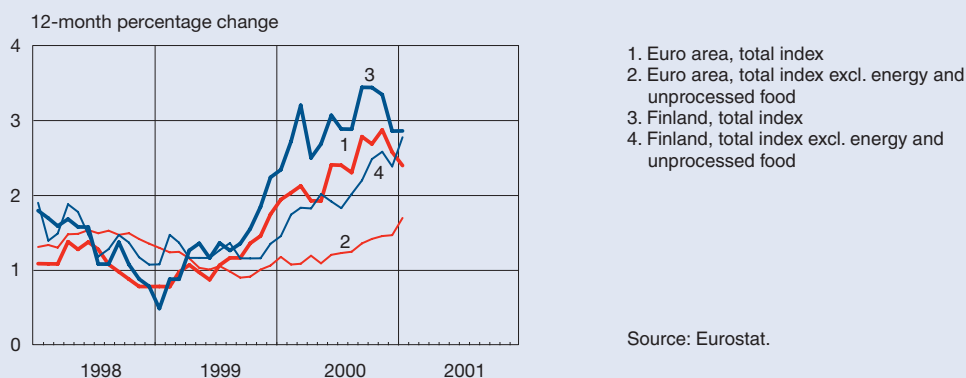
The Finnish economy continued to experience rapid export-led growth in the second half of 2000. Business expectations in the export sector weakened towards the end of the year, however, with the worsening in the world economic outlook. Export growth in 2001 is now expected to be lower than forecast by the Bank of Finland in the autumn. By contrast, household confidence has remained relatively good. Private consumption is likely to pick up this year more or less as forecast as a result of tax cuts and good wage growth. Overall, the Finnish economy seems set to continue growing at a fairly robust pace, albeit more slowly than was foreseen in the autumn forecast. On the other hand, the inflation outlook for Finland is somewhat better than envisaged in the autumn.

The great uncertainty concerning world growth prospects also makes it difficult to assess Finland's growth performance in the near term. Thus one cannot rule out the possibility that economic growth in

**Chart 1. Crude oil price and industrial producer prices in the euro area**



**Chart 2. Harmonized Index of Consumer Prices**



Finland will be noticeably weaker than forecast in the autumn.

The surplus in general government finances in 2000 was larger than forecast. Central government finances, in particular, benefited from rapid economic growth and companies' good earnings growth. A substantial proportion of the increase in the central government surplus was nevertheless due to one-off factors, such as options income and capital gains in connection with corporate restructurings, the probable reduction in which in 2001 and 2002 will weaken the financial balance of the central and local government

sectors. The growth of revenue will also slow as a result of tax cuts, the slower pace of economic growth and poorer prospects for corporate profitability.

The positive developments in central government finances in 2000 do not therefore mean that the surplus will persist. The scope for reducing government debt depends crucially on the fiscal stance adopted in the budget for 2002. A temporary increase in revenue should not be used as a justification for a further increase in spending, and failure to keep within agreed spending ceilings would jeopardize the strengthening of the central government's fiscal position.

## Inflation slowed in the euro area and Finland at the turn of the year

The rate of increase in consumer prices decreased in the euro area at the end of 2000, largely because of a sharp fall in oil prices (Charts 1 and 2). At its peak in 2000 inflation was running at an annual rate of nearly 3%. By contrast, there has been no slowdown in the annual rate of increase in consumer prices excluding energy and unprocessed food (Chart 2).

Measured by the Harmonized Index of Consumer Prices (HICP), euro area inflation will probably fall further in the course of the current year, if oil prices remain clearly below their peak level in the latter part of 2000 and the euro does not weaken again. But as apparently not all the effects of last year's fall in oil prices and the euro are yet reflected in consumer prices, this could slow the decline in inflation over the next few months. Rises in administered prices and changes in indirect taxation could also be factors maintaining inflation. In the longer term attempts to seek compensation in wage agreements for earlier rises in import prices could generate upward pressure on prices.

Largely reflecting the fall in energy prices, inflation has also slowed in Finland in recent months, measured both by the HICP and the national consumer price index (Chart 2). Contributing to the de-

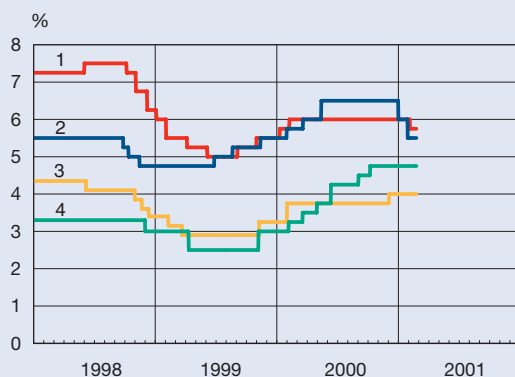
cline in CPI inflation has been a fall in house prices, in addition to lower oil prices. The annual rate of increase in CPI inflation slowed to 3.3% in January, almost one percentage point below its peak in autumn 2000.

Inflation in Finland will probably turn out to be a little lower this year than forecast by the Bank of Finland last autumn, if the price of oil remains clearly lower and the euro stronger than assumed in the forecast. Inflation is nevertheless likely to remain faster than in the euro area on average. Relatively buoyant domestic demand could generate upward pressure on services prices, so that the rate of increase in non-energy prices may not slow this year. Furthermore, inflationary pressures could be sustained by higher labour costs and the effects of the earlier rise in energy prices on housing costs and services prices.

## No change in euro area monetary policy but market interest rates have fallen

The Governing Council of the ECB has kept the Eurosystem's official interest rates unchanged since early last October (Chart 3). The minimum bid rate for the main refinancing operations is currently 4.75%.

**Chart 3. Official interest rates**



1. United Kingdom: base rate
2. USA: fed funds target rate
3. Sweden: repo rate
4. Eurosystem: main refinancing rate/minimum bid rate (German repo rate before 1999)

Source: Reuters.

## Box. Greece entered the euro area

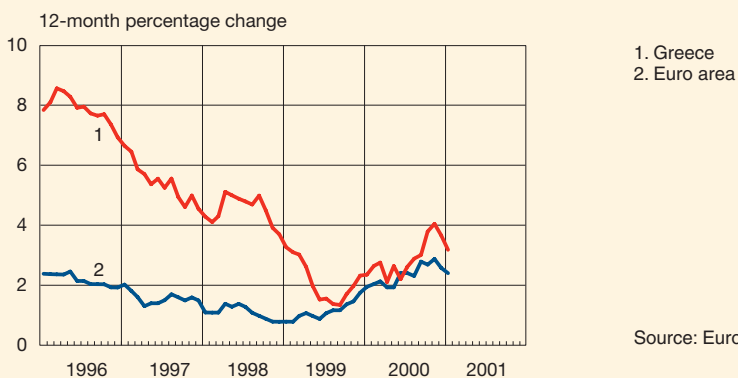
On 1 January 2001 Greece became the 12<sup>th</sup> EU member state to enter the euro area. At its meeting in June 2000 the Ecofin Council confirmed that Greece had fulfilled the necessary conditions for the adoption of the single currency. In the period between the Council's decision and the start of participation, the final preparations were made so that the Bank of Greece could be included in the Eurosystem. The Governor of the Bank of Greece has been a member of the Governing Council of the ECB since the beginning of 2001.

The entry of Greece into the euro area does not have major implications for euro area statistics

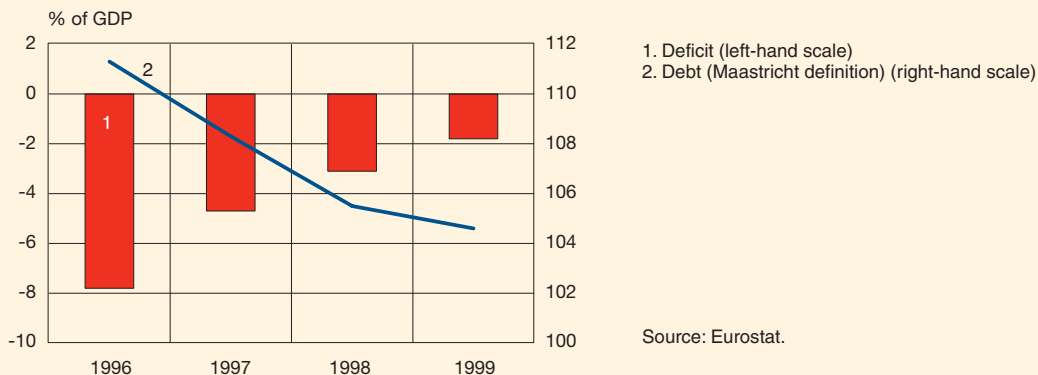
because of the small size of the country.<sup>1</sup> Euro area statistics cover the countries participating in the single currency in the particular period under review. Thus data referring to periods up to the end of December 2000 cover the euro area of 11 participating countries while data referring to periods from 1 January 2001 onwards also include Greece. For analytical purposes, however, historical data for the 11 euro area countries plus Greece for a number of key series are published in the ECB *Monthly Bulletin*.

<sup>1</sup> The statistical implications are discussed in the January 2001 issue of the ECB *Monthly Bulletin*.

**Chart 1. Harmonized Index of Consumer Prices in Greece and the euro area**



**Chart 2. General government deficit and debt in Greece**



**Chart 3. Greek interest rate differentials**



1. Short-term interest rate (3-month): differential vis-à-vis Euribor (comparable German rate before 1999)
2. Long-term interest rate (10 year): differential vis-à-vis comparable German rate

Source: Reuters.

One of the most significant achievements of Greek economic policy has been the lowering in the rate of increase in consumer prices from around 20% in 1999 to 2.5% in 1999 (Chart 1). Among the contributory factors were wage restraint, fairly tight monetary policy and a more stringent fiscal stance. Nevertheless keeping inflation under control will be a major challenge for Greek economic policy in the near term. In the second half of 2000 Greek inflation accelerated from well over 2% to about 4%. This was partly due to the rise in oil prices, which has a large impact in a country that is dependent on imported energy. Though the rate of inflation slowed in January 2001, it still exceeded the euro area average by a clear margin.

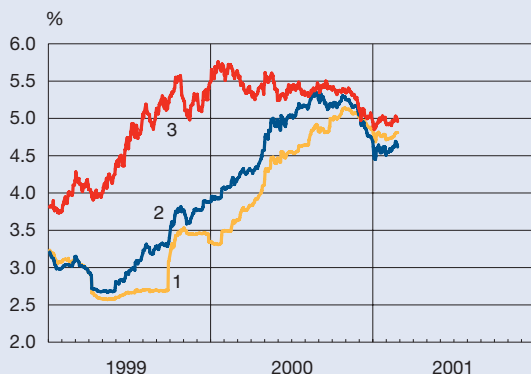
Another impressive economic achievement was a substantial reduction in the general government deficit in the 1990s (Chart 2). An important factor in this regard in recent years has been an increase in tax revenue as a result of a widening in the tax base and more effective tax collection. Also contributing to the consolidation of general government finances have been rapid economic

growth, privatization of a number of state-owned banks and lower interest rates.

Greek short-term interest rates have declined considerably over the last three years as the official interest rate has converged towards the euro area level. In 2000 the Bank of Greece lowered its official interest rate by a total of six percentage points. Long-term interest rates have also converged towards comparable euro area rates, and have been running at around 5½% so far this year (Chart 3). With the fall in interest rates in the latter part of the 1990s, the Greek government issued new bonds in large quantities, which helped to improve liquidity in the country's capital market.

A long-term aim of Greek economic policy is to maintain faster growth than in the euro area on average so as to reduce the gap in living standards in relation to other euro area countries. In 1999 real GDP per capita in Greece was about a third below the euro area average. At the same time the Greek price level can be expected to continue rising and to approach price levels in the more advanced euro area countries.

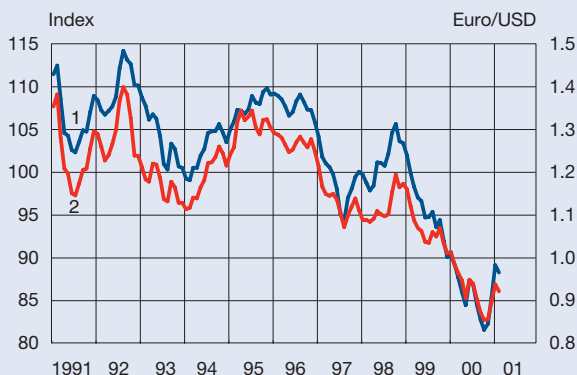
**Chart 4. Interest rates in the euro area**



1. 3-month Euribor
2. 12-month Euribor
3. Average 10-year government bond yield

Source: Reuters.

**Chart 5. Euro's effective exchange rate and US dollar – euro exchange rate**



1. Index, 1999 Q1 = 100 (left-hand scale)\*
2. Units of USD per euro (right-hand scale)\*\*

\* Before 1999 a trade-weighted index of the currencies of the euro area countries. An upward movement in the index represents an appreciation of the euro.

\*\* Prior to 31 December 1998, the rate for the ecu.

Source: European Central Bank.

Euribor rates rose until the end of October last year (Chart 4). After market expectations of an increase in official interest rates had receded and been replaced by expectations of a fall in rates, Euribor rates moved lower towards the end of the year, causing an inversion at the short end of the yield curve. Long-term government bond yields in the euro area also fell substantially towards the end of the year. Both short and long-term rates have remained fairly stable in the early part of the current year. In the United States, long-term interest rates have fluctuated more than corresponding euro area rates, reflecting nervousness in

equity markets and the great uncertainty about the growth prospects for the US economy.

The euro started to strengthen against the dollar towards the end of 2000 amid signs of economic slowdown in the United States (Chart 5). The euro has stopped strengthening in the first weeks of 2001, however, partly because of uncertainty about the economic outlook for the euro area. The euro's effective exchange rate in the early part of this year has been at roughly the same level as a year ago.

In mid-December the Governing Council of the ECB reconfirmed the existing reference value for the



growth of the broad monetary aggregate M3, namely 4½%. The annual rate of increase in M3 started to slow in the second half of 2000, and the three-month moving average of the growth of M3 declined to 5.0% in the months November to January. The growth of the most liquid components, in particular, slowed along with the rise in interest rates.

The rate of growth of loans to the private sector has remained strong in the euro area, even though it slowed slightly towards the end of last year. Contributing to the continued strong growth of lending to this sector has been financing of purchases of UMTS licences by telecommunications companies. In January the annual growth of loans to the private sector was 9.1%.

In the final quarter of 2000 the Finnish contribution to euro area M3 decreased and its annual rate of growth turned negative. This was mainly due to a fall in the outstanding amount of money market paper. The rate of growth of bank lending to the private sector has been notably slower than the average for the euro area. This is partly explained by the fact that Finnish firms have also borrowed from non-banking financial institutions in Finland and directly abroad. In fact, the stock of bank lending to non-financial corporations remained virtually unchanged in the second half of 2000. In contrast, the annual rate of growth in lending to households has remained rapid. The rate of growth in the stock of housing loans has stayed virtually unchanged since spring 2000 at around 10%.

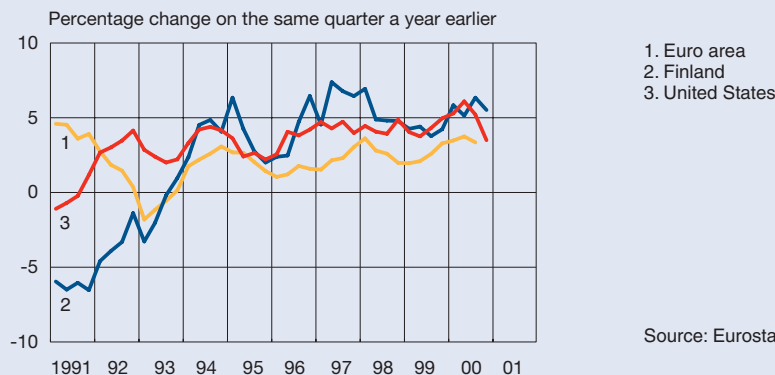
## Economic growth has slowed in the euro area

Towards the end of 2000 there were increasing signs of a slowdown in economic activity in the euro area. Already in the third quarter of the year the rate of growth of real GDP decreased slightly from the previous quarter (Chart 6). The growth of private consumption, in particular, slowed, which was probably due to the rise in interest rates and the effect of higher oil prices on real incomes.

Indicators suggest that economic growth in the euro area slowed further in the fourth quarter of 2000. The main industrial confidence indicators have been falling for some time. In addition, retail sales and car sales were sluggish in the second half of 2000. A positive development, however, was a further drop in the unemployment rate in the last part of the year. Good employment performance and a fall in oil prices help to explain why the consumer confidence indicator for the euro area has remained at a high level.

Recently, growth forecasts for the euro area in 2001 have generally been revised downwards slightly because of the weaker prospects for world economic growth. The slowdown in growth of export demand is nevertheless likely to be partly offset by domestic demand, which will benefit from fiscal easing, lower oil prices and the disappearance of expectations of rise in interest rates. Euro area growth is therefore likely to remain fairly robust. It should, however, be

**Chart 6. Real GDP growth**



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emphasized that the difficulties in the US economy and their repercussions for other countries and financial markets could result in slower-than-expected growth in the euro area.

## Economic growth has remained robust in Finland

The rate of growth of the Finnish economy remained robust in the last part of 2000 (Chart 6). According to preliminary national accounts data, real GDP grew by 5.5% in the fourth quarter of 2000, compared with the same period a year earlier, and growth for the whole year reached 5.7%. The economy grew a little faster in the latter part of the year and in the year as a whole than was forecast by the Bank of Finland in the autumn.

Finland's faster economic growth than in the euro area on average has been driven by strong export demand since the middle of 1999, when export markets started to recover from the effects of the Asian and Russian economic crises. The volume of exports grew by a full 18% in 2000. There was also a marked increase in non-residential investment, partly as consequence of strong export performance. The forest industries invested in replacing and extending capacity in Finland, although they expanded their productive capacity significantly abroad as well. Private consumption grew by 3% and, with the exception of cars, developments in the trade sector were also favourable. Car sales were hit by the rise in oil prices and to some extent also by the rise in interest rates in the course of the year.

In the export sector, output in the electronics industry continued to grow at a notably faster pace than output in other sectors in 2000. Growth of output in the electronics industry accelerated in the fourth quarter of the year to nearly 50% compared with one year earlier. Excluding the electronics industry, growth of industrial production in the final part of the year was about 5%. If the economic downturn in the United States weakens the market prospects for the electronics industry worldwide, this could have a major impact on the Finnish economy.

According to the business tendency survey conducted by the Confederation of Finnish Industry and Employers in January, the outlook for industry is weakening. Expectations of slowdown in output

growth are based on the gloomier prospects for growth in key export markets. There is now also considerable uncertainty about future price developments. Therefore it is possible that the slowdown in the rate of growth of export volumes will be larger than forecast by the Bank of Finland last autumn. A decline in firms' price competitiveness could further slow export growth, if the euro starts to strengthen again.

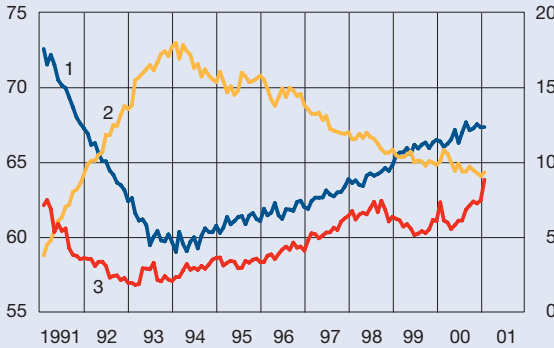
Household confidence about the future weakened in the autumn, which was partly due to the rise in oil prices and expectations of higher interest rates. Household confidence nevertheless increased again around the turn of the year. In principle, the prospects for an increase in consumer demand are good as tax cuts and pay increases in 2001 and 2002 will boost disposable incomes substantially. Furthermore, the forecast fall in the rate of inflation will underpin the growth of real incomes. According to current estimates, it seems that growth of private consumption this year will be more or less in line with last autumn's forecast.

Given the rapid growth of the economy, employment has increased only slowly in recent months (Chart 7). The seasonally adjusted employment rate has remained almost unchanged during the autumn and winter months. In January it stood at about 67½%. The best performing sectors as regards job increases in recent months have been transport and business services. Regionally, employment growth has been concentrated in southern Finland whereas it has been slow in central and northern Finland. Similarly, the fall in unemployment has been slow, partly reflecting an increase in labour supply. The seasonally adjusted unemployment rate calculated by Statistics Finland has remained stubbornly above 9% during the autumn and winter months.

The ratio of vacancies to the total labour force has risen substantially in recent months, suggesting that mismatches between labour supply and demand are worsening (Chart 7). One reason for this is the inadequate training of jobseekers, which was a factor cited by, for example, employers in labour force surveys conducted towards the end of last year. Shortages of skilled labour hampered the hiring of new staff in both industry and the private services sector in the latter part of last year.

Conditions in the housing market have been fairly stable in recent months, compared with the situation

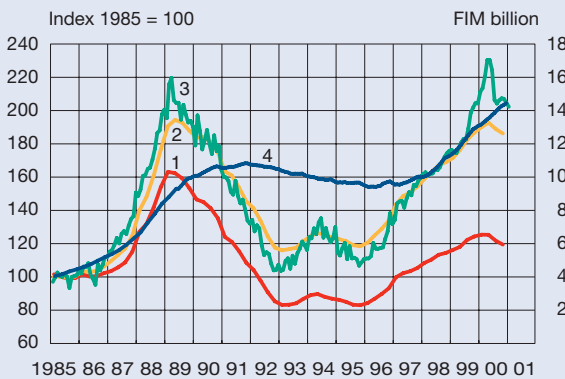
**Chart 7. Unemployment and employment in Finland**



1. Employment rate, Statistics Finland measure, % of 15–64 year-olds, seasonally adjusted\* (left-hand scale)
  2. Unemployment rate, Statistics Finland measure, seasonally adjusted\* (Eurostat definition) (right-hand scale)
  3. Number of vacancies per thousand persons in the labour force, seasonally adjusted\* (right-hand scale)
- \* Seasonally adjusted by the Bank of Finland.

Sources: Statistics Finland and Ministry of Labour.

**Chart 8. Housing prices and housing loans in Finland**



1. Real prices of old dwellings, whole country (left-hand scale)
2. Nominal prices of old dwellings, whole country (left-hand scale)
3. Price of old two-roomed flats in the Greater Helsinki area (left-hand scale)
4. Stock of bank housing loans (right-hand scale)

Sources: Bank of Finland, Huoneistokeskus and Statistics Finland.

last spring. Regional differences are considerable, however, as evidenced for example by reports of a marked lengthening in selling times for properties outside growth centres. Prices of old dwellings in the whole country fell slightly in the fourth quarter of last year compared with the previous quarter and towards the end of the year prices were at roughly the same level as one year earlier (Chart 8). In the Greater Helsinki area prices fell by less than in the rest of the country.

Activity in the housing market could pick up during the spring as a result of tax cuts and rising household incomes. Furthermore, interest rates on new

housing loans have fallen slightly in recent months along with market interest rates. Increased demand for housing in growth centres could give rise to problems because of the slow response of supply.

### The challenges facing the public sector call for spending restraint

The ratio of the general government surplus to GDP grew to 6.7% in 2000. This was about two percentage points more than foreseen in the Bank of Fin-

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land's autumn forecast and in Finland's stability programme update. Central government finances, in particular, benefited significantly from the rapid pace of economic growth and firms' favourable earnings performance. In addition, corporate restructurings and capital gains on equity sales boosted capital income tax revenue and the central government's property income. Total revenue from income and wealth taxes increased by over a third from the previous year and property income more than doubled. Indirect tax receipts increased only slightly, however. As central government expenditure increased only moderately, central government finances moved into a surplus of FIM 26 billion. The surplus, together with privatization proceeds totalling FIM 12 billion, made it possible to reduce central government debt by a larger amount than in the previous year. The ratio of central government debt to GDP stood at 48% at the end of 2000. Municipalities' tax revenue, especially corporate tax receipts, grew rapidly, and the local government sector shifted into a small surplus.

The positive developments in 2000 could give the impression that a permanent surplus has been established in central government finances. This is not self-evident, however, since a large proportion of the surplus is the result of one-off factors, the reduced importance of which in 2001 and 2002 will weaken the financial position of the central government and municipalities. On top of this, the planned tax cuts will slow the growth of tax revenue over the next two years. Similarly, a reduction in indirect taxes with the expiry of the EU's transitional provisions and the likelihood of increasingly intense tax competition will curb the growth of tax receipts in the years to come.

As the growth of government revenue weakens, the rate of reduction in central government debt will slow. Under favourable circumstances, however, it could be possible to create a virtuous circle in central government finances over the next few years, whereby progressively smaller interest payments on

outstanding debt would enable an accelerated pace of debt reduction. This, however, requires that the growth of central government primary expenditure remain moderate. As a rough estimate, if the central government primary balance (surplus excluding interest payments), which increased to nearly 7 % in 2000, could be kept at around 4–5% of GDP in the future, it would be possible to pay off the debt in about 10 years' time. This is conditioned on the assumption of the continuation of steady, robust economic growth, which, of course, is by no means certain.

Rapid repayment of the debt would be desirable so as to allow room to prepare for future demographic changes, among other things. The ageing of the population will start to become a major challenge at the beginning of the next decade when additional resources will have to be made available for health care and care of the elderly, as well as for pensions. It is essential that interest payments on the debt, which amounted to FIM 26 billion in 2000, be reduced significantly before the pressures generated by pensions start to mount and the labour force starts to shrink as a result of population ageing. Strong public finances are a *sine qua non* for managing the budgetary consequences of an ageing population in the long term. The policy decisions taken with regard to spending in the budget for 2002 will be vital for debt reduction efforts. The positive developments in public finances in 2000 should not delude us in to thinking that there is scope for permanent increases in expenditure in a situation where the growth of tax revenue will slow substantially over the next two years.

28 February 2001

■ **Key words: inflation, monetary policy, economic situation**

## Challenges facing the Finnish labour market

Ongoing structural change is a characteristic of the global economy. The Finnish economy has been integrated into the international environment in increasingly diverse ways. Economic flexibility in its full sense – as understood to mean the shift of resources from sector to sector in search of the highest productivity – is crucial for growth and employment prospects.

The need for economic policy reforms aimed at supporting employment has attracted growing attention in the European Union. Underlying this are both concern about the EU's high level of unemployment, the welfare losses it engenders and the burden it places on public finances and recognition of the fact that structural rigidities tend to generate inflationary pressures, which slow economic growth and have to be warded off by monetary policy measures. The more flexible an economy is, the more strongly it can grow without causing inflationary pressures.

The need for flexibility holds true nationally, in monetary union and in the context of the global economy as a whole. Since monetary policy under monetary union is formulated with the needs of the entire euro area in mind, this further underlines the importance of economic flexibility at national level.

In their deliberations on monetary policy, central banks pay attention to other areas of economic policy and structural factors at work in the economy. One of the duties of independent central banks is to publicly explain the reasoning behind their decision-making, including their views on developments in these fields. With the establishment of monetary union, the Bank of Finland also became subject to the requirement for openness and transparency in this regard.

According to many Finnish and international assessments, a significant part of unemployment in Finland is structural. By structural unemployment is meant the level of unemployment below which the unemployment rate cannot be permanently pushed without changing the structure of the labour market. When this unemployment rate has been reached, further increases in demand for labour do not lead to higher employment but rather to faster wage inflation.

This article discusses three key structural factors affecting the functioning of the labour market and falling within the sphere of social policy, namely the combined effect of tax and social benefits systems, wage bargaining arrangements and traditions, and employment protection regulation. Labour market equilibrium and structural unemployment are also affected by decisions taken in numerous other policy areas. For example, in Finland regional policy objectives have figured prominently in the range of instruments available for labour market policy. Other policy areas which affect the labour market but which are not discussed here include housing policy, education and training policy and active labour market policies.

Taxation and social benefits affect employment in many ways. Labour taxes increase the price of labour and reduce incentives to employ people. Together, taxes and social security determine the minimum level of labour costs below which labour is not available in practice. At the same time, they set minimum requirements for the skill and productivity levels that a job seeker must meet in order to find employment. High taxes on labour impede job creation in the private services sector, in particular: by doing work oneself instead of having it done by someone else, one can avoid taxes and indirect labour costs.

Employment protection refers to regulations concerning the hiring and firing of employees, including, for example, conditions for using fixed-term

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contracts and minimum levels of protection and compensation for dismissals. Employment protection is partly based on legislation and partly on agreements. An appropriate level of employment protection furthers the mutual commitment of the employee and the employer to a long-term employment relationship. Taken too far, however, employment protection causes rigidities in the labour market, hampers the placement of workers in the most productive jobs and deepens the division between ‘insiders’ and ‘outsiders’.

The wage bargaining system sets the framework in which employers and workers can agree on pay and other terms and conditions of employment. A smoothly functioning wage bargaining system can enhance the functioning of the labour market by, for example, improving the predictability of the operating environment and making it easier for the labour market to adjust to economic disturbances. On the other hand, a wage bargaining system that is too rigid can cause wage distortions, which prevent the labour market from clearing.

## Structural factors and Finnish unemployment

There seems to be fairly wide acceptance that the direct cause of the emergence of mass unemployment in Finland was the overheating of the economy in the late 1980s and the exceptionally severe slump in economic activity that followed at the beginning of the 1990s. The dramatic rise in unemployment was not connected with the sudden appearance of structural rigidities in the labour market or any significant reduction in incentives. But structural problems that had accumulated over the preceding decades were nevertheless a key factor behind the rapid rise in unemployment and its subsequent slow decline.<sup>1</sup> Structural factors – such as the high cost of hiring workers and the obligations it carries with it – increased the tendency for employers to shed labour when economic conditions worsened. Similarly, structural factors weakened the ability of the labour market to create new jobs for those made unemployed. As the duration of unemployment increased, a growing proportion of the unemployed was permanently excluded

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<sup>1</sup> In some respects structural problems were exacerbated during the recession by a rise in taxes and tighter means testing of benefits.

from the labour market, whereupon unemployment that had initially been cyclical became structural.<sup>2</sup>

So, whilst macroeconomic factors triggered the crisis, structural weaknesses – associated with labour market incentives and regulation as well as regional mismatches in labour supply and demand – slowed adjustment to the changed economic conditions and contributed to the deepening of the crisis. The macroeconomic and structural causes of unemployment combined and reinforced each other. This is also in line with the general conclusion about the role played by structural factors in variations in the level of employment: when economic conditions are stable, structural rigidities have little impact on unemployment. The importance of flexibility increases only when economic conditions start to deteriorate.

Seen in this light, it is clear that decomposition of unemployment into structural and cyclical components is not always straightforward. It is possible that part of Finnish employment is still cyclical in the sense that given good economic performance, there could be a further marked fall in the unemployment rate in the longer run. But then again, a new recession could once more push unemployment to noticeably higher levels than at present for several years. Although economic and monetary union and the fiscal stance adopted in recent years have brought stability, uncertainty always surrounds the economic prospects of a small country with a relatively undiversified production base. This places special demands on labour market flexibility.

## Taxation and social benefits

The social benefits system comprises various kinds of social support and unemployment security. In the 1990s the debate on the need to reform social security systems intensified in practically all European countries when the cost of these schemes rose as a result of higher unemployment and began to place a growing burden on government finances. Reforming tax and social benefit systems so as to promote employment is currently a key priority in the debate on economic policy within the EU.

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<sup>2</sup> The task of managing unemployment was complicated by a massive deficit in central government finances, which prevented the deployment of active labour market policies on the same scale as in, for example, Sweden.



Finland's social benefits system is fairly typical of those in Europe, although like those in other Nordic countries it is a little more generous than the European average, according to an OECD comparison.

Finland's comprehensive social security system has been fairly effective in keeping poverty at bay. Funding the system has, however, required heavy taxation, and further substantial tax increases were necessary during the recession of the 1990s. Although the tax wedge on labour has been reduced in recent years, it is still very large by international standards.

Taxes and social benefits are of particular significance for employment levels among those who are least able to compete in the labour market. In practice, social security sets the floor which take-home pay from gainful employment must exceed. When to this is added the share of the tax wedge, the result is the minimum cost that an employer must pay for labour input in Finland in order to make it financially worthwhile to work. If the value of labour input to an employer or buyer of a service does not exceed this minimum cost, no immediate incentive may exist to establish an employment relationship.<sup>3</sup> In the case of a business, the labour input that is left unpurchased may be replaced by investment in machinery and equipment, while for individuals the option is to do the work themselves. In many cases the result may simply be that the work is not done at all.

There is much evidence to suggest that a significant part of Finland's unemployment problem is due to this very factor. Unemployment is concentrated among the less advantaged, ie individuals who are poorly educated or whose education is outdated, who are close to pensionable age or who live in remote regions. Further support for this explanation is provided by the fact that the share of Finnish employment in low-skill occupations in the private services sector is exceptionally small. In particular, the share of employed persons working in retail trade and personal services is (along with Sweden) the lowest in the OECD area.

In recent years, a number of reforms have been effected in the unemployment insurance system with

<sup>3</sup> Even if net income from gainful employment is less than social security, in the longer term there may nevertheless be a financial incentive to work as far as, for example, accumulation of pension rights and future career prospects are concerned. This explains why some people choose to work even though the immediate effect of this is a drop in net income.

the aim of enhancing work incentives.<sup>4</sup> Despite these reforms the duration of unemployment compensation is still exceptionally long and the overall level of social security for the unemployed in relation to wages in the private sector is one of the highest in the OECD area. Finland's unique earnings-related pension scheme, which enables 55-year olds to receive support on a continuing basis until they qualify for old-age pension, has contributed to the very low employment rate of this age group. Several studies show that there is a clear link between the level and duration of unemployment compensation and the level of unemployment in the economy.

The combined effect of taxation and income-related social benefits gives rise to 'incentive traps', where accepting a job results in a reduction in net income. In Finland this is essentially a problem experienced by families. Some progress has been made in eliminating incentive traps for low-income families<sup>5</sup>, but there are still few incentives for an unemployed person with children to earn extra income by taking a part-time job, for example.

A solution put forward to deal with this problem is to target income tax cuts on low-income groups. The scope for such action is limited, however. For one thing, the taxation of low-income groups has already been reduced to a level where the major component of the remaining tax wedge consists of various insurance-based payments such as contributions to earnings-related pension schemes, unemployment insurance contributions and accident insurance premiums. Restricting cuts in these payments to low-income groups would require a change in the very principles on which the social insurance system is founded. In some countries the incentive problem has been addressed by applying a negative income tax

<sup>4</sup> One of the conditions for receiving labour market support under the present rules is that a young person must participate in vocational training. In addition, extension of earnings-related unemployment compensation after 500 days now requires a prior employment spell of 10 months as opposed to six months previously. On the other hand, the level of compensation for earnings-related unemployment security has been raised to some extent.

<sup>5</sup> In Finland, local taxes levied on low-income groups have been reduced mainly by increasing the earned income allowance. Where municipalities have not been reimbursed for the resulting loss in revenue by means of government transfers, this has weakened their financial position and may therefore have led indirectly to a rise in the local tax rate.

(eg earned income tax credit in the United States), whereby central government funds are used to support the low paid. Assessments of the success of these initiatives are contradictory.

Another problem is that targeting tax cuts on low-income groups could generate incentive traps in higher income groups. In fact, this is just what has happened in recent years. Whereas the incentive problems faced by low-income groups have diminished, they have, if anything, worsened for those in the middle-income groups. Recent studies show that, for a significant proportion of the population, taxes and a reduction in income-related support still eat up all additional income in practice. For example, the dependency of labour market support and general housing support on a spouse's income may, together with a high marginal income tax rate, result in a situation where there is virtually no financial incentive for the spouse to work unless the monthly salary exceeds FIM 15,000.<sup>6</sup> The long-term implications of such a situation for work and training incentives are potentially disastrous.

For those in the highest income groups, growing international tax competition and the increasing mobility of well-educated labour are undermining the conditions for maintaining tax rates at their present high levels. Targeted tax concessions are already being used to attract foreign labour to Finland. In the future, it will be increasingly difficult to keep highly skilled Finnish workers in Finland.

Therefore there needs to be a further reduction in the tax wedge in all income groups. Tax cuts and social benefit reforms alone are not a panacea for the unemployment problem, and it will take years before their effects are felt. They nevertheless have an important role to play in increasing work incentives.

## Employment protection

Employment protection, which refers to the regulation of hiring and firing in the labour market, is not particularly strict in Finland. It is close to the average for OECD countries and it has for long been among the least restrictive in the EU area. Although

<sup>6</sup> The example cited refers to a couple with two children living in the greater Helsinki area who receive the maximum compensation for general housing support and where one of the parents is on labour market support.

Finland's relative position in Europe has changed in recent years with liberalization of employment protection in many EU countries, Finnish employment protection still cannot be described as exceptionally strict. According to an OECD study, regulation of permanent employment contracts, in particular, is lenient by European standards whereas regulation of the use of fixed-term contracts and their renewal is relatively strict. This has been a factor curbing the growth of fixed-term contracts in the private sector, in particular.

Studies have not found a clear link between employment protection and the level of unemployment. A high level of employment protection has, however, been observed to reduce dismissals and new hirings, and thus to affect the structure of unemployment. Employment protection reduces the risk of those in work becoming unemployed but makes it more difficult for those without jobs to find work. Fewer people lose their jobs but at the same time spells of unemployment become longer and the share of the long-term unemployed grows. So employment protection deepens the division between insiders and outsiders, increases the risk of exclusion among outsiders and makes it more likely that unemployment becomes structural.

Employment protection may also affect the structure of production. By impeding the mobility of labour it can hamper the flow of labour and skills into potentially more productive uses, resulting in lower productivity and lower wages.

Employment protection is probably not a major cause of unemployment in Finland, and therefore a reduction in the general level of employment protection should not be seen as a solution to the problem. But in a situation where a significant proportion of the labour force faces exclusion because of the effects of other factors, there is a case for also considering targeted employment protection reforms as a way of activating these groups. Here priority should be given to relaxing regulations affecting fixed-term contracts and young jobseekers.

## Wage bargaining and wage structure

Collective bargaining in Finland is characterized by a high unionization rate and a relatively high degree



of centralization. A widely stated objective in wage bargaining is the pursuit of 'solidaristic' or egalitarian wage developments, and this has gained even more prominence in the centralized agreements reached in recent years. The egalitarian objective is evident, for example, in convergence of wage increases (including absolute increases) across sectors, the widespread application of extension practices, low-pay and equality allowances and mechanisms for reviewing earnings developments.

The Finnish labour market system has managed to generate incomes settlements that have helped the country to maintain its international competitiveness, also during the economic upswing of recent years. In contrast to past experience, wages have not soared to unsustainable levels even during periods of strong growth. Continuation of slower wage growth than in competitor countries on average would further improve external competitiveness in the future and thus increase employment to some extent in the exposed or tradeables sector of the economy. But, given the very large external surplus, unemployment is not now a primarily competitiveness problem, and therefore there is no reason to seek a solution in a lower average wage level than at present.

A more serious concern from the standpoint of employment is that the Finnish collective bargaining system leaves relatively little room for flexibility in *relative* wages. As wage agreements determine pay increases for each worker, wage flexibility *within the sector* covered by the agreement is only possible through positive wage drift, ie wage increases in excess of negotiated increases. The wage bargaining process is far more flexible in, for example, Germany, where collective agreements typically fix only the aggregate amount of pay increases and largely leave it to the employer to decide how this sum is to be divided among individual workers. *Intersectoral* wage flexibility in Finland is limited not only by a centralized bargaining system but also by the widespread practice of including earnings guarantees and low pay allowances in wage agreements.

Another factor limiting the scope for wage flexibility in Finland is that agreements are typically negotiated on the basis of the employer's industry and not the worker's occupation. This practice can, on the one hand, lead to the creation of artificial wage links between different occupational categories in the same sector and, on the other hand, to unjust intersectoral

differences in wages for employees in the same occupational category. There is no justification on employment grounds for paying people with the same skills different wages according to whether the industry in which they work is doing well or badly. In a well functioning labour market the compensation a worker receives depends on the demand for the skills he or she has to offer in the economy as a whole, not on the profitability of a particular industry.<sup>7</sup>

The pronounced regional and occupational disparities in Finnish unemployment support the view that relative wage flexibility is inadequate. For example, a study conducted by the European Commission on the basis of 1997 figures shows that in Finland that year there was an exceptionally heavy concentration of unemployment among the poorly educated and young people. The regional dispersion in unemployment was one of the highest in Europe, comparable to that in Germany (strong east-west distribution) and Italy (North v. South).

The shift to a regime of low inflation and low nominal pay increases may have increased wage structure rigidities. In recent years a growing proportion of wage increases has taken the form of negotiated increases whereas the market-based component of wage formation contained in wage drift has clearly diminished. Thus the wage bargaining system has come to wield an increasingly strong influence on actual developments in relative wages.

Wage flexibility would not necessarily improve as a result of a shift from central to union level in collective bargaining. Wage differentials across sectors would probably increase, but it is unclear whether this would have a positive impact on employment. On the other hand, the average rate of increase in wages could pick up, with adverse consequences for employment. Regardless of the level at which incomes negotiations take place, it would be desirable if, in future, an increasingly large proportion of pay in-

<sup>7</sup> It has been argued that sectoral differences in productivity growth imply the need for sectoral differences in wage developments that reflect productivity growth. This argument is not entirely valid. In conditions of flexible wage and price formation, sectoral differences in productivity growth show up primarily in differences in price developments for the products concerned; for example, prices of mobile phones fall as productivity in their manufacture increases. Productivity differences should be reflected in wages only to the extent that they bring about changes in the demand for different kinds of skills in the labour market.

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creases consisted of market-based components agreed at local and individual level.

It should be emphasized that greater relative wage flexibility is not the same as increased wage differentials. A move towards a more flexible wage formation process would not, for example, mean that wage growth in the public sector would lag behind that in the rest of the economy. In order to be able to meet their obligations as regards service provision, public sector employers must offer competitive wages under all circumstances.

The comprehensiveness and high level of Finland's education system will help to maintain a relatively even income distribution even under conditions where market forces play a greater role in wage formation. It nevertheless seems likely that a significant improvement in employment among the less educated will require reduction in labour costs at the lower end of the wage scale. If there is reluctance to do this by lowering the income level of these workers, then costs will have to be cut by reducing the size of the tax wedge (mainly by lowering insurance-based payments) and by developing support systems that provide incentives to work.

## Future challenges

As more and more people in the age cohorts where there is heavy unemployment retire during the current decade, this will help to alleviate the country's unemployment problem. The unemployment figures will improve as mass unemployment gives way to the pensions problem. The burden placed on the economy by the existence of a large passive population will not diminish for some decades to come, however. As long as the overall performance of the economy remains good, no insurmountable difficulties are likely to arise. But we also have to be prepared for the possibility that economy does not perform as hoped. A recession that is more severe than a normal cyclical downturn could require far greater adaptability on the part of the labour market – and the economy as a whole – than has been the case hitherto. A marked rise in unemployment, combined with a rapidly ageing population, would seriously tax the capacity of the welfare state.

It is obvious that there are some groups among the unemployed who, for all practical purposes, are

beyond the reach of labour market incentives and possibly also other labour market measures. Partly for this reason the chances of structural reforms to reduce unemployment in the short run are limited. The importance of structural changes needs to be assessed in the long run, however, when the industrial structure and people's behaviour have had time to adapt.

Ensuring that labour market incentives and regulation function effectively has a vital role to play in efforts to keep as large a part of the active population as possible in the labour market. This is not, however, the whole answer to the unemployment problem. Rather, a whole range of measures is necessary. Adjustment to continuing structural change in the labour market calls for action in the areas of education and training and housing policy to foster workers' regional and occupational mobility. There is also a need for active labour market policy, particularly as regards supporting problem groups.

The social benefits system, employment protection regulation and the wage bargaining framework are designed to protect citizens from economic risks and to guarantee workers equal status as a negotiating partner. These arrangements are essential components of the Finnish welfare society, but the protection they afford is fairly limited in a changing economy. Ultimately, a worker's best protection is a high level of employment and the knowledge that follows from this that there are always alternatives available in the labour market. If the arrangements created to protect workers end up by making it more difficult for people to find employment, they defeat the purpose for which they were originally intended. Therefore it must be possible to review all existing arrangements in an objective and unprejudiced way and make reforms where necessary.

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■ **Key words: structural unemployment, social benefits system, taxation, employment protection, wage bargaining system, wage structure**

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# Systemic risks in the Finnish financial markets

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**A** modern financial system is a network of financial intermediaries, investment service providers and marketplaces – linked together by payment and settlement systems. National systems, in turn, are parts of the network of international financial systems.

Controlled and closely monitored risks are a normal part of operating in the financial markets. At times, financial institutions may have to deal with realizations of these operating risks. Because different financial market participants are linked to each other, serious disturbances can spread from one participant to another and even to other systems, which can prevent the financial system from accomplishing its essential tasks, ie financial and payments intermediation, as well as the pricing of financial claims. The possibility that such disturbances will occur is referred to as ‘systemic risk’.

In terms of systemic risks, the key causal factors and channels of financial contagion are the banking sector and payment and settlement systems. The vast majority of IMF member countries have experienced some degree of banking crisis during the last 20 years. The risks associated with financial systems have become focal concerns along with the globalization of financial markets. Based on experiences with financial crises of the 1990s, it has become apparent that systems are most vulnerable when they are in the process of change. In extreme cases, cross-border financial contagion requires only that the economies be similar.

## Monetary union and the onset of crisis

The framework for Finland’s monetary and economic policies has changed since the start of monetary union. The new edifice has stabilized the environment by eliminating exchange rate risk in transactions between Finland and other euro area countries, while

also reducing the likelihood of interest rate gyrations. But monetary union has also brought new risks in the form of a greater dependency on economic performance and soundness of financial systems in the larger euro area countries. Because monetary policy is now aimed at the needs of the whole euro area, the other tools of economic policy must be calibrated to the specific needs of the Finnish economy.

Monetary union has increased the versatility of the Finnish financial system and has reduced its dependence on the banks. However, in the context of a monetary union, a disturbance caused by a systemic crisis can originate in other financial systems or in structural developments or suboptimal functioning within the various parts of the domestic financial system. The biggest challenge for European regulators and supervisors is to stay on top of the structural changes that are integral to the evolution of financial markets in connection with convergence across Europe. The sources of future disturbances may continue to change, inter alia, because of changes in savings-related behaviour, stock market developments, population ageing, the growing importance of institutional investors, and technological progress.

## Channels of contagion in the banking sector

Banks occupy a central position in the Finnish financial system, and their problems can spread, via the lending channel, throughout the economy. Banks accept repayable-on-demand funds from depositors and lend them at long maturity to companies and households in need of financing. Besides deposits, banks also issue debt instruments. Correspondingly, the asset side of a bank’s balance sheet includes – besides loans – debt instruments issued by other institutions, as well as shares. A bank’s balance sheet can

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be weakened by maturity mismatches between loans and deposits or by fluctuations in asset prices. On the other hand, a bank's lending policy can lead to credit losses that reduce its profitability and eventually its capital base. If the bank is a large one, such problems can jeopardize the stability of the whole financial system.

Finland's banking crisis of the early 1990s was very severe, relative to GDP, even by international standards. The underlying cause was the structural backwardness of the financial system, which had its roots in a long period of tight regulation. Rapid deregulation that coincided with an economic boom led to a surge in borrowing from abroad. When the economy turned down, capital flight caused a collapse in the external value of the markka. This led to dramatic increase in credit losses and a banking crisis. As a result of the crisis, the Finnish banking sector has undergone structural revamping via bank mergers, alliances and closures. Because of the structural changes, the Finnish banking sector is one of the most efficient in Europe; credit losses are at record low levels; and the banks are generating excellent returns on capital. The strong profitability, over a period of several years now, has solidified Finnish banks' balance sheets, which has increased the banking sector's ability to withstand disturbances.

Because the Finnish banking sector is highly concentrated, the problems of a single bank spread quickly to other banks. However, this domestic contagiousness is now a less serious problem because the banks have forged more extensive international connections. The increased internationalization of banks implies greater dependence on what happens in foreign financial markets. The increase in international linkages enables more effective diversification of risks while also increasing the likelihood that a disturbance in a foreign country will spread to Finland.

The greatest challenge to the Finnish financial system, in terms of its development and stability, relates to dependencies associated with the structural changes in progress in the financial markets. As a result of mergers across national and sectoral borders, the concept of a Finnish banking sector is becoming blurred. Because of their size, multi-national financial giants formed via cross-border mergers create systemic risk. If such a large organization encounters problems, this can damage the financial systems of several countries. A comparable risk linked to large

size is present in cross-sector mergers. As a result of sectoral crossovers, disturbances can spread more readily than before, eg between the banking and insurance sectors.

Besides alliances formed across sectors and countries, the banking sector is in the process of a technological transformation, which enables provision of services without regard to location as well as development of new products. Assuming that services can be provided in a reliable manner via the Internet, this type of micro-level networking will increase the efficiency of service provision, but it will also weaken banks' information-gathering ability, which is maximized when customer and bank maintain an ongoing relationship based on personal contact.

## Financial contagion via the securities markets

Globalization has changed the way securities markets function and the channels of contagion in the financial system. The fact that in 2000 price movements in publicly quoted shares spread from one marketplace to another, practically without any lag, is just one of several indicators of how close the links are between Finnish and international markets.

Changes in share prices in international markets have not directly caused major disturbances in the Finnish financial markets, partly because domestic banks have reduced their securities holdings. The direct effects of disturbances are probably limited to those institutions whose financial results depend on the prices of shares other than their own. A widespread precipitous decline in share prices could weaken the financial results of such companies and eventually jeopardize their solvency.

In Finland the effects of share price fluctuations are probably for the most part indirect. From the lender's viewpoint, a weakening in a company's future prospects reduces the expected earnings on, and hence value of, the company's assets that would be eligible for use as collateral. The lender should interpret changes in market expectations as portents of increasing uncertainty and raise his credit-risk premium. The change in expected earnings will reduce the stability of the financial system only if an important financial market participant misreads the company's prospects and is hit by increasing credit losses. Another possi-

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bility (in principle) is that an important participant in the international financial system runs into problems because of fluctuations in share prices and that these problems spread to the Finnish system via interbank connections.

Because of diversification, international institutions' portfolios include Finnish securities. If important institutional investors encounter problems, this can lead to portfolio adjustments and to large price movements, even in the Finnish securities markets. The channels of contagion may be even stronger if international investors have inadequate knowledge of how the Finnish markets operate.

Another result of structural changes in the markets is that innovations and new activities taken up by traditional institutions may alter the nature of systemic risk in the securities markets. Whether this will increase the risks associated with such innovations depends largely on how well regulators meet the challenges. Technical progress among market institutions also has a significant impact on the market risks inherent in financial systems. As trading costs fall and the amount and quality of information increase, market efficiency improves. Cost reductions enable connections with new market participants. Increased connections mean greater efficiency and a higher probability that systemic disturbances will dissipate widely rather than seriously hurting a single market sector or area.

## Reliability of payment and settlement systems

In view of the fact that all transactions connected with financing agreements are executed via payment and settlement systems, it is clear that the operability and efficiency of the entire financial system is highly dependent on these systems. As economic convergence has progressed, the importance of large-value payments has increased. Because of the destabilizing effects of payment system disturbances, reliable execution of large payments is imperative. Finnish payment systems have traditionally been technically advanced and highly reliable<sup>1</sup>. The Bank of Finland's

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<sup>1</sup> See Leinonen, H, and Saarinen, V (1998), 'Payment system risks in Finland and the need for regulation and supervision', *Bank of Finland Publications*, A:101, Helsinki.

interbank payment system and the TARGET system of the European System of Central Banks, which executes euro-denominated payments, are both real-time gross settlement systems. Payments executed via these systems avoid the settlement risk inherent in net settlement systems. In the context of monetary union, problems encountered in European payment systems may also affect Finnish systems more directly than before. The TARGET system enables real-time payment execution with central bank money throughout the euro area, ie it provides a secure and efficient pan-European mechanism for making payments. Another large-value payment system is the European Banking Association's Euro 1 net payment system.

Maintaining credibility of payment systems also places demands on retail payment systems. There are two interbank retail payment systems in Finland: the interbank payment system, PMJ, and the express and cheque payment system, POPS. Last year improvements were made in risk control for the two systems as a result of cooperative efforts between the Bank of Finland and the banks. A new law on netting, which entered into effect in December 2000, will apply, inter alia, to these systems and will ensure that netting calculations are binding on the participants in the event of bankruptcy.

Globalization and technical progress in trading systems have meant that more transactions can be handled in both payment and settlement systems. If these systems are running at near capacity levels, operating problems can arise if there is a sudden unexpected increase in the number of transactions. Enhanced competition in securities trading has induced stock exchanges to form alliances. Increased cooperation inevitably includes settlement operations. As trading becomes increasingly globalized, international settlement institutions gain in importance. Technical differences between systems pose a challenge for growing globalization of trading and cooperation between exchanges.

## Management of systemic risks in Finland

The tools for managing systemic risks in Finland can be roughly broken down into two types on the basis of whether they are primarily preventive or are used to contain problems after they surface. The first type



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is represented by regulation, supervision and market discipline and the second by safety nets based on legislation. Such safety nets are also preventative since they reduce the probability that a disturbance will lead to a panic situation.

The operating framework for the financial system derives from domestic and international financial legislation and supervisory norms. Management of systemic risks is facilitated by standards set or developed in international fora, which are aimed at ensuring banks' solvency and the functionality of securities markets and payment and settlement systems.

The tasks of different authorities are also set out in the legislation. Preparation of financial market legislation is primarily the responsibility of the Ministry of Finance. The Financial Supervision Authority (FSA) supervises the activities, inter alia, of credit institutions (incl. banks), securities and derivatives exchanges, book-entry system participants, the Finnish Central Securities Depository (APK), investment firms, and mutual fund management companies. Insurance companies are supervised by the Insurance Supervision Authority. Broad oversight of financial markets (incl. payment and settlement systems) falls to the Bank of Finland, which, as a member of the ESCB, is obliged to promote the same objectives at EU level.

Supervisors of individual institutions (FSA and Insurance Supervision Authority) must ensure that supervised entities observe applicable legislation and regulations, that their risks are kept under control, and that they develop their risk management systems in accord with market developments. The supervisors must also see to it that these entities provide the markets with adequate information on their activities. Informed financial markets determine the availability and cost of financing to a company and so increase institutions' incentive to operate soundly and efficiently. In order to have market discipline, supervised entities must make their operations transparent and provide the markets with comprehensive information on a continuous basis. International standards are one way to promote transparent behaviour on the part of financial market participants and authorities.

Whenever a system participant faces a crisis, the authorities' job is to try to prevent the problem from spreading to other parts of the financial system. The existence of this type of safety net reduces the likelihood that a disturbance will lead to a panic situation.

In practical terms, banking is crisis prone, since the bulk of deposits is effectively payable on demand. In order to prevent a run on deposits, Finnish banks belong to a deposit guarantee fund, which will cover a depositor's losses up to FIM 150,000 in the event a bank failure. The authorities try to avoid direct financial support of institutions. Their aim is to prevent healthy institutions from failing because of a lack of liquidity.

## Future challenges

As market-based financial systems become more widespread, the probability of systemic risk realization can be reduced by enabling diversified and efficient financial market behaviour. Through regulation and supervision, a framework can be put in place that will enable efficient operations and effective risk management. At the same time, this will ensure that markets receive sufficient information, and it will help create incentives for financial institutions to strive for greater soundness and efficiency. In this way, the probability that systemic problems will arise can be minimized.

In order to understand and control systemic risks, it is crucial that we have the ability to evaluate developmental trends and the nature of structural changes. Even a strong system can, over time, run into problems if financial institutions and authorities fail to keep abreast of ongoing changes both within and between systems. By employing the tools of up-to-date regulation, supervision and market discipline, the financial system can be given the room to develop in a way that ensures economy-wide efficient allocation of financial capital in all circumstances.

The framework for controlling risks in the Finnish financial system fulfils today's demands, but new challenges are emerging in connection with globalization, conglomeration and technological progress. Meeting these challenges will, in most cases, involve international cooperation.

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■ **Key words: systemic risk, financial contagion, financial markets, regulation, safety net**

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# The Financial Supervision Authority and international cooperation

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International cooperation in the regulation and supervision of financial markets is becoming increasingly important. The need for a harmonized regulatory framework, common standards for supervision and enhanced information exchange is growing continually. The pressure for greater convergence of regulatory and supervisory practices is being driven by three forces. First, the regulation and supervision of multinational financial conglomerates offering financial services on a cross-border and cross-sectoral basis pose a growing challenge to regulators and supervisors and calls for targeted cooperation. Secondly, convergence of regulation and supervision is a necessary condition for a level playing field, where all financial institutions, investment firms and issuers can compete fairly in markets throughout the European Union, regardless of their home-country jurisdiction. Thirdly, there is a desire to give investors and consumers better opportunities to benefit from the provision of services on an EU-wide basis. This requires the adoption of common practices in cross-border business and provision of investment and banking services and a more consistent approach to consumer and investor protection.

## The FSA focuses on cooperation between authorities at European level

The most important fora for the international cooperative efforts of the Financial Supervision Authority (FSA), the body responsible for supervision of financial markets and participants in Finland, are in Europe. They comprise the Forum of European Securities Commissions (FESCO), which is composed of the national securities supervisors of all the countries in the European Economic Area (EEA); the Banking Supervision Committee (BSC) of the Euro-

pean System of Central Banks (ESCB), which brings together senior officials of EU central banks and supervisory authorities; the Banking Advisory Committee (BAC) of the European Commission, which comprises representatives from ministries of finance, central banks and banking supervisory authorities from all the member states; and the Groupe de Contact, an informal forum for EEA banking supervisors. One of the main tasks of these bodies is to draw up common principles for the regulation and supervision of banking and securities markets. They also provide a forum for exchange of information on recent developments in national markets, supervisory issues and national regulations and guidelines and for discussion of important international trends and developments in financial markets. In addition to these high-level fora, cooperation takes place in numerous expert working groups operating under their auspices.

## FESCO: the FSA's main forum for cooperation in the regulation and supervision of securities markets

FESCO was set up in 1997 in response to challenges to develop the EU's single market in financial services. Its aim is to foster market integrity and transparency and establish clearer rules on investor protection. In its work, FESCO focuses on developing common standards for harmonization of securities regulation in Europe and promoting practical cooperation between supervisory authorities in the supervision of securities markets. FESCO standards complement EU directives or cover areas where no framework legislation exists at EU level. At the request of the European Commission, FESCO also participates in the preparation of EU directives by conveying the views of supervisors. FESCO has adopted an active

and practically oriented approach in cooperation between European securities supervisors and in its work on complementing securities market regulation.

So far, FESCO has published the following standards:

- *European Standards on Fitness and Propriety to Provide Investment Services*;
- *Market Conduct Standards for Participants in an Offering*, which is applicable to issuers, managers, underwriters and other investment firms involved in offerings and includes e.g. standards on the handling of confidential information;
- *Standards for Regulated Markets under the Investment Services Directive (ISD)*, which is applicable to stock exchanges and other regulated markets and lays down conditions for, inter alia, access to the market and listing; and
- *Implementation of Article 11 of the ISD: Categorization of Investors for the Purpose of Conduct of Business Rules*, which establishes clearer grounds for application of investor protection rules to different groups of investors by dividing investors into two groups, professional investors and retail investors. FESCO has also published a report, *A European Passport for Issuers*, that it submitted to the European Commission. The paper sets out proposals for common standards that would facilitate EU-wide offerings. In addition, FESCO has, at the Commission's request, prepared a paper as a basis for a proposed directive on prevention of market abuse.

A FESCO experts group is currently drawing up common standards on stabilization and allotment in connection with public offerings of equities. Stabilization refers to action that an investment firm involved in an offering is allowed to take, under certain circumstances, to prevent an excessively large fall in the price of an equity after the commencement of trading. The allotment standards deal with the practices to be applied in the allotment of equities to investors, especially in cases where an issue is oversubscribed. The experts group is chaired by Mr Kaarlo Jännäri, Director General of the FSA.

The FSA is also a member of the International Organization of Securities Commissions (IOSCO). IOSCO is a global organization, with members from more than 90 countries. The FSA participates in the work of the IOSCO in the annual conferences and in

its capacity as a member of the organization's European Regional Committee.

Plans to set up a Securities Committee under the European Commission are still pending owing to disputes between the Commission, the Council and the European Parliament over areas of influence. In the meantime, the High Level Securities Supervisors Committee (HLSSC) is functioning as a cooperative body under the Commission until an official committee has been established by a directive. Although the HLSSC has no formal duties, it assists the Commission in the preparation of directives. Representatives of the Finnish Ministry of Finance, the Bank of Finland and the FSA participate in HLSSC meetings.

## Various committees discuss current issues in the field of banking regulation and supervision

Finland is represented on the European Commission's Banking Advisory Committee (BAC) by the Ministry of Finance, the Bank of Finland and the FSA. The BAC's main task is to assist the Commission in the preparation of EU legislation on credit institutions and to provide advice on other issues related to banking regulation and supervision. The BAC also assists the Commission in the implementation of banking directives. Recently, the BAC has been involved in, inter alia, drafting amendments to the capital adequacy directives for credit institutions and investment firms and in preparation of a directive on the regulation and supervision of financial conglomerates.

Representatives of the Bank of Finland and the FSA participate in the meetings of the Banking Supervision Committee (BSC) of the ESCB. The BSC assists the ESCB in its tasks related to supervision of credit institutions and financial stability. As part of this work, the BSC assesses trends in European banking and financial systems and the effects of economic developments on the banking sector. Recent publications by the BSC include *Mergers and acquisitions involving the EU banking industry – facts and implications* and *EU banks' margins and credit standards*. The BSC also assists the European Central Bank in drafting opinions whenever the European Commission, the Council of the European Union or EU member states consult the ECB on proposals for Community or member state legislation on the financial ser-



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vices sector. In addition, the BSC promotes exchange of information between banking supervisors and central banks at a general level (not related to individual institutions), for example on financial stability and on cooperation in the areas of oversight of payment and settlements systems (the responsibility of central banks) and prudential supervision of institutions (the responsibility of banking supervisors).

The Groupe de Contact was established in 1972 as a forum for multilateral cooperation between banking supervisors from EEA countries. Its purpose is to promote cooperation and exchange of information related to practical issues in banking supervision. The Groupe de Contact is the only EU-wide forum where supervisors exchange information on individual institutions. These discussions are strictly between Groupe de Contact members and strictly confidential. In addition, members of the group compare and endeavour to bring about convergence of banking supervisory practices. Members also exchange information on current banking supervision issues in their respective countries and produce reports commissioned by the BAC and BSC, for example on the solvency and profitability of the banking sector.

The International Conference of Banking Supervisors (ICBS) is held at two-yearly intervals and the arrangements for the conference are coordinated by the Basel Committee on Banking Supervision (see below). Finland is represented at the conference by the Bank of Finland and the FSA.

## The future of financial supervision in Europe

The possible reorganization of financial supervision in Europe has been a major topic of debate among supervisors, particularly since the start of EMU. The quickening pace of integration in the single market poses a challenge to supervisors. This raises the question as to whether centralized supervision would be a more effective way to supervise international financial markets. The prevailing view seems to be that, for the present at least, there is no need for centralization of banking, securities or insurance supervision in a pan-European organization. Rather, it is more important to ensure that there is adequate cooperation between supervisors. This was the conclusion drawn by a working group (the Brouwer group)

chaired by Henk Brouwer, Deputy Governor of the Dutch central bank. The group was set up under the aegis of the Economic and Financial Committee of the Council of Economic and Finance Ministers (Ecofin) to determine whether the existing regulatory and supervisory structures in the EU can safeguard financial stability.

Recently, much has been done to clarify the division of labour between the various bodies for cooperation in the field of banking regulation and supervision, especially following the publication of the Brouwer Report. The aim of these efforts is to clarify the tasks and objectives of each body so as to avoid unnecessary duplication of work and also to ensure coverage of all segments of the financial sector. Exchange of information and cooperation between the various fora are necessary for promoting financial stability. The fora regularly exchange a wide range of information on their ongoing work, with the exception of confidential information on individual institutions.

Another working group set up by Ecofin, the Committee of Wise Men on the Regulation of European Securities Markets, chaired by Alexandre Lamfalussy, has assessed the present state of regulation and supervision in European securities markets and the need for improvement.

## Harmonized regulation and supervision in Europe

The framework for regulation and supervision at national level is based on EU directives and on interpretations and codes of conduct jointly agreed by regulators and supervisors. Directives are binding legal instruments, the provisions of which member states are required to implement in their national legislation. This is in contrast to common interpretations and codes of conduct, which each supervisory authority undertakes to apply as far as it can within the limits of its powers (eg FESCO standards). Supervisors in member states need to have the same powers if convergence of supervisory practices in the EU is to advance to the maximum possible extent. Much still remains to be done in this regard.

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## Need for global standards to underpin financial stability

While there is a need for common rules for the regulation and supervision of financial markets in the EU, pressure is also mounting for the introduction of common rules at global level. Mergers within the financial services industry and the interest of investors extend beyond EU borders. Besides IOSCO and the ICBS, there are a number of other global fora for international cooperation. They include the Basel Committee on Banking Supervision (Basel Committee), which is composed of representatives of the G-10 countries, and the Joint Forum, which brings together banking, securities and insurance supervisors representing the Basel Committee, IOSCO and the International Association of Insurance Supervisors (IAIS). Although the FSA, either because of restrictions on membership or for resource reasons, is unable to participate directly in the activities of all these fora, it nevertheless endeavours to take the principles and recommendations approved by these bodies into account in its own activities.

International standards on market and supervisory practices can help to reduce market vulnerability and make a positive contribution to economic development. Standards are considered to enhance regulation and supervision and increase transparency. The FSA is currently engaged in evaluating the extent to which international recommendations have been implemented by the FSA. The most important standards from the FSA's point of view are the IMF's *Code of Good Practices on Transparency in Financial Policies*, the Basel Committee's *Core Principles for Effective Banking Supervision* and IOSCO's *Objectives and Principles of Securities Regulation*.

## Long tradition of cooperation in the Nordic countries

Nordic cooperation in the field of supervision dates back to 1925 and embraces banking, securities and insurance. The annual meetings of Nordic supervisors and the Nordic Memorandum of Understanding, which has been signed by the supervisory authorities of Denmark, Finland, Iceland, Norway and Sweden, form the basis for ongoing cooperation in the area of practical supervision. This Memorandum

of Understanding has been complemented by an agreement between Denmark, Finland, Norway and Sweden on cooperation in the supervision of the Nordea financial services group (formerly Nordic-Baltic Holding), whose operations cover the entire region made up of these four countries.

## Memoranda of Understanding are the foundation stones of international supervisory cooperation

Memoranda of Understanding (MoUs) are a basic component of international cooperation between supervisory authorities. MoUs are agreements between financial supervisors in two or more countries on the principles to be applied in supervisory cooperation, and they typically include practical provisions on, for example, inspections of branches and the exchange of confidential information between authorities. A written agreement on the underlying principles of cooperation is particularly necessary in cases where a financial services company subject to supervision conducts business in several countries. The FSA has MoUs on cooperation in banking supervision with twelve countries: Denmark, Estonia, France, Germany, Iceland, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Sweden and the United Kingdom. In addition, the Nordic countries have signed an MoU on cooperation in the Nordic region (see above). The FSA is also a signatory to a multilateral MoU between FESCO members on cooperation in the field of securities supervision. The purpose of FESCO's MoU is to ensure that supervisors cooperate in, for example, investigation of insider trades and price manipulation and in supervision of investment services.

## Working towards functioning financial markets

National financial markets and practices in EU member states still differ from each other to the extent that complete harmonization of regulation and supervision at the present stage is neither feasible nor even sensible. National authorities are best aware of the special characteristics of the financial markets and regulatory and supervisory needs of their own coun-

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tries. Markets and supervision go hand in hand, however; greater harmonization of regulation and supervision opens the way to increasing financial market integration while integrating markets require greater harmonization of regulation and supervision. Efficient and reliably functioning markets are the goal of all market participants, ie authorities, financial services companies, investors and consumers. The role of the authorities is to strike a balance between the twin goals of promoting financial stability, on the one hand, and efficiently functioning markets, on the other. It remains to be seen whether these two goals can be achieved, in other words whether the quantity and quality of regulation and supervision are suffi-

cient to foster financial stability and confidence in markets and, at the same time, whether the authorities can provide financial services companies with the opportunity to compete with each other on equal terms. The financial authorities are committed to doing their utmost to ensure that both goals can be achieved.

26 January 2001

■ **Key words: banking and securities supervision, banking and securities regulation, international cooperation**

## Item

### Commemorative coin for the FIS World Nordic Championships in Lahti

On 25 January 2001 the Ministry of Finance decided on the striking of a commemorative coin for the FIS World Nordic Championships held in Lahti in February 2001. The nominal value of the coin is FIM 25, and the maximum number to be struck is 100,000. It is a bi-metal coin, with a centre of aluminium-bronze and an outer ring of cupro-nickel.

The skiing-inspired design is based on the proposal of the sculptor Jarkko Roth. The coin weighs 20 grams and measures 35 mm in diameter. The obverse features embossed texts in curvature form, HIIHDON MM and 2001 LAHTI. On the right-hand side there are ski tracks on an undulating landscape forming a woman's figure. The reverse features the

face value 25 MK and the text SUOMI FINLAND in curvature form. In the centre there is a facial portrait of a woman with tips of skis in hair.

The new coin went on sale on 12 February 2001, and its price is FIM 25.



# The Eurosystem's monetary policy instruments

14 February 2001

## Key interest rates

The main refinancing operations are the principal monetary policy instrument used by the Eurosystem<sup>1</sup>. Changes in the interest rate applied in the main refinancing operations signal the stance of the Eurosystem's monetary policy and have a major impact on the shortest money market rates. From the beginning of 1999 to June 2000 the main financing operations of the Eurosystem were conducted using the fixed rate tender procedure. At its meeting on 8 June 2000 the Governing Council of the ECB decided that, starting from the operation to be settled on 28 June 2000, the main financing operations of the Eurosystem would be conducted as variable rate tenders, using the multiple rate auction procedure. Furthermore, the Governing Council decided to set a minimum bid rate for these operations. The minimum bid rate was initially set at 4.25%, the same level applied for the previous fixed rate tender operations. Since then the minimum bid rate has been raised twice. Effective 11 November 2000, the minimum bid rate is 4.75%. In the new procedure the minimum bid rate signals the monetary policy stance, which previously was indicated by the rate applied to fixed rate tenders.

The Eurosystem uses the rates on its standing facilities to bound overnight market interest rates. The interest rates on the marginal lending facility and the deposit facility are set separately by the Eurosystem. Effective 6 October 2000, the interest rate on the Eurosystem's marginal lending facility is 5.75% and the overnight interest rate on the deposit facility 3.75%.

<sup>1</sup> The European System of Central Banks (ESCB) comprises the European Central Bank (ECB) and the national central banks of the EU member states. The Eurosystem is composed of the ECB and the national central banks of the member states participating in Stage Three of Economic and Monetary Union. The Eurosystem's supreme decision-making body is the Governing Council of the ECB, which comprises the six members of the Executive Board of the ECB and the governors of the eleven national central banks forming the Eurosystem.

## Open market operations

Open market operations play an important role in the monetary policy of the Eurosystem. They are used for the purposes of steering interest rates, managing the liquidity situation in the market and signalling the stance of monetary policy. Open market operations are normally executed by the national central banks on the initiative of the ECB. Open market operations can be divided into four categories:

1) The *main refinancing operations* are weekly liquidity-providing operations executed by the national central banks through standard tenders and with a maturity of two weeks. They play a pivotal role in pursuing the purposes of the Eurosystem's open market operations and provide the bulk of refinancing to the financial sector.

2) The *longer-term refinancing operations* are liquidity-providing standard tender operations with a monthly frequency and a maturity of three months. These operations aim to provide counterparties with additional longer-term refinancing. In these operations, the Eurosystem does not intend to send signals to the market and therefore the operations are normally executed on the basis of variable-rate tenders.

3) *Fine-tuning operations* are executed on an ad hoc basis in order to smooth interest rate movements caused by unexpected changes in market liquidity. Fine-tuning operations are executed by the national central banks primarily as reverse transactions, but they can also take the form of outright transactions, foreign exchange swaps and the collection of fixed-term deposits. Fine-tuning operations are executed through quick tenders or bilateral procedures. Under exceptional circumstances and by decision of the Governing Council of the ECB, the ECB may execute fine-tuning operations in a decentralized manner.

4) *Structural operations* are executed with the aim of adjusting the structural position of the Eurosystem vis-à-vis the financial sector. Structural operations can be executed through reverse transactions, outright transactions or the issuance of ECB debt certificates.

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## Standing facilities

The standing facilities are intended to limit excessive movements in overnight interest rates by providing or absorbing overnight liquidity and to signal the general stance of monetary policy. Two standing facilities are available: the marginal lending facility and the deposit facility. Counterparties can use the marginal lending facility to obtain overnight liquidity from the national central banks against eligible assets. The interest rate on the marginal lending facility provides a ceiling for the overnight market interest rate. Counterparties can use the deposit facility to make overnight deposits with the national central banks. The interest rate on the deposit facility provides a floor for the overnight market interest rate. Under normal circumstances, there are no quantitative limits on access to the standing facilities.

## Minimum reserve system

The Eurosystem's minimum reserve system applies to credit institutions in the euro area and primarily pursues the aims of stabilizing money market interest rates and creating (or enlarging) a structural liquidity shortage. The reserve base of each credit institution is defined in relation to liability items on its balance sheet. The reserve base includes deposits, debt securities issued and money market paper. However, liabilities vis-à-vis other institutions subject to the minimum reserve system are not included in the reserve base. Liabilities included in the reserve base are subject to either a 2% reserve ratio or to a zero reserve ratio. Liabilities included in the reserve base and to which a zero reserve ratio is applied comprise deposits with an agreed maturity of over two years, repos and debt securities issued with an agreed maturity of over two years.

In order to pursue the aim of stabilizing interest rates, the Eurosystem's minimum reserve system enables institutions to make use of averaging provisions. Compliance with the reserve requirement is determined on the basis of the institution's average daily reserve holdings over a one-month maintenance period. Institutions' holdings of required reserves are remunerated at the interest rate of the main refinancing operations. When the main financing operations are conducted as variable rate tenders, the interest rate on minimum reserves is determined on the basis

of the marginal interest rates applied in the tenders held during the maintenance period in question.

With effect from the beginning of 2001, the group of institutions in Finland subject to the minimum reserve requirement was extended to include all institutions, in addition to deposit banks, that are authorized to operate as credit institutions. The purpose of this change was to bring the definition of institutions subject to the minimum reserve requirement into line with the practice applied in other euro area countries. A list of the institutions subject to the Eurosystem's minimum reserve requirement is available on the ECB's website (<https://mfi-assets.ecb.int>).

## Counterparties to monetary policy operations

Credit institutions subject to the Eurosystem's minimum reserve system may, in general, access the Eurosystem's standing facilities and participate in the Eurosystem's main refinancing operations and longer-term refinancing operations. The Eurosystem has, however, limited the number of counterparties for fine-tuning operations and structural operations to counterparties that are active players in the money market. For outright transactions, no restrictions are placed on the range of counterparties. For foreign exchange swaps, the counterparties must be counterparties for foreign exchange intervention operations who are active players in the foreign exchange market.

## Assets eligible for monetary policy operations

Under the ESCB/ECB Statute, all the Eurosystem's credit operations must be based on adequate collateral. The Eurosystem accepts a wide range of securities, issued by both public sector and private sector entities, as underlying assets for its operations. For purposes internal to the Eurosystem, eligible assets are divided into two categories. 'Tier one' consists of marketable debt instruments fulfilling uniform euro area-wide eligibility criteria specified by the ECB. 'Tier two' consists of assets, both marketable and non-marketable, that are of particular importance for national financial markets and banking systems and for which eligibility criteria are established by the na-

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tional central banks and approved by the ECB. Both tier one and tier two assets may be used as collateral for Eurosystem monetary policy operations. A list of eligible assets is available on the ECB's website

(<https://mfi-assets.ecb.int>). More detailed information on the Eurosystem's monetary policy instruments is posted on the Bank of Finland's website (<http://www.bof.fi/rhindex.htm>).



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### Publications series

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## Abstracts

### Series E

#### **Technological Transformation and Retail Banking Competition: Implications and Measurement**

Jukka Vesala  
E:20

■ Key words: banking competition, technological change, delivery networks, monetary policy efficiency, competition policy

The study analyses the effects on banking competition of the changes in banking delivery and information collection technologies and of the rivalry from outside the traditional banking sector. Key implications for monetary, regulatory and competition policies are also addressed.

Evidence is provided that liberalization increased banking competition in Europe. In a mostly deregulated environment, technology is argued to be of major importance for competition. The study argues against the prevalent spatial modelling of banking competition due to the difficulty of representing remote access and nonbank activity. Instead, a novel two-stage model (delivery capacity, then loan and deposit pricing decisions) is developed based on multidimensional differentiation theory. According to the results, benefits that clients derive from branch or ATM proximity, additional outlets, or superior service quality can maintain pricing power for banks. Technological development reduces these benefits and generates a permanent increase in competition. The optimal sizes of branch and ATM networks decline. Network cooperation reduces network sizes, but is not necessarily harmful, as price competition is stimulated.

An empirical implementation of the model is presented for the Finnish loan and deposit markets. Banks' pricing power is found to be entirely due to their branch network differentiation and size in the loan markets, and to exist mainly in household lending. In contrast, price coordination was found to likely characterize deposit pricing. The ability to distinguish differentiation from collusion is a new contri-

bution. Banks' pricing advantages were found to be diminishing in all lending and especially deposit-taking activities, following the technological development, which indicates reduced significance of branches for clients.

Technological development, growing nonbank activity, deepening capital markets and weakening price coordination are found to enhance the efficiency of monetary policy transmission into lending (and deposit) rates. The results are relevant for the common euro area monetary policy, since they show the dependence of the transmission on particular structural and competitive conditions of the banking system. Finally, deregulation of deposit interest rates insulates loan rates from changes in deposit rates and, contrary to what is often argued, does not make loans more costly.

### Discussion papers

#### **Re-engineering Payment Systems for the E-world**

Harry Leinonen  
17/2000

■ Key words: payment systems, settlement systems, RTGS, payment system integration

Payment systems are undergoing rapid changes stimulated largely by technological progress. Distributed network technology, real-time processing and customers' willingness to use electronic banking interfaces will further reshape payment systems during the coming years. Internet and e-commerce will have a major impact on payment systems.

This paper presents the current developmental trends. It analyses the need to develop payment standards and the content of payment instructions in order to fully automate the payment process. Since interbank settlements comprise an essential part of payments, they should be made an integral part of the payment process within the Internet environment. With cross-border payments increasing in importance, any new developments should take an international perspective.

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Payment system development requires cooperation between the banks and other participants involved. In order to build the necessary consensus, banking industry organizations as well as central banks and other regulators will need to work together to re-engineer the present payment systems, making full use of the possibilities created by modern technology.

### **Business Activities Open to Credit Institutions: A Legal Perspective**

Markku Lounatuori  
18/2000

■ Key words: credit institutions, activities of credit institutions, banks, banking

In Finland the business activities of banks have traditionally been restricted, and this is still the case. Today, the restrictions apply also to other credit institutions. Lawmakers have not lately undertaken a comprehensive analysis of the rationale for such restrictions, nor has there been a great deal of public discussion of the issue in Finland.

In this paper I attempt to show that numerous changes in the operating environment – viz. deregulation of financial markets, rapid development of the information society, and EU membership – argue for the need to re-evaluate whether it is still necessary to restrict these activities in the same way as before.

I cite regulations that currently restrict credit institutions' business activities and present viewpoints that I feel have underpinned the drafting of those regulations. I also attempt to evaluate whether these viewpoints should now be given the same weight as was given at the time the regulations were drawn up. I also point out certain factors that, in my view, have come to light as changes have occurred in the operating environment and that may provide a strong rationale for rescinding these restrictions. In this same context, some comments are also made on related regulation in the EU and United States. My rationale for a re-evaluation also relies on the view expressed in the United States that banking and commercial activities should be kept separate.

I end the paper with a call for public discussion on how regulation and recent business trends can be harmonized. The present situation regarding super-

vision and regulation of credit institutions is not sustainable. The Financial Supervision Authority – the body charged with supervising financial markets and participants in Finland – repeatedly encounters situations in which it is torn between two demands: the good of society vs the letter of the law.

### **Evolution of Retail Payments in Finland in the 1990s**

Jussi Snellman  
19/2000

■ Key words: retail payments, electronification, ATMs, Internet banking

During the 1990s the availability of location-specific retail payment services in Finland declined substantially, but at the same time there was a surge in development of self-service methods. These new methods, which make use eg of mobile phones and the Internet, dramatically increased the availability of payment services that are not tied to location. More traditional forms of payment still exist; for example, the use of cash remains significant. In Europe there are marked differences between countries with respect to the use of different payment methods. Generally, the use of cashless payment instruments has increased during the last ten years, but it seems that payment patterns are still not converging to similar structures.

The development of the Finnish retail payment system has long roots, and several factors – eg the salary bank arrangement of the 1960s and the severe banking crisis of the early 1990s – have influenced the development of the current Finnish payment system. In the retail payments area, new technologies are developing rapidly. The success of new forms of payment (based eg on mobile phones) in gaining general acceptance may depend on changes in the nature of consumption. If customer demand increasingly shifts toward virtual goods and services, the demand for new types of payment methods such as electronic money may increase substantially.

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## **Are Expansions Cost Effective for Stock Exchanges?**

### **A Global Perspective**

Iftekhhar Hasan – Markku Malkamäki  
20/2000

- Key words: stock exchanges, mergers, regional alliances, economies of scale.

This paper investigates the existence and extent of economies of scale and scope among stock exchanges. Evidence from 38 exchanges in 32 countries and 4 continents around the world for the years 1989–1998 indicates the existence of significant economies of scale and scope. The degree of such economies however differs by size of exchange and region. The largest stock exchanges show an increasing trend of cost effectiveness. Exchanges in North America and Europe report substantially larger economies of scale than those in the Asia-Pacific regions.

## **The Effects of Competition on Banks' Risk Taking with and without Deposit Insurance**

Juha-Pekka Niinimäki  
21/2000

- Key words: deposit insurance, insurance guaranty funds, bank and insurance regulation, moral hazard, credit rationing, financial fragility

We consider the joint effect of competition and deposit insurance on risk taking by banks when the riskiness of banks is unobservable to depositors. It turns out that the magnitude of risk taking depends on the type of bank competition. If the bank is a monopoly or banks compete only in the loan market, deposit insurance has no effect on risk taking. In that case the banks are too risky but extreme risk taking is avoided. In contrast, introducing deposit insurance increases risk taking if banks compete for deposits. Then, deposit rates become excessively high and force the banks to take extreme risks. Regarding the effects of increasing competition when there is deposit insurance, the results imply that deposit competition encourages risk taking but loan market competition does not. Our results can be extended more generally to insurance guaranty funds

## **The Term Structure of Real Interest Rates: Theory and Evidence from UK Index-Linked Bonds**

Juha Seppälä  
22/2000

- Key words: term structure of interest rates, general equilibrium, default risk, term premia, index-linked bonds.

This paper studies the behaviour of the default-risk-free real term structure and term premia in two general equilibrium endowment economies with perfect markets but without money. In the first economy there are no frictions as in Lucas (1978) and in the second risk-sharing is limited by the risk of default as in Alvarez and Jermann (2000ab). Both models are solved numerically, calibrated to UK aggregate and household data, and the predictions are compared to data on real interest rates constructed from the UK index-linked data. While both models produce time-varying risk or term premia, only the model with limited risk-sharing can generate enough variation in the term premia to account for the rejections of expectations hypothesis.

## **Consumption and Uncertain Access to the Asset Market**

Leena Rudanko  
23/2000

- Key words: consumption, liquidity constraints, permanent income hypothesis

This paper presents a new approach to modelling credit restrictions by considering uncertain access to the asset market. The asset market and the stochastic process governing access are considered fully exogenous and independent of income. The model generates stable debt trajectories for a broader array of interest rate levels than the one corresponding to the agent's rate of time preference. The agent exhibits excess sensitivity of consumption to current period income, even for low probabilities of constraints. Because this sensitivity is inversely related to the maturity of debt contracts, the availability of long-term debt contracts reduces the income-sensitivity of consumption. A very tractable approximative Euler equation for the model is presented.

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## Cross-Border Performance in European Banking

Iftexhar Hasan – Ana Lozano-Vivas –  
Jesús T. Pastor  
24/2000

■ Key words: efficiency, technology, competition, regulation

Recent cross-country comparisons of bank efficiency have been based on pooled estimates of banks across countries and have typically assumed a common frontier and that differences in performance among banks are primarily due to disparities in certain country-specific aspects of banking technology. This paper argues that such comparisons of performance must take into account cross-country differences in economic conditions, demographics, and regulatory structures (environmental factors). Using a sample of banks from ten leading European countries, this paper provides detailed evaluations of the efficiency of banks in each country that operate both within and outside their own environments. The results indicate that adverse (advantageous) environmental conditions are a positive (negative) factor for the home banking industry and that technical efficiency is a significant deterrence to foreign competition.

## BOFIT Discussion Papers

### Novgorod and Pskov in the 1990s

Laura Solanko – Merja Tekoniemi  
14/2000

■ Key words: Russia, regions, Novgorod, Pskov

This paper examines two regions of the Russian Federation, Novgorod and Pskov, to compare how differences in economic policy affect economic development. Despite common histories, geography and natural resources, Novgorod committed early on to policies that would attract foreign investments in production. Pskov, on the other hand, withdrew into protectionist policies until it was clear that efforts to increase domestic and foreign investment levels were needed. Using available statistics, we consider the reasoning that led these regions down such distinctly different economic policy paths – and consequences of these choices.

### Land, climate and population

Finland covers an area of more than 338,000 square kilometres. The total area is slowly increasing because of the steady uplift of the land since the last glacial era. The country shares frontiers with Sweden in the west, Norway in the north and Russia in the east and has a coastline bordered by the Baltic Sea in the south and west. Agricultural land accounts for 6% of the total area, forest and other wooded land for 68% and inland waters for 10%. Located between latitudes 60° and 70° north, Finland has warm summers and cold winters. Helsinki on the south coast has an average maximum temperature of 21° C (70° F) in July and -3° C (25° F) in February.

Finland has a population of 5,171,302 (31 December 1999) and an average population density of 17 per square kilometre. The largest towns are Helsinki, the capital, with 551,123 inhabitants, Espoo 209,667, Tampere 193,174, Vantaa 176,386 and Turku 172,107.

There are two official languages: 93% of the population speaks Finnish as its mother tongue and 5.7% Swedish. There is a small Lapp population in the north. Finnish is a member of the small Finno-Ugrian group of languages, which also includes Estonian and Hungarian.

### Form of government

Finland is a parliamentary democracy with a republican constitution. From the twelfth century to 1809 Finland was part of the Kingdom of Sweden. In 1809 Finland was annexed to Russia as an autonomous Grand Duchy with the Tsar as Grand Duke. On 6 December 1917 Finland declared her independence. The republican constitution adopted in 1919 remains essentially unchanged today.

The legislative power of the country is exercised by Parliament and the President of the Republic. The supreme executive power is vested in the President, who is elected for a period of six years. The President for the current term, 1 March 2000 to 1 March 2006, is Ms Tarja Halonen.

Parliament, comprising 200 members, is elected by universal suffrage for a period of four years. Following the parliamentary elections of 1999, the seats of the various parties in Parliament are distributed as follows:

Social Democratic Party 51; Centre Party 48; National Coalition Party 46; Left Alliance 20; Swedish People's Party 12; Green League 11; Christian League 10; True Finns 1; and Reform Group 1.

Of the 18 ministerial posts in the present Government appointed in April 1999, 6 are held by the Social Democratic Party, 6 by the National Coalition Party, 2 by the Left Wing Alliance, 1 by the Swedish People's

Party, 2 by the Green League and 1 by an expert with no party affiliation. The Prime Minister is Mr Paavo Lipponen of the Social Democratic Party.

Finland is divided into 452 self-governing municipalities. Members of the municipal council are elected by universal suffrage for a period of four years.

### International relations

Finland became a member of the BIS in 1930, the IMF in 1948, the IBRD in 1948, GATT in 1950, the UN in 1955, the Nordic Council in 1955, the IFC in 1956, IDA in 1960, EFTA in 1961, the ADB in 1966, the OECD in 1969, the IDB in 1977, the AfDB in 1982, the MIGA in 1988, the Council of Europe in 1989, the EBRD in 1991 and the EU in 1995.

Citizens of the five Nordic countries, Denmark, Finland, Iceland, Norway and Sweden, have enjoyed a common labour market, a passport union and reciprocal social security benefits since the mid-1950s.

Having abolished most quantitative restrictions on foreign trade in 1957, Finland first took part in European free trade arrangements under the auspices of EFTA in 1961. Finland's free trade agreement with the EEC entered into force in 1974 and agreements for the removal of trade barriers were concluded with several eastern European countries as well. The agreement on the European Economic Area (EEA) between the member countries of EFTA and the European Union came into effect at the beginning of 1994. Finland became a member of the European Union on 1 January 1995. Finland and ten other EU countries entered Stage Three of EMU in 1999.

### The economy

**Output and employment.** Of the gross domestic product of FIM 623 (EUR 105) billion in basic values in 1999, 1.3% was generated in agriculture, hunting and fishing, 2.4% in forestry, 27.3% in industry, 5.7% in construction, 12.4% in trade, restaurants and hotels, 9.3% in transport and communications, 3.5% in finance and insurance, 17.6% in other private services and 20.5% by producers of government services. Of total employment of 2.3 million persons in 1999, 6.1% were engaged in primary production, 27.5% in industry and construction and 66.4% in services.

In 1999 expenditure on the gross domestic product in purchasers' values amounted to FIM 722 (EUR 121) billion and was distributed as follows: net exports 8.2% (exports 37.5%, imports -29.3%), gross fixed capital formation 19.1%, private consumption 50.4% and government consumption 21.5%. Finland's tax ratio (gross

taxes including compulsory employment pension contributions relative to GDP) was 46.1%.

Average annual (compounded) growth of real GDP was 4.7% in the period 1950–59, 5.0% in 1960–69, 3.7% in 1970–79, 3.6% in 1980–89 and 1.7% in 1990–99. Finland's GDP per capita in 1999 was USD 25,056.

**Foreign trade.** EU countries absorb the bulk of Finnish merchandise exports. In 1996–2000 their average share was 55.5%. Over the same period, Finnish exports to other European countries (including Russia) accounted for 18.5% and to the rest of the world for 26.0%. During the same period the regional distribution of Finnish merchandise imports was quite similar to that of exports: EU countries accounted for 58.3%, other European countries for 17.4% and the rest of the world for 24.3%.

In 2000 the share of forest industry products in total merchandise exports was 27.1%, the share of metal and electrical products 55.7% and the share of other goods 17.2%. Raw materials and intermediate goods and energy together accounted for 53.1% of merchandise imports, capital goods for 24.0% and durable and non-durable consumer goods for 22.9%.

**Forest resources.** Finland has abundant forest resources but only limited amounts of other raw materials. The growing stock comprises 1,927 million cubic metres, of which 46% is pine, 36% spruce, 15% birch and 3% other broad-leaved species.

According to the National Forest Inventory for 1992–1998, the annual volume increment was about 76 million cubic metres. Over the same period the average annual drain was about 59 million cubic metres.

## Finance and banking

**Currency.** Finland had its own monetary system from 1865 to 1998. The currency unit was the markka (plural markkaa), which was divided into 100 penniä (singular penni). During the last decades of this period the objective of foreign exchange policy was to maintain a fixed exchange rate in relation to a given currency basket. On 8 September 1992 the markka was allowed to float. On 14 October 1996 the markka joined the Exchange Rate Mechanism of the European Monetary System. Since the beginning of 1999 Finland has participated in the single currency area, in accordance with the Treaty establishing the European Community. The conversion rate for the markka, as confirmed by the Council of the European Union on 31 December 1998, is 5.94573. With effect from the beginning of 1999 the currency unit used in Finland is the euro, which is divided into 100 cent. The markka will, however, remain as the national denomination of the euro until the year 2002, and during this time notes and coins denominated in markkaa will continue to be used.

**The Central Bank.** The two new laws adopted in 1997 and 1998 make Finnish legislation compatible with

the requirements of the Treaty establishing the European Community and the Statute of the European System of Central Banks and the European Central Bank. The latter law, the new Act on the Bank of Finland, integrates the Bank of Finland into the ESCB. In performing the tasks of the ESCB, the Bank of Finland acts in accord with guidelines and instructions issued by the ECB. Under the Treaty, the primary objective of the Bank of Finland is to maintain price stability. The new Act did not change the division of responsibilities between the Parliamentary Supervisory Council and the Board. The tasks of the Council are connected with supervision of the Bank's administration and operations, administrative decisions and certain other responsibilities. The Board of the Bank of Finland comprises the Chairman (Governor) and a maximum of five (currently two) other members, all of whom are appointed by the President of the Republic upon a proposal from the Council. The Chairman of the Board is appointed for a seven-year term and the other members of the Board each for a five-year term. The Bank of Finland has a head office in Helsinki and four branch offices in other towns.

**Other banks** (31 October 2000). Finland has three major groups of deposit banks with a total of about 1,540 branches. In addition there are six smaller banks and banking groups. The commercial banks have a total of 17 foreign branches, subsidiaries and associate banks and 17 representative offices abroad. There are 40 savings banks, a group of cooperative banks (246) and 43 local cooperative banks. In addition, 8 foreign banks have branches and 5 foreign banks have representative offices in Finland.

**Financial markets.** The total stock of domestic credit amounted to FIM 745.3 (EUR 125.3) billion at end-September 2000 and was broken down by lender group as follows: deposit banks 56%; insurance companies 6%; pension insurance institutions 17%; other credit institutions 11%; central and local authorities and social security funds 10%.

In the money market, the total value of instruments outstanding was about FIM 125.5 (EUR 21.1) billion at end-December 2000; bank certificates of deposit accounted for 62% of the total and Treasury bills, commercial paper and local authority paper for the rest.

At end-December 2000 there were 108 companies on the Main List, 32 on the Investors' List and 17 on the NM List of the HEX, Helsinki Exchanges. At end-December 2000 total market capitalization was FIM 1,876.5 (EUR 315.6) billion for the Main List, FIM 8.3 (EUR 1.4) billion for the Investors' List and FIM 5.8 (EUR 0.97) billion for the NM List. Domestic bonds and debentures in circulation at end-December 2000 amounted to FIM 306.8 (EUR 51.6) billion; government bonds accounted for 79% of the total. Share turnover on the HEX, Helsinki Exchanges amounted to FIM 1,351 (EUR 227.2) billion in 2000.





# VISITING SCHOLARS PROGRAMME

## BANK OF FINLAND

*The Bank of Finland, the national central bank, has 750 employees, some 30 of whom are involved in research. The Bank is located in Helsinki.*

The Bank of Finland welcomes applications from foreign and Finnish scholars for a post under the Bank's Visiting Scholars Programme at the Research Department. Scholarships for six months are available for faculty or post-doctoral level research projects in two main research areas:

- (1) The modelling of monetary policy
- (2) The future of the financial services sector.

In the area of monetary policy modelling, we are especially interested in incorporating the analysis of credibility and policy uncertainty in applied models that could be used to analyze monetary policy in practice. The second area aims at illuminating the ongoing structural transformation of the global financial services industry, as driven by electronification and increased competition in particular. This area includes stability and other public policy aspects of the transformation.

A visiting scholar will be expected to conduct research based on a mutually agreed research plan. Articles stemming from the research are expected to be included in the Bank's Discussion Papers and may be published elsewhere as well. A visiting scholar should normally also give a lecture at the Bank to an audience of economists on his or her research topic as well as interact with other researchers engaged in projects in the same area.

Remuneration for visiting scholars will be commensurate with their research experience.

Persons interested in applying are invited to send

- a brief research proposal concerning either of the two areas
- a CV specifying the applicant's academic and research background, with the names of two or three referees

to: Research Department  
Bank of Finland  
P.O.Box 160  
Helsinki, Finland  
Fax: +358 9 183 2560  
Email: Kaisa-Liisa.Nordman@bof.fi

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phone +358 9 183 2581, email Juha.Tarkka@bof.fi  
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Jouko Vilmunen, Research Supervisor, Research Department  
phone +358 9 183 2594, email Jouko.Vilmunen@bof.fi

## Balance sheet of the Bank of Finland, EUR million

	2000	2001	
	31.12.	26.1.	23.2.
<b>Assets</b>			
<b>1 Gold and gold receivables</b>	462	462	462
<b>2 Claims on non-euro area residents denominated in foreign currency</b>	8,447	8,450	8,484
2.1 Receivables from the IMF	692	655	700
2.2 Balances with banks and security investments, external loans and other external assets	7,755	7,794	7,783
<b>3 Claims on euro area residents denominated in foreign currency</b>	859	802	729
<b>4 Claims on non-euro area residents denominated in euro</b>	–	0	0
4.1 Balances with banks, security investments and loans	–	0	0
4.2 Claims arising from the credit facility under the ERM II	–	–	–
<b>5 Lending to euro area credit institutions related to monetary policy operations denominated in euro</b>	454	517	2,050
5.1 Main refinancing operations	394	117	1,650
5.2 Longer-term refinancing operations	61	400	400
5.3 Fine-tuning reverse operations	–	–	–
5.4 Structural reverse operations	–	–	–
5.5 Marginal lending facility	–	–	–
5.6 Credits related to margin calls	–	–	–
<b>6 Other claims on euro area credit institutions denominated in euro</b>	4	4	4
<b>7 Securities of euro area residents denominated in euro</b>	–	–	–
<b>8 General government debt denominated in euro</b>	–	–	–
<b>9 Intra-Eurosystem claims</b>	768	769	768
9.1 Share in ECB capital	70	70	70
9.2 Claims equivalent to the transfer of foreign currency reserves	699	699	699
9.3 Claims related to the issuance of ECB debt certificates	–	–	–
9.4 Claims related to TARGET and correspondent accounts (net)	–	–	0
9.5 Claims related to other operational requirements within the Eurosystem	–	1	0
<b>10 Other assets</b>	615	586	593
<b>Total assets</b>	11,610	11,590	13,090

Totals/sub-totals may not add up because of rounding.



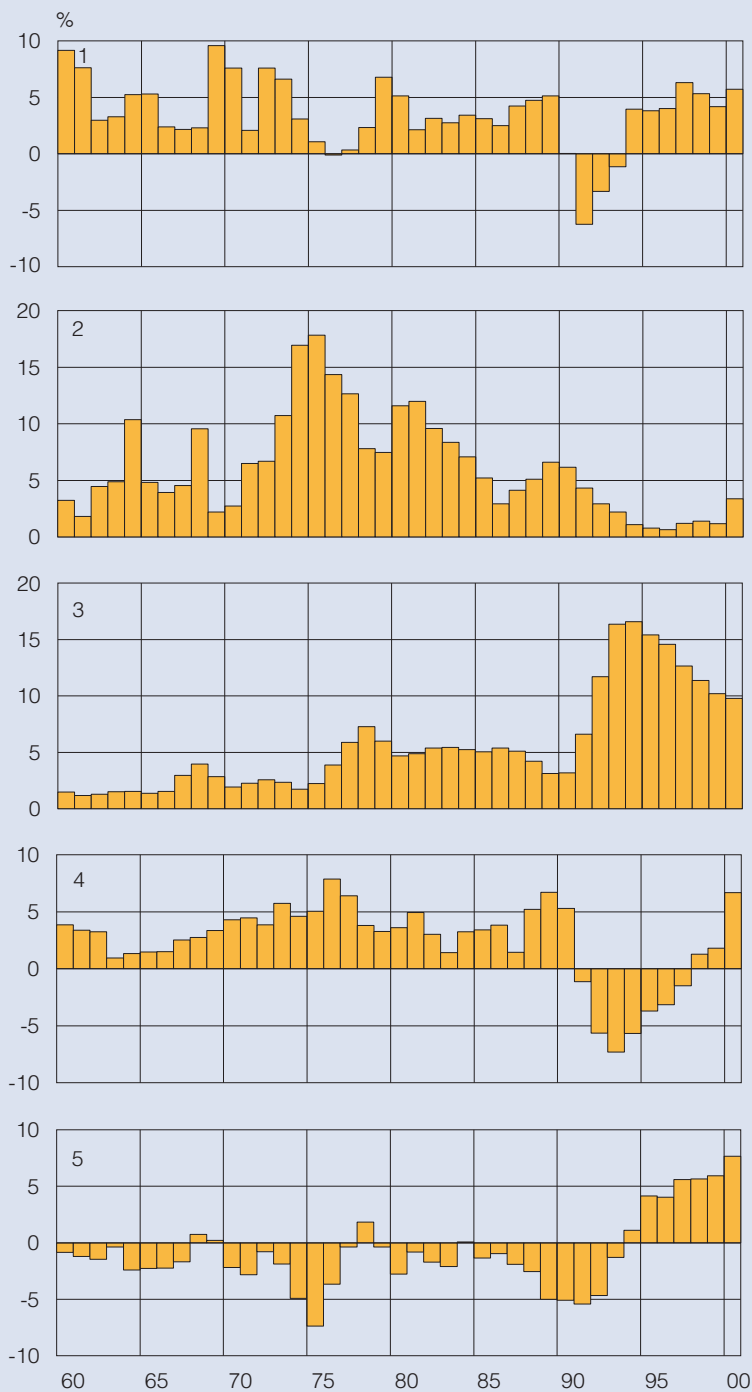
<b>Liabilities</b>	<b>2000</b>	<b>2001</b>	
	<b>31.12.</b>	<b>26.1.</b>	<b>23.2.</b>
<b>1 Banknotes in circulation</b>	2,982	2,636	2,598
<b>2 Liabilities to euro area credit institutions related to monetary policy operations denominated in euro</b>	2,475	1,552	1,643
2.1 Current accounts (covering the minimum reserve system)	2,475	1,552	1,520
2.2 Deposit facility	–	–	122
2.3 Fixed-term deposits	–	–	–
2.4 Fine-tuning reverse operations	–	–	–
2.5 Deposits related to margin calls	–	–	–
<b>3 Other liabilities to euro area credit institutions denominated in euro</b>	–	–	0
<b>4 Liabilities to other euro area residents denominated in euro</b>	1	1	1
4.1 General government	–	–	–
4.2 Other liabilities	1	1	1
<b>5 Liabilities to non-euro area residents denominated in euro</b>	194	83	24
<b>6 Liabilities to euro area residents denominated in foreign currency</b>	–	–	–
<b>7 Liabilities to non-euro area residents denominated in foreign currency</b>	299	199	122
7.1 Deposits, balances and other liabilities	299	199	122
7.2 Liabilities arising from the credit facility under the ERM II	–	–	–
<b>8 Counterpart of special drawing rights allocated by the IMF</b>	200	200	201
<b>9 Intra-Eurosystem liabilities</b>	167	1,608	3,137
9.1 Liabilities related to promissory notes backing the issuance of ECB debt certificates	–	–	–
9.2 Liabilities related to TARGET and correspondent accounts (net)	167	1,608	3,137
9.3 Liabilities related to other operational requirements within the Eurosystem	–	–	0
<b>10 Other liabilities</b>	747	766	820
<b>11 Revaluation account</b>	1,070	1,070	1,070
<b>12 Capital and reserves</b>	3,475	3,475	3,475
<b>Total liabilities</b>	<b>11,610</b>	<b>11,590</b>	<b>13,090</b>

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## Charts

1. Finland: key economic indicators
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3. Monetary aggregates for the euro area
4. Growth of the money stock in the euro area and Finland
5. Eurosystem interest rates and money market rates
6. Eurosystem (Bank of Finland) interest rates
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57. Level of industrial earnings in the euro area and Finland
58. Selected asset prices in Finland

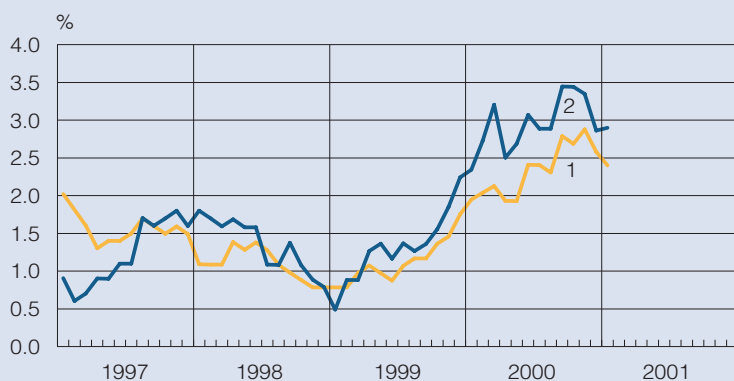
## 1. Finland: key economic indicators



1. GDP, volume change from previous year
2. Consumer prices, change from previous year
3. Unemployment rate
4. General government fiscal position, % of GDP
5. Current account, % of GDP

Sources:  
Statistics Finland and  
Bank of Finland.

## 2. Price stability in the euro area and Finland

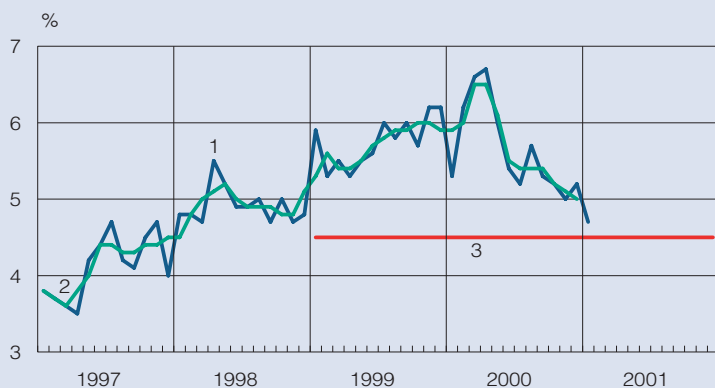


Harmonized Index of Consumer Prices,  
12-month percentage change

1. Euro area countries
2. Finland

Sources:  
Eurostat and Statistics Finland.

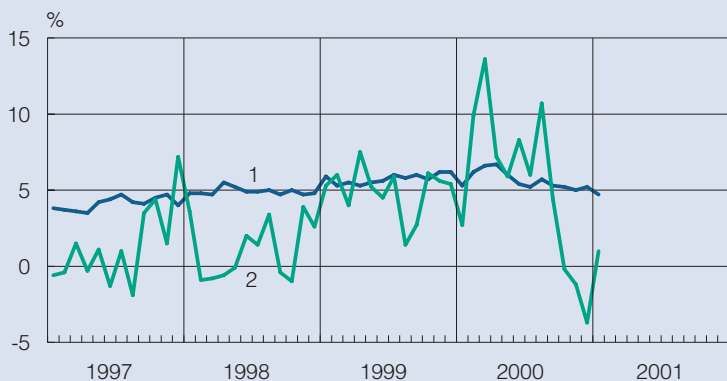
## 3. Monetary aggregates for the euro area



1. M3, 12-month percentage change
2. M3, 12-month percentage change, smoothed by means of a 3-month moving average
3. Eurosystem's reference value for the growth of M3

Source:  
European Central Bank.

## 4. Growth of the money stock in the euro area and Finland

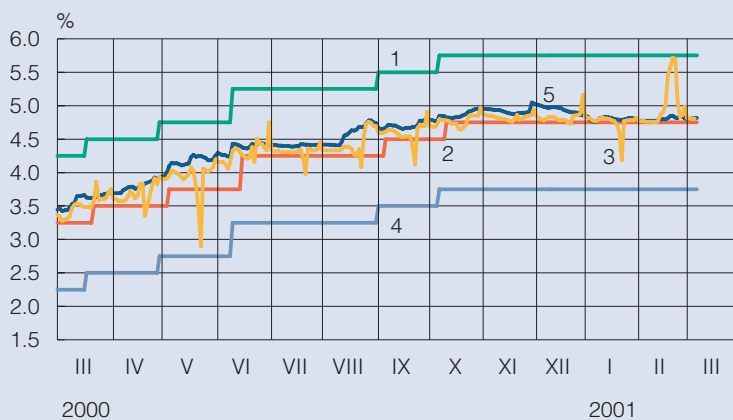


12-month percentage change

1. M3 for the euro area
2. Deposits and other liabilities of Finnish monetary financial institutions included in M3

Sources:  
European Central Bank and  
Bank of Finland.

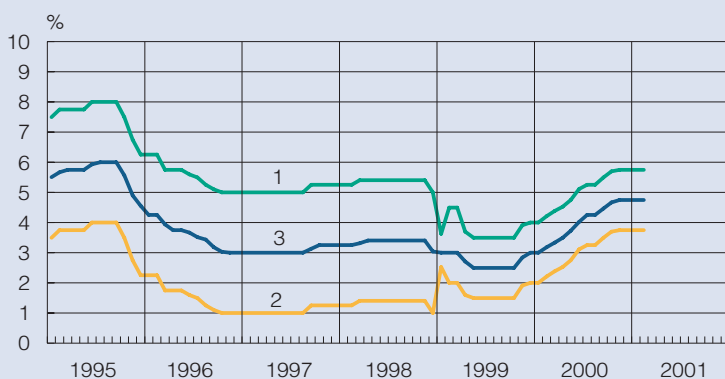
## 5. Eurosystem interest rates and money market rates



1. Marginal lending rate
2. Main refinancing rate / minimum bid rate
3. Eonia rate
4. Deposit rate
5. 1-month Euribor

Sources:  
European Central Bank and Reuters.

## 6. Eurosystem (Bank of Finland) interest rates

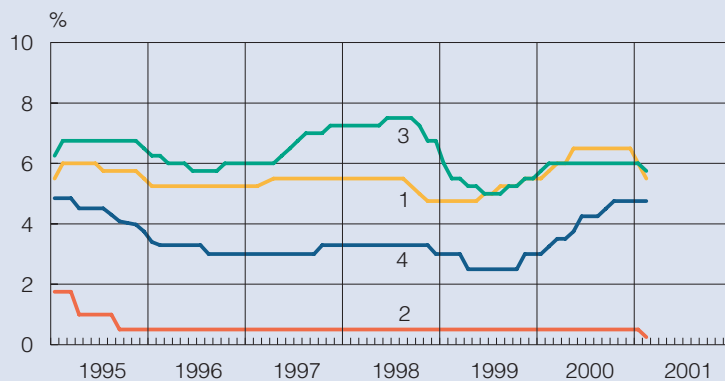


Bank of Finland interest rates until end-1998

1. Marginal lending rate (liquidity credit rate until end-1998)
2. Deposit rate (excess-reserve rate until end-1998)
3. Main refinancing rate / minimum bid rate (tender rate until end-1998)

Source:  
European Central Bank.

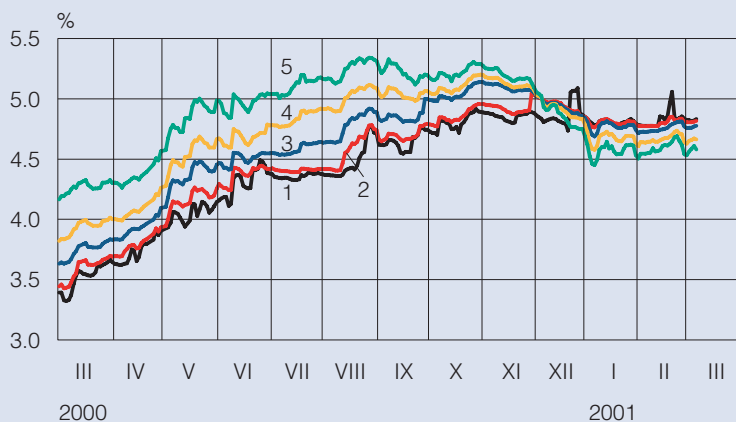
## 7. Official interest rates



1. USA: fed funds target rate
2. Japan: discount rate
3. United Kingdom: base rate
4. Eurosystem: main refinancing rate (German repo rate until end-1998)

Source: Bloomberg.

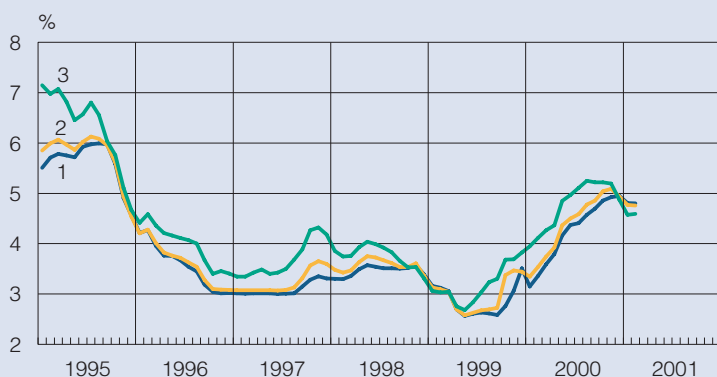
### 8. Euribor rates, daily values



- 1. 1-week
- 2. 1-month
- 3. 3-month
- 4. 6-month
- 5. 12-month

Source: Reuters.

### 9. Euribor rates, monthly values

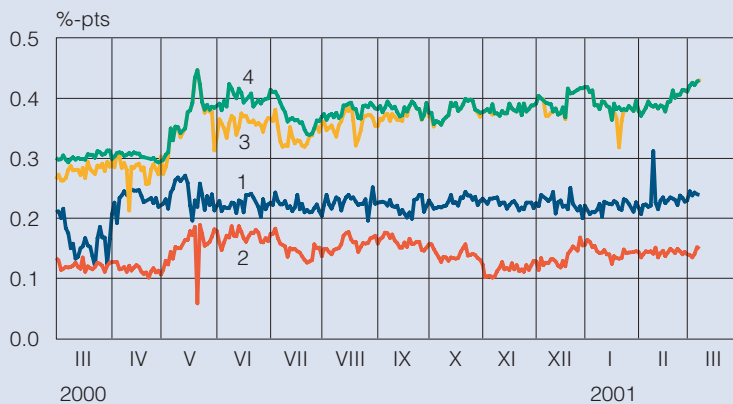


Helibor rates until end-1998

- 1. 1-month
- 2. 3-month
- 3. 12-month

Source: Reuters.

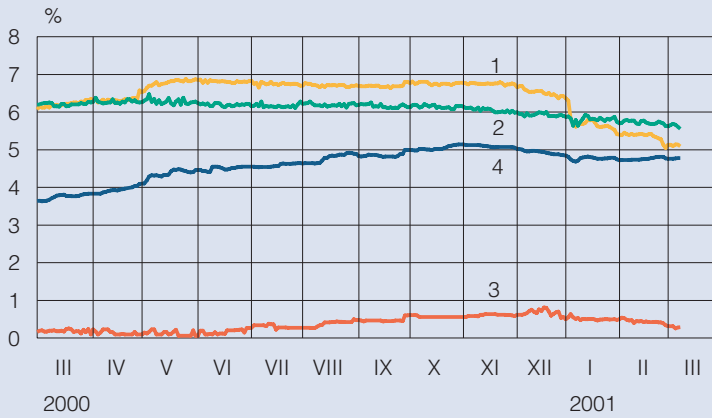
### 10. Differentials between ten-year yields for Germany and selected euro area countries



- 1. Finland
- 2. France
- 3. Italy
- 4. Largest differential

Source: Reuters.

### 11. International three-month interest rates, daily values

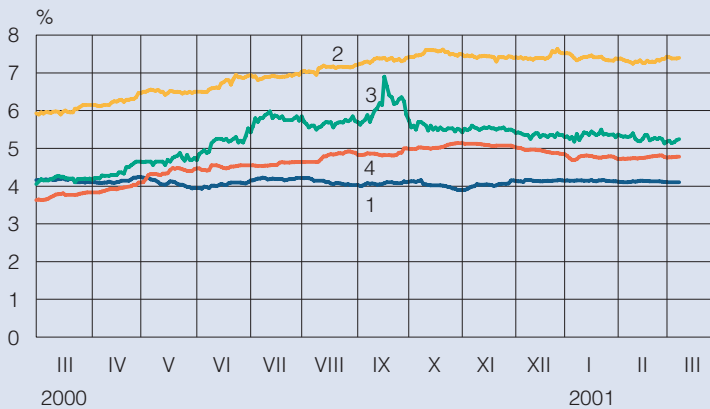


Interbank rates

- 1. United States
- 2. United Kingdom
- 3. Japan
- 4. Euro area

Source: Reuters.

### 12. Three-month interest rates in the Nordic countries, daily values

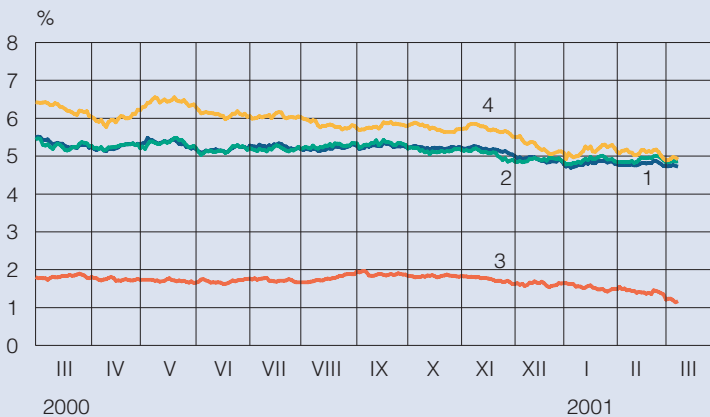


Interbank rates

- 1. Sweden (Stibor)
- 2. Norway
- 3. Denmark
- 4. Finland (Euribor)

Source: Reuters.

### 13. International long-term interest rates, daily values



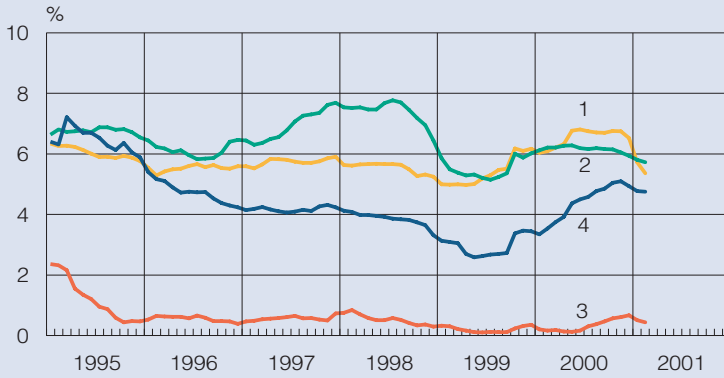
Yields on ten-year government bonds

- 1. Germany
- 2. United Kingdom
- 3. Japan
- 4. United States

Source: Reuters.



#### 14. International three-month interest rates, monthly values

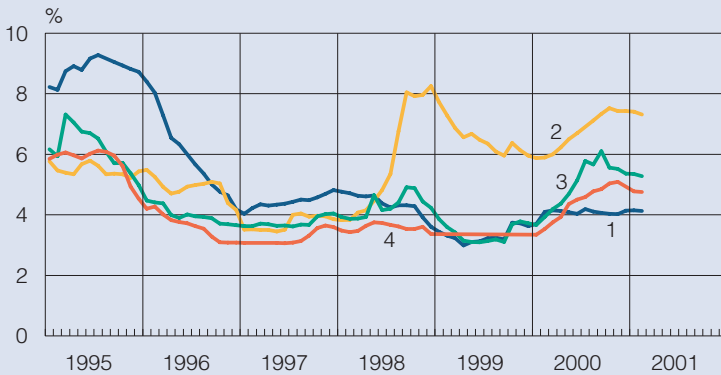


Interbank rates

1. United States
2. United Kingdom
3. Japan
4. Euro area

Source: Reuters.

#### 15. Three-month interest rates in the Nordic countries, monthly values

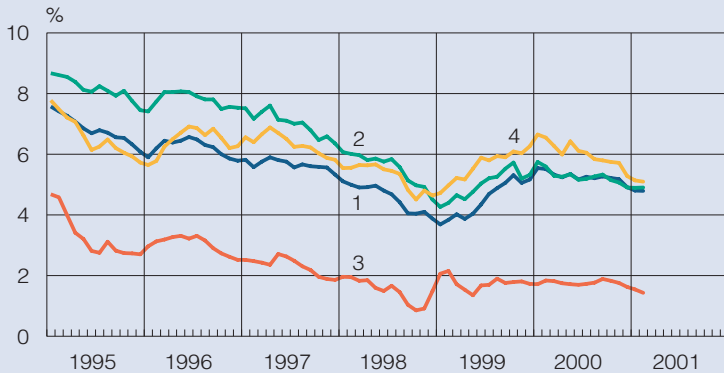


Interbank rates

1. Sweden (Stibor)
2. Norway
3. Denmark
4. Finland (Euribor; Helibor until end-1998)

Source: Reuters.

#### 16. International long-term interest rates, monthly values

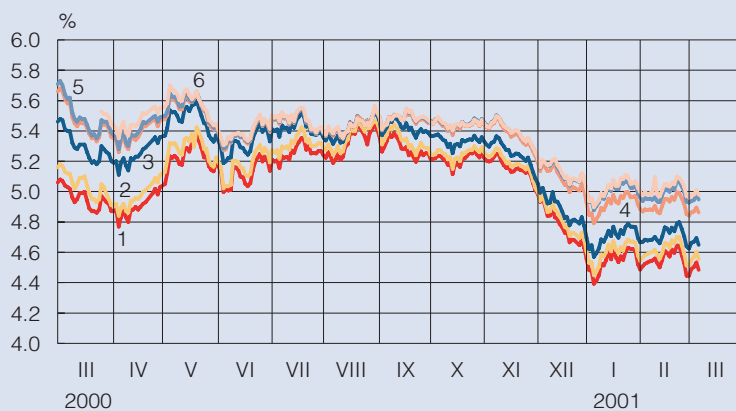


Yields on ten-year government bonds

1. Germany
2. United Kingdom
3. Japan
4. United States

Source: Reuters.

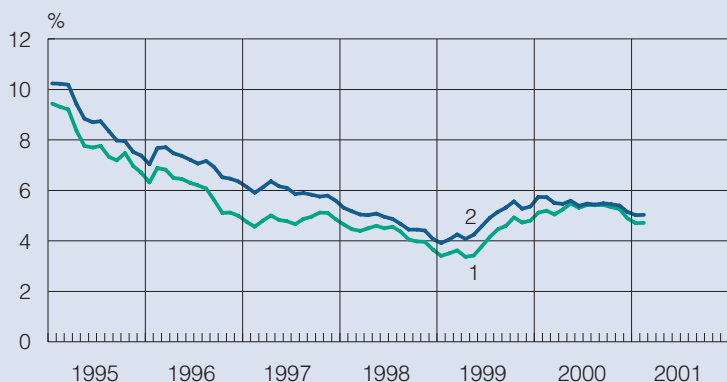
## 17. Yields on Finnish benchmark government bonds



1. Bond maturing on 12 November 2003, 3.75%
2. Bond maturing on 15 March 2004, 9.5%
3. Bond maturing on 18 April 2006, 7.25%
4. Bond maturing on 25 April 2008, 6%
5. Bond maturing on 25 April 2009, 5%
6. Bond maturing on 2 February 2011, 5.75%

Source: Reuters.

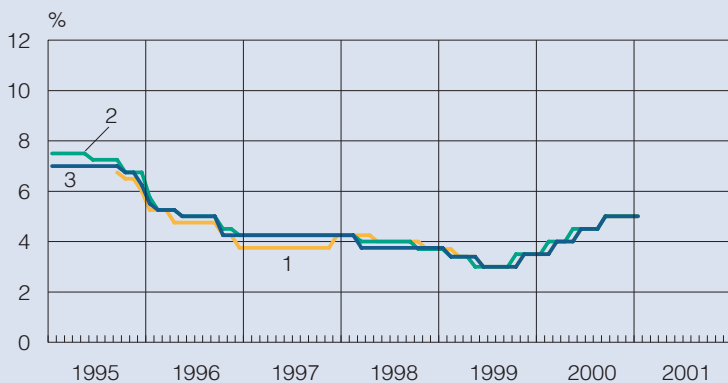
## 18. Yields on five and ten-year Finnish government bonds



1. 5 years
2. 10 years

Source: Reuters.

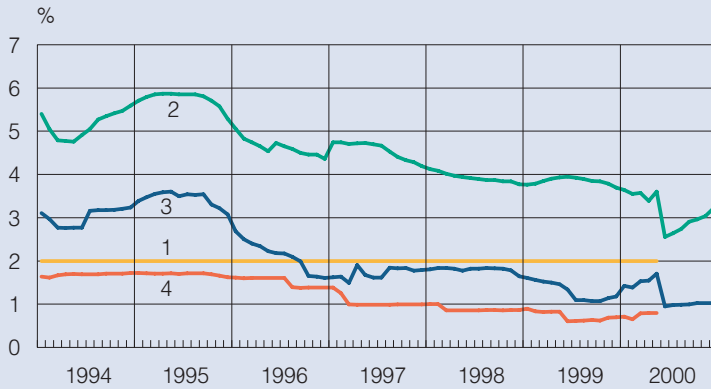
## 19. Bank reference rates in Finland



1. Merita prime
2. Leonia prime
3. OKOBANK group prime

Source: Banks.

## 20. Bank deposit rates in Finland

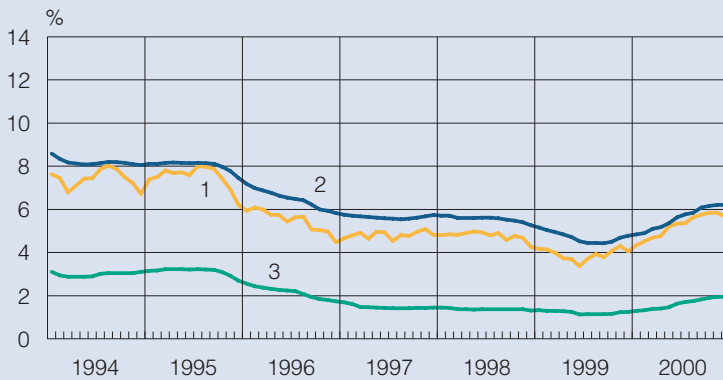


The tax treatment of deposits changed on 1 June 2000.

1. Rate on tax-exempt transaction accounts (upper limit)
2. Average rate on fixed-term deposits subject to withholding tax
3. Average rate on cheque and transaction accounts subject to withholding tax
4. Average rate on tax-exempt cheque and transaction accounts

Source: Bank of Finland.

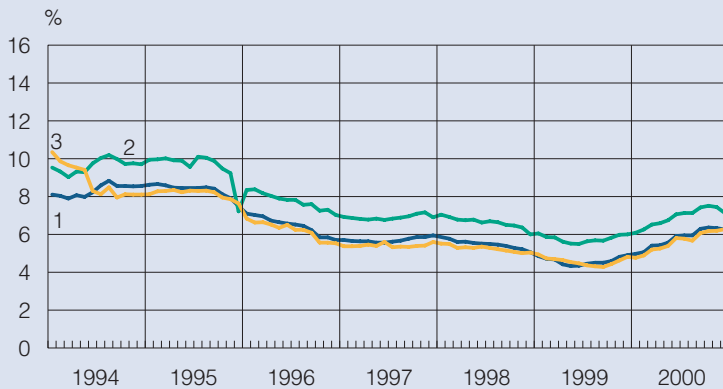
## 21. Bank lending and deposit rates in Finland



1. Rate on new lending
2. Average lending rate
3. Average deposit rate

Source: Bank of Finland.

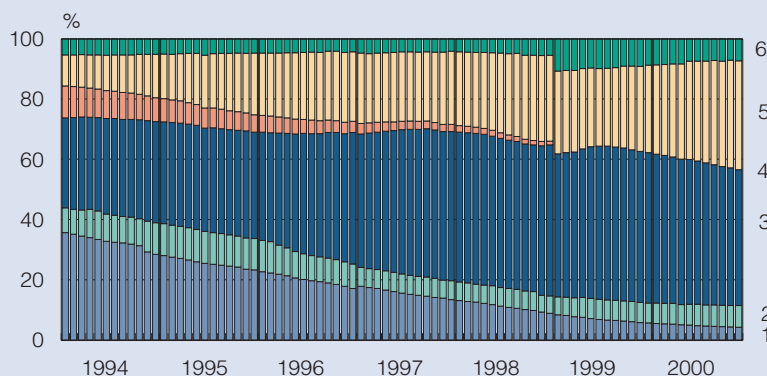
## 22. Interest rates charged by Finnish banks on new lending to households



1. New housing loans
2. New consumer credits
3. New study loans

Source: Bank of Finland.

### 23. Stock of bank lending in Finland

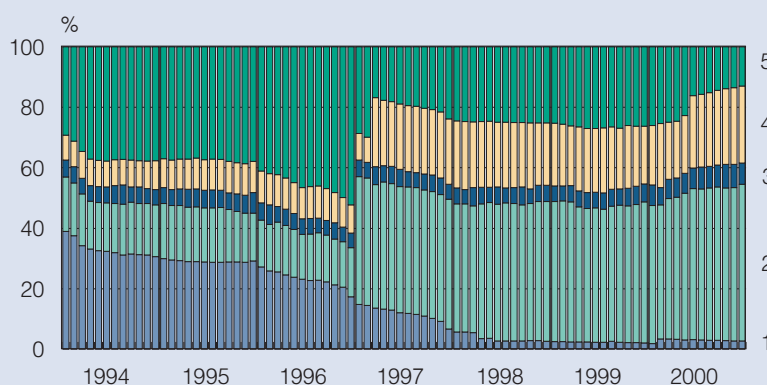


Interest rate linkages, percentages

1. Linked to base rate
2. Fixed-rate
3. Linked to Euribor (Helibor until end-1998)
4. Linked to 3 and 5-year reference rates
5. Linked to reference rates of individual banks (prime rates etc)
6. Other

Source: Bank of Finland.

### 24. Stock of bank deposits in Finland by interest rate linkage

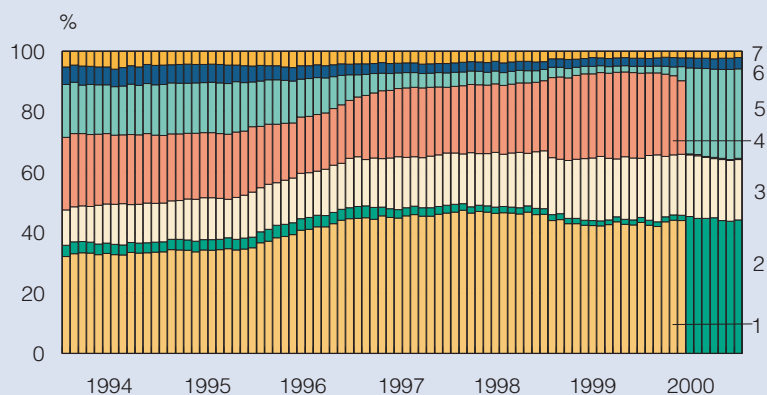


Interest rate linkages, percentages

1. Linked to base rate
2. Fixed-rate
3. Linked to Euribor (Helibor until end-1998)
4. Linked to reference rates of individual banks (prime rates etc)
5. Other

Source: Bank of Finland.

### 25. Stock of bank deposits in Finland by tax treatment

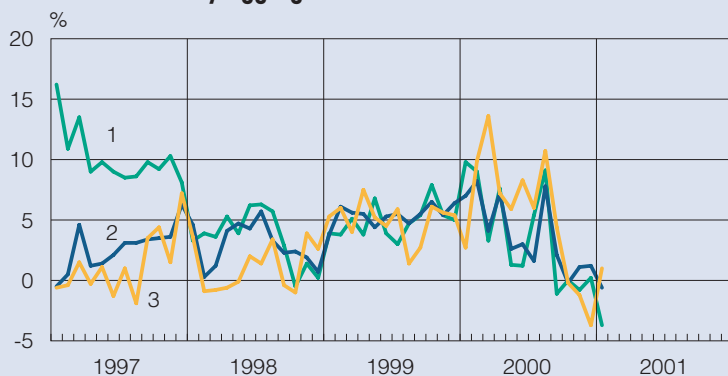


The tax treatment of deposits changed on 1 June 2000.

1. Tax-exempt cheque and transaction accounts
2. Cheque and transaction accounts subject to withholding tax
3. Other taxable cheque and transaction accounts
4. Tax-exempt fixed-term accounts and other accounts
5. Fixed-term accounts and other accounts subject to withholding tax
6. Other taxable accounts
7. Foreign currency accounts

Source: Bank of Finland.

## 26. Liabilities of Finnish monetary financial institutions included in monetary aggregates for the euro area

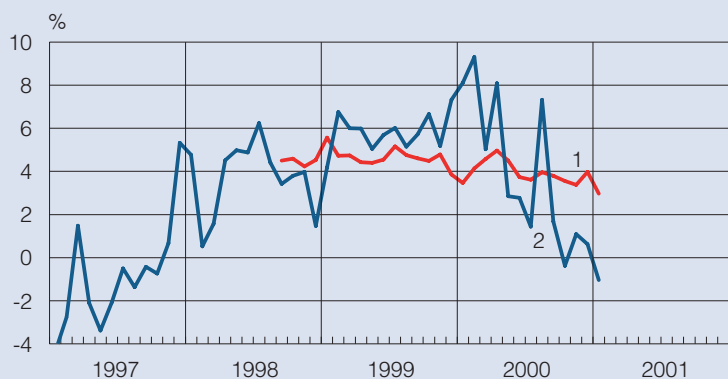


12-month percentage change

1. Items included in M1: transaction accounts (=overnight deposits)
2. Items included in M2: all deposits except fixed-term deposits of over 2 years
3. Items included in M3: M2 deposits plus certain securities and other items

Source: Bank of Finland.

## 27. Euro area and Finnish banks: growth of deposits

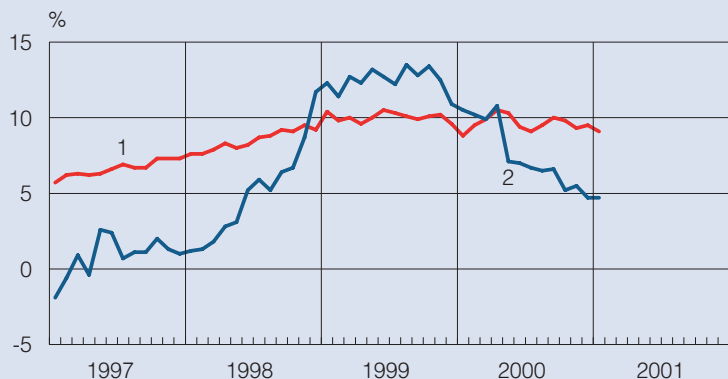


12-month percentage change

1. Deposits of euro area residents with euro area banks
2. Deposits of Finnish residents with Finnish banks

Sources:  
European Central Bank and  
Bank of Finland.

## 28. Euro area and Finnish banks: growth of lending

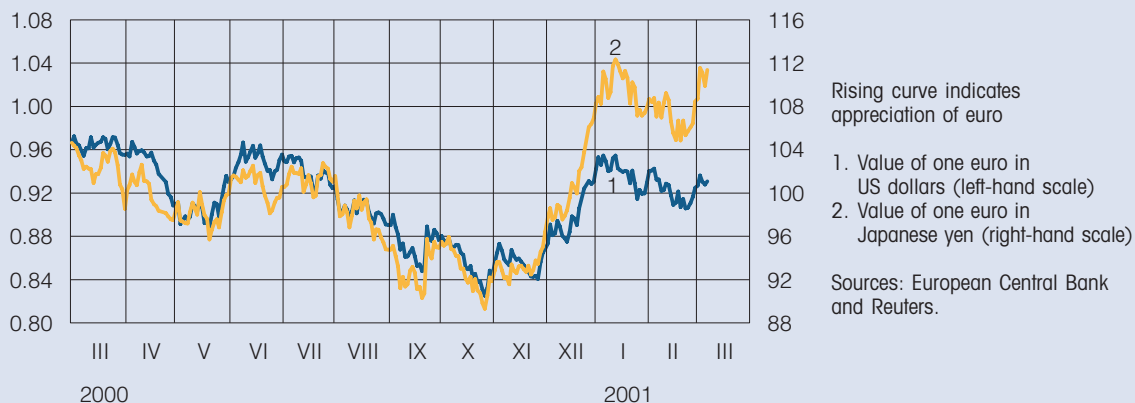


12-month percentage change

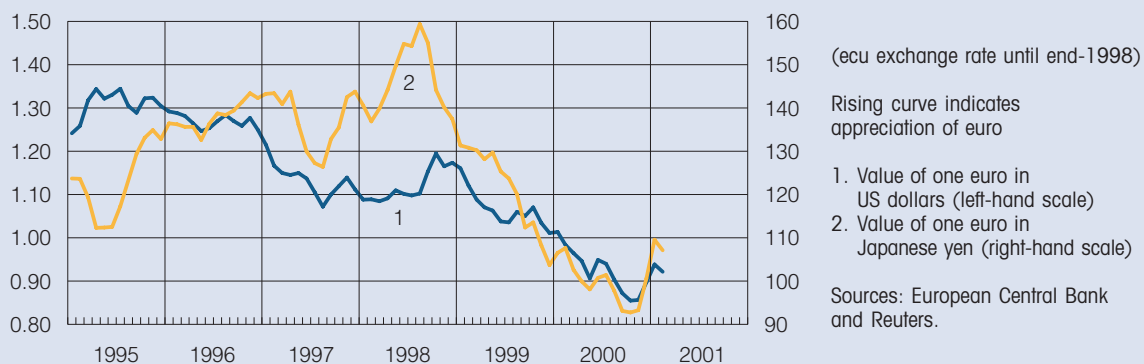
1. Lending by euro area banks to euro area residents
2. Lending by Finnish banks to Finnish residents

Sources:  
European Central Bank and  
Bank of Finland.

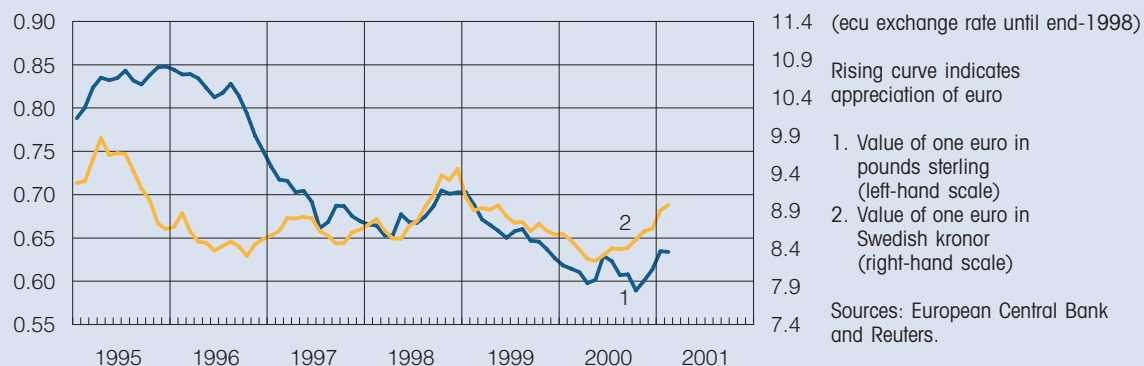
### 29. Euro exchange rates against the US dollar and the yen, daily values



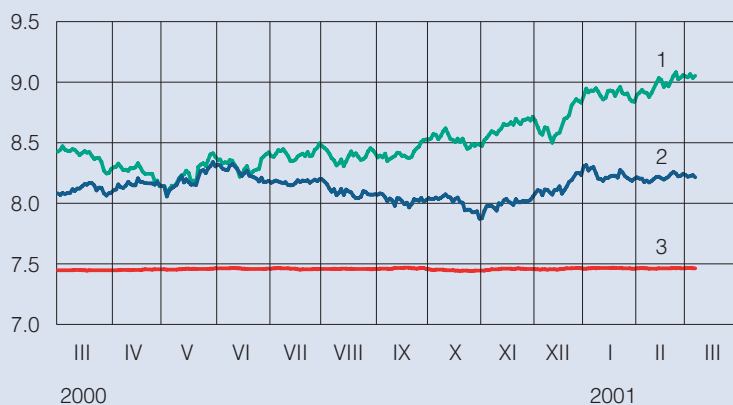
### 30. Euro exchange rates against the US dollar and the yen, monthly values



### 31. Euro exchange rates against the pound sterling and the Swedish krona



### 32. Euro exchange rates against the Scandinavian currencies

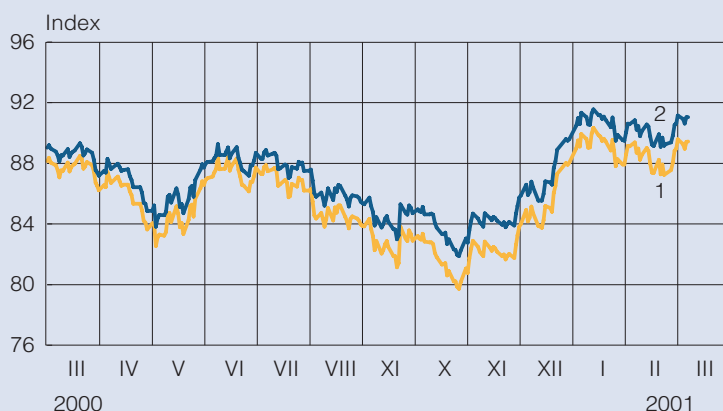


Rising curve indicates appreciation of euro

1. Value of one euro in Swedish kroner
2. Value of one euro in Norwegian kroner
3. Value of one euro in Danish kroner

Sources: European Central Bank and Reuters.

### 33. Euro's external value and Finland's competitiveness indicator

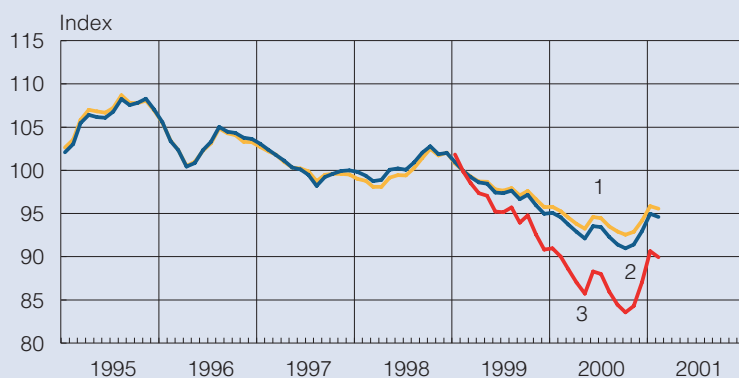


1999 Q1 = 100  
An upward movement of the index represents an appreciation of the euro / a weakening in Finnish competitiveness

1. Euro's effective exchange rate
2. Finland's narrow competitiveness indicator

Sources: European Central Bank and Bank of Finland.

### 34. Competitiveness indicators for Finland



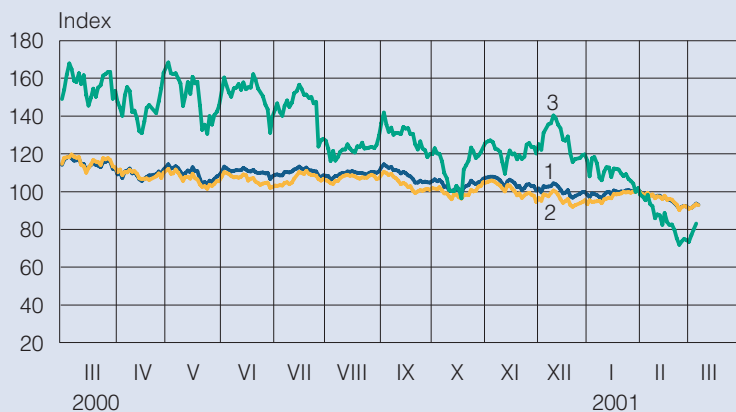
1999 Q1 = 100  
An upward movement of the index represents a weakening in Finnish competitiveness

1. Bank of Finland's old currency index
2. Narrow plus euro area competitiveness indicator
3. Narrow competitiveness index

Source: Bank of Finland.



### 35. Selected stock price indices in the euro area, daily values

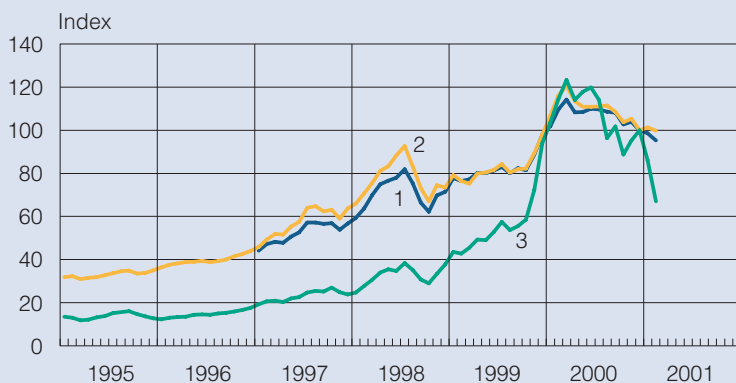


29 December 2000 = 100

1. Euro area:  
Dow Jones Euro Stoxx index
2. Germany: DAX index
3. Finland: HEX all-share index

Sources: Bloomberg and  
HEX Helsinki Exchanges.

### 36. Selected stock price indices in the euro area, monthly values

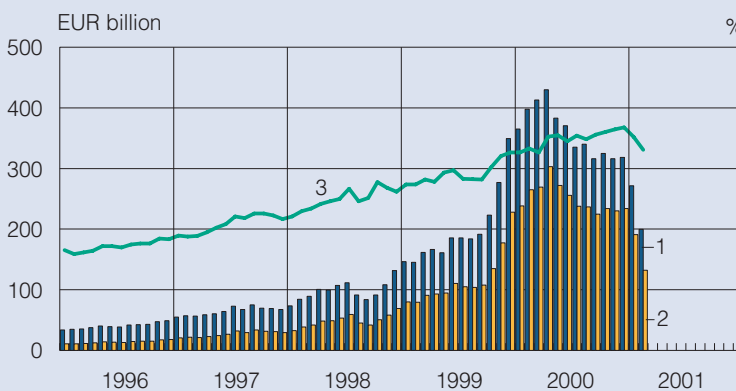


30 December 2000 = 100

1. Total euro area:  
Dow Jones Euro Stoxx index
2. Germany: DAX index
3. Finland: HEX all-share index

Sources: Bloomberg and  
HEX Helsinki Exchanges.

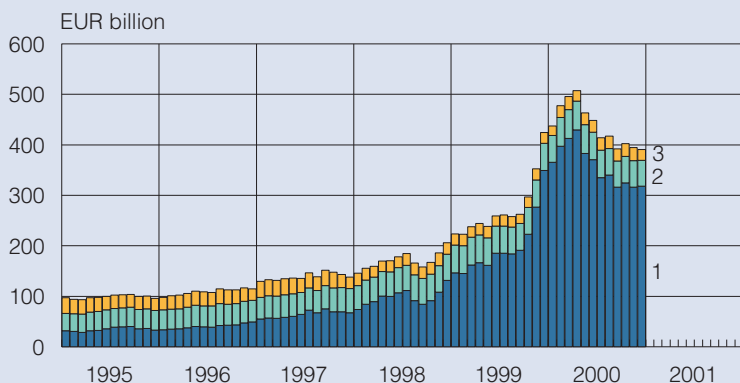
### 37. Listed shares in Finland: total market capitalization and non-residents' holdings



1. Market capitalization of all listed shares (left-hand scale)
2. Market capitalization of non-residents' holdings (left-hand scale)
3. Market capitalization of non-residents' holdings as a percentage of total market capitalization (right-hand scale)

Sources: HEX Helsinki Exchanges and Finnish Central Securities Depository (APK).

### 38. Securities issued in Finland

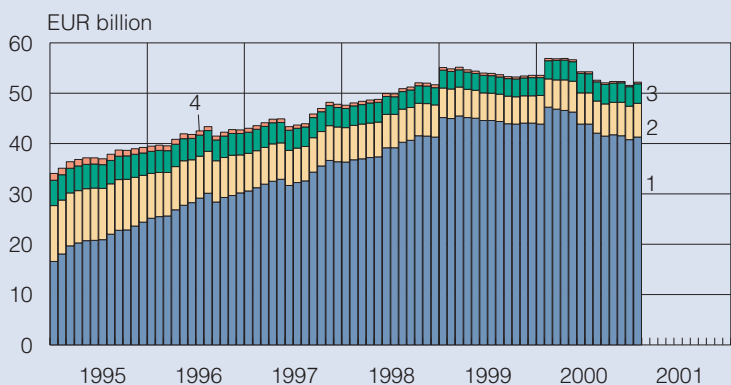


End-month stock

1. Market capitalization of shares
2. Stock of bonds, nominal value
3. Outstanding money market instruments

Sources:  
HEX Helsinki Exchanges,  
Bank of Finland,  
Statistics Finland and  
State Treasury.

### 39. Bonds issued in Finland

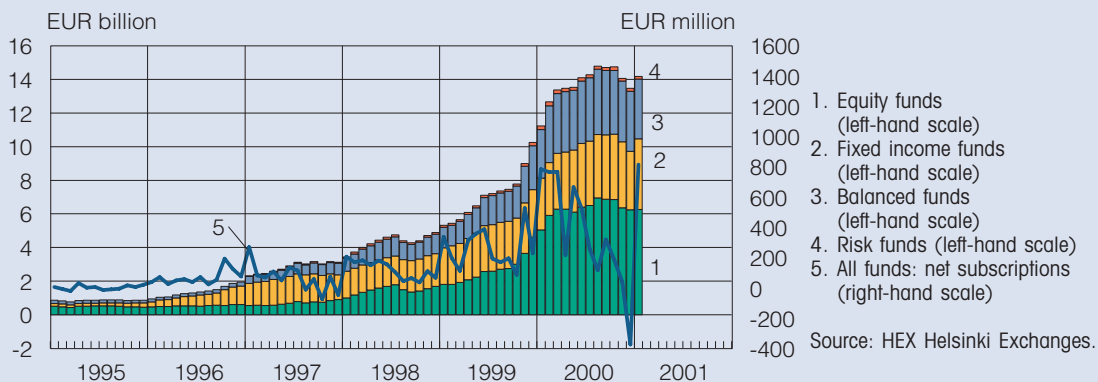


End-month stock

1. Central government
2. Financial institutions
3. Companies
4. Other

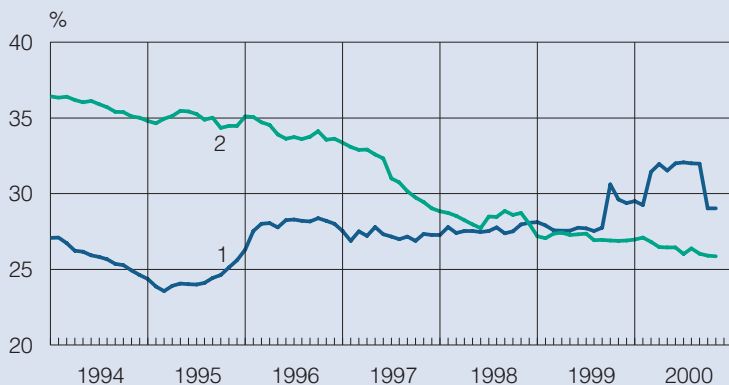
Source: Statistics Finland.

### 40. Mutual funds registered in Finland



Source: HEX Helsinki Exchanges.

#### 41. Central government revenue and expenditure in Finland

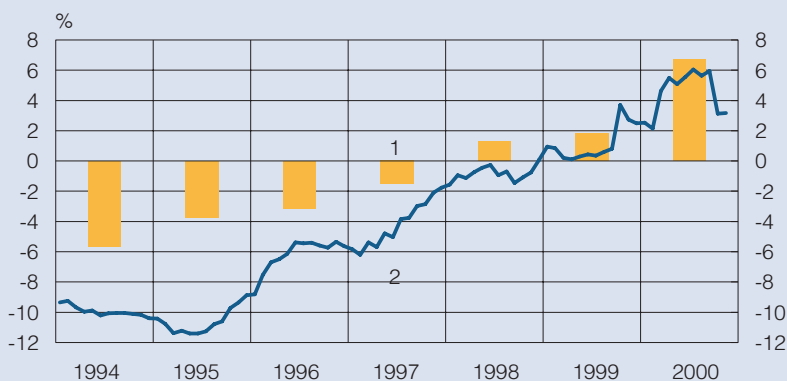


Excluding financial transactions  
12-month moving totals, % of GDP

- 1. Revenue
- 2. Expenditure

Sources: State Treasury,  
Statistics Finland and  
Bank of Finland.

#### 42. Public sector balances in Finland

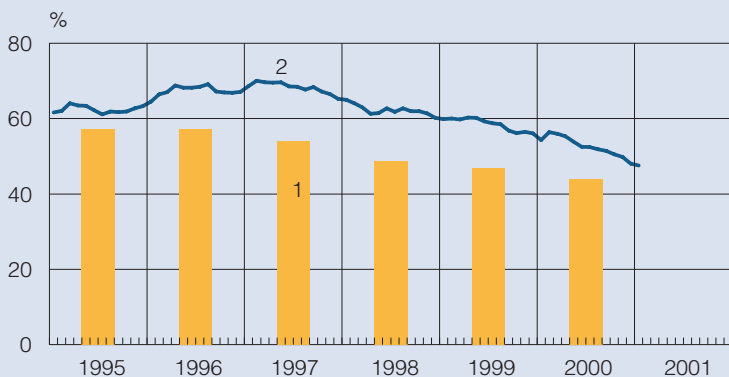


% of GDP

- 1. General government fiscal position
- 2. Central government revenue surplus, 12-month moving total

Sources: State Treasury,  
Statistics Finland and  
Bank of Finland.

#### 43. Public debt in Finland

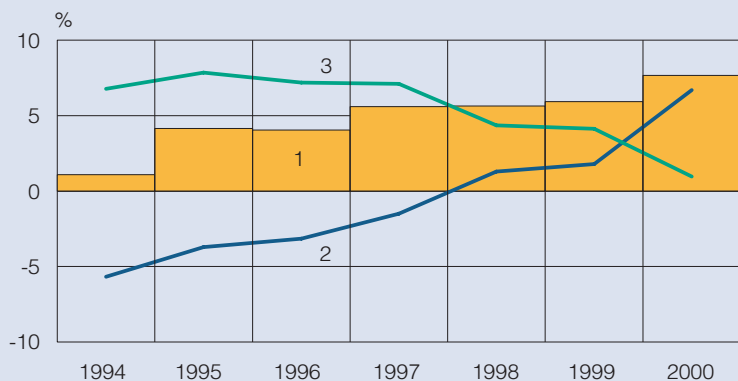


% of GDP

- 1. General government debt
- 2. Central government debt

Sources: Statistics Finland and  
State Treasury.

#### 44. Net lending in Finland by sector

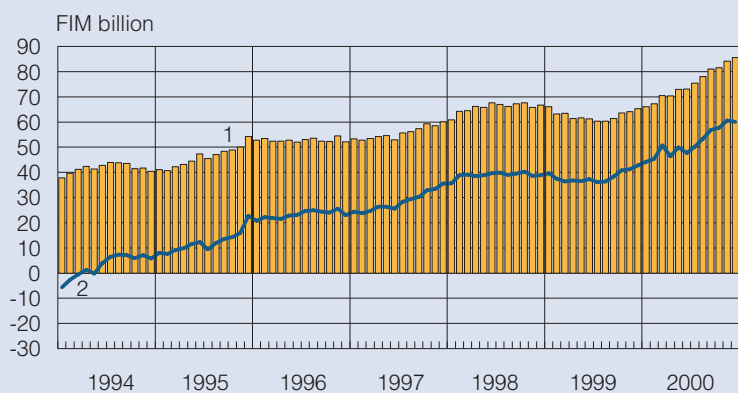


Main sectoral financial balances, % of GDP

1. Current account
2. General government sector
3. Private sector

Sources: Bank of Finland and Statistics Finland.

#### 45. Finland: goods account and current account

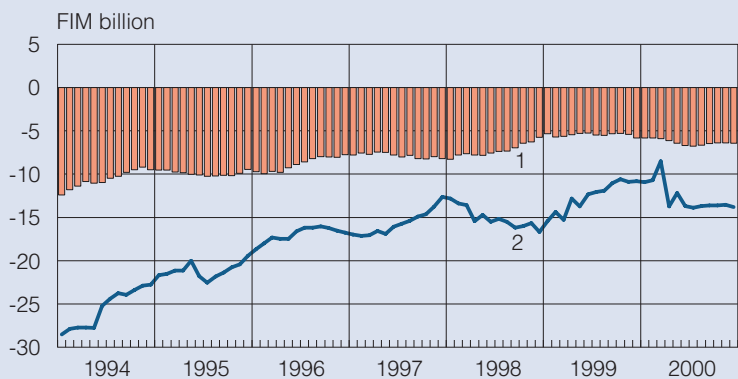


12-month moving totals

1. Goods account, fob
2. Current account

Source: Bank of Finland.

#### 46. Finland: services account and income account

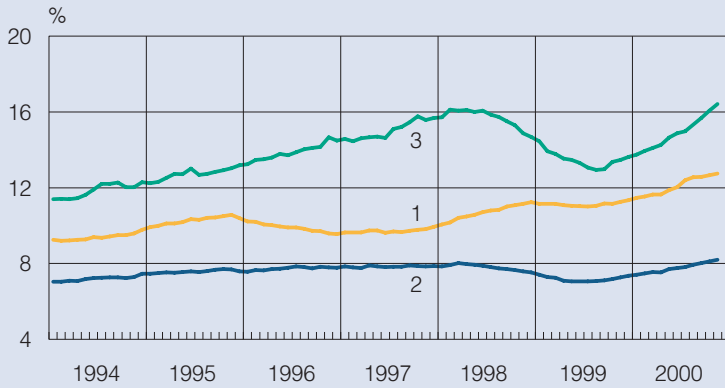


12-month moving totals

1. Services account (trade in goods, fob)
2. Income account

Source: Bank of Finland.

#### 47. Regional distribution of Finnish exports

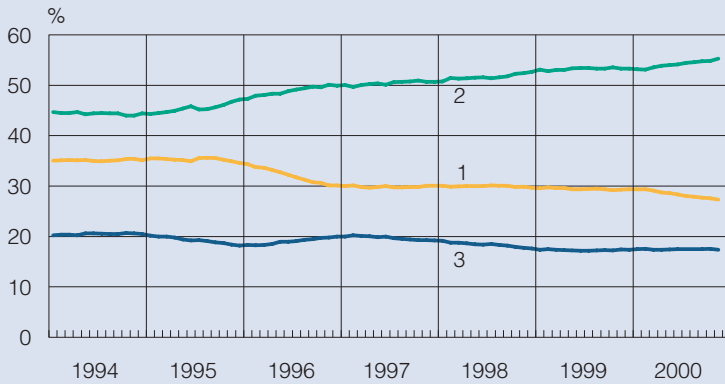


12-month moving totals,  
% of GDP

1. Euro area
2. Other EU member states
3. Rest of world

Sources:  
National Board of Customs  
and Statistics Finland.

#### 48. Finnish exports by industry

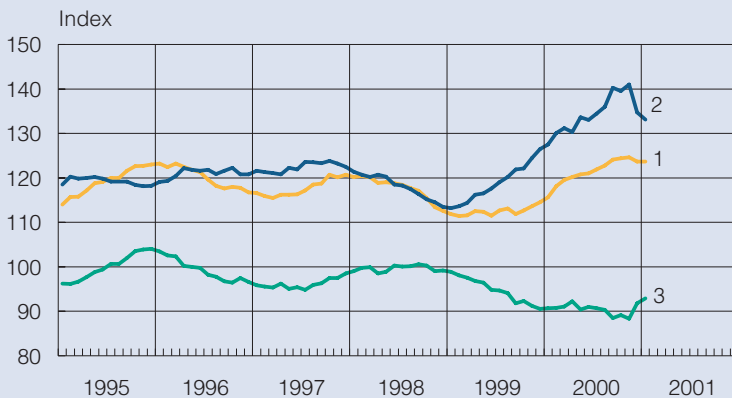


12-month moving totals,  
percentage of total exports

1. Forest industries
2. Metal and engineering  
industries (incl. electronics)
3. Other industry

Source:  
National Board of Customs.

#### 49. Finland's foreign trade: export prices, import prices and terms of trade

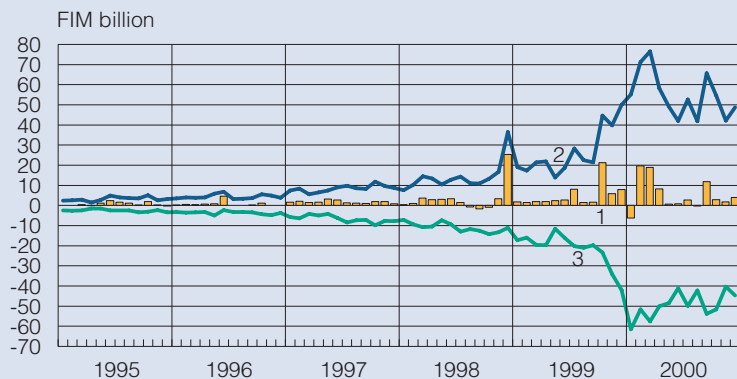


1990 = 100

1. Export prices
2. Import prices
3. Terms of trade

Source: Statistics Finland.

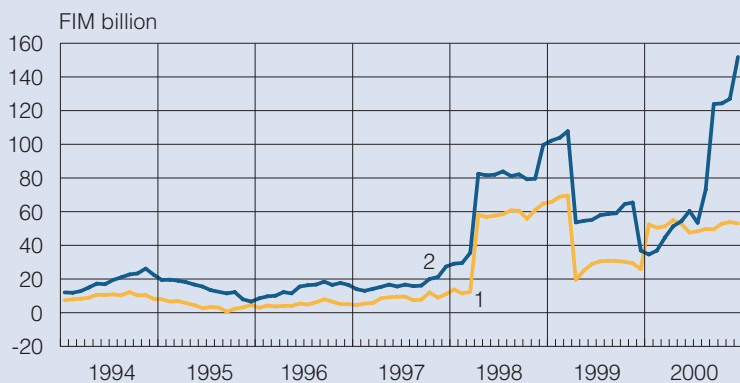
## 50. Non-residents' portfolio investment in Finnish shares



1. Net sales
2. Sales to non-residents
3. Repurchases from non-residents

Source: Bank of Finland.

## 51. Finland: direct investment

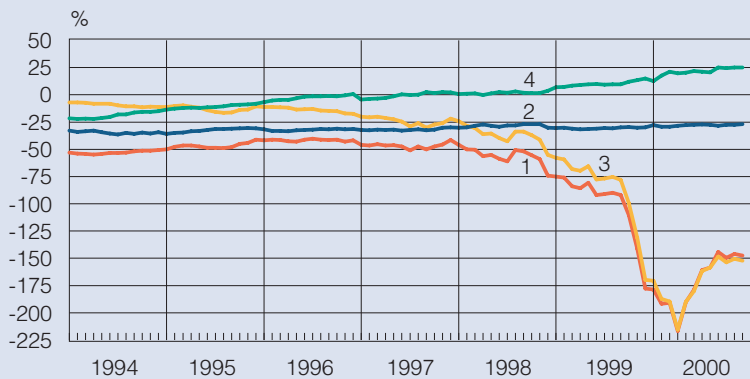


12-month moving totals

1. In Finland
2. Abroad

Source: Bank of Finland.

## 52. Finland's net international investment position

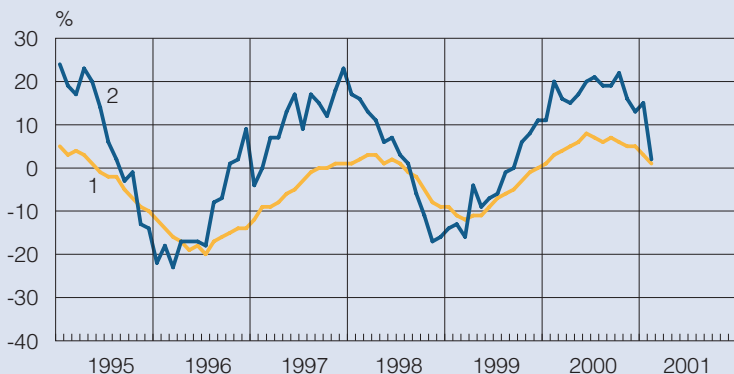


% of GDP

1. Net international investment position
2. Net international investment position of central government
3. Listed shares
4. Other items (excl. reserve assets)

Sources: Bank of Finland and Statistics Finland.

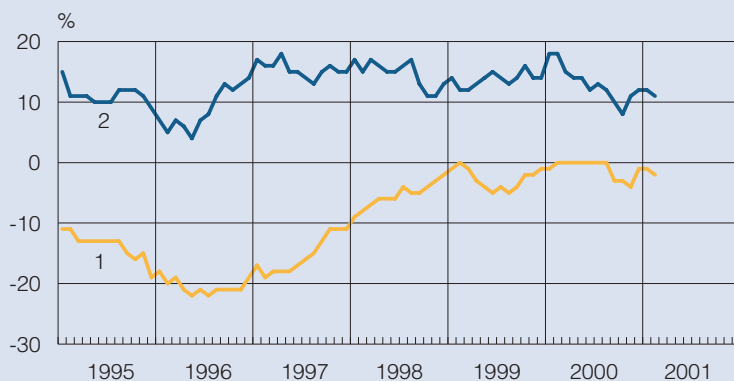
### 53. Industrial confidence indicator in the euro area and Finland



1. Euro area countries  
2. Finland

Source: European Commission.

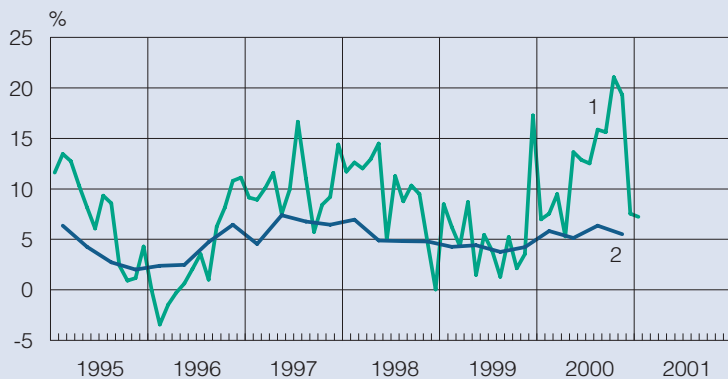
### 54. Consumer confidence indicator in the euro area and Finland



1. Euro area countries  
2. Finland

Source: European Commission.

### 55. Finland: GDP and industrial production



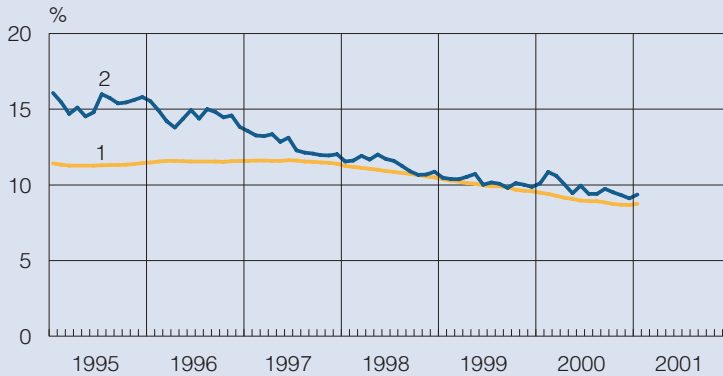
Percentage change from previous year

1. Industrial production  
2. Gross domestic product

Source: Statistics Finland.



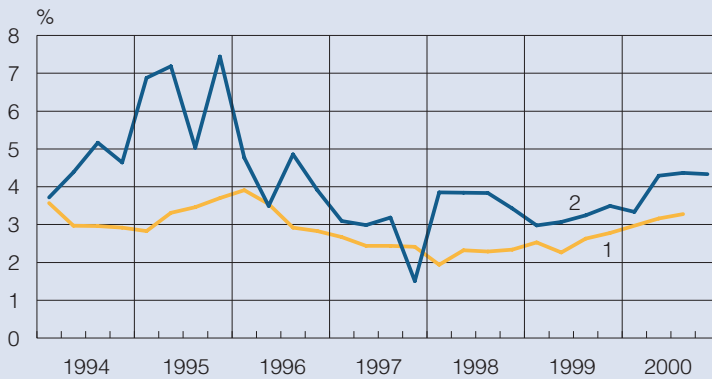
## 56. Unemployment rate in the euro area and Finland



1. Euro area countries
2. Finland

Sources: Eurostat, Statistics Finland and Bank of Finland.

## 57. Level of industrial earnings in the euro area and Finland

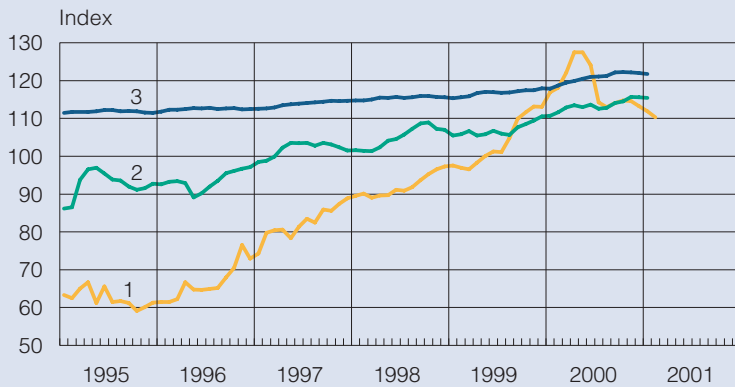


Percentage change from previous year

1. Euro area countries
2. Finland

Sources: Eurostat and Statistics Finland.

## 58. Selected asset prices in Finland



January 1990 = 100

1. Housing prices (old two-room flats; debt-free price per m<sup>2</sup>)
2. Stumpage prices
3. Consumer prices

Sources: Finnish Forest Research Institute, Huoneistokeskus, Statistics Finland and National Board of Customs.

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# Organization of the Bank of Finland

15 March 2001

## Parliamentary Supervisory Council

**Ilkka Kanerva, Chairman, Virpa Puisto, Vice Chairman,  
Olavi Ala-Nissilä, Ben Zyskowitz, Antero Kekkonen, Anneli Jätteenmäki,  
Matti Tiuri, Kari Uotila, Mauri Pekkarinen**

Anton Mäkelä, Secretary to the Parliamentary Supervisory Council

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## The Board

**Matti Vanhala**  
Governor

**Matti Louekoski**  
Deputy Governor

**Sinikka Salo**  
Member of the Board

Heikki T. Hämäläinen, Secretary to the Board

---

## Departments and other units

**Pentti Pikkarainen**  
Economics  
Antti Suvanto\*

**Heikki Koskenkylä**  
Financial Markets  
Harry Leinonen\*

**Juha Tarkka**  
Research  
David Mayes\*

**Anneli Isopuro, ad int.**  
Market Operations

**Raimo Hyvärinen**  
Payments and Settlement

**Martti Lehtonen**  
Statistics

**Antti Juusela**  
Communications

**Urpo Levo**  
Payment Instruments

**Esa Ojanen**  
Administration

**Kjell Peter Söderlund**  
International Secretariat

**Hannu Karppinen, ad int.**  
Legal Affairs

**Antero Arimo**  
Publication and  
Language Services

**Taina Kivelä**  
Internal Audit

**Arno Lindgren, ad int.**  
Personnel  
Anton Mäkelä\*

**Armi Westin**  
Information Technology

**Heikki T. Hämäläinen**  
Management  
Secretarial Staff

**Terhi Kivilahti**  
Development and Budget

**Jyrki Ahvonen**  
Security

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**Pekka Sutela**  
Institute for  
Economies in Transition

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\* 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; the Director General is Kaarlo Jännäri.