



BANK OF FINLAND

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- The Bank of Finland's macroeconomic forecast
 - Financial stability in Finland
 - Better-informed wage setters
 - Unemployment, labour markets and EMU
 - The Baltic economies at the turn of the millennium
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Labour markets under the euro

The wage agreements reached in the spring of this year were the first in Finland since the introduction of the euro. Public assessment of the settlements has already begun. One of the issues that has provoked debate is how best in future to reconcile the income goals of different sectors in the economy with the moderate developments in costs and prices that are essential for the achievement of growth and employment goals.

Earlier in the year, when the negotiations in this wage round were still in progress, the Bank of Finland asked two external experts to contribute articles to the Bulletin dealing with the functioning of labour markets, particularly under the euro.

The author of the first article is Svante Öberg, Director General of Statistics Sweden. In 1999, he produced a comprehensive report for the Swedish government on ways in which goals related to macroeconomic performance, employment and stable price and cost developments could be better taken into account in sector and industry level negotiations in Sweden. The author of the second article is Professor Erkki Koskela, an influential member of the academic community in Finland, who discusses the relative merits of different wage bargaining systems in the circumstances of monetary union.

The views expressed in these articles are those of the authors alone. The Bank of Finland has commissioned contributions from external writers in the hope that this will, if possible, add new perspectives to the debate in Finland.

The main focus of this issue of the Bulletin, however, is presentation of the Bank of Finland's forecast for the Finnish economy.

18 May 2000

Matti Vanhala

The Bank of Finland's macroeconomic forecast 2000–2002

The generally more positive outlook for world economic activity has improved the growth prospects for the Finnish economy. Upward revisions of assumptions concerning world economic growth and foreign trade are the main reason why the Bank of Finland now expects the economy to grow at a notably faster pace than envisaged in the forecast published in December 1999. Both exports and domestic demand are expected to grow strongly, and total output is forecast to increase by more than 5% in 2000 before gradually slowing to a rate of 4% (Chart 1 and Table 1). Stronger-than-forecast growth of world trade has, however, led to a faster rise in world commodity prices – and in recent months also in consumer prices in industrial countries – than was foreseen in the autumn. The forecast for inflation in Finland over the next few years has likewise been raised, especially for the current year.

The oil price has been an important factor behind the recent pick-up in inflation in Finland, but it is assumed to fall back towards its long-run average level during the forecast period. The weakening of the euro has also generated inflationary pressures in the economy, the bulk of which will materialize in the current year. The acceleration in the inflation rate in 2000 to close to 3% on average will largely be a consequence of higher import prices. From now on inflation will increasingly be determined by developments in domestic cost factors, mainly wages and productivity. Employment and labour supply are expected to grow further. Labour market conditions are nevertheless expected to tighten towards the end of the forecast period, leading to higher wages. Among the factors contributing to rapid growth in the level of earnings will be an improvement in the terms of trade, the current good profitability of firms and the good price competitiveness of Finnish exports. The rise in unit labour costs is forecast to pick up towards the end of the forecast period. Consumer prices are

expected to rise at an annual rate of about 2% in the latter part of the forecast period.

Despite tax cuts, the public sector surplus will grow strongly during the forecast period. Central government finances will move into surplus this year. The continually widening current account surplus also indicates a strong financial surplus in the business sector. Market interest rates and even more so bank interest rates are assumed to be somewhat higher in nominal terms than in the autumn 1999 forecast. However, the difference is smaller for real interest rates, and the level of interest rates is still quite low in comparison with income prospects for both firms and households. In the forecast this leads to stronger business investment and increased demand in the housing market.

The Bank of Finland has also prepared a forecast in which interest rates and exchange rates are based on market expectations at the end of April. In this forecast, interest rates in the euro area are expected to rise and the euro's exchange rate to strengthen a little over the forecast period. Assumptions of this kind have been made in many recent forecasts published by research institutes and international organizations. On the basis of these assumptions, economic growth in Finland is more stable and inflation more moderate than in the baseline forecast.

Broad-based and stable economic growth

Exports will be the fastest growing component of private demand throughout the forecast period. Net exports will make an exceptionally strong contribution to GDP growth in 2000, but with the slowdown in export growth the contribution of net exports declines to about 1 percentage point in subsequent years. The GDP contribution of domestic demand, mainly

Table 1. Summary of the baseline forecast**Demand and supply 1998–2002 (1995 prices)**

	1998	1999	2000	2001	2002
Percentage change on a year earlier					
Gross domestic product	5.0	3.5	5.1	4.4	4.0
Imports	8.5	3.4	7.3	7.0	6.6
Exports	9.3	7.4	10.6	7.5	6.9
Private consumption	4.6	2.9	3.3	3.4	3.2
Public consumption	1.5	0.3	1.2	1.3	2.1
Private fixed investment	9.6	7.0	6.5	7.2	6.6
Public investment	-0.4	-6.3	-1.3	2.5	2.9
Change in inventories and statistical discrepancy,					
% of total demand in the previous year	-0.1	-0.7	-0.1	0.1	-0.1
Total demand	5.9	3.5	5.6	5.0	4.7
Total domestic demand	4.3	1.7	3.2	3.7	3.5

Key economic indicators

	1998	1999	2000	2001	2002
Percentage change					
Consumer price index	1.4	1.2	2.8	2.5	2.1
Level of earnings	3.5	2.6	4.6	4.6	4.7
Labour productivity	3.2	-0.1	3.2	2.4	2.1
Unit labour costs	2.3	2.8	1.2	2.5	3.2
Number of employed	2.4	3.3	1.5	2.2	2.0
Employment rate, 15–64 year-olds, %	64.1	66.0	66.9	68.3	69.6
Unemployment rate, %	11.4	10.2	10.0	8.8	7.8
Export prices of goods and services	-1.3	-5.7	4.9	2.5	2.3
Terms of trade	2.7	-5.2	-2.3	1.1	1.2
% of GDP (National Accounts)					
Ratio of taxes to GDP	46.2	46.1	45.7	44.7	43.9
General government net lending	1.3	2.3	4.2	4.7	5.0
General government debt (Maastricht definition)	49.0	47.1	40.9	35.4	30.9
Trade account	9.7	9.1	10.2	10.8	11.4
Current account	5.7	5.3	6.3	7.2	8.0
Average interest rate on new loans granted by deposit banks, %	4.8	3.9	4.5	4.5	4.5

private consumption and investment, is about 3 percentage points a year throughout the forecast period. According to preliminary data, stockbuilding made a marked negative contribution to growth in 1999, but it is assumed to be neutral over the forecast period. GDP growth is forecast to accelerate to close to 5% this year, but to moderate to 4% in each of the following years.

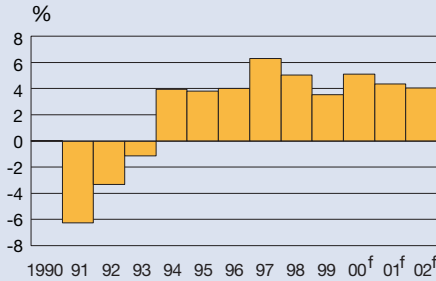
Exports will be boosted by good competitiveness and growth of export markets

Exports are forecast to grow strongly throughout the forecast period, increasing by over 10 % this year and by about 7% in 2001 and 2002. The growth of imports will also accelerate and imports are forecast

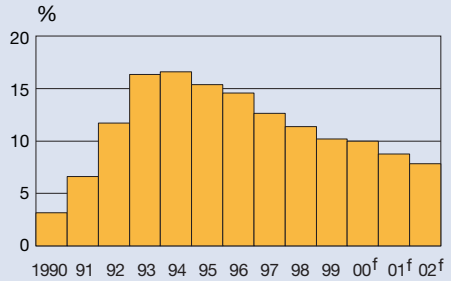
Chart 1.

Key economic indicators in the baseline forecast

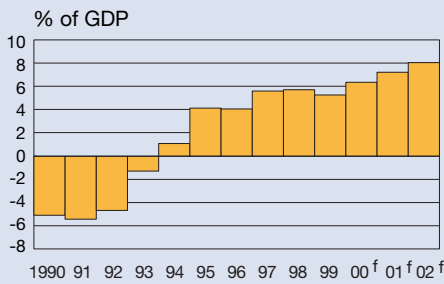
Gross domestic product



Unemployment rate

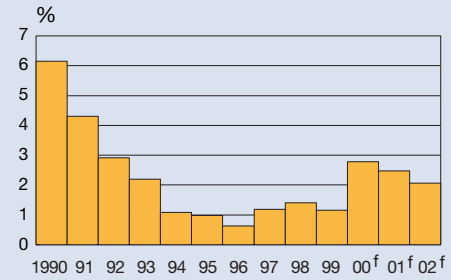


Current account

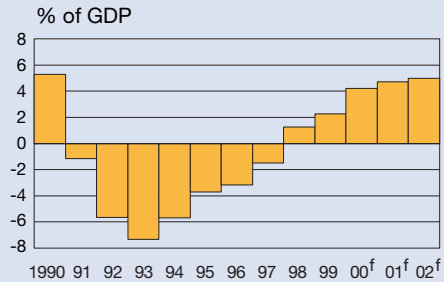


Inflation

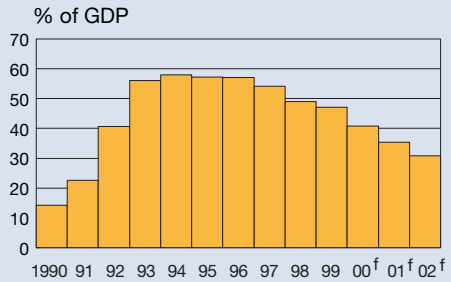
Consumer price index



General government fiscal position (Maastricht definition)



General government debt (Maastricht definition)



Sources: Bank of Finland and Statistics Finland.

Box 1. Assumptions underlying the forecast

The Bank of Finland's forecast is built on the assumption of a very positive outlook for the world economy. This provides the basis for the price and demand assumptions for export markets and the projections for Finnish import prices. For monetary policy, the baseline forecast assumes no change in interest rates or exchange rates. The assumptions on Finnish fiscal policy are based on policy objectives embodied in Government programmes.

No change in monetary policy

The forecast assumes that market interest rates and exchange rates remain unchanged at their March 2000 levels. This means that the euro area short-term interest rate (three-month Euribor) is kept at 3.7% while the yield on Finnish government bonds with approximately five years to maturity remains more or less constant at 5.1%, which is consistent with market expectations in March 2000 (Table 2).

In addition to unchanged interest rate differentials, the euro's exchange rate against other major currencies is assumed to remain constant. Finland's trade-weighted index has been calculated by fixing exchange rates on the basis of developments in March 2000. The trade-weighted currency index is about 3% weaker during the forecast period than in the autumn 1999 forecast.

World economic growth

World economic growth is expected to pick up in 2000 and to remain very strong in the following two

years. Growth in the United States is assumed to finally soften a little and the Japanese economy to gradually recover. Growth in the euro area started to gather pace towards the end of 1999.

The growth of world imports is expected to accelerate from 6% in 1999 to 8% in 2000 and to continue expanding at a robust pace of 7% over the rest of the period. Import growth in Finnish export markets, weighted by these countries' shares of Finnish exports, is assumed to be as high as about 10% in 2000, 9% in 2001 and 8% in 2002, which is well above the trend growth rate of about 6%.

International prices

The rise in world commodity prices in the wake of the recovery in Asian economies and strong revival in world trade has been substantially faster than forecast in autumn 1999. Oil prices doubled in the space of a year. On the basis of recent oil futures prices, the price of oil is assumed to gradually fall back to USD 20 per barrel. Prices of non-oil commodities are expected to continue rising at a fairly rapid pace.

In markka terms, prices of raw material imports (including energy) and producer goods rose very sharply in 1999, but the rise in prices is expected to slow considerably in the future. Prices of industrial goods in Finnish export markets are assumed to rise by about 1½% a year and prices of Finnish imports of consumer and investment goods at the same pace. About half of the 7% increase in import prices this year will be due to exchange rate movements. In

Table 2. Assumptions of the baseline forecast

	1998	1999	2000	2001	2002
Import volume growth in Finnish export markets, percentage change	5.8	4.4	10.1	8.7	8.1
Finnish import prices, percentage change	-3.0	-1.0	6.6	1.5	1.3
3-month Helibor/Euribor, %	3.6	3.0	3.7	3.7	3.7
Yield on taxable 4-5 year government bonds, %	4.3	4.1	5.0	5.0	5.1
Finland's trade-weighted currency index	119	121	125	126	126
Markka - US dollar exchange rate	5.34	5.58	6.12	6.16	6.16

2001 and 2002 the rate of increase in import prices is expected to moderate to 1½% (Chart 2).

Labour market

The one-year pay settlements reached in spring 2000 will bring wage increases of just over 3% on aver-

age, with fairly little variation between sectors. No assumptions are made in the forecast about possible links between tax cuts and future wage agreements, which could change the picture of developments in the level of earnings.

to increase at an annual rate of some 7% over the entire forecast horizon.

As relative export prices are assumed to remain unchanged throughout the forecast period, the growth of exports will be based on the expansion of export markets. The market shares of Finnish export industries are assumed to remain virtually unchanged. Unit labour costs in Finland will, however, grow faster than in competitor countries and so cost competitiveness will weaken towards the end of the forecast period. This, together with a slowdown in the growth of export markets, is likely to lead to a levelling off in export growth.

Export growth was particularly robust in the second half of 1999, and is expected to remain so in the near term. Latest business survey data show that firms have large export orders. Moreover, exports will be underpinned by the positive outlook for the world economy and good price competitiveness. The forecast for the growth of Finnish export markets is notably higher than in the autumn 1999 forecast, in addition to which the exchange rate has weakened. Consequently, exports are projected to grow at a faster pace than previously expected over the entire forecast period.

Growth of exports in 2000 seems likely to be more evenly spread across sectors than in 1999. Despite rapid growth, widespread production bottlenecks are not expected to emerge in industry, according to latest business surveys, although capacity utilization rates have been rising recently. Towards the end of the forecast period, the risk that production bottlenecks could occur and thus dampen export growth is likely to increase, though this will be mitigated by continued strong growth of investment.

Export prices are forecast to rise noticeably in 2000 and to continue rising at a moderate rate throughout the forecast period (Chart 2). Contributing to the rise in export prices will be higher labour costs in Finland, rising import prices and the general

increase in world commodity prices. But as export prices will rise in line with those of competitors, no change is expected in relative export prices.

Prices are expected to rise in many sectors. At the moment the rise in export prices is particularly evident in the forest industries, and also in the metal and engineering industries. The prolonged downward trend in export prices in the electronics and telecommunications sector seems to have come to an end for the time being. The fall in prices could resume at a quickened pace, however, as a result of productivity gains and intense competition in this sector.

Import propensity is expected to increase throughout the forecast period. Import growth will be based on both a strong increase in production, which will boost imports of raw materials and producer goods, and an increase in consumer demand and investment. However, the growth of imports will be curbed by the weakness of the exchange rate, among other factors.

Industrial investment set to pick up

The rate of growth of non-residential investment slowed temporarily in 1999 as result of sluggish investment activity in industry. The slowdown will be reversed in the current year and private non-residential investment is expected to grow at an annual rate of 7% on average over the forecast period. The strong recovery of the world economy will also be a key factor behind the robust growth of investment. Companies in the forest and metal and engineering industries are again investing heavily. Expected rates of return on investment have increased and the profitability and financial position of firms are good. Furthermore, financing remains attractive for firms as real interest rates are still low, despite a slight increase in nominal rates. The investment rate is expected to rise throughout the forecast period.

Capacity utilization is currently at high levels and the forest industries, notably the paper industry, are close to full capacity. Reflecting this, an increasingly large share of investment will be directed towards expanding capacity while the share of replacement and rationalization investment is likely to decrease. In the metal and engineering industries, expansion of capacity will focus on the manufacture of machinery and equipment and basic metals. Fixed investment in the electronics and telecommunications sector will be small in relation to the sector's value added.

At the same time as investment activity picks up in the domestic economy, Finnish companies will continue to invest abroad. Some firms are likely to shift production closer to their main markets, and no longer expand production in Finland to any significant extent. In manufacturing, especially the electronics and telecommunications sector, part of investment now takes the form of expenditure on product development. The high level of taxation in Finland may be another reason why investment is being diverted to countries where it is easier from the tax point of view to remunerate top executives and specialists.

Continuing strong demand in the housing market

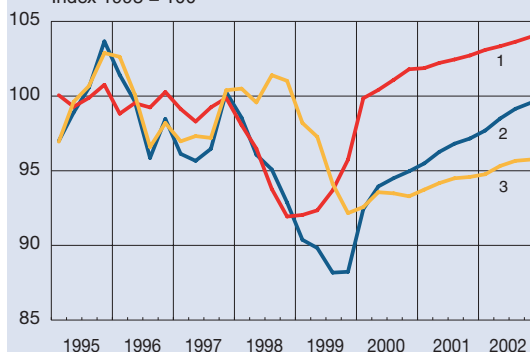
Residential investment will continue to grow at a rapid pace, but the rate of growth is expected to slow during forecast period from 8% to 4% in 2002. Construction costs will increase in line with housing prices. Profitability in the construction sector remains good. The main factors contributing to the rise in prices in residential construction are labour costs and contract prices. Already this year, new construction activity will clearly exceed renovation and repairs. There is considerable regional variation in the level of construction activity as construction is particularly profitable in growth centres. Construction is now also predominantly privately financed since the share of output co-financed by the state declined in the latter part of the 1990s.

Divergent patterns have also emerged in housing prices. In the growth centres prices are still rising at a rapid pace, but for the country as whole conditions in the housing market are quietening down. Although whole-economy housing prices will still rise by almost 8% this year, the rise in prices will begin to

Chart 2.

Foreign trade prices and terms of trade

Index 1995 = 100



1. Prices of imports of goods
2. Prices of exports of goods
3. Terms of trade

Sources: Bank of Finland and Statistics Finland.

moderate under the combined impact of higher real prices and increased supply. Moreover, the slight rise in interest rates on new housing loans, which began already in mid-1999, is likely to dampen households' purchases of dwellings in the years ahead.

Continuing good outlook for household income

Although the level of earnings rose by only 2.6% in 1999, wages and salaries paid to the household sector grew by nearly 6% as a result of a sharp increase in hours worked. Wages and salaries were boosted by FIM 4 billion in share option pay-outs, which are expected to be of broadly the same magnitude in 2000 as well. Entrepreneurial income grew by less than 5%.

Households' primary income is expected to increase by 7% a year on average over the forecast period. Household's property income will grow because of a rapid increase in interest and dividends. On the other hand, property expenditure is forecast to grow by over 10% a year on average as a result of an increase in household indebtedness and the rise in interest rates that has already occurred.

Curbing the growth of households' disposable income in 2000 will be an increase of 10% in direct

taxes paid by households. The rate of increase in direct tax payments is forecast to slow to 4 % in 2001 and 2002 as a result of the income tax cuts implemented in those years.

Households' nominal disposable income will continue to grow at a rapid pace of just under 5% this year. The rate of increase is forecast to accelerate to 6% a year in 2001 and 2002 owing to both positive developments in earnings and the planned income tax cuts. A slowdown in inflation during the forecast period will help to boost households' real purchasing power over the next two years, bringing the annual growth rate back to over 3%.

Private consumption to grow at a steady pace

According to preliminary data, the volume of private consumption grew by only 2.9% in 1999. This year the growth rate is expected to pick up to 3.3%, despite the fact that disposable income will increase by slightly less than in the previous year. Consumers remain confident about future economic developments as the employment situation is expected to improve further, and interest rates are assumed to remain low in the forecast.

As a result of tighter taxation and faster inflation, households' real purchasing power will increase by only a little over 1% this year. Partly because of this, the saving rate will fall temporarily by about two percentage points this year.¹ The financial balance of the household sector is expected to move into a small deficit already in 2000 because of a further increase in outlays related to purchases of dwellings. Although the rate of growth in borrowing for house purchase has now slowed, the stock of housing loans has been growing at an annual rate of 15% for a long time, with the result that household indebtedness has begun to rise. The stock of household debt is forecast to grow by a further 10% this year but after that the rate of increase is expected to slow to 7% by the end of 2002. This will nevertheless mean a marked increase in indebtedness and debt servicing costs, thus limiting the amount of income available for other purposes and higher consumption.

¹ The fall in the saving rate in 2000 is partly due to technical reasons as tax on share option pay-outs included in wage and salary earnings for 1999 will be paid in 2000.

Achievement of the Government's employment objective seems likely

There was an exceptionally large increase of nearly 2% in labour supply in 1999. The growth of labour supply is expected to slow to 1.2% this year and to below 1% in the following two years. Despite the slowdown, no significant labour shortages are expected to emerge at the total economy level during the forecast period. Labour has been in short supply in only a few sectors such as construction and data processing.

The number of employed also grew strongly in 1999. The number of hours worked grew even more because of increased overtime. There will be a further improvement in the employment situation in the following years as well. According to the forecast, the Government's objective of an employment rate of 70% by the 2003 will be achieved.

Unemployment is projected to fall quickly during the forecast period, despite having edged up slightly in the early months of this year. This temporary rise in unemployment is partly due to the fact that students registered as unemployed in larger numbers than at the same time in previous years.

Productivity and wages – a rapid rise in the level of earnings

According to preliminary National Accounts data, labour productivity did not improve at all in 1999. In 2000 labour productivity growth is expected to return to its 1998 level of just over 3%, but then to slow to 2 % by 2002 (Chart 3). The slowdown will be the result of an increase in employment in less productive sectors, notably services, in 2001 and 2002. In the first months of the current year employment has increased most in manufacturing.

The pay settlements reached at industry level in spring 2000 provide for noticeably larger wage increases than the general increases under the previous two-year agreements. The agreements raised wage costs by 3.3% on average.

The index of wage and salary earnings is expected to rise at steady annual rate of 4.5% throughout the forecast period. Underlying the rise in earnings will be the economy's long-continuing good growth performance and the good profitability of the corporate sector. Wage drift will be affected by tightening la-

bour market conditions since labour supply will increase by only a little whereas employment will continue to rise at a rapid pace.

Average earnings will grow faster than the index of wage and salary earnings, at a rate of over 5%, as pay components other than basic wages for normal working time are expected to increase towards the end of the forecast period. There will be no change in the distribution of income between wage and capital income during this period.

Unit labour costs in Finland will rise at a faster pace than the euro area average in 2000. But despite the larger wage increases this year, the rise in unit labour costs will nevertheless be slower than in 1999, thanks to robust growth of output. The rate of increase in unit labour costs is expected to accelerate in 2001 and 2002 under the combined effect of a further rise in compensation of employees and slower output growth.

Inflation will increasingly be of domestic origin

Producer prices have begun to rise sharply and the rapid rate of increase is expected to continue for the rest of this year. The upturn is due to the rise in import and export prices. Towards the end of the forecast period the rise in producer prices will be increasingly fuelled by rising wages, whereas upward pressure from import and export prices will diminish.

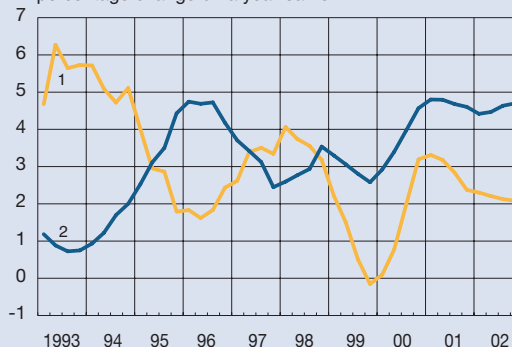
The inflation prospects for Finland weakened noticeably towards the end of 1999 and inflation accelerated as a result of rising world commodity prices, mainly energy prices. The depreciation of the euro has also increased inflation. Energy prices continued to rise in the early months of 2000, pushing up inflation to over 3%. As the impact of higher energy prices will decrease considerably in 2000, inflation will start to slow. The main factor sustaining inflation in the future will be rises in wages and services prices. In the case of services, the rise in prices will be effected especially by the higher cost of housing services. Although the pick-up in the inflation rate in the current year is largely due to external factors, wage developments will exert upward pressure on inflation over the entire forecast period.

The consumer price index (CPI) is forecast to rise by 2.8% this year but the rate of increase will then

Chart 3.

Level of earnings and productivity

Four-quarter moving total, percentage change on a year earlier



1. Productivity
2. Index of wage and salary earnings

Sources: Bank of Finland and Statistics Finland.

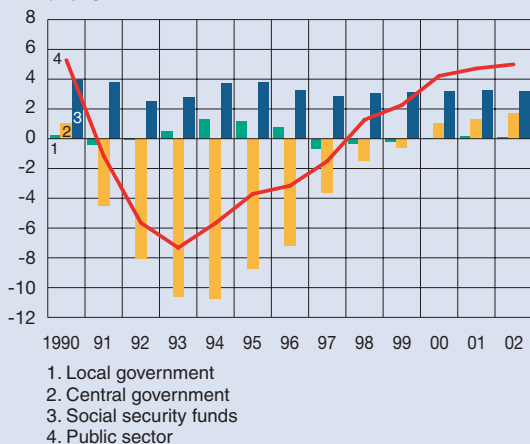
slow to 2.1% in 2002. The housing costs component of the CPI will start to put upward pressure on inflation this year as the effect of the fall in interest rates on housing loans comes to an end. The assumed cut in indirect taxes in 2002 will have a downward effect on inflation and it is forecast to slow the rise in the CPI by a quarter of a percentage point. Although the rate of increase in dwelling prices is expected to moderate by 2002, the rise in dwelling prices will nevertheless exceed the overall rate of inflation throughout the forecast period. Measured by the private consumption deflator, inflation will accelerate to 3.3% in 2000 and slow to 2.5% in 2002. The rise in level of housing costs in recent years does not show up as clearly in the CPI as in the private consumption deflator.

Further strengthening in public finances

The public sector surplus, which turned out to be smaller in 1999 than originally estimated, is forecast to increase by nearly 2 percentage points this year and to widen to 5% of GDP in 2002 (Table 3 and Chart 4). Central government finances will also move into surplus. The ratio of the primary balance (balance excluding interest payments) will increase sub-

Chart 4.**Public sector financial balances**

% of GDP



Sources: Bank of Finland and Statistics Finland.

stantially in 2000 and then remain unchanged for the rest of the forecast period. The anticipated large proceeds from privatization, which it is assumed will be used to pay back central government debt, will speed up the reduction in interest payments. Given the prospect of continuing rapid economic growth, a virtuous circle is likely to be established in central government finances, which will help to further strengthen the surplus. In 2002 the debt-to-GDP ratio (Maastricht definition) is expected to already fall to around 30%.

Growth in spending will remain moderate. Taken together, payments of social benefits and social assistance benefits to households will grow at slower pace than other household income items, since outlays on unemployment benefits will fall as employment continues to rise and there will be no increase in other current transfers to households in 2000. Moreover, expenditure on pensions will grow only slowly in 2000 and 2001 because of a reduction in the basic pension amount under the national pensions scheme. By contrast, the growth of public consumption expenditure is expected to pick up slightly in the latter part of the forecast period as a result of a faster rate of increase in public sector pay and also because it is assumed that both central and local government will no longer reduce their labour force. Similarly, public investment is expected to recover as the financial position of municipalities improves. All in all, the ratio of general government primary expenditure to GDP is forecast to decline by nearly 5 percentage points over the forecast period.

Central government tax revenue will grow rapidly this year, partly because of the small size of tax cuts and the rapid widening in tax bases. Receipts will also be boosted by the fact that taxes on capital income and share options pay-outs in 1999 are not payable until 2000. The growth of central government income and wealth tax receipts is forecast to slow markedly in 2001 and 2002 as a result of tax cuts. The growth of indirect tax receipts will likewise be relatively modest because the assumed tax cuts in 2002 will reduce revenue from commodity taxes, in particular. The tax cuts will not affect rev-

Table 3. Public sector financial position, % of GDP

	1997	1998	1999	2000	2001	2002
Revenue	55.1	54.7	54.2	53.8	52.3	51.2
Expenditure	56.6	53.5	52.0	49.6	47.6	46.2
Primary expenditure	52.4	49.7	48.4	46.3	44.8	43.8
Net lending	-1.5	1.3	2.3	4.2	4.7	5.0
Central government	-3.7	-1.5	-0.6	1.1	1.3	1.7
Local government	-0.7	-0.3	-0.2	0.0	0.2	0.1
Social security funds	2.8	3.1	3.1	3.2	3.2	3.2
Primary balance	2.7	5.0	5.8	7.5	7.5	7.4
Public sector debt	54.1	49.0	47.1	40.9	35.4	30.9
Central government debt	65.8	61.2	57.2	48.3	40.6	33.6

enue in the local government sector, the growth of which will be boosted by an increase in state aids. Contributions to social security funds will rise in line with the total wage bill as there will be only minor reductions in contribution rates. Property income of social security funds will also increase, but the bulk of the sector's income from investments will still go unrecorded in National Accounts figures.

The rapid increase in tax bases and the decline in interest payments along with the fall in public debt will make possible a strengthening in central government finances even though taxation is lowered. Cuts in income tax in line with the Government's programme, which are assumed to amount to FIM 3 billion a year in 2001 and 2002, will result in a fall of more than two percentage points in the average rate of income tax faced by households (Chart 5). The overall tax ratio (taxes and social security contributions as a percentage of GDP) is forecast to fall by the same amount. This will only partly offset the increase in the tax burden caused by the recession in the 1990s.

Current account surplus set to widen further

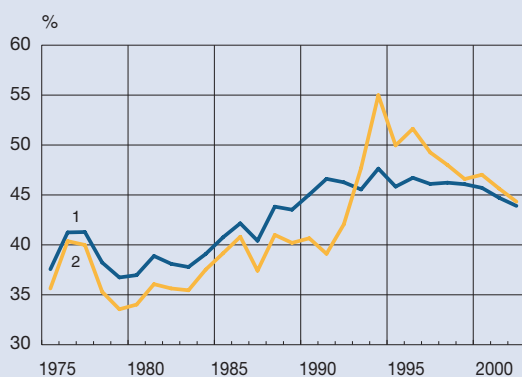
In 1999 the trade surplus amounted to about FIM 65 billion, representing 9% of GDP. In 2000 the trade surplus is forecast to increase further to about FIM 79 billion as a consequence of strong export growth and improved terms of trade. This pattern of development is expected to continue throughout the forecast period. Developments in the current account will broadly mirror those in the trade account as the combined deficit in the other current account items is expected to remain practically unchanged over the forecast horizon.

The deficit on the services account is forecast to total almost FIM 6 billion in 2000 and then to narrow slightly. Problems nevertheless attach to the compilation of statistics on services, for example with regard to the export of services by firms in the IT sector.

The income account (mainly interest and dividends) posted a deficit of about FIM 16 billion in 1999. Although the sustained surplus on current account means that interest payments on external debt are decreasing, at the same time dividends payable to non-resident shareholders continue to increase. The deficit on the income account is forecast to remain at

Chart 5.

Tax ratios



1. Taxes and social security contributions, % of GDP
2. Household's direct taxes plus employees' social security contributions, % of wage bill

Sources: Bank of Finland and Statistics Finland.

about FIM 17.5 billion throughout the forecast period. The deficit on the transfers account is forecast to widen a little during this period, mainly because of payments related to EU membership.

The current account posted a surplus of FIM 38 billion in 1999. The surplus is forecast to widen to nearly FIM 50 billion in 2000, which is about 6% of GDP. In 2001 the surplus will be 7% of GDP and in 2002 already 8% of GDP. The surpluses on current account will reduce Finland's net external debt, which stood at about FIM 106 billion (excluding equities held by non-residents) at end-1999.

The financial balance of the household sector is forecast to shift into a modest deficit as a result of heavy housing investment. By contrast, there will be sizeable surpluses in particularly the public sector and also the corporate sector. In both sectors, the surplus will grow in relation to GDP towards the end of the forecast period.

Lending continues to grow at a rapid pace

Interest rates on new loans have moved higher, despite intense interbank competition. Interest rate margins for banks operating in Finland are already

below the euro area average. The interest rate on new lending is forecast to settle at 4.5% during the forecast period. The average rate on the credit stock will fall from 5.2% at the beginning of the forecast period to 5.0%. Deposit rates are assumed to edge up slightly since the change in the tax treatment of deposit rates due to take effect on 1 June 2000 will probably lead to some degree of competition between banks. The use of deposits for investment purposes will, however, depend on the performance of mutual funds and other investment products and the popularity they attract. In spite of robust economic growth and the good outlook for incomes, the amount of deposits is expected to grow at moderate annual rate of 3.5% in 2000 and 2% in 2001 and 2002. The increase in deposits could, however, turn out to be stronger than forecast, given the growth picture for the economy as a whole.

Lending will continue to grow strongly, albeit at a decelerating pace. Sustaining the demand for loans by non-financial corporations will be the good growth prospects for the economy, which will boost business investment. The rate of growth of new loans granted to non-financial corporations is nevertheless forecast to slow towards the end of the forecast period, as borrowing needs will decline as a result of good profitability. Interbank competition in lending to the corporate sector is likely to remain intense.

Lending to households will continue to grow strongly over the forecast period. The rate of growth is forecast to be 10% in 2000, but to slow to 7% in 2002. Underlying this development will be the continuing rapid growth of loans for house purchase. Despite the assumption of unchanged interest rates, the growth of borrowing by households for house purchase is nevertheless forecast to moderate, since housing prices have already risen to a fairly high level in relation to other prices and households' disposable income. In addition, household indebtedness has increased.

As household income and purchasing power have been growing at a fast pace for several years now, households have been able to invest an increasing part of their income in investment products offering a good rate of return without having to reduce growth of consumption or conventional savings in the form of bank deposits. The most striking change in the structure of households' financial assets in recent years has been the rapid expansion of shareholdings. The rise in share and housing prices has enabled house-

holds to spend more on consumption. A marked fall in share values would, through the 'wealth effect', have the opposite effect and lead to lower levels of consumption and investment than foreseen in the baseline forecast.

Risks surrounding the forecast: several potential risks to the balanced growth of the economy

The main risks to the balanced growth of the Finnish economy relate to the low level of interest rates, weaker euro, abundant liquidity in the corporate sector, surplus in central government finances, rapid growth of lending to households, rise in housing prices, pick-up in the growth of world trade and rising export prices. The overall impact of these factors is reflected in the forecast in, among other things, the growth of wage pressures. But although conditions are conducive to overheating, this is not yet expected to become a serious problem during the forecast period.

The risk assessment made in connection with the autumn 1999 forecast is still relevant, with the difference that the balance of risks is now weighted more heavily towards faster growth and inflation. A separate projection has been made to determine the effects of the recent rise in interest rates and depreciation of the euro (Box 2).

In addition, the Bank has attempted to assess the effects of different assumptions concerning interest rates and exchange rates by preparing an alternative forecast based on market expectations. According to this forecast, the performance of the Finnish economy is noticeably more stable, particularly with regard to cost and price developments, if it is assumed that interest rates in the euro area rise in line with market expectations. The risk of overheating is clearly smaller in this case, due in part to more moderate developments in housing prices and a slower increase in labour costs.

Attention was drawn above to changes in the indebtedness and financial assets of the household sector. These changes could have an important impact on households' consumption and saving behaviour. Persistently low interest rates could act as a spur to these changes and lead to the emergence of price bubbles which, when they burst, could pose a considerable risk to the balanced growth of the Finnish economy. The

Box 2. Effects of a rise in the official interest rate and a weakening in the exchange rate

On 27 April the ECB raised its key interest rate, the rate on the Eurosystem's main refinancing operations, to 3.75%. If the short-term market interest rate is kept constant at the level prevailing at the beginning of May and the long-term interest rate is fixed on the path implied by interest rate expectations at that time, three-month Euribor rises to 4.2% and the yield on five-year government bonds to 5.5%. If the euro's exchange rate against the dollar is set at the level prevailing at the same point in time, it is about 8% weaker and Finland's trade-weighted currency index about 3% weaker than in the forecast.

The effect of the rise in interest rates on growth and inflation in Finland can be judged to be less than the change in the exchange rate. Therefore the implications of a further weakening in the euro are

an important consideration in assessing the forecast, especially as the weakening trend has continued since early 1999. On the basis of a simple calculation covering the Finnish economy, the size of the effects of the revised assumptions for interest rates and exchange rates on the forecast for economic growth and inflation in Finland are as follows. The rate of GDP growth increases by 0.1–0.2 percentage point a year as a result of stronger exports. Thus the positive impact on growth of the gain in export competitiveness more than offsets the negative impact of the slower growth of domestic demand caused by the rise in the interest rate. The rate of inflation increases by about 0.4 percentage point a year in 2000 and 2001 as a result of the rise in foreign trade prices in markka terms.

greatest risk relates to housing and share markets, where an excessive rise in values and ensuing crash would inevitably be quickly reflected in domestic demand and employment.

Risks do not attach solely to faster growth and a faster rise in prices. The main downside risk to the global economy continues to be the possibility of a sharp and sudden slowdown in economic activity in the United States. Similarly, the risks in recent years associated with the prospect of continuing slow growth in the Japanese economy have not receded. How accurate the positive forecast turns out to be will hinge to a large extent on whether the world economy grows as expected. The risks associated with a slowdown in growth mean that the risks to growth are broadly balanced towards the end of the forecast period.

The projected slowdown in inflation in the near term is based on the forecast fall in the oil price. Some uncertainty surrounds this assumption, given recent developments in the oil market. Exchange rate effects are, together with pay developments, key factors in trying to assess future price risks. As concerns factors influencing inflation, the upside risks to inflation are judged to have strengthened, despite the fact that labour market tightness is not expected to increase significantly in terms of availability of labour.

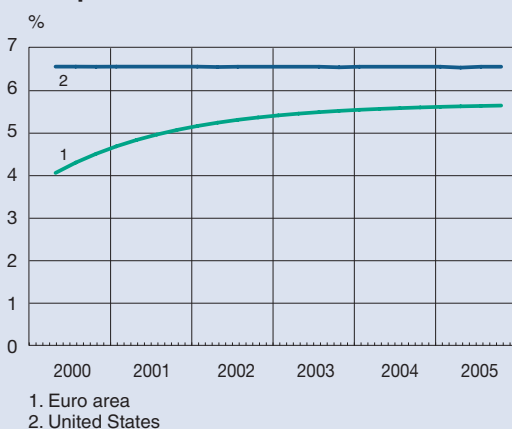
Economic policy

Continuing robust economic growth and a rate of inflation in excess of the euro area average will require a tight overall economic policy stance in Finland over the next few years. Despite the rise in interest rates, the single monetary policy has been too lax from the point of view of Finland's needs and is likely to remain so, even if monetary policy is tightened further. Accordingly, domestic fiscal policies and labour market developments will to a large extent determine whether the positive employment performance can be maintained and whether inflation subsides.

At the same time it is essential that structural measures be taken to eliminate factors impeding the growth of the economy and employment. The heavy taxation of earned income is crucial in this regard. The tax cuts laid down in the Government's programme are rather modest. Projections indicate that a structural surplus can be achieved in central government finances with larger tax cuts than assumed in the Government's programme. Nor would the objective for reducing the debt-to-GDP ratio be jeopardized if proceeds from privatization increase as forecast; they are assumed to total about 10% of GDP during the forecast period.

Chart 6.

**Expected three-month interest rate,
28 April 2000**



Source: Bank of Finland.

However, a reduction in the tax burden during a period of strong economic growth calls for a correspondingly tighter stance in other areas of fiscal policy and wage settlements. The best way to support employment would be to conclude moderate wage settlements, be it through bargaining at industry level or on a centralized basis. A lowering in taxation also has a potentially vital role to play in fostering employment, but leeway needs to be preserved in fiscal policy (including tax policy), particularly under the euro, regardless of labour market agreements. Tax cuts could be targeted in such a way that they increase the supply of labour by reducing the tax wedge at the same time as demand for labour increases as a result of moderate pay increases. The stimulus to demand provided by tax cuts would have to be neutralized by cutting expenditure. In central government finances, in particular, care will have to be taken to ensure that other items of expenditure are not allowed to grow as employment-related expenditure and interest payments decrease.

The spring 2000 wage agreements were the first to be concluded in the circumstances of monetary union. They provide for negotiated wage increases that are higher than the euro area average. The outcome of this round of industry-level wage bargaining was, however, reasonable from the point of view of balanced economic growth.

Nevertheless, the industry-level settlements covering more than one year contain conditions that could hamper the conclusion of the next collective agreements and cause a resumption of the wage-price spiral, which, it was thought, was already a thing of the past.

In the forecast, wage increases lead to a faster rise in unit labour costs and to the continuation of inflation at a notably faster pace than the euro area average and the price stability objective. In the next round of agreements, nominal wage increases will have to be very moderate so that the rise in costs does not continue at a quicker rate than in competitor countries and so that overheating of the economy can be averted.

Forecast for 2000–2002 based on market expectations

This forecast differs from the baseline forecast in terms of monetary policy, in that the projections for interest rates and exchange rates are based on market expectations (Box 3). The baseline forecast, which assumes no change in monetary policy, highlights prevailing inflationary pressures in the economy. A forecast based on market expectations could be more realistic in the current circumstances.

Demand

In this forecast export prospects remain fairly positive over the entire forecast horizon. Export growth reaches 11% in 2000, 8% in 2001 and 7% in 2002 (Table 5). The slightly faster growth for 2000 and 2001 in comparison with the baseline forecast is due to better export competitiveness. The assumption on growth of export markets is the same as in the baseline forecast. Import growth also continues at a robust pace, albeit slightly slower than in the baseline forecast. This reflects a slowing in the rate of growth in non-residential investment in Finland.

Underlying the slowdown in the growth of private investment is the rise in interest rates during the forecast period. In comparison with the baseline forecast, the rate of growth of fixed investment is 1.5 percentage points lower in 2000 and 2.5 percentage points lower in 2002. In the course of 2002 the rise in interest rates levels off and investment starts to

Box 3. Assumptions of the forecast based on market expectations

In the baseline forecast the short-term market interest rate remains constant at 3.7% whereas according to inferred market expectations it rises to 5.3% by the end of 2002. The markka's exchange rate against the US dollar is kept unchanged at 6.16 in the baseline forecast. By contrast, in the alternative forecast it starts at a lower level (end-April 2000) and strengthens a little over the forecast horizon to reach 6.33 by the end of 2002 (Table 4). The other assumptions concerning the global economy, as too those concerning public finances, are the same as in the baseline forecast.

Estimated paths for interest rates and exchange rates in the alternative forecast

Market expectations can be inferred from the term structure of interest rates, which shows the yield on loans (usually bonds) of different maturities at a particular point in time. The term structure (yield curve) has to be estimated from discount rates for zero-coupon money market instruments and from quotations for coupon bearing bonds.

Several different methods are available for estimating the term structure and the technique used here is the Nelson – Siegel method.²

² In estimation the shape of the yield curve will depend on the estimation method used and the choice of securities. For more details on the definition and estimation of the term structure of interest rates, see eg John Y Campbell, Andrew W Lo and A Craig MacKinlay, 'The econometrics of financial markets', Princeton University Press (1997).

Thus in the case of the alternative forecast the term structure, ie the yield curves for euro and US dollar interest rates, has been estimated in the way described above.

From the yield curve it is then possible to infer market expectations about short and long-term interest rates. The other important piece of information that is required is the prevailing exchange rate between the euro and the dollar (or between the dollar and the markka). On the basis of this information and the yield curves for the two currencies, it is thus possible to calculate market expectations of the future path of the exchange rate from the present moment on.

Chart 6 shows market expectations of future movements in euro and US dollar short-term interest rates as estimated on 28 April 2000. The euro short-term interest rate is expected to rise whereas the corresponding dollar rate is expected to fall only slightly. In the light of the most recent developments, the dollar interest rate is expected to rise in the short run, but then to fall again.

In addition to changes in expectations of market rates and exchange rates, the following factors must also be taken into account. First, a change in the euro-dollar exchange rate also means a change in the trade-weighted currency index. In the forecast the value of the euro is also assumed to change in a corresponding way in relation to other non-euro area currencies.

Table 4. Assumptions of the forecast based on market expectations

	1998	1999	2000	2001	2002
Import volume growth in Finnish export markets, percentage change	5.8	4.4	10.1	8.7	8.1
Finnish import prices, percentage change	-3.0	-1.0	7.5	1.0	0.7
3-month Helibor/Euribor, %	3.6	3.0	4.1	4.9	5.3
Yield on taxable 4–5 year government bonds, %	4.3	4.1	5.2	5.4	5.5
Finland's trade-weighted currency index	119	121	126	126	125
Markka – US dollar exchange rate	5.34	5.58	6.39	6.41	6.34

Table 5. Summary of the forecast based on market expectations**Demand and supply 1998–2002 (1995 prices)**

	1998	1999	2000	2001	2002
Percentage change on a year earlier					
Gross domestic product	5.0	3.5	4.9	4.0	4.0
Imports	8.5	3.4	6.7	6.3	6.7
Exports	9.3	7.4	11.1	7.8	6.9
Private consumption	4.6	2.9	2.7	2.9	3.4
Public consumption	1.5	0.3	1.2	1.3	2.1
Private fixed investment	9.6	7.0	5.0	4.3	5.9
Public investment	-0.4	-6.3	-1.3	2.5	2.9
Change in inventories and statistical discrepancy, % of total demand in the previous year	-0.1	-0.7	-0.1	0.0	-0.1
Total demand	5.9	3.5	5.3	4.6	4.7
Total domestic demand	4.3	1.7	2.5	2.9	3.4

Key economic indicators

	1998	1999	2000	2001	2002
Percentage change					
Consumer price index	1.4	1.2	2.9	2.0	1.6
Level of earnings	3.5	2.6	4.6	4.2	4.2
Labour productivity	3.2	-0.1	3.2	2.4	1.9
Unit labour costs	2.3	2.8	1.2	2.1	2.8
Number of employed	2.4	3.3	1.4	1.9	2.1
Employment rate, 15–64 year-olds, %	64.1	66.0	66.8	68.0	69.4
Unemployment rate, %	11.4	10.2	10.1	9.0	8.0
Export prices of goods and services	-1.3	-5.7	5.2	2.1	1.9
Terms of trade	2.7	-5.2	-2.8	1.2	1.4

% of GDP (National Accounts)

Ratio of taxes to GDP	46.2	46.1	45.7	44.7	43.9
General government net lending	1.3	2.3	4.2	4.6	4.9
General government debt (Maastricht definition)	49.0	47.1	41.1	36.0	31.7
Trade account	9.7	9.1	10.4	11.4	12.1
Current account	5.7	5.3	6.6	7.9	8.8
Average interest rate on new loans granted by deposit banks, %	4.8	3.9	4.7	5.0	5.2

grow at a slightly faster pace, although, at around 6%, it is still slower than in the baseline forecast.

The rise in interest rates is also reflected in a slowing in the growth of consumption. Expectations of

higher interest rates are likely to be evident specifically in lower demand for consumer durables. In this forecast, the rate of growth of private consumption in 2000 and 2001 is about 0.5 percentage point lower

than in the baseline forecast. As in the case of investment, there are no significant differences between the two forecasts as regards growth in 2002.

The biggest differences between the forecasts concern consumption and investment in 2000 and 2001, and of course this is reflected in GDP growth. In the forecast based on market expectations, GDP grows by nearly 5% in 2000 and 4% in 2001, ie by slightly less than in the baseline forecast. Growth continues at a rate of 4% in 2002.

There is a clear difference as regards the profiles for residential investment and housing prices. The growth rate for residential investment is some 3 percentage points lower in 2000 and 2001 than in the baseline forecast. The difference is even more striking in the case of housing prices, since prices are forecast to rise by just over 1% in 2001 as against 5% in the baseline forecast. Developments in the current year follow a similar pattern. The rather large differences are due to the high interest rate elasticity of both housing investment and demand for housing; in other words, a change in interest rates is reflected relatively quickly and strongly in housing investment and demand for housing. In 2002 there are no longer any major differences between the forecasts.

Employment, wages and prices

The two forecasts also differ as regards inflation. The assumed rise in interest rates in the forecast based on market expectations clearly dampens the rise in prices, and the rate of increase in the CPI falls well below 2% (Chart 7). In 2001 and 2002 the rise in consumer prices is ½ percentage point slower than in the baseline forecast.

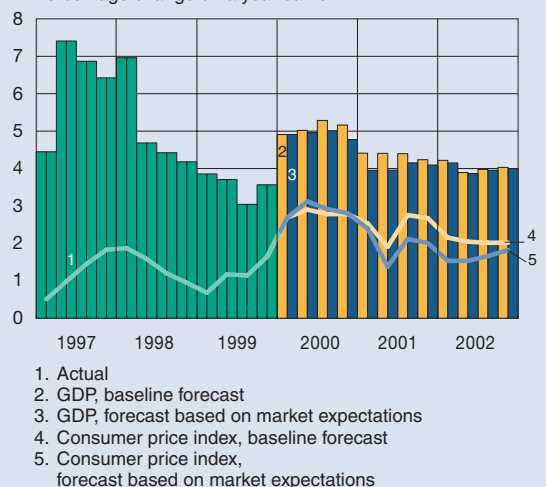
There is very little difference between the forecasts as regards developments in employment. The fall in the unemployment rate is a little slower in the alternative forecast. Similarly, the rate of increase in whole-economy unit labour costs is slower than in the baseline forecast but still higher than the euro area average.

The slower inflation rate and more subdued inflation rate expectations in the forecast based on market expectations results in smaller wage increases and thus more moderate growth in the level of earnings in the forecast period.

Chart 7.

Growth and inflation

Percentage change on a year earlier



Sources: Bank of Finland and Statistics Finland.

External balance and public finances

Taking market expectations into account does not alter the overall picture as regards external balance. The trade surplus continues to widen throughout the forecast period, and the current account surplus is already close to 9% of GDP in 2002. As in the baseline forecast, both the public sector and the corporate sector have sizeable surpluses. In contrast to the baseline forecast, the financial balance of the household sector does not move into deficit until 2002. This is because of the weaker outlook for housing investment in this forecast, caused in part by the higher cost of servicing loans.

The picture as regards public finances is very similar to that in the baseline forecast. General government debt (Maastricht definition) stays marginally higher than in the baseline forecast.

23 May 2000

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

Financial stability in Finland

The Finnish financial markets have been stable, largely because of favourable macroeconomic developments. One threat to the benign outlook is posed by the continuing uncertainty caused by gyrating share prices, which could spread to other parts of the financial system. Finnish banks are now more profitable than ever. The biggest risks facing them are associated with the growing stock of long-term bank lending and with shrinking margins due to tightening competition. Pronounced structural changes in the banking and insurance sector present formidable challenges for supervisors and crisis management, which will have to be met through further development of international law and closer cooperation.

Cautiously positive outlook for international financial markets

Prospects are good for a continuation of relative calm in the international financial markets owing to positive macroeconomic developments. Robust economic growth has, however, increased inflationary pressures in several countries, which has strengthened expectations of rising interest rates and increased uncertainty.

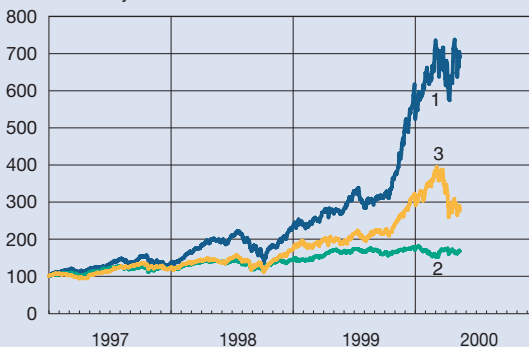
Uncertainty in the international financial markets has in recent months been exacerbated by increased volatility of share prices. The turbulence started in the United States, where share prices of many information technology (IT) companies turned down in March. The volatility spread particularly to European exchanges weighted towards IT companies, including Helsinki's HEX (Chart 1). In trying to evaluate the effects of the decline in share prices, one should, however, note that prices of IT company shares posted huge gains in the period around the millennium change. The price trend for shares of companies in more traditional sectors has remained fairly steady during the early part of 2000, although short-term volatility has increased during the spring months.

The Asian financial markets have shown signs of impending recovery. No large specific risks are apparent in the Japanese markets, although questions remain as to the effectiveness of financial system reforms and the solidity of bank balance sheets. The conditions do not exist for acute crisis in the Latin American financial markets, as the economies in the area have been quite stable. Not much has changed in the Russian financial markets since the crisis of 1998. There is mounting pressure to make changes in Russian legislation and supervision concerning the financial markets that will bolster confidence in the banking sector.

Chart 1.

Stock indices

2 January 1997 = 100



1. HEX all-share
2. Dow Jones Industrial Average
3. Nasdaq Composite

Sources: HEX and Bloomberg.

Banks' financial results improved and consolidation continued

The profitability of the biggest international banks improved notably in 1999. This was largely based on income growth, which resulted from a more stable operating environment and improved growth prospects for the world economy. Because of these positive developments, loan loss provisions declined and operational efficiency improved. Although for many banks costs started to increase again, the growth was slower than the growth in income.

Balance sheets of the largest international banks expanded rapidly in 1999. The margin between banks' average lending and funding rates nonetheless narrowed, as competition picked up. Despite the squeezing of margins, many banks posted an increase in net income from financial operations because of higher volumes.

Banks have tried to increase their profitability by boosting fee incomes and returns on securities trading. These items have indeed grown considerably faster than net income from financial operations. For the large banks, other income climbed above net income from financial operations as a portion of total income. The improvement in profitability also reflected the stronger capital positions of many banks.

The bank consolidation trend has spread from the Nordic countries and the United States to the core of Europe and to Japan. Particularly in Europe and Japan, alliances between large banks are helping to reduce overcapacity and to restructure global banking markets. Alliances across the insurance and banking sectors and between countries have advanced furthest in the Nordic and Benelux countries.

Technological progress is also changing the nature of international banking. Almost all the major banks invested heavily in Internet banking in 1999. Moreover, a number of small Internet banks have been established in Europe. Such banks, which operate independently of the larger banks, were launched in the United States already in the mid-1990s.

Cross-border bank mergers: a challenge for regulation and supervision

Banks have responded to heightened competition by seeking scale economies and market power via mergers across sectors and national borders. The merger trend increases the need for developing international law in the area of supervision. Nordic country super-

Table. Deposit banks¹: combined financial results and balance sheet, 1993-1999, EUR billion

	1993	1994	1995	1996	1997*	1998*	1999*	1997**	1998**	1999**
								incl. Nordbanken		
Net income from financial operations	2.2	2.3	2.1	1.9	2.1	2.3	2.3	3.1	3.2	3.1
Other income	1.6	1.4	1.4	1.7	1.3	1.4	1.4	2.1	2.4	2.2
Total income	3.8	3.8	3.5	3.6	3.4	3.7	3.7	5.2	5.6	5.3
Operating expenses	2.6	2.8	2.6	2.2	1.9	2.0	1.9	2.8	2.9	2.8
Depreciation	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.3	0.3	0.3
Loan and guarantee losses	2.5	1.9	1.0	0.6	0.4	0.3	0.1	0.5	0.2	0.1
Operating profit	-1.5	-1.1	-0.5	0.6	1.0	1.3	1.4	1.7	2.1	2.2
Total assets	122.2	112.3	103.7	97.2	110.5	107.9	117.1	159.1	153.1	168.4
Non-performing assets, net	6.0	4.3	3.3	2.1	1.4	0.9	0.8	2.1	1.5	1.1
– % of claims on the public	8.7	7.2	6.3	4.0	2.5	1.5	1.2	2.4	1.6	1.1
Loan losses, % of claims on the public	3.6	3.2	2.0	1.2	0.7	0.4	0.1	0.5	0.3	0.1
Risk-weighted assets and liabilities	82.2	70.6	62.5	62.6	67.6	69.8	71.8	94.2	97.3	105.3
Capital adequacy ratio, %	10.7	11.7	12.0	11.4	11.9	11.5	11.9	11.8	11.1	11.7
Return on equity, %***	-25.9	-20.3	-9.6	11.8	16.7	25.8	20.1	18.4	21.5	19.8
Return on assets, %	-1.4	-1.0	-0.5	0.6	0.7	1.2	1.0	0.9	1.1	1.1

¹ The figures for 1997, 1998 and 1999 are not fully comparable with the figures for previous years owing to the formation of MeritaNordbanken and the restructuring of the cooperative banking group. The figures for 1999 include the Leonia Group.

The figures for commercial banks are on a consolidated basis.

* The figures for MeritaNordbanken Group include only Merita Bank Group.

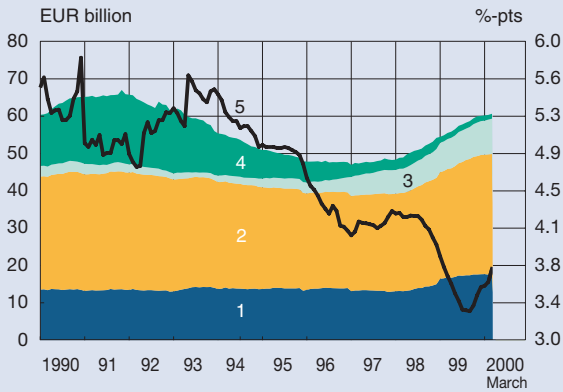
** Incl. the entire MeritaNordbanken Group.

*** Ratio of operating profit less taxes to average equity.

Sources: Financial Supervision Authority and Bank of Finland.

Chart 2.

**Deposit banks:
lending stock and interest rate margin**



1. Lending to companies (left-hand scale)
2. Lending to households (left-hand scale)
3. Other markka-denominated lending (left-hand scale)
4. Foreign-currency lending (left-hand scale)
5. Difference between average rates on markka-denominated (from 1999 euro-denominated) lending and deposits (right-hand scale)

Source: Bank of Finland.

visors have been studying the implications of the new operating environment and working to create an effective Nordic framework for banking supervision. This work has focused on agreements and other forms of cooperation between the authorities concerned. One of the risks associated with the merger trend is the increased complexity of monitoring the multinational banks that are being created. The problems arise in respect of comparability and differences eg in accounting practices, all of which complicate the task of the supervisor. Crisis management in this environment also requires new arrangements between authorities.

Rapid growth of lending in the euro area

Lending by euro area financial institutions has continued to increase at an annual rate of some 10%. The growth in lending in the euro area is marked by wide differences across countries. For example, in Portugal and Ireland the annual growth rate is approximately 30%. Banks' interest rate margins have

meanwhile narrowed on average, as a result of tighter competition. Both deposit and lending rates have recently followed market trends upwards. However, real interest rates have actually declined in some cases.

EU area banks have played a significant role in lending to developing countries. The economic crises that occurred in Asia, Latin America and Russia in 1998 underlined the magnitude of the risks associated with such lending. Recent improved performances by the most problematic economies in these regions have reduced EU area banks' short-term risks associated with claims on these countries. These claims will nonetheless continue to require close monitoring.

EU area banks are currently in excellent financial condition. Tightening competition will, however, cause problems for inefficient banks. For EU banks, the biggest risks in connection with core banking activities will be those associated with lending to companies in the construction and real estate sectors. This is related to the fact that many countries have recently witnessed surges in real estate prices.

Profitability of Finnish banks is excellent

The aggregate operating profit of Finnish banks (incl. MeritaNordbanken Group) increased for the fourth year in a row, to about EUR 2.2 billion in 1999. The excellent performance was based on reductions in costs and in credit and guarantee losses. Loan loss recoveries (income from realizations of collateral) reduced already small gross loan losses, and thus net loan losses had positive effects on some banks' financial results. These recoveries are, however, likely to dry up in the near future. Although the stock of lending increased sharply, net income from financial operations fell slightly as competition tightened. The recent rise in market interest rates again boosted net income from financial operations, because of differences in interest linkages of lending as opposed to deposits. The aggregate margin (average gap between euro-denominated lending and funding rates) has widened, as banks' lending rates are for the most part tied to short-term market rates or prime rates, whereas about half of deposit volume is subject to fixed rates (Chart 2). The aggregate margin may shrink in the future since interest rates on new lending are gener-

ally lower than the average rate on the stock of lending and deposit rates are subject to upward pressure.

The trend for other income¹ depends largely on the growth of fee income. With the transition to Stage Three of EMU, interest rate levels in the euro area have converged and exchange rate risk has been eliminated within the area. Moreover, Finnish banks have been reducing their share holdings. These developments explain the sharp decline in net income from securities transactions and foreign exchange dealing. Fee income from asset management services and sales of mutual fund units and insurance increased substantially. In the aggregate, banks' other income declined slightly, as the growth in fee income did not fully offset decreases in the other items included.

Finnish banks' (incl. MeritaNordbanken Group) return on equity was about 20% in 1999. The solvency ratio, as defined in the Credit Institutions Act (BIS rules), improved slightly, from 11.1% in 1998 to 11.7% in 1999. The increase in risk-weighted assets was more than offset by growth in equity capital over the same period, which had a positive effect on profitability. Tier 1 capital² increased. The expansion in banks' balance sheets accelerated not only because of a large increase in lending but also because of exceptionally strong Y2K-related demand for liquidity in late 1999. Small banks in particular stepped up their lending substantially. Foreign banks operating in Finland have competed aggressively, increasing their market share in lending from less than 3% to some 5% between February 1999 and February 2000. While banks' deposits from the public are still on the increase, growth has decelerated as alternative investment outlets gain rapidly in popularity (Chart 3).

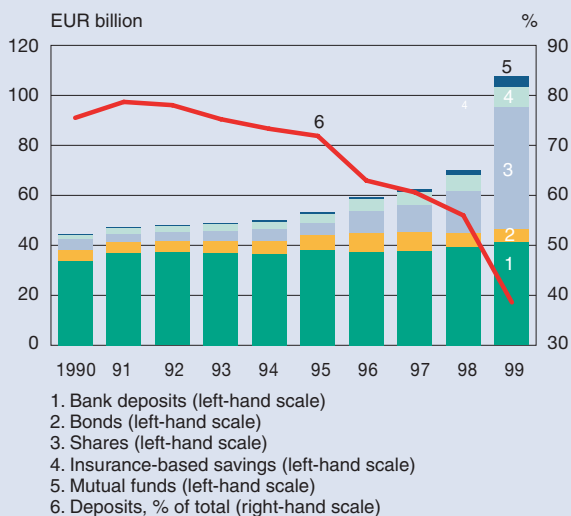
Finland's banking sector is among the most efficient in Europe. Banks managed to cut expenses connected with personnel and branches again in 1999. The total number of employees has declined to less than half the peak reached in 1989, when Finnish banks employed over 53,000 persons (Chart 4). At the end of 1999 about 24,000 persons were employed. The number of branches fell from the 1987 peak of

¹ Other income includes net income from securities and currency trading, fees, dividends and other items as well as shares in profits/losses of associated companies.

² Includes (for limited liability companies), inter alia, share capital, capital loans, reserves, premium accounts and unrestricted capital.

Chart 3.

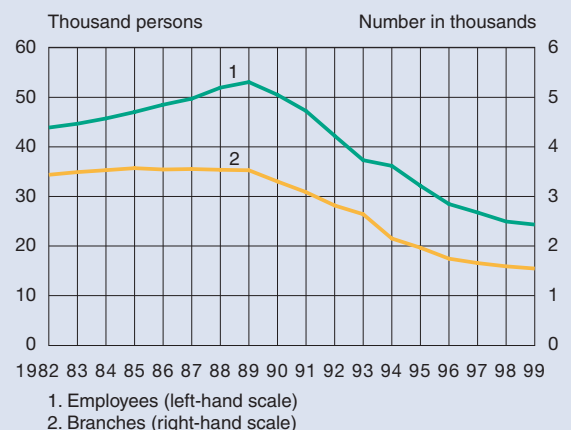
Financial assets of Finnish households



Sources: Finnish Bankers' Association, Bank of Finland, Statistics Finland and Federation of Finnish Insurance Companies.

Chart 4.

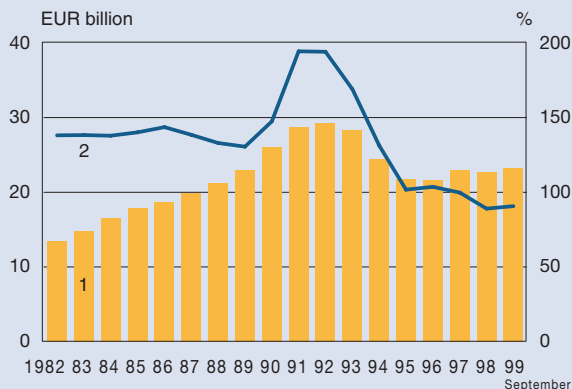
Deposit banks (parent banks): numbers of employees and branches



Source: Finnish Bankers' Association.

Chart 5.

Manufacturing companies' debt and ratio of debt to value added

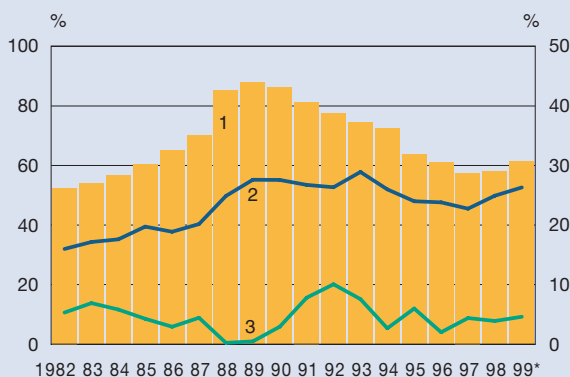


1982 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99
September

Sources: Bank of Finland and Statistics Finland.

Chart 6.

Household debt, debt servicing costs and saving rate, % of disposable income



1982 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99*

* Figures for debt and debt servicing costs in 1999 are Bank of Finland forecasts.

Sources: Statistics Finland and Bank of Finland.

3,553 to 1,545 by end-1999³. The decline in numbers of employees and branches did, however, slow down in 1999. Banks incurred new costs, inter alia, in connection with the application of new technologies and product innovation. Banks in general, including small banks, have invested heavily in Internet banking.

Favourable macroeconomic performance will probably keep the stock of bank lending on the rise for the next few years. On the other hand, there is likely to be a gradual intensification in interest-rate competition for deposits after earnings on all deposits become taxable on 1 June 2000. Although banks will attempt to channel funds that are withdrawn from deposits eg into mutual funds, the removal of tax exempt status from certain deposits is likely to affect the rates paid on high-yield accounts and new fixed-term accounts. Because of rising market interest rates, banks' net income from financial operations will probably continue to develop favourably this year. However, increasing competition for deposits is likely to eventually put a squeeze on Finnish banks' net income from financial operations.

Wide fluctuations in asset prices entail risks

Favourable economic conditions have been accompanied by soaring asset prices. Price rises in housing and shares in particular have been the subject of wide discussion. A precipitous decline in asset prices could elicit both *direct* effects (via realizations of credit and market risks, lower fee income and problems involving subsidiaries) and *indirect* effects (via an economic slowdown).

The likely direct result of a sharp decline in asset prices would be that banks' customers would experience increased bankruptcies and payment defaults. This would in turn reduce the protective value of collateral, which would lead to increases in nonperforming assets and loan losses. Although Finnish companies and households are at this stage of the economic cycle still well positioned to service their debts, there has been an upturn in the ratio of households' debt servicing costs to disposable income (Charts 5 and 6).

³ These figures include foreign banks' branches operating in Finland as well as Merita Bank of the MeritaNordbanken Group.

The recent increase in the stock of lending is apparently not due to any substantial easing of lending standards. On the other hand, the share of total lending to companies accounted for by construction and real estate services and rental and other business services is significant, and these types of lending are particularly vulnerable to falling asset prices. However, banks' nonperforming assets are still exceptionally small, both in absolute terms and relative to the stock of lending.

At the moment, Finnish banks' direct market risks can be considered to be fairly small. Because their present share holdings are quite limited, a drop in share prices would probably not cause serious problems. By contrast, the financial results of insurance companies would be significantly affected by a sizeable drop in share prices, as their results in 1999 were more dependent on high investment returns than was the case for deposit banks. Many banks have in recent years been able to substantially reduce their real estate holdings and hence reduce their direct risks associated with changes in real estate prices.

Compared with parent banks, their subsidiaries' profitability could suffer more from a steep drop in prices. All the large banks, for instance, have asset management or real estate management companies through which losses can be realized. In the short run, price volatility would probably boost share trading volumes and hence fee income from broking and asset management.

A significant decline in asset prices could have indirect effects on banks' profitability as economic agents became less inclined to borrow, the economy slowed, and banks' found themselves with less financial room for manoeuvre.

Consolidation of securities markets continues

Consolidation of the infrastructure of European securities markets is continuing and is taking on new forms. It is important for the future of the Finnish financial system that secure and efficient links to core European securities markets be made available to domestic investors and securities issuers. As trading and settlement systems of different countries converge, it will become imperative to resolve a number of new operational and legal issues.

Some of the alternative share trading systems that are taking their place alongside traditional European stock exchanges aim to offer pan-European facilities for trading in shares of large or growing companies. Traditional exchanges are seeking to forge alliances or cooperate in other ways in order to become more competitive. In autumn 1999 eight European exchanges (Milan, Zurich, Madrid, Paris, Amsterdam, Brussels, London and Frankfurt) agreed to launch a common securities market by November 2000. The agreed format would mean, inter alia, a common customer interface and unification of certain operations. In March 2000 the Paris, Amsterdam and Brussels exchanges announced their intention to merge to form the Euronext exchange. And at the start of May, the London and Frankfurt exchanges announced their decision to merge to form the iX exchange, which will specialize in electronic trading. The London and Frankfurt exchanges have also agreed on a joint venture with the US Nasdaq exchange. These alliances are restructuring the cooperative arrangements among European exchanges.

The HEX has been closely following consolidation efforts and has participated in negotiations with the parties concerned. Trade in Finnish derivative instruments has for the most part been transferred (by an earlier agreement) to the German-Swiss Eurex derivatives exchange.

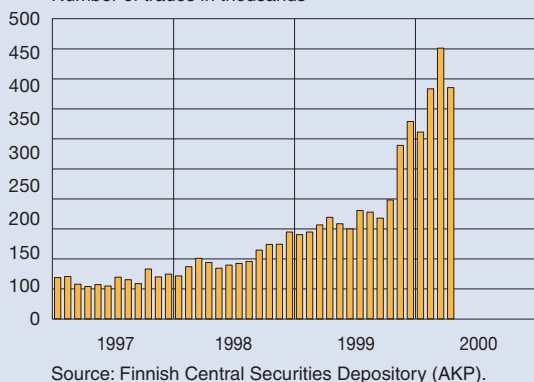
The consolidation of settlement facilities for securities trades has so far led to the formation of three central securities depositories (CSDs) in Europe. Deutsche Börse Clearing and Luxemburg's Cedel merged at the start of 2000 to form the Clearstream CSD. In March Euroclear, which operates in Belgium, and the French Sicovam announced plans to merge. CrestCo of the United Kingdom and the Swiss SIS launched a joint venture called Settlement Network. These alliances will soon be expanding and integrating further. With time, it will be possible for the European settlement infrastructure to be concentrated in one or two international CSDs.

CSDs operating in Europe have constructed numerous links, which have helped to unify settlement operations. The system operated by the Finnish Central Securities Depository (APK) now has two two-way links, with Clearstream and Sicovam. These links have also been approved for transfer of securities used as collateral in Eurosystem credit granting operations.

Chart 7.

Volume of share trades settled in the APK system

Number of trades in thousands



Source: Finnish Central Securities Depository (AKP).

Share trading in Helsinki increased sharply

The Finnish Central Securities Depository (APK) maintains settlement and register systems for equities (OM system) and debt instruments (RM system). Numbers of transactions processed in the OM system have increased sharply in the last six months or so (Chart 7). The increase is based on strong interest in HEX-listed technology companies and the shrinking in average transaction size as a result of the boom in online trading. Because of the growth in transaction volume, efforts have been made to upgrade the settlement of share trades. Nonetheless, concentration of securities registration in the APK, which will enable revamping of share settlement, is not expected to be completed until October 2000. The number of transactions processed in the RM system also rose slightly in the first quarter of 2000, following a year of subdued activity. The growth was partly due to the issuance of a 2011-dated benchmark government bond as well as the addition of several large international banks to the list of primary dealers.

The number of TARGET transactions continues to increase

The number of cross-border TARGET payments has increased steadily from about 29,000 (daily average) in 1999 to about 36,000 in early 2000 (January–February). On the basis of number of payments, the peak day in the latter period was 22 February (dollar markets being closed on 21 February), when some 52,000 TARGET payments were processed.

The average value of a TARGET payment has continually declined. This is explained by the increasing share of customer payments, which are smaller on average than interbank payments. In February 2000 customer payments accounted for more than 31% of all payments (as against 17% in January–April 1999).

As it continues to develop the TARGET system, the Eurosystem will be particularly concerned to take into account the views of participating banks. According to a report published by the ECB in November 1999, banks have de facto adopted TARGET as the standard for cross-border transfer of large-scale euro-denominated payments. The priority for development of the system is to increase its functionality, though this does not apply to all of the RTGS systems included in TARGET.

The Eurosystem has indicated that the banks should have cross-border retail payment systems in place that can compete with national systems, eg in terms of efficiency and pricing, by 1 January 2002, when euro notes and coins are put into circulation. It is hoped that the practical goals that have been set for the Eurosystem banking sector will promote development of a system that enables the public to reap the benefits of the single currency also in respect of cross-border credit transfers.

In the period January–March 2000, the daily average value of payments transferred in the BoF-RTGS system was about EUR 19 billion. This average corresponds to 16% of Finnish GDP, so that the six-day flow of payments through the BoF-RTGS matches the annual value of GDP. Work on the changeover from morning transfers of covering funds to night transfers in the interbank payment system (PMJ) is moving ahead on schedule. Night booking, due to start in May 2000, will reduce interbank counterparty risks, since banks will credit payments from other banks to their customers' accounts only

after covering funds are received. Bilateral transfers of covering funds eg for credit transfers and debit card payments are effected via banks' settlement accounts at the Bank of Finland.

The proportion of banks' domestic customer payments rose again in 1999, to 85%, according to the Finnish Bankers' Association. The bulk of banks' paper-based transactions are credit transfers handled through their payment services. As the WAP standard⁴ becomes more widely applied, more and more diversified payment services are becoming available via mobile phones. Finland is the world's leading country in the use of banking services provided via

both mobile phones and the Internet. Security with respect to wireless data transfers is being upgraded as new procedures such as the electronic signature come on stream. This technology is already being put to use eg in electronic ID (HST) cards.

15 May 2000

■ **Key words: financial system, stability, financial markets, banking sector, securities markets, payment and settlement systems**

⁴ WAP = Wireless Application Protocol.

Better-informed wage setters

by **Svante Öberg**¹
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The aim of this article is to argue for the underpinning of wage setting procedures by reports and discussions on domestic and international economic and labour market developments.

In 1997–1998 I headed a committee that sought to strengthen the Mediation Authority in Sweden. However, the remit of the committee was not limited only to mediation. It also covered the framework for wage formation in Sweden. In this article, I describe the committee's proposals, the reactions to them and the final results. I then discuss some issues concerning wage formation and finally elaborate on one of the issues dealt with by the committee. Although I benefited from the support of an able secretariat and many good experts on the committee, I remain solely responsible for the report.

The committee on mediation and wage formation

The aim of the committee's proposals was to contribute to efficient wage formation and positive economic performance in Sweden, with strong growth and rising employment, while avoiding upward inflationary pressure.

The committee's report identified four starting points for the proposals, namely: the wage formation process in Sweden does not function well; the wage formation framework is important for economic progress; collective agreements are preferable to legislation; the broad support of the social partners (em-

ployer and employee organizations) and the Swedish Riksdag (Parliament) would be necessary to achieve legislative changes in this area.

The committee's proposals covered five areas

A new and stronger Mediation Authority should be established. Unlike Denmark, Finland and Norway, Sweden has had a very small Mediation Authority with very few powers.

The Mediation Authority should be given enhanced powers. It should have the authority to act in good time before the termination of wage contracts; to call parties to attend meetings; to encourage coordination in negotiations; to receive 14 days advance notice of industrial action; to delay notified industrial action by up to 14 days; to request parties to settle conflicts through arbitration; and to set up a permanent arbitration board. These powers exist in various forms in other Nordic countries.

The Mediation Authority should play an active role in setting standards. It should have expert advisory committees in the areas of wage contracts, economics and wage statistics. It should be responsible for the development of high-quality wage statistics (the production of which would remain the responsibility of Statistics Sweden). It should publish reports on economic developments and wage trends in Sweden and other countries.

Stricter rules on industrial action. A better balance needs to be established between the social partners through restrictions on the right to take sympathetic industrial action, the introduction in Swedish law of a proportionality requirement limiting the possibilities of an organization to take industrial action that imposes substantial costs on the opposing party and third parties without the organization itself incurring sub-

¹ Svante Öberg has been Director General of Statistics Sweden since May 1999. Prior to that, he was Secretary of State at the Swedish Ministry of Finance from 1990 to 1991 and again from 1994 to 1997, Advisor at the International Monetary Fund in Washington from 1992 to 1994 and Director General of the Institute of Economic Research from 1997 to 1999.

stantial costs and a prohibition on industrial action against sole traders and family companies.

Finally, the Mediation Authority should contribute to increased equality between women and men through better wage statistics, the addition of wage data to databases, discussions in reports on wage trends for women and men and recruitment of necessary expertise in the equality area.

The committee also stated that it is generally better if relations between the social partners are regulated through collective agreements than by law. Furthermore, the committee proposed that the Swedish Government appoint a council for regular discussions with the social partners to reach a better understanding and a common view of what constitute desirable developments. Unlike Finland, Sweden does not have a tradition of national tripartite agreements on wages and income between the Government and the social partners.

Reactions to the committee's proposals and final results

The committee submitted its proposals in November 1998. They were well received by the Government and economists, but heavily criticized by labour market organizations. I found some support at the central level for strengthening the wage formation framework, but very little support at the sector and branch level, where the power resides as regards wage negotiations. Most sector and branch organizations did not want any central or Government intervention in negotiations.

The Government appointed the former Prime Minister Ingvar Carlsson and myself as 'samsynsmän', a kind of mediator, with the remit of reaching broader agreement between the social partners on what needed to be done. But we did not get very far. There was consensus on some issues, eg that a somewhat stronger Mediation Authority should be established. But SAF, the employers' central organization in the private sector, did not agree on the need for involving the Mediation Authority in coordinating negotiations or setting standards. They even failed to agree to a proposal to set up a body for regular discussions with the employee organizations. In addition, LO, TCO and SACO, the central employee organizations, did not agree to the need for tighter rules on industrial action.

The Government and the Riksdag have now decided that a new and stronger Mediation Authority will be

established on 1 June 2000. It will have some increased authority, although not as much as the committee had proposed. The rules on industrial action have been tightened only slightly. It is still an open question whether the Mediation Authority will be successful in issues related to setting standards. It will have the resources to commission improved wage statistics and economic reports. But SAF has stated that it will not take part in the advisory committees in the areas of wage contracts, economics and wage statistics.

There is one encouraging development in the Swedish labour market that is worth mentioning in this context. The social partners in the manufacturing sector, twelve employer organizations and eight employee organizations, have reached an important agreement on industrial development and wage formation, the 'Industriavtalet'. In this agreement, the parties have agreed to set up an industrial committee, to observe certain procedures in wage negotiations, to appoint independent chairpersons for the negotiations and to set up an economic council, 'Industrins ekonomiska råd'. A similar agreement, but not as far-reaching, has been made in the trade sector and part of the private service sector. Negotiations on similar agreements are currently taking place in the central and local government sectors.

Wage formation

Wage formation plays several important roles in society. Through wage formation, incomes are distributed between labour and capital, and between sectors and individuals. Wage formation also affects resource allocation and economic efficiency. Furthermore, wage formation affects inflation and national competitiveness and thereby growth and employment.

In this last-mentioned respect, Sweden and Finland have had severe problems in the last three decades. Since the mid-1970s Sweden has devalued the krona six times to cope with inflation and wage increases that were higher than in other countries. It now has a floating currency. Finland used to be known for its devaluation cycle, but, with Finnish membership of European monetary union (EMU), the country can no longer deal with competitiveness problems through devaluation (if ever it could).

Economic research indicates that highly centralized or highly decentralized wage setting produces

better results in terms of unemployment than wage setting at sector and branch level. In the first case, the reason is thought to be that it makes more sense for large organizations covering a large part of the economy to take into account the negative effects of high wage increases on growth and employment at national level. In the second case, the reason is thought to be that, with highly decentralized or local wage setting, unrestricted market forces generally produce more efficient solutions.

In the case of wage setting at sector or branch level, negotiations mainly have the character of negotiations between sectors and branches. It is important for negotiators of employee organizations to achieve wage increases that are at least as high as or preferably higher than wage increases in other sectors or branches. The negative implications of high wage increases in only one sector or branch for the nation's growth and employment are not strong enough to be a restrictive factor in negotiations.

Early empirical results by Calmfors and Driffill found support for the theory that central and local wage setting produces better results than wage setting at sector or branch level (the so-called Calmfors–Driffill curve). Recent re-examinations of the theory by Elmeskov, Martin and Scarpetta at the OECD also provide support for the theory; in particular, the results indicate that a high degree of coordination of wage negotiations may result in low unemployment. Empirical results are, however, not conclusive.

Experiences from several European countries also support the view that greater consensus at national level contributes to good economic performance. Austria, Denmark, Finland, Norway, Ireland and the Netherlands have had good experiences with various forms of tripartite cooperation. In times of crisis, agreements have been reached on effective measures to address the problems at hand. Over the last 10 to 20 years, the economies of these countries have performed better in terms of growth and employment than most other European countries.

On the other hand, countries with decentralized or local wage setting have also done well economically over the last two decades. One such country is the United Kingdom, which radically changed its economic policies in the early 1980s. The changes included a tightening of monetary policy, reforms in public expenditure, deregulation of the labour market and privatization. The United States has never had a regulated labour market

and has performed very well with respect to employment growth. Other countries, such as Australia and New Zealand, have also had good results.

For Sweden, which lies somewhere in between the highly centralized and the highly decentralized systems of wage setting, the best way to reform wage formation would be to move towards more consensus, similar to that in certain other European countries. Although a deregulated labour market is better in terms of flexibility and efficiency, it would take many years of severe conflict to achieve this in Sweden, given its high union participation rate and egalitarian tradition. The committee has therefore sought ways to improve wage formation through better information and forums for discussion.

Underpinning wage setting procedures

Thus, an important part of the committee's proposals concerns the underpinning of wage setting procedures by reports and discussions on domestic and international economic and labour market developments.

The proposals include assigning responsibility to the Mediation Authority for the preparation of annual economic reports. These would deal with economic developments in Sweden and internationally and with prospects for the upcoming wage agreement period. The reports should elaborate on many issues, but they should not seek to establish a norm for the wage negotiations. The reports would not be prepared by the staff of the Mediation Authority, but instead be commissioned from an independent body, eg the National Institute of Economic Research (Konjunkturinstitutet).

There are several reasons justifying the production of such reports. First, theoretical arguments indicate that a shared view of important circumstances makes it easier for negotiating parties to reach an agreement without conflict. Several researchers indicated to the committee that coordination would make parties more willing to take into account effects of the negotiations on employment and unemployment at national level. They also argued that the risk of conflict would be reduced if the parties had access to the same information.

Secondly, several countries have had positive experiences with cooperation in the preparation of reports on economic issues. The committee noted the positive

experiences in Norway, the Netherlands, Austria and Ireland with efforts to develop a shared outlook between the parties on issues that are essential for wage formation. Cooperation in analysing the issues had contributed to greater consensus in these countries.

In Norway, this type of report is published every January. The report is prepared by a standing committee, 'Det tekniske beregningsutvalg', under the chairmanship of the Director General of Statistics Norway and comprising representatives of the social partners, agricultural and fishery organizations and the Ministry of Finance. The aim is to develop a common view on economic developments and the prospects for price movements.

Thirdly, Sweden has also had positive experiences with efforts in this direction. In the early 1990s the Rehnberg Commission began producing reports on economic developments as part of the wage agreement process and as a way to induce the parties to agree to a reduction in previously high wage increases. The Government requested the Rehnberg Commission to mediate in the wage negotiations at that time. According to the minutes of the independent chairpersons, three reports by the Industrial Economic Council played an important role in the last wage round for the manufacturing sector.

The Mediation Authority would also be responsible for wage statistics and for annual reports on wage trends, etc. These reports would describe wage developments, negotiations and wage agreements, labour market legislation in Sweden and other countries. They would not, however, include wage forecasts.

I believe it is important that the social partners have access to the same independent and reliable information on wage developments. Some of the critics of the committee argued that wage statistics are always used for comparisons with groups that are better paid, thereby contributing to wage increases. While this may be true to some extent, I maintain that it is better to have good and reliable information than to pretend that the problem does not exist. Moreover, if there are no official wage statistics, the parties will make their own statistics, which are bound to be poorer in quality.

In particular, it is important to have much better information than is currently available on wage developments in other countries. European developments will be especially important, since Finland and Sweden are members of the European Union and Fin-

land participates in EMU. At present, there are no reliable comparable data on hourly wages in European countries, an issue that I intend to promote as Director General of Statistics Sweden.

It is also important to arrange forums for discussing these developments. As I noted above, I believe that a common view of the situation makes it easier for the parties to reach agreement without conflict. In this respect, the committee proposed that the Government should appoint a council for regular discussions with the social partners on issues of common interest.

The committee also proposed that the Mediation Authority should have three expert advisory committees on wage contracts, economics and wage statistics. The Government should not, however, take part in these three expert advisory committees and it should not try to influence the work of these committees. They should serve only as discussion forums for the experts of the social partners.

Conclusion

One way to improve wage formation in Sweden, and perhaps in Finland too, would be to underpin wage negotiations with reports and discussions that contribute to forming a common view of domestic and international economic developments that are important for wage negotiations.

28 April 2000

■ **Key words: wage negotiations, wage formation, incomes policy, mediation, labour markets**

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Unemployment, labour markets and EMU

by Erkki Koskela
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University of Helsinki

The contrasting unemployment performance of Europe and the United States

The unemployment performance of EU countries has differed markedly from that of the United States over the past quarter of a century (Chart 1). Despite an upward trend, European unemployment was lower than US unemployment until the 1980s. Since then the opposite has been true: there has been a consistent decline in US unemployment whereas European unemployment has roughly doubled in the period up to the present day. What is the explanation for this contrasting performance? Simplifying a little, it can be said that economists have attempted to explain it by pointing to differences in the economic shocks experienced by Europe and the United States and by emphasizing differences between labour market institutions in these two regions: European labour markets are rigid while US labour markets are flexible. What are the essential features of the explanations that have been put forward?

The explanation based on economic shocks attributes the contrasting developments in unemployment in Europe and the United States over the past twenty-five years to fluctuations in oil prices and real interest rates and differences in productivity performance. But although economic shocks can explain the rise in unemployment for part of this period, the problem is how to explain the differences in unemployment rates. The economic shocks experienced within Europe have been too similar for them to account for cross-country differences in unemployment rates.

The other approach is to highlight differences in the institutional characteristics of labour markets and argue that the contrasting unemployment performance of Europe and the United States is due to rigidities in European labour markets and the flexibility of US labour markets. How do labour market

institutions affect unemployment? Some aspects of this issue are considered below.

- Unemployment benefit systems influence the equilibrium level of unemployment via two mechanisms. *First*, the more generous is the level of unemployment benefit, the higher are negotiated wages, labour costs and unemployment.¹ *Secondly*, the longer is the duration of the unemployment benefit, the weaker are incentives for workers to search for work and the higher is unemployment.²
- Although the effect of job protection on employment is *a priori* unclear as it reduces both hirings and firings, it affects the nature of unemployment. The higher the level of employment protection, the less workers change jobs. Workers who happen to be unemployed at any given time are likely to receive less job offers. As a result the duration of unemployment increases and skills deteriorate.³

Strong job protection and generous unemployment benefit schemes were already in existence in Europe in the early 1970s when unemployment was still relatively low. Subsequently, European labour markets have become more flexible at the same time as unemployment has grown on average. Therefore the labour market institution hypothesis *per se* is also

¹ The importance of unemployment benefits in wage formation has been well documented empirically. For a discussion of the Finnish case, see eg Honkapohja and Koskela (1999).

² There is a wealth of international empirical evidence indicating that, *ceteris paribus*, unemployment benefit schemes prolong the duration of unemployment; see eg Layard, Nickell and Jackman (1991) and Nickell (1998).

³ See Bertola (1998).

unable to explain Europe's weaker employment performance.

The effect of economic shocks depends on a country's labour market institutions.⁴ The case of Spain and Portugal illustrates this in striking way. The unemployment rate in Spain has fluctuated on either side of 20% over the past fifteen years whereas the Portuguese unemployment rate has varied between 4% and 8% (Chart 2). As movements in the business cycle in these neighbouring countries have been quite similar during the past two decades, it seems logical to focus attention on the characteristics of the countries' labour market institutions. Recently, Bover, Garcia-Perea and Portugal (1999) have made a systematic analysis of Spanish and Portuguese labour market institutions, which reveals that Spain and Portugal are like night and day in this regard. In Spain the actual level of employment protection is higher, the unemployment benefit system is more generous for workers – in terms of eligibility criteria, the benefit replacement rate and benefit duration – trade unions are stronger and wage flexibility is lower. As Spain and Portugal have experienced more or less the same economic shocks, a natural explanation for the difference in unemployment rates is that economic shocks effect employment via different mechanisms.

If the economic environment is stable, labour market rigidities are probably not a serious problem. But if the economic environment is unstable – as has been the case in Europe since the first oil crisis at various times and for various reasons – then rigid labour markets lead to faster growth of unemployment and unemployment easily becomes long-term. This seems to be crucial for understanding the countries' different unemployment performance in fairly similar macroeconomic conditions.

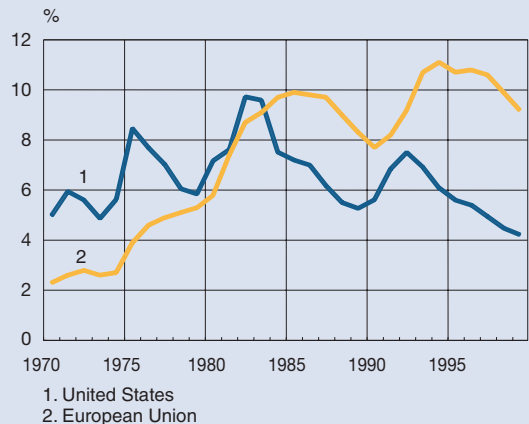
Structural unemployment and factors influencing it

During the severe recession in Finland in the early 1990s open unemployment quickly rose from about 3% to close to 20%. Since 1994 – and in fact already a little before this – Finnish GDP and industrial production have grown at rapid rates by European standards, but in the view of many commentators unem-

⁴ See Blanchard and Wolfers (1999).

Chart 1.

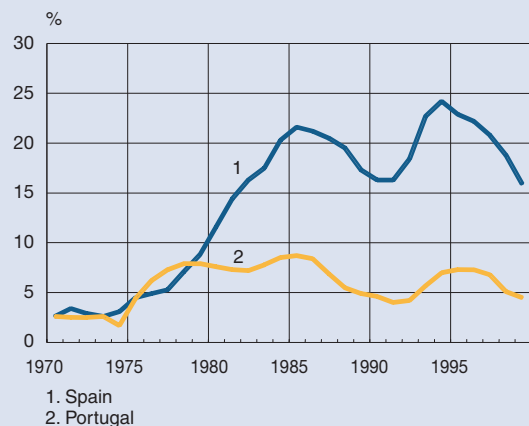
Unemployment rate in the United States and the European Union



Source: Eurostat.

Chart 2.

Unemployment rate in Spain and Portugal



Source: Eurostat.

ployment has come down surprisingly slowly. A consequence of this has been protracted problems in central government finances, despite the good growth performance. How and why did this come about?

For various reasons, the 1990s recession led to a sharp increase in structural unemployment. In such conditions, unemployment will not fall below a certain level even during good economic times without structural reforms. This question has recently been analysed in the Finnish case (Honkapohja and Koskela, 1999) by applying an approach developed by British researchers in the 1990s (Layard, Nickell and Jackman, 1990) but extending it to include, for example, the real interest rate and private sector indebtedness as potential factors influencing structural unemployment.⁵

According to the study, the Finnish economy was characterized by overemployment in the late 1980s; that is structural unemployment was higher than the prevailing level of unemployment. In the 1990s structural unemployment rose sharply to as high as about 10% in 1994–1996.⁶ Among the factors contributing to the rise in structural unemployment were:

- the rise in labour taxes as part of measures to alleviate the central government's funding problems, which were caused by high unemployment and public support for the banking sector;⁷
- high real interest rates as a result of speculative attacks against the markka; and

⁵ Structural unemployment is defined in different ways in the literature. Put loosely, structural unemployment, as understood here, is the unemployment rate that is consistent with stable inflation and external balance. It is therefore unemployment that cannot be reduced in the long run by increasing aggregate demand.

⁶ Precise figures should be treated with caution as this was a very unstable period and the aggregate time series used in the study are short. Precise quantitative estimates of structural unemployment are sensitive to the details of the calculations.

⁷ The effect of raising the labour tax rate — the sum of the personal income tax rate and the payroll tax rate — on total labour costs and thereby employment in Finland has been documented earlier in studies at both the total manufacturing level (Holm, Honkapohja and Koskela, 1994) and sectoral level (Holm, Honkapohja and Koskela, 1996, and Honkapohja, Koskela and Uusitalo, 1999).

- firms' high indebtedness in the wake of financial market deregulation.⁸

Since high structural unemployment prevents economic growth from being translated into a better employment performance in the long run, this raises the important question of how structural unemployment can be reduced by policy action.

First, labour taxation in Finland, and also in Sweden, is among the most severe in the world, yet for some reason there has been an unwillingness to address the problem, apart from making some minuscule cosmetic changes.

Second, it is worth considering what is a suitable degree of labour market flexibility from the point of view of structural unemployment. As I pointed out above, rigid labour markets are a safety net for workers but in turbulent economic times they can easily cause suffering for less fortunate workers. In a recent paper, Ljungqvist and Sargent (1998) provide an interesting and convincing analysis of how an improvement in unemployment compensation programmes reduces the ability of economies to adjust to adverse economic shocks. This leads to growing unemployment, which easily develops into structural unemployment. There is also empirical evidence that an improvement in employment protection increases long-term unemployment (Pissarides, 1999). It should be stressed that labour market flexibility has become more important in Europe because the possibility of using national economic policies to tackle country-specific shocks has diminished.

Labour market rigidities have been defended by arguing that they constitute safety nets and improve the position of workers. But they carry costs as well, which can be extremely high during times of economic turbulence, as many European countries — Spain is a good example — have discovered. The result is rising unemployment, problems in central government finances and higher taxation. Distorted incentives brought about by overly generous safety nets may actually work against the interests of disadvantaged workers.

⁸ Why does a rise in real interest rates and corporate indebtedness lead to higher structural unemployment? The reason is that higher real interest rates and corporate indebtedness result in bigger mark-ups. Phelps (1994) was the first to stress the importance of the real interest rate as a factor influencing structural unemployment.

Labour markets and monetary union

Wage bargaining systems in OECD countries differ considerably from each other in terms of their degree of centralization or decentralization. Does this have any macroeconomic importance? It has been argued that centralized wage bargaining and decentralized wage bargaining are better for macroeconomic performance than an intermediate level involving bargaining at industry or sector level. A decentralized system, in which wages are negotiated at local level, keeps wages in check through competition. The advantage of a centralized system, or corporatism, is considered to be that the effect of wages on prices is taken into account in wage negotiations. As a result, there is greater awareness that a rise in nominal wages does not mean higher real wages. This, in turn, tends to moderate nominal wage demands. In bargaining at industry level, by contrast, the effect on the price level is not taken into consideration, as each union is relatively small in relation to the size of the economy. As a consequence, wage increases are larger, which can also lead to competition between unions in terms of the size of their wage demands. This leads to weaker employment performance. The positive effect of corporatism on employment is documented empirically (see, for example, Alesina and Perotti, 1997).

What will happen to labour markets under the changed circumstances of monetary union? Will monetary union lead to rising or falling unemployment? Recently, some economists have analysed the strategic interaction between the ECB and trade unions resulting from monetary union and they conclude that monetary union will make unions more aggressive, thus leading to an increase in structural unemployment. This line of reasoning goes as follows: if there is a corporatist wage bargaining system in a national labour market before monetary union, then transition to monetary union means that the significance of wage determination in that country diminishes, in relation to the euro area as a whole. In that case corporatism is transformed, as it were, into bargaining at immediate, industry-wide level, resulting in high wage demands and an increase in structural unemployment (Cukierman and Lippi, 1999, and Gruner and Hefeker, 1998). The policy recommendation that follows from this kind of analysis is that either wage bargaining should be coordinated be-

tween unions on a cross-country basis so that the benefits of corporatism can be exploited or that labour markets should be decentralized. Coordination is probably impossible in practice. Similarly, decentralization is probably not possible for political reasons. Does this mean that monetary union will lead to growing problems in European labour markets? Some observers, including myself, take a more optimistic view.

The arguments above assume that competitive conditions in labour and product markets remain unchanged under monetary union. This is probably not the case, however. The Nobel laureate Robert Mundell (1961), writing at an earlier point in time, argued that labour market flexibility – by which he meant labour mobility – is an important adjustment channel for countries in a currency area when they experience negative economic shocks. From the point of view of European monetary union, Mundell's view represents a nightmare, as labour mobility is very low.

The onset of monetary union and ongoing economic integration mean an increase in the mobility of other factors of production. Although labour mobility in Europe is low compared with the United States and is likely to remain so, capital mobility has increased and will increase further. With higher capital mobility, demand for labour will become more sensitive to labour costs. Competition will also intensify in product markets, implying an increase in the price elasticities of demand for goods and hence in the wage elasticities of demand for labour. Moreover, real interest rates at present and in the near future are and will be notably lower than in the early 1990s, because the euro is floating and there will be no speculative attacks against the currency and thus no need to ward them off by tightening monetary policy through a hike in interest rates. This will also help to reduce mark-ups and structural unemployment. Nor will the ECB accommodate wage increases in euro area countries by easing monetary policy, as central banks sometimes did under the old regime.

For these reasons – growing competition in product and labour markets and the low level of real interest rates that comes with financial stability – the bargaining strength of trade unions will be reduced. Wage demands will moderate either automatically or as a result of bitter experience. Labour markets will be forced to decentralize under market pressure and structural unemployment will decline.

But, as I pointed out above, it is nevertheless important that this process be accompanied by policy measures that seek to reduce structural unemployment by lowering taxes and by reforming unemployment benefit systems so as to foster greater moderation in wage bargaining and offer more incentive for people to search for work. This would reduce unit costs in production and enhance the ability of the economy to adjust to shocks, thereby mitigating the

risk of long-term unemployment, which is a problem typical to European countries.

3 May 2000

■ **Key words: structural unemployment, unemployment benefit system, taxation, labour markets and monetary union**

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The Baltic economies at the turn of the millennium

by **Seija Lainela**, Economist
Institute for Economies in Transition
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The Baltic States' transition to a market economy continues apace. The record so far is remarkable, considering the difficult position from which these countries started during the socialist era less than ten years ago. Progress has not been smooth, however. The Baltic States were hit by domestic banking crises in the mid-1990s and the economic turmoil in Russia at the end of the decade. But although these crises slowed economic growth in the Baltic States, they also helped to provide impetus for much needed structural reforms by exposing weaknesses in the economy. Estonia and Latvia, in particular, have made notable progress in economic reform and, in many aspects of economic policy, they are at the forefront of transition economies.

Brief recessions in Estonia and Latvia

The Baltic economies grew rapidly in the second half of the 1990s, but growth was brought to a sudden halt by the Russian economic crisis in autumn 1998 (Chart 1). Before the devaluation of the rouble, the Baltic States had depended heavily on exports to Russia, and the subsequent collapse of these exports had a major impact on output in these countries.

The decline in total output, which began around the end of 1998, took many observers by surprise. The recession proved, however, to be short-lived in both Estonia and Latvia. According to preliminary data, Estonian GDP declined by 1.4% in 1999, while Latvian GDP remained broadly flat. In both countries, output turned up in the second half of the year.

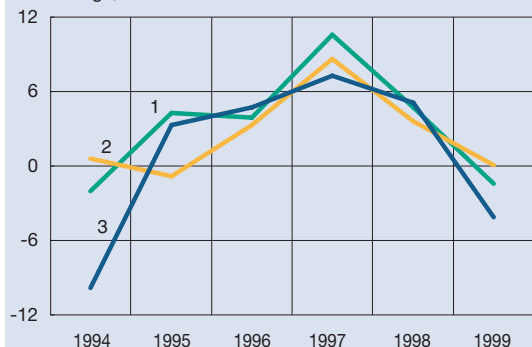
Sales of industrial production in Estonia fell by 4% in 1999. Although production began to recover in the second half of the year, the upturn was not strong enough to offset the sharp decline in the first half of the year. Growth continued in many industrial sectors that rely heavily on exports to western

countries. Among the strong performers were the forest and electronics industries. The pickup in production in Estonia has been robust, as evidenced by the 13% jump in industrial sector sales in the first quarter of this year compared with the same period one year earlier. It should, however, be noted that sales were rather low in the comparison period. In Latvia industrial production fell by about 9% in 1999, although by the end of the year monthly output had returned to the end-1998 level. There was also a decline last year in freight traffic, which is important to the Latvian economy and heavily dependent on transit trade to and from Russia. Cargo handled in Latvian

Chart 1.

Gross domestic product

Change, %

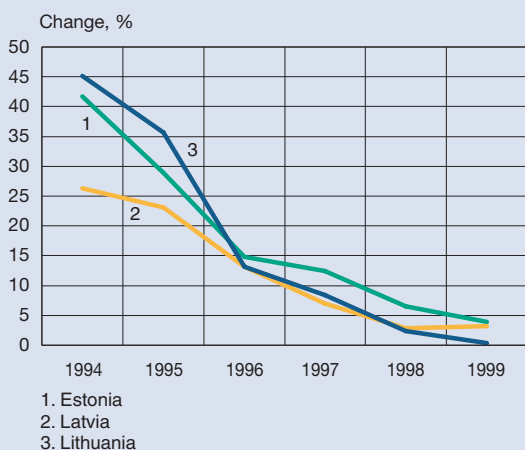


1. Estonia
2. Latvia
3. Lithuania

Sources: National statistical authorities.

Chart 2.

Consumer prices



Sources: National statistical authorities.

ports fell by 6% compared with 1998, partly because some of Russia's transit traffic was re-routed through other Baltic States.

In Lithuania total output continued to decline throughout last year. According to preliminary data, GDP declined by 4.1% and industrial production by 8%. While this was largely the result of lower exports to Russia, other factors also played a part. Mazheikiu Nafta, the only oil refinery in the Baltic States, is located in Lithuania and accounts for about 10% of that country's GDP. Last year the Lithuanian government began privatizing the production facility by selling part of it to a US oil company. The refinery, which depends to a large extent on crude oil supplies from Russia, has suffered occasional cut-offs in supply during and since the privatization process.

GDP is expected to increase in all the Baltic States this year. The Estonian and Latvian authorities are forecasting national growth rates of about 4%; for Lithuania the corresponding figure is about 2%.

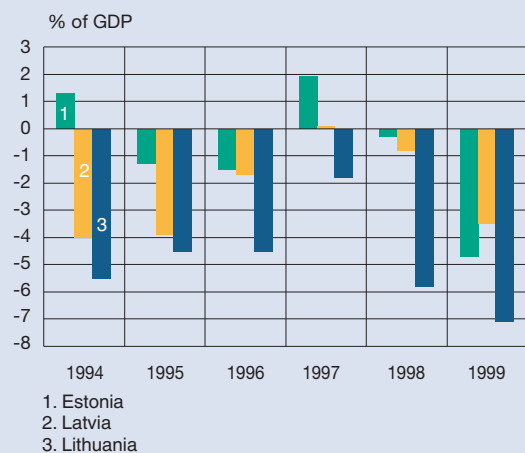
Low inflation and high unemployment

Following a surge in inflation in the wake of price deregulation at the beginning of the 1990s, there was an abrupt slowing of inflation in the Baltic States. During the last two years inflation rates in Latvia and Lithuania have been among the lowest for the transition economies. In 1999 consumer prices rose by 3.9% in Estonia, 3.2% in Latvia and just 0.3% in Lithuania (Chart 2). The virtual stability of prices in Lithuania was affected by the ongoing recession, which had a marked dampening effect on domestic demand. Inflation is expected to accelerate somewhat in all of the Baltic States in 2000, as economic growth recovers.

The economic difficulties faced by the Baltic States in recent years have been reflected in unemployment rates, which have climbed to record high levels. In 1999 the unemployment rate rose to nearly 15% in Latvia and Lithuania and to about 12% in Estonia. These unemployment rates are based on internationally comparable labour force surveys, which are carried out in the Baltic States 2–4 times a year. The monthly unemployment figures published by national employment authorities count as unemployed only those persons who are registered as such. The unemployment rates calculated in this way are therefore considerably lower than the above rates and are

Chart 3.

Public sector financial balance



Sources: EBRD and national authorities.

not comparable across countries. There are major regional disparities in unemployment conditions in all the Baltic States. Unemployment rates in remote regions and declining industrial areas can be as much as four times higher than rates found in the capital regions.

Government finances under pressure

Estonia and Latvia pursued a policy of budgetary restraint in the 1990s (Chart 3). Estonia's budget deficits have been among the lowest in the transition economies. In only three years in the 1990s did the country's public sector deficit exceed 1% of GDP. This is a remarkable achievement for a new state that had to build its government and economic structures virtually from scratch and at the same time develop its social security system and invest in education. In Latvia the public sector deficit peaked at about 4% of GDP in the mid-1990s. The main reason for deficits at that time was a severe crisis in the banking sector, which resulted in the failure of some large banks as well as the loss of deposits held by both individuals and public sector entities. In the following years budgetary policy was tightened and deficits declined significantly.

Lithuania's budgetary policy has been more lax than that of the other Baltic States. Only in 1997, when the economy grew at a record pace, was the public sector deficit less than 4.5% of GDP. One reason for the large deficits has been the slower pace of economic reform in Lithuania. For example, public support has been provided to large companies facing financial problems, among them firms in the energy sector.

The economic recession led to a widening of budget deficits in the Baltic States in 1999. The budgets for 1999 were initially drafted on an optimistic basis, as they underestimated the likely impact of the Russian crisis. But, as output declined, revenue fell below projected levels. Despite the fact that all the Baltic States were forced to cut expenditure in the course of the year, the deficits turned out to be of record magnitude. According to preliminary data, the public sector deficit was 4.7% of GDP in Estonia, 3.5% in Latvia and 7.1% in Lithuania. Spending cuts have not been easy to implement in countries where pensions and salaries in the public sector are small

and the need to develop, for example, social welfare programmes is great.

The Baltic States are seeking to consolidate their budgets substantially this year. The public sector deficit is projected to amount to 1.3% of GDP in Estonia, 1.9% in Latvia and 2.8% in Lithuania. This requires that expenditure be kept at 1999 levels. This is to be achieved by, for example, enhancing the efficiency of government administration, freezing salaries in the public sector and limiting increases in pension benefits. In addition, in Lithuania certain kinds of benefits and business subsidies are to be cut. During the first quarter of 2000 central budget deficits in the Baltic States have remained within the limits set.

Foreign trade deficit – a cause for concern

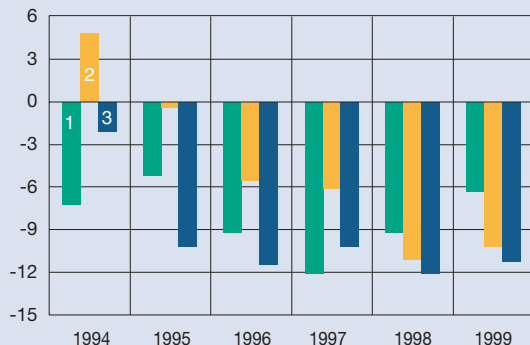
Major changes have occurred in Baltic States' foreign trade as a result of the Russian crisis. The impact of the crisis demonstrated how important Russia still was for the Baltic economies. This was something that many people in the Baltic States had perhaps forgotten during the period of rapid economic growth that preceded the crisis. In 1997, before the collapse of the Russian export market, official statistics indicated that Russia accounted for 19% of Estonia's total exports, 21% of Latvia's and 25% of Lithuania's. In 1999 the corresponding shares were only 9% for Estonia and 7% for both Latvia and Lithuania. Last year's slump in exports to Russia and other CIS countries was so large that it was not offset by increased exports to other (notably EU) countries. Total exports from both Estonia and Latvia decreased by about 5% while Lithuanian exports fell by 20%. The relative share of EU countries in the Baltic States' foreign trade increased throughout the 1990s, albeit in more recent times partly because of the decline in trade with CIS countries. In 1999 EU countries accounted for 63% of Estonian exports, 60% of Latvian exports and 50% of Lithuanian exports. Such large shares are a significant achievement for a group of countries whose trade with the EU area accounted for only a few per cent of their total exports just ten years ago.

What might be considered a positive consequence of the Russian crisis is that it forced the Baltic States

Chart 4.

Current account balance

% of GDP



- 1. Estonia
- 2. Latvia
- 3. Lithuania

Sources: National statistical authorities.

to make greater efforts to find outlets for their exports in western markets and so reduce their dependency on a single market region. A large proportion of the goods sold to Russia are not of the kind or quality that are suitable for western markets, but as long as exporting to Russia went smoothly there was no need to improve existing products or develop new ones. One of the main categories of Baltic exports to Russia was foodstuffs, and finding western markets for these has been difficult, although not impossible.

One of the Baltic States' major problems is external imbalance (Chart 4). Lithuania posted current account deficits of more than 10% of GDP throughout the latter half of the 1990s, while Estonia and Latvia occasionally had deficits exceeding 10%. In 1999, however, Estonia's current account deficit declined sharply to 6% of GDP as recession dampened the demand for imports. In Latvia and Lithuania, the current account deficit fell only slightly. In both Estonia and Latvia, the current account deficit began to grow rapidly again in the last quarter of 1999 as economic growth recovered. Current account deficits can be considered normal for developing econo-

mies like the Baltics with low domestic saving rates and huge investment needs. However, as foreign debt increases, large deficits can jeopardize economic development if, for example, financing becomes harder to obtain.

In several years in the latter half of the 1990s, Estonia and Latvia were able to finance their current account deficits, or at least a large part of them, through direct investment from abroad. As a result, these countries' external debts are not as large as their deficits would suggest. Since Lithuania has not attracted as much direct investment as its Baltic neighbours, it has had to resort to a greater extent to borrowing in the international markets. Lithuania's public external debt, which amounts to about 25% of GDP, is not yet large enough to give cause for concern, but it is growing fairly rapidly. In Estonia and Latvia the public external debt is less than 10% of GDP.

As to a large extent foreign direct investment in the Baltic States has been tied to privatization deals, the progress made in privatizing state-owned companies has had a major impact on the inflow of foreign direct investment. Since privatization is now in its final stages, the related direct investments will decline in the coming years.

All the Baltic States have fixed exchange rate regimes, and their exchange rates have been stable since the early 1990s. The aim is to keep exchange rates fixed until these countries join the EU and eventually EMU. Lithuania has announced its intention to start pegging its currency to the euro instead of the US dollar in 2001.

Preparation for EU membership supports economic reforms

For several years now, the development of economic legislation and economic institutions in the Baltic States has been guided by the goal of EU membership. The guiding principles provided by the prospect of EU membership have made an important contribution to the building of a market economy and have also helped to speed up the reform process in the Baltic States.

In December 1999 the EU decided to admit six more countries to membership negotiations. These 'second wave' countries comprise Bulgaria, Latvia,

Lithuania, Malta, Romania and Slovakia. The first wave countries were invited to start membership negotiations in 1997, when the EU launched its eastward enlargement strategy. Estonia was one of the countries to begin negotiations at that time.

The decision in 1997 to admit only Estonia of the Baltic States was a big disappointment to Latvia and Lithuania. However, Latvia, in particular, quickly turned its disappointment to advantage as economic reforms were stepped up with a view to gaining admission to membership negotiations as soon as possible. The efforts proved fruitful, and during the next two years Latvia made swift progress in reforming its economy.

The road to EU membership is a long one for all countries involved in membership negotiations. In

order to gain membership, applicant countries must adopt the EU's extensive body of legislation, implement corresponding laws of their own and – the biggest challenge of all – ensure that laws are observed in the intended manner. This, in turn, often requires the setting up of new organizations and equipping staff with the specialist skills needed to run these organizations effectively. These tasks are not easy for the Baltic States, which have small populations and are poor by EU standards.

10 May 2000

■ **Key words: Estonia, Latvia, Lithuania, transition, economic development**

Item

Publication of the Bank of Finland

The Bank of Finland Annual Report 1999 has been published with revised layout and contents. The Report contains the Governor's review, sections on monetary policy, economic developments and implementation of monetary policy in the euro area, economic developments in Finland and other central bank ac-

tivities in 1999, as well as the Bank of Finland's financial statements and accompanying notes. The statistical appendix contains various data on the Eurosystem and the Bank of Finland. Vammala 2000. 124 pp. ISSN 1239-9345 (print), ISSN 1456-579X (online).

The Eurosystem's monetary policy instruments 4 May 2000

Key interest rates

The main refinancing operations are the principal monetary policy instrument used by the Eurosystem¹. 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. Pursuant to the decision taken by the Governing Council of the ECB on 27 April 2000, the interest rate applied to the main refinancing operations is 3.75%, effective 4 May 2000.

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 28 April 2000, the interest rate on the Eurosystem's marginal lending facility is 4.75% and the overnight interest rate on the deposit facility 2.75%.

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 mar-

ket 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.

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

¹ 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.

provides a floor for the overnight market interest rate. Under normal circumstances, there are no quantitative limits on access to the standing facilities.

Svenska Handelsbanken AB (publ),
Branch Operation in Finland
Treviso Bank Plc
Unibank A/S, Helsinki Branch
Other cooperative and savings banks

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. The Eurosystem's minimum reserve requirement is applicable to the following credit institutions that engage in banking business in Finland:

Aktia Savings Bank plc
Bank of Åland plc
Citibank International plc, Finland Branch
Crédit Agricole Indosuez, Helsinki Branch
Den Danske Bank, Helsinki Branch
Gyllenberg Private Bank Ltd
Leonia Bank plc
Mandatum Bank Plc
Merita Bank Plc
Okopankki Oyj
OP-Kotipankki Oyj
OKOBANK Osuuspankkien Keskuspankki Oyj
Skopbank
Svenska Enskilda Banken AB (publ), Helsinki Branch

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 national 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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2/2000

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3/2000

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Abstracts

Series E

The Microeconomics of Innovation: Oligopoly Theoretic Analyses with Applications to Banking and Patenting
Kauko Karlo
E:18

The innovation activities of companies has long been a topic of interest in economics. Game theory mod-

els of oligopoly have, since the start of the 1980s, played a central role in the economics of innovation. In this study three game theory duopoly models are presented and each is used to analyse the firm's R&D activities.

The first model is used to examine the variables that affect the incentives of banks providing payment services to develop an interbank payment system. A customer of a large bank may be in an advantageous situation in that most of his payments will be effected in that bank's internal payment system, which is more reliable and otherwise superior to the interbank system. A key result derived from the model is that provision of payment services free of charge to customers often results in a distortion of banks' incentives to develop the system. A smaller bank will overinvest in the system in order to improve its relative competitive position. Because system improvement would only weaken the large bank's superior position, it will not have a strong incentive to improve the system. Since only one of the model's two banks is investing in the quality of the system, the investments will generally not be cost-effective. If fees are charged for payment services, the distortions in incentives are less serious, even though it is often the case that both banks overinvest in the system. When model results are compared with historical situations regarding payment systems, a number of consistencies are found.

The second model deals with the possibilities of a national government to influence domestic companies' investments in product development via patent laws that discriminate against foreign companies. If two countries have discriminatory patent laws in order to promote domestic companies' investments in product development, the results may well turn out to be offsetting. If just one of the two countries discriminates against foreign patent applicants, this may result in either more or less R&D effort by domestic companies, depending on the situation.

The third model is used to study patenting decisions by a company that has made an innovation. A company can monopolize its innovation by either patenting it or keeping it secret. Patenting is the only viable option if a competitor independently comes up with the same innovation. A patent application, by contrast, is a public document, the contents of which are useful to others who would like to develop substitute products. Patenting is thus not advan-

tageous unless the competitor is likely to come up with the same innovation independently. This means that a company will be the more inclined to patent an innovation, the more its rival invests in R&D. A risk-averse company is more inclined to patent than a risk-neutral one. This model is generally supported by empirical findings.

■ **Key words:** innovation, oligopoly, banking, patenting

Discussion Papers

Substitution of Noncash Payment Instruments for Cash in Europe

Jussi Snellman – Jukka Vesala –
David Humphrey
1/2000

The substitution of noncash (check, giro, and credit and debit card) payments for cash transactions is difficult to gauge because there are no data series on the actual value or volume of cash transactions in any country. However, determining the degree of cash substitution is important because it will negatively affect government seigniorage revenue and, if cash use falls fast enough, may require tax revenues to redeem excess currency holdings. We utilize a novel method for approximating the volume of cash transactions using public information on currency stocks and noncash payments. Applying this method, we estimate how cash has been substituted by other payment instruments in 10 European countries. We also provide a forecast of future cash use by country. We find that the trend in cash substitution across countries is quite similar. However, the countries themselves are at significantly different stages of this substitution process. The spread of debit and credit card payments has been the key factor behind the substitution away from cash as use of e-cash innovation is still in its infancy. Country-specific differences in the substitution process are largely explained by differences in the level of implementation of each country's card payment technology.

■ **Key words:** cash substitution, learning curves, seigniorage

A Model for Estimating Recovery Rates and Collateral Haircuts for Bank Loans

Esa Jokivuolle – Samu Peura
2/2000

We present a model of risky debt in which collateral value is correlated with the possibility of default. The model is then used to study: 1) the expected amount of debt recovered in the event of default as a function of collateral; and 2) the amount of collateral needed to mitigate the riskiness of a loan to a desired degree. The results obtained could prove useful for estimating recovery rates required by many popular models of credit risk and for determining collateral haircuts in debt transactions. The analysis also generates testable predictions of the behaviour of historical recovery rates of risky debt when collateral is involved. Regulators might benefit from the analysis in developing capital adequacy requirements and reviewing banks' lending standards relative to current collateral values.

■ **Key words: credit risk, collateral, recovery rates, options theory**

Markets, Reserves and Lenders of Last Resort as Sources of Bank Liquidity

Risto Herrala
3/2000

We study the long standing issue of whether markets can supply banks with sufficient liquidity or whether markets should be complemented with a lender of last resort (LOLR). For this purpose, we develop an extended version of the recent model of Holmström and Tirole (1998) on the supply of liquidity to firms.

H&Ts original model analyses liquidity supply to firms that are facing solvency shocks. We apply their framework to banking and extend the framework to admit the analysis of problems associated with transitory liquidity outflows, even in the absence of any change in a bank's value. Our premise is that the scope for moral hazard may increase in connection with liquidity outflows. Moral hazard, which we interpret as the possibility of laxity in banks' monitoring of firms, may increase with liquidity outflows because banks need to increase their monitoring efforts in order to safeguard their own interests.

The model illustrates many key aspects of the classical LOLR debate. The model shows how moral hazard limits banks' ability to borrow from markets to cover liquidity outflows. It also predicts banks' demand for liquid reserves and the economies associated with centralization of reserves in a liquidity pool when the holding of liquid reserves entails opportunity costs. Finally, the model enables discussion of viable lending policies for the LOLR and contrasts these with the 'Bagehotian principles', which are still widely used as benchmark criteria in evaluating LOLR operations.

■ **Key words: liquidity, lender of last resort, banking, central banking**

BOFIT Discussion Papers

Employment-wage decisions in the insider-owned firm

Victor Polterovich
1/2000

The aim of the paper is to explain the low sensitivity of employment decisions observed in transition economies where insider ownership prevails and capital markets are not highly developed. We introduce a stability concept for employment levels of a labour-managed firm and prove that there exists a segment of stable employment levels. If a level belongs to the interior of the segment then the firm keeps the same labour input under any not too large changes. By contrast the wage rate is responsive. Only the firms on the boundaries of the segment may reconsider employment decisions. Deterioration of market conditions entails decreasing labour inputs for the firms with much excess labour and, the same time, increases employment for the firms with low levels of labour inputs. This creates inter-firm flows of labour and restrains the rise of total unemployment. Stability segments also exist for firms where employment-wage decisions are made by bargaining between workers and managers, and may exist for manager-dominated firms as well. Several concepts of labour hoarding are discussed.

■ **Key words: labour-owned enterprises, transition, Russia**

Bank Regulation, Compliance and Enforcement

Rupinder Singh
2/2000

A model is presented where the question of bank regulation is developed under a principal-agent scenario in a regime where the regulator has limited resources and banks may have an incentive to act ultra vires the regulatory standards. If banks are subject to random audit, then compliance is achieved through a system of fines determined according to the extent of non-compliance. The model shows that the choice of internal monitoring of risk is driven by each bank's choice of the wage contract for its compliance officer, who works for the bank for a wage. The officer's incentive for effective monitoring is heightened by the threat of an internal fine from the bank for any contravention of regulations. Moreover, either a fine on the bank or a fine on the compliance officer alone is sufficient to ensure that efficiency is achieved. The model is useful for the bank regulator in a market economy and in transition economies, where the effective constraint on regulatory capacity is addressed using market-based incentives to ensure prudent regulation and effective supervision, and thereby limit the danger of bank failure and contagion.

■ **Key words: banking, regulation, supervision, enforcement, transition economies**

An assessment of the Estonian investment climate: Results of a survey of foreign investors and policy implications

Terri Ziacik
3/2000

Credible economic reform has played a key role in Estonia's success in attracting significant amounts of foreign direct investment. This paper analyses two years of data from a survey of foreign investors in Estonia to determine the major motivations to invest and the greatest problems faced by investors. Results indicate that the labour force and market-related factors are the primary motivations for investors coming to Estonia, while bureaucracy, corruption, and labour quality are the greatest problems. Ordered probit analysis of the factor rankings supports previous findings that investor characteristics such as export orientation, mode of entry, or industry can explain factor evaluation for some, but not all, factors. This method can be used by policy makers to identify whether certain types of investors are likely to be affected differently by the host country investment climate.

■ **Key words: foreign direct investment, transition, Estonia, ordered probit**

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 5,159,646 (31 December 1998) and an average population density of 17 per square kilometre. The largest towns are Helsinki (Helsingfors), the capital, with 551,123 inhabitants, Espoo (Esbo) 209,667, Tampere (Tammerfors) 193,174, Vantaa (Vanda) 176,386 and Turku (Åbo) 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 592 (EUR 100) billion in basic values in 1998, 1.3% was generated in agriculture, hunting and fishing, 2.5% in forestry, 28.2% in industry, 5.0% in construction, 12.2% in trade, restaurants and hotels, 9.2% in transport and communications, 4.1% in finance and insurance, 16.7% in other private services and 20.8% by producers of government services. Of total employment of 2.3 million persons in 1999, 6.3% were engaged in primary production, 27.7% in industry and construction and 66.0% in services.

In 1998 expenditure on the gross domestic product in purchasers' values amounted to FIM 687 (EUR 116) billion and was distributed as follows: net exports 8.9% (exports 39.0%, imports -30.1%), gross fixed capital formation 18.6%, private consumption 50.3% and government consumption 21.7%. Finland's tax ratio (gross taxes including compulsory employment pension con-

tributions relative to GDP) was 46.2%, which is somewhat below the average for the Nordic countries.

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 1.4% in 1990–98. Finland's GDP per capita in 1998 was USD 24,938.

Foreign trade. EU countries absorb the bulk of Finnish merchandise exports. In 1995–1999 their average share was 55.9%. Over the same period, Finnish exports to other European countries (including Russia) accounted for 18.2% and to the rest of the world for 25.9%. During the same period the regional distribution of Finnish merchandise imports was quite similar to that of exports: EU countries accounted for 56.0%, other European countries for 16.8% and the rest of the world for 27.2%.

In 1999 the share of forest industry products in total merchandise exports was 29.4%, the share of metal and electrical products 53.2% and the share of other goods 17.4%. Raw materials and intermediate goods and energy together accounted for 49.8% of merchandise imports, capital goods for 25.8% and durable and non-durable consumer goods for 24.3%.

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 three) 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 (30 April 2000). Finland has three major groups of deposit banks with a total of about 1,540 branches. There are three big commercial banks with national branch network and six smaller ones. 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 824.3 (EUR 138.7) billion at end-September 1999 and was broken down by lender group as follows: deposit banks 51%; insurance companies 7%; pension insurance institutions 23%; other credit institutions 11%; central and local authorities and social security funds 8%.

In the money market, the total value of instruments outstanding was about FIM 151.7 (EUR 25.5) billion at end-March 2000; bank certificates of deposit accounted for 80% of the total and Treasury bills, commercial paper and local authority paper for the rest.

At end-December 1999 there were 104 companies on the Main List, 39 on the Investors' List and 8 on the NM List of the HEX, Helsinki Exchanges. At end-March 2000 total market capitalization was FIM 2,457.4 (EUR 413.3) billion for the Main List, FIM 11.3 (EUR 1.9) billion for the Investors' List and FIM 9.4 (EUR 1.6) billion for the NM List. Domestic bonds and debentures in circulation at end-March 2000 amounted to FIM 337.9 (EUR 56.8) billion; government bonds accounted for 82% of the total. Share turnover on the HEX, Helsinki Exchanges amounted to FIM 623.1 (EUR 104.8) billion in 1999. In January-March 2000 share turnover amounted to FIM 396.4 (EUR 66.7) billion.



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 electrification 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

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Balance sheet of the Bank of Finland, million EUR

	2000			
	25.2.	31.3.	28.4.	26.5.
Assets				
1 Gold and gold receivables	457	456	456	456
2 Claims on non-euro area residents denominated in foreign currency	8 227	8 314	8 567	8 270
2.1 Receivables from the IMF	900	923	815	758
2.2 Balances with banks and security investments, external loans and other external assets	7 328	7 391	7 752	7 512
3 Claims on euro area residents denominated in foreign currency	743	756	724	746
4 Claims on non-euro area residents denominated in euro	4 064	8 233	1 680	813
4.1 Balances with banks, security investments and loans	4 064	8 233	1 680	813
4.2 Claims arising from the credit facility under the ERM II	-	-	-	-
5 Lending to financial sector counterparties in the euro area denominated in euro	348	263	1 166	887
5.1 Main refinancing operations	200	194	1 163	884
5.2 Longer-term refinancing operations	146	66	-	-
5.3 Fine-tuning reverse operations	-	-	-	-
5.4 Structural reverse operations	-	-	-	-
5.5 Marginal lending facility	-	-	-	-
5.6 Credits related to margin calls	-	-	-	-
5.7 Other claims	2	2	3	3
6 Securities of euro area residents denominated in euro	-	-	-	-
7 General government debt denominated in euro	-	-	-	-
8 Intra-Eurosystem claims	977	768	768	768
8.1 Share in ECB capital	70	70	70	70
8.2 Claims equivalent to the transfer of foreign currency reserves	699	699	699	699
8.3 Claims related to the issuance of ECB debt certificates	-	-	-	-
8.4 Other claims within the Eurosystem (net)	209	-	-	-
9 Other assets	609	663	640	614
Total assets	15 425	19 453	14 001	12 555

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

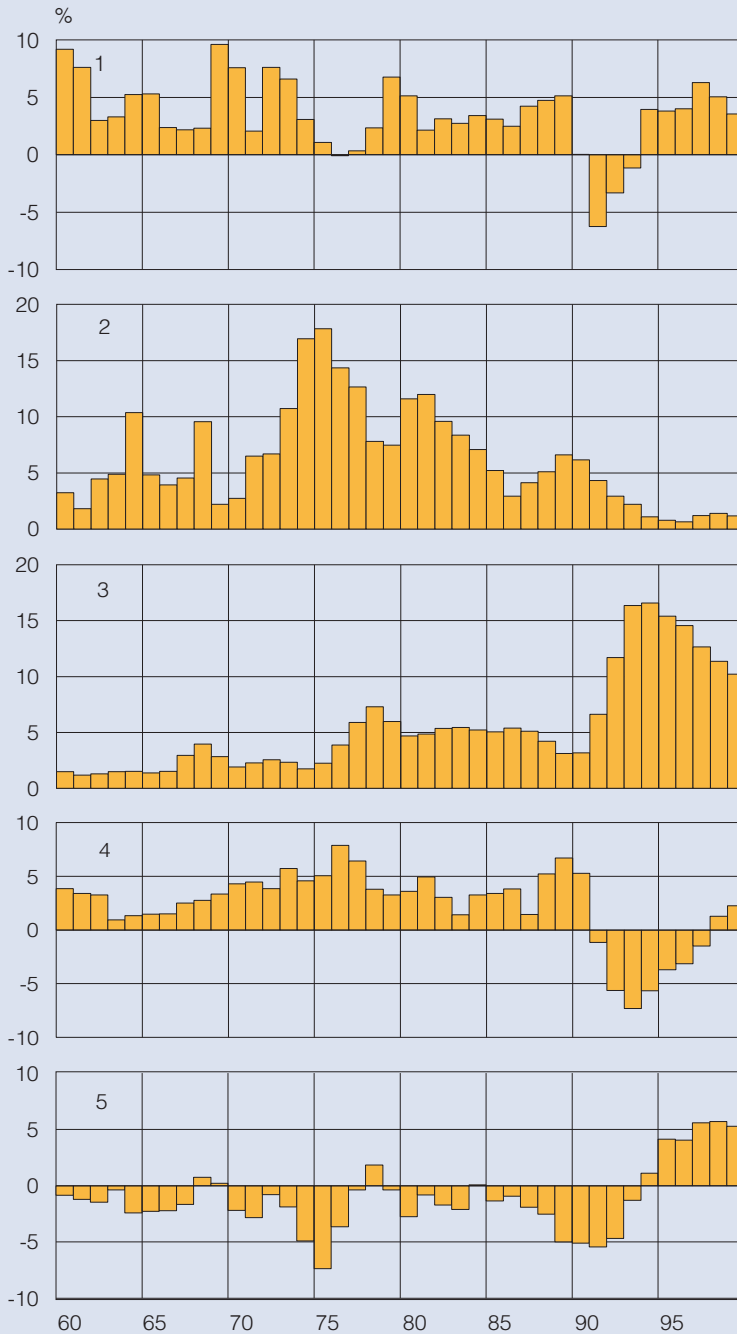
2000

	25.2.	31.3.	28.4.	26.5.
Liabilities				
1 Banknotes in circulation	2 604	2 630	2 722	2 686
2 Liabilities to euro area financial sector counterparties denominated in euro	1 167	1 542	873	1 604
2.1 Current accounts (covering the minimum reserve system)	1 167	1 542	873	1 604
2.2 Deposit facility	0	0	-	-
2.3 Fixed-term deposits	-	-	-	-
2.4 Fine-tuning reverse operations	-	-	-	-
2.5 Deposits related to margin calls	-	-	-	-
3 Liabilities to other euro area residents denominated in euro	1	1	1	1
3.1 General government	-	-	-	-
3.2 Other liabilities	1	1	1	1
4 Liabilities to non-euro area residents denominated in euro	6 288	632	4 128	1 597
5 Liabilities to euro area residents denominated in foreign currency	-	-	-	-
6 Liabilities to non-euro area residents denominated in foreign currency	412	223	375	105
6.1 Deposits, balances and other liabilities	412	223	375	105
6.2 Liabilities arising from the credit facility under the ERM II	-	-	-	-
7 Counterpart of special drawing rights allocated by the IMF	195	202	202	202
8 Intra-Eurosystem liabilities	-	9 136	570	1 161
8.1 Liabilities related to promissory notes backing the issuance of ECB debt certificates	-	-	-	-
8.2 Other liabilities within the Eurosystem (net)	-	9 136	570	1 161
9 Other liabilities	50	137	181	249
10 Revaluation account	1 232	1 475	1 475	1 475
11 Capital and reserves	3 475	3 475	3 475	3 475
Total liabilities	15 425	19 453	14 001	12 555

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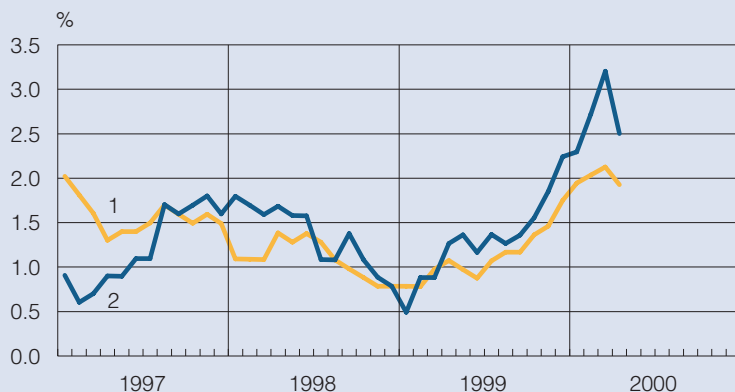
1. Finland: key economic indicators



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.

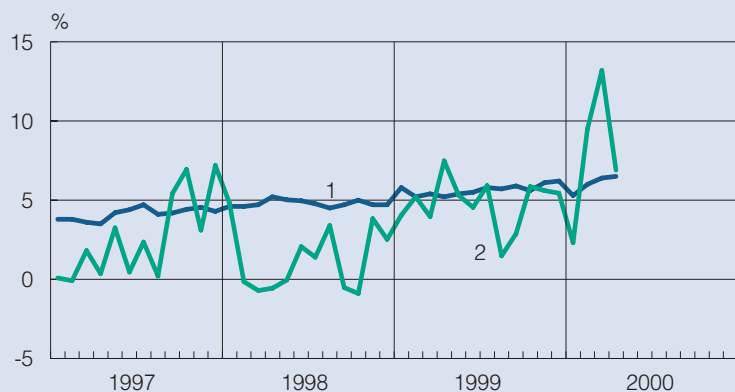
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1. M3, 12-month percentage change
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Source:
European Central Bank.

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

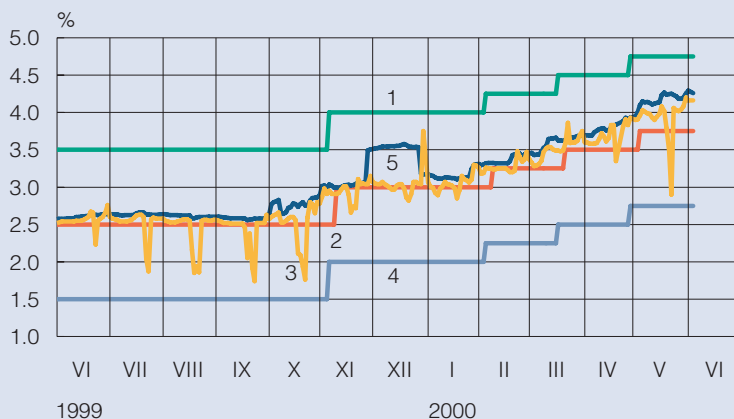


12-month percentage change

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

Sources:
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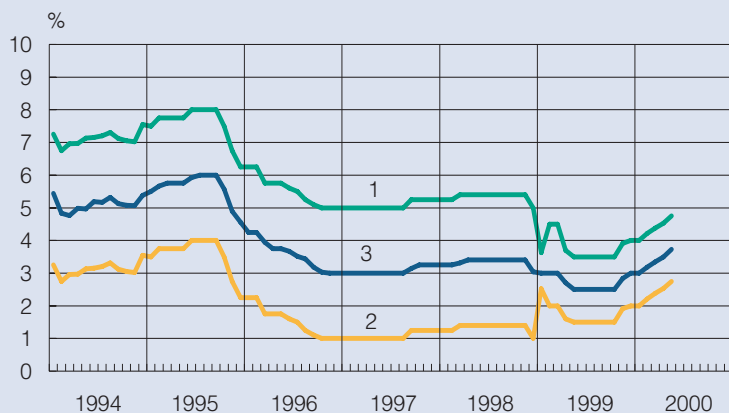
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Sources:
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Reuters.

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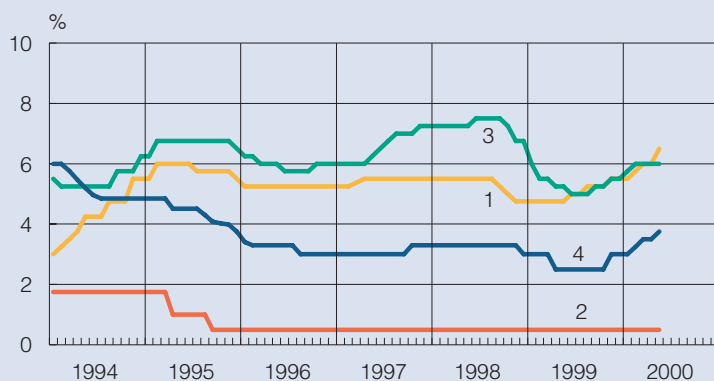


Bank of Finland interest rates
until end-1998

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

Source:
European Central Bank.

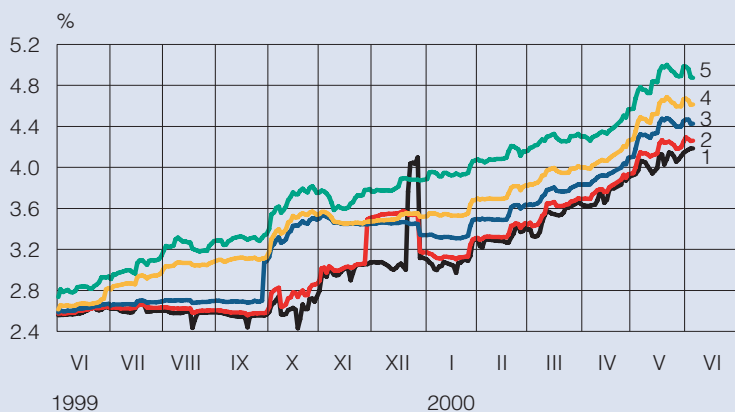
7. Official interest rates



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.

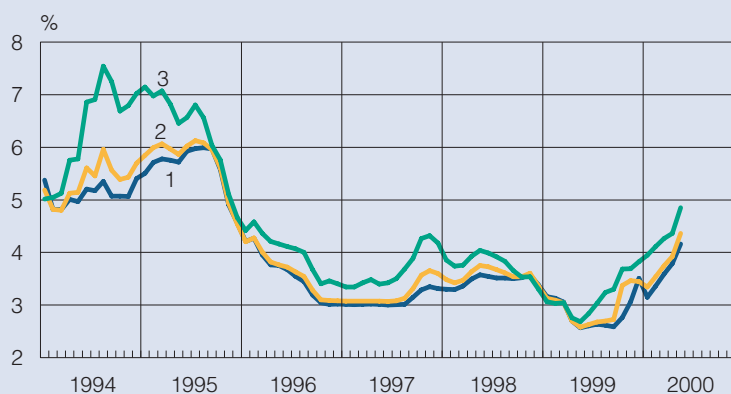
8. Euribor rates, daily values



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

Source: Reuters.

9. Euribor rates, monthly values

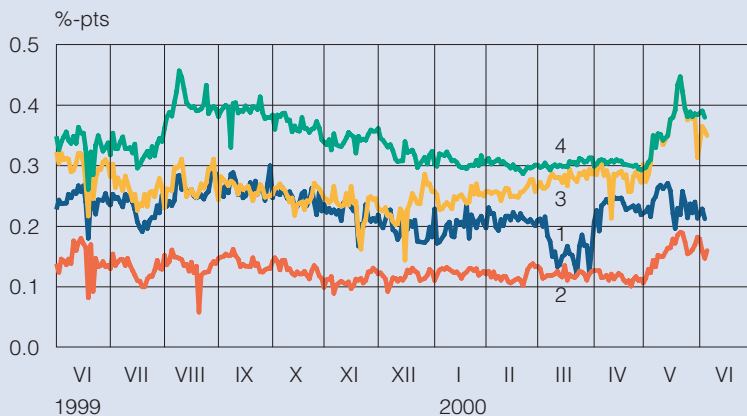


Helibor rates until end-1998

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

Source: Reuters.

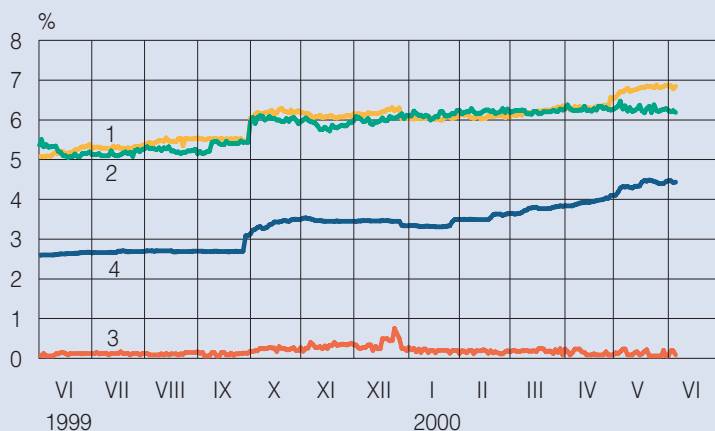
10. Differentials between ten-year yields for Germany and selected euro area countries



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

Source: Reuters.

11. International three-month interest rates, daily values

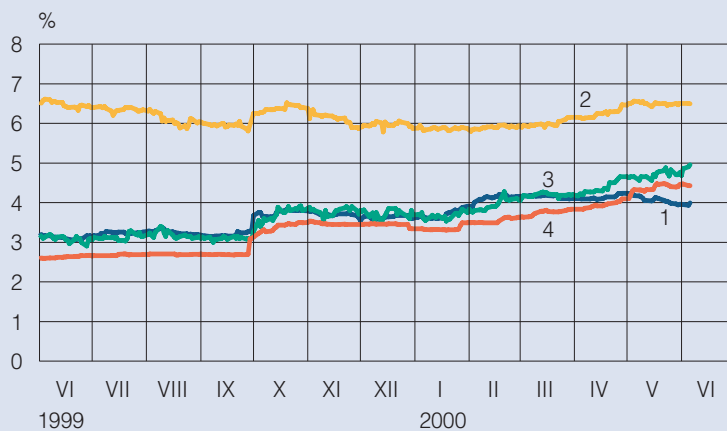


Interbank rates

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

Source: Reuters.

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

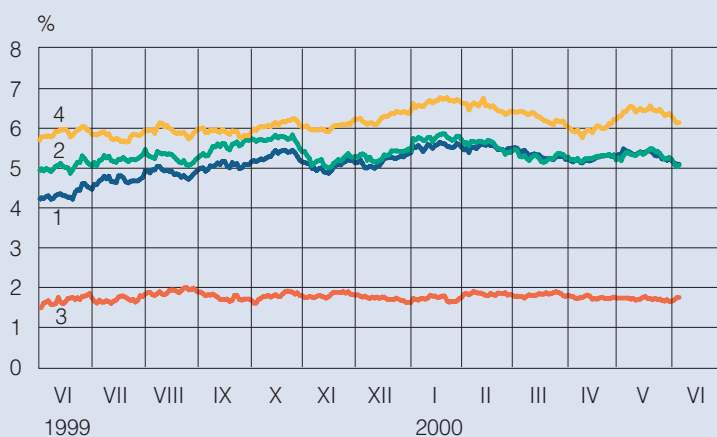


Interbank rates

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

Source: Reuters.

13. International long-term interest rates, daily values

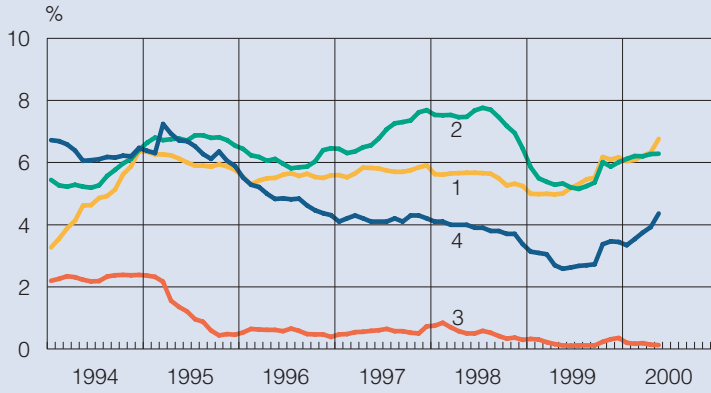


Yields on ten-year government bonds

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

Source: Reuters.

14. International three-month interest rates, monthly values

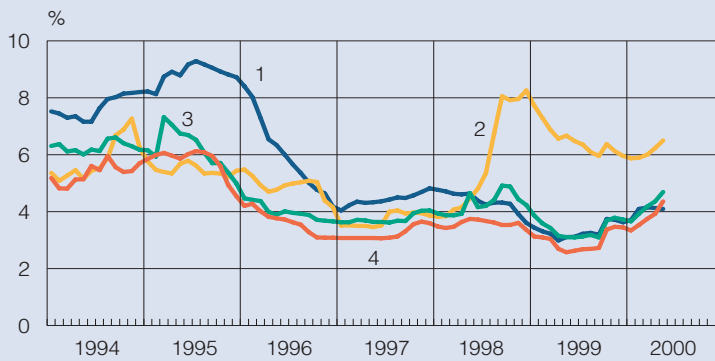


Interbank rates

1. United States
2. United Kingdom
3. Japan
4. Euro area (Germany until end-1998)

Source: Reuters.

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

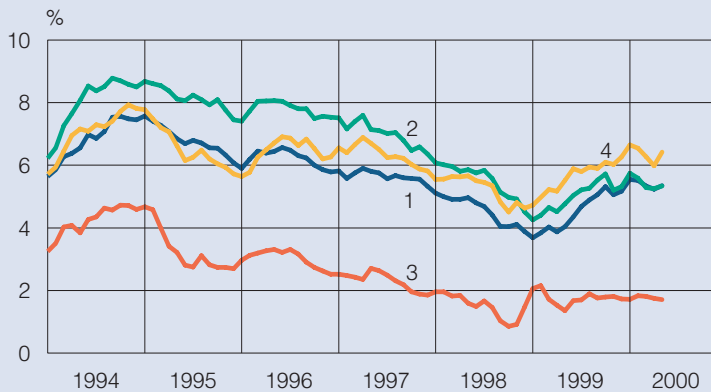


Interbank rates

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

Source: Reuters.

16. International long-term interest rates, monthly values

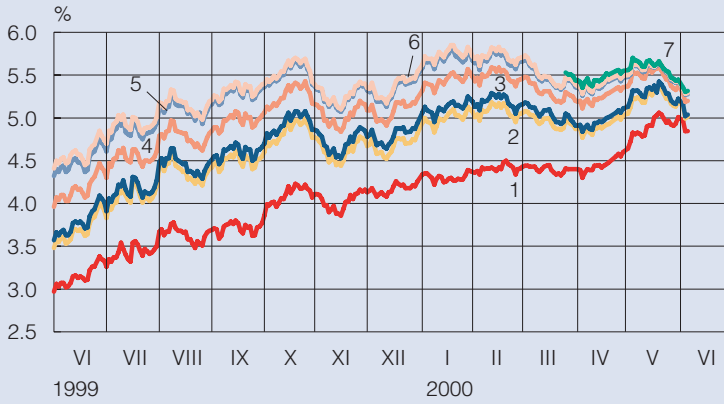


Yields on ten-year government bonds

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

Source: Reuters.

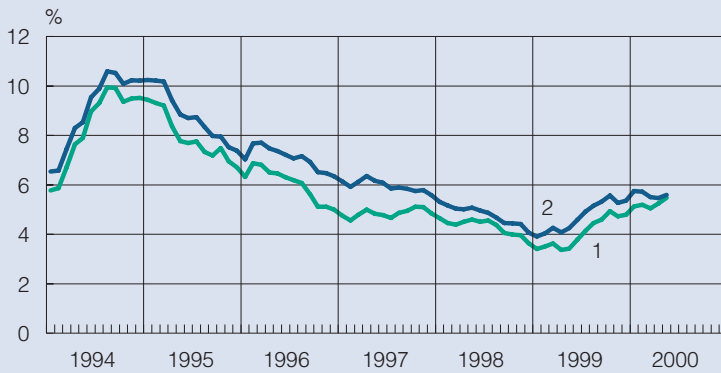
17. Yields on Finnish benchmark government bonds



- 1. Bond maturing on 15 September 2001, 10 %
- 2. Bond maturing on 12 November 2003, 3.75 %
- 3. Bond maturing on 15 March 2004, 9.5 %
- 4. Bond maturing on 18 April 2006, 7.25 %
- 5. Bond maturing on 25 April 2008, 6 %
- 6. Bond maturing on 25 April 2009, 5 %
- 7. Bond maturing on 2 February 2011, 5.75 %

Source: Reuters.

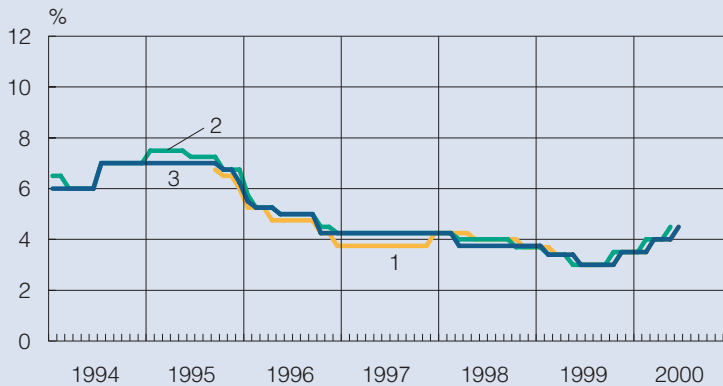
18. Yields on five and ten-year Finnish government bonds



- 1. 5 years
- 2. 10 years

Source: Reuters.

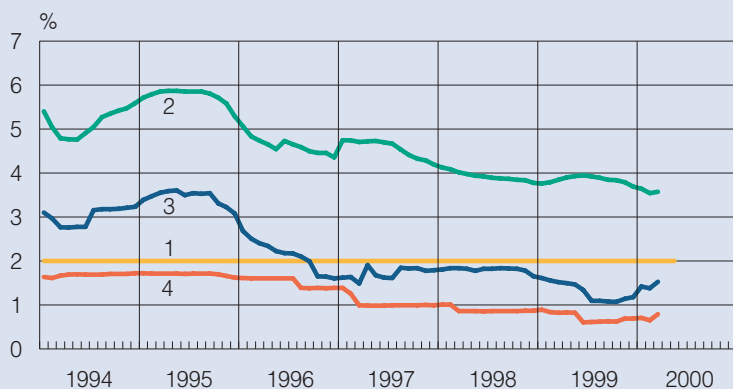
19. Bank reference rates in Finland



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

Source: Banks.

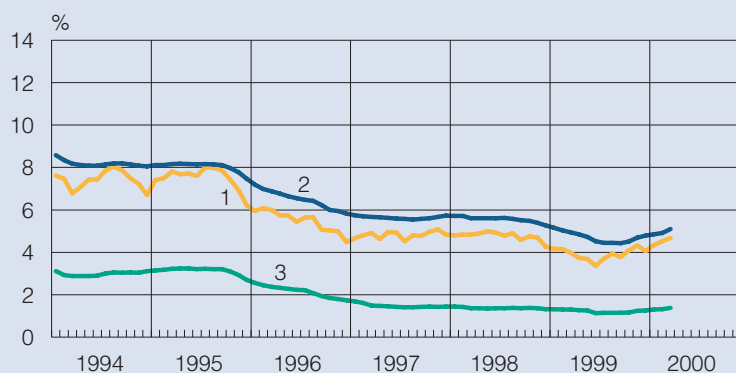
20. Bank deposit rates in Finland



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.

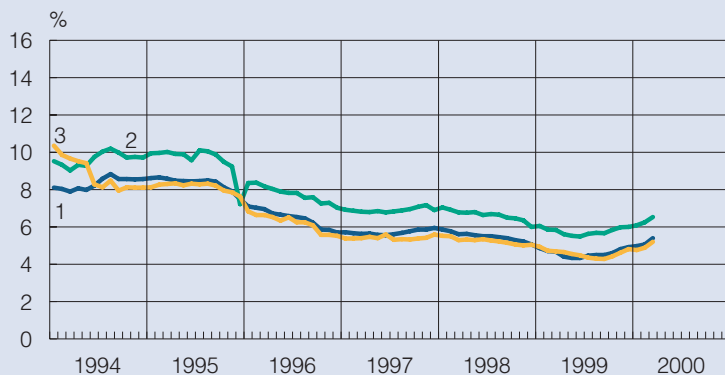
21. Bank lending and deposit rates in Finland



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

Source: Bank of Finland.

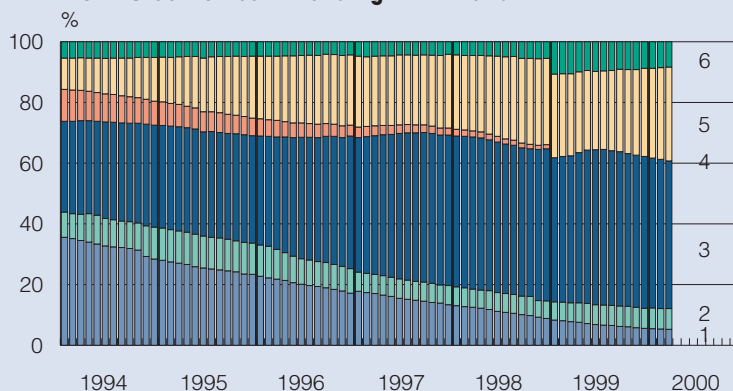
22. Interest rates charged by Finnish banks on new lending to households



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

Source: Bank of Finland.

23. Stock of bank lending in Finland

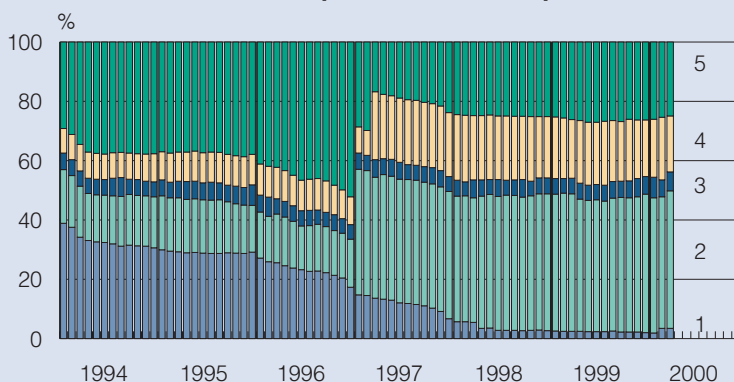


Interest rate linkages,
percentages

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

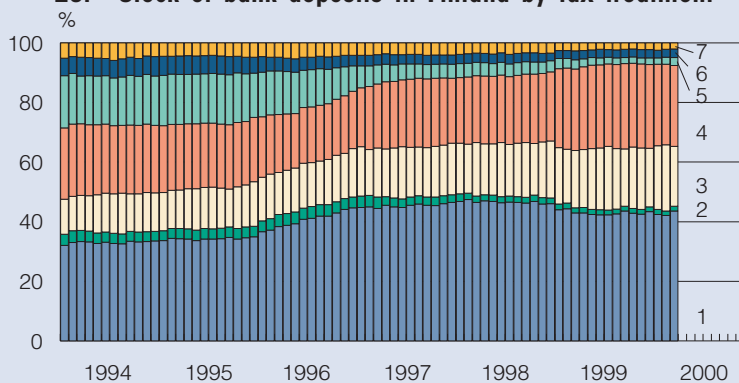


Interest rate linkages,
percentages

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.

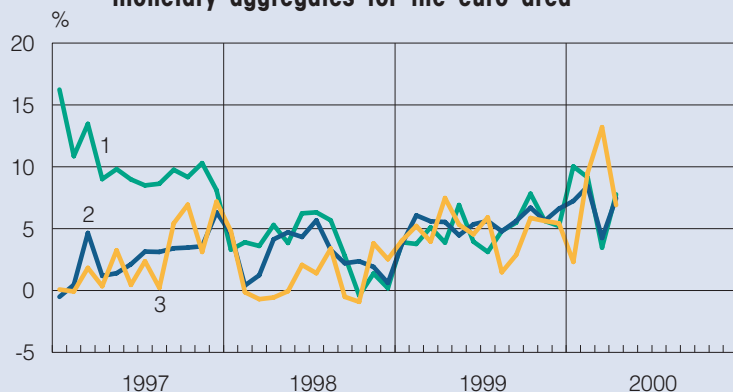
25. Stock of bank deposits in Finland by tax treatment



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

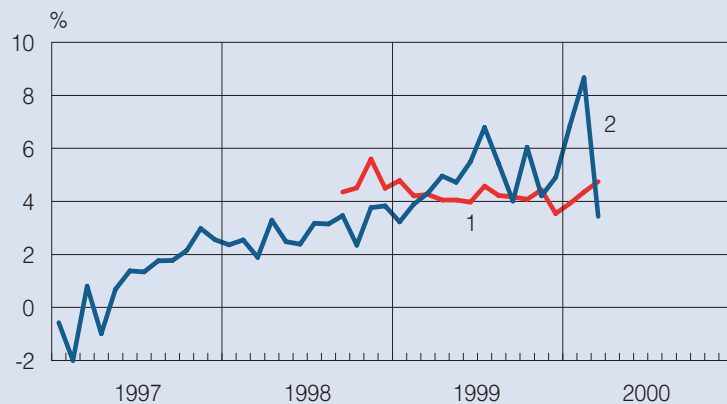


12-month percentage change

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

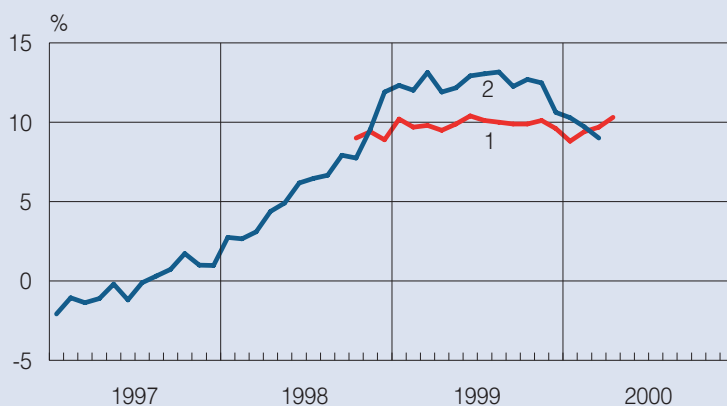


12-month percentage change

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

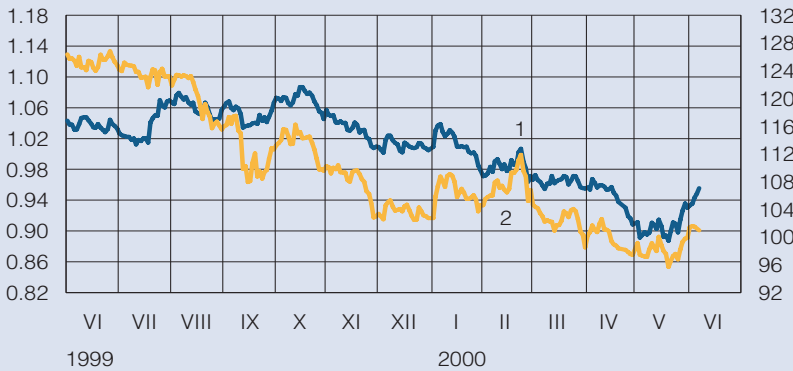


12-month percentage change

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

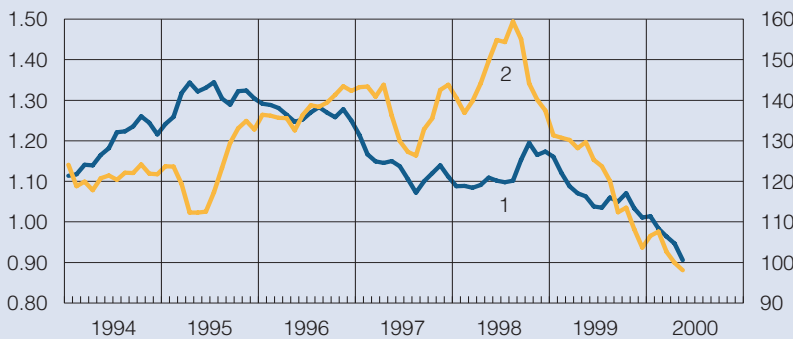


Rising curve indicates appreciation of euro

1. Value of one euro in US dollars (left-hand scale)
2. Value of one euro in Japanese yen (right-hand scale)

Sources: European Central Bank and Reuters.

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

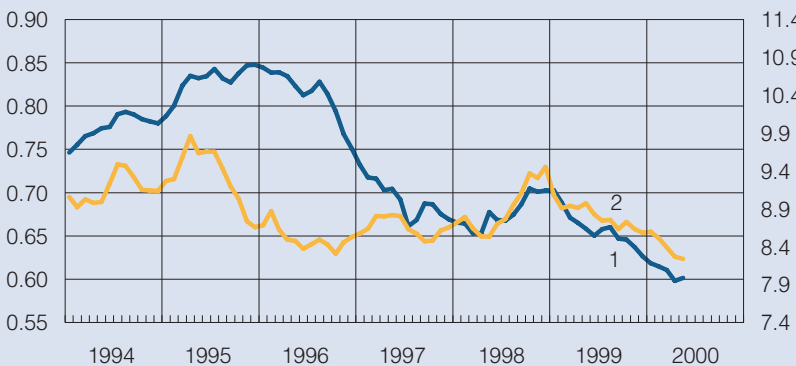


(ecu exchange rate until end-1998)
Rising curve indicates appreciation of euro

1. Value of one euro in US dollars (left-hand scale)
2. Value of one euro in Japanese yen (right-hand scale)

Sources: European Central Bank and Reuters.

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

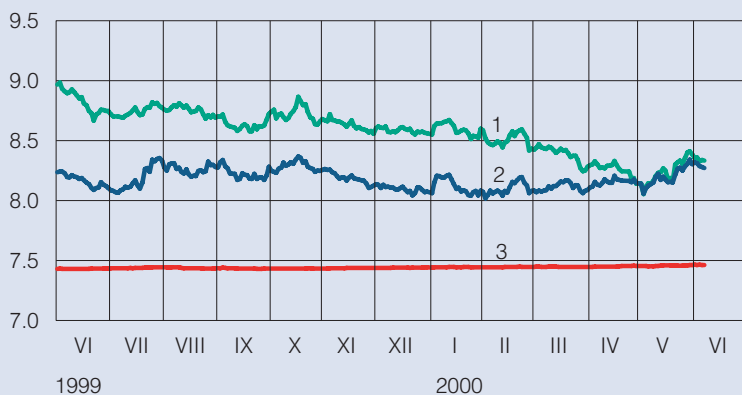


(ecu exchange rate until end-1998)
Rising curve indicates appreciation of euro

1. Value of one euro in pound sterling (left-hand scale)
2. Value of one euro in Swedish kronor (right-hand scale)

Sources: European Central Bank and Reuters.

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

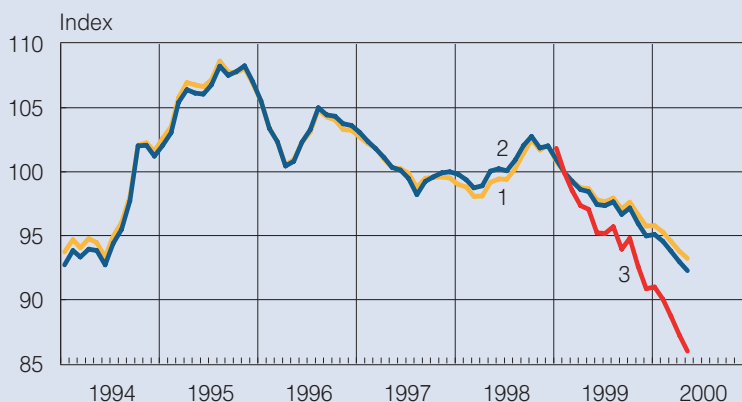


1999 Q1 = 100
An upward movement of the index represents an appreciation of the euro / a weakening in Finnish competitiveness

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

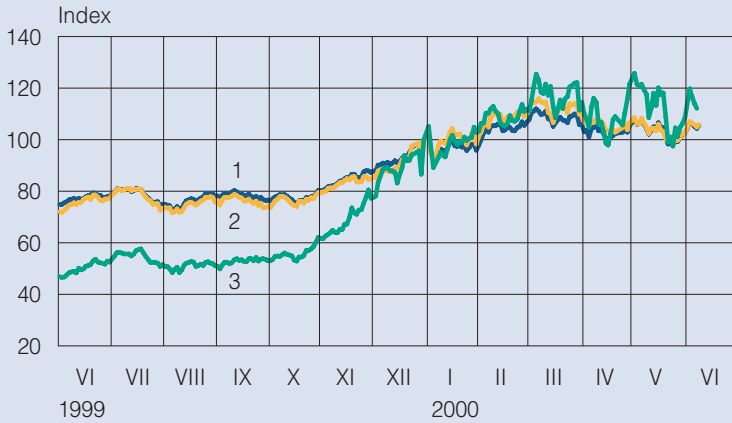


1999 Q1 = 100
An upward movement of the index represents a weakening in Finnish competitiveness

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

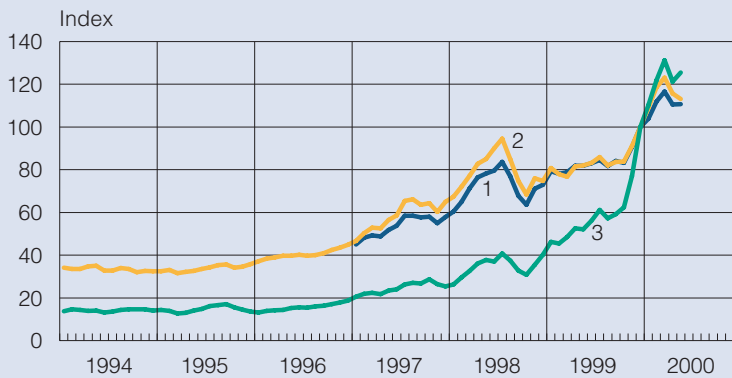


30 December 1999 = 100

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

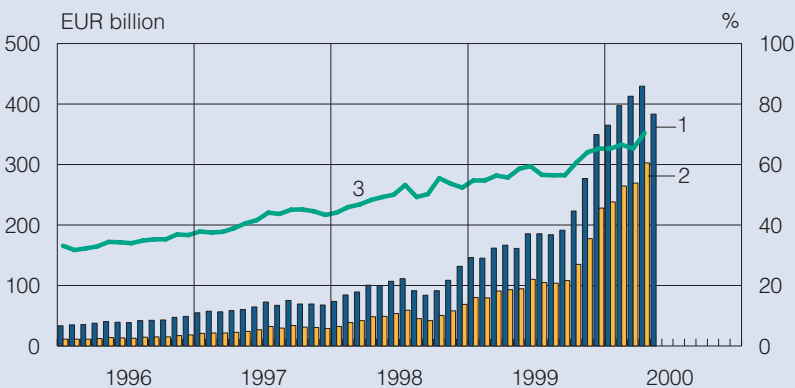


30 December 1999 = 100

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

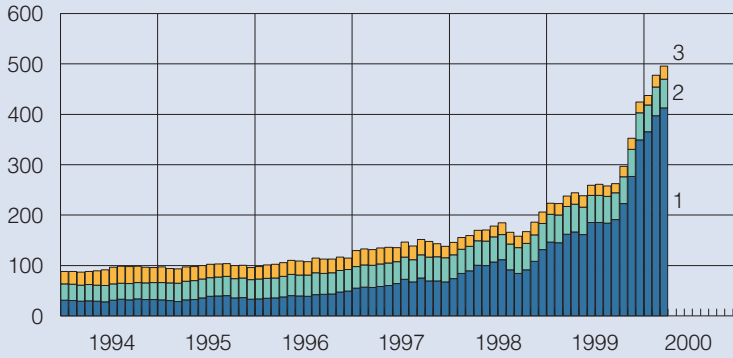


1. Market capitalization of all listed shares (left-hand scale)
2. Market capitalization of non-residents' holdings (left-hand scale)
3. Market capitalization of non-residents' holdings as a percentage of total market capitalization (right-hand scale)

Sources: HEX Helsinki Exchanges and Finnish Central Securities Depository.

38. Securities issued in Finland

EUR billion



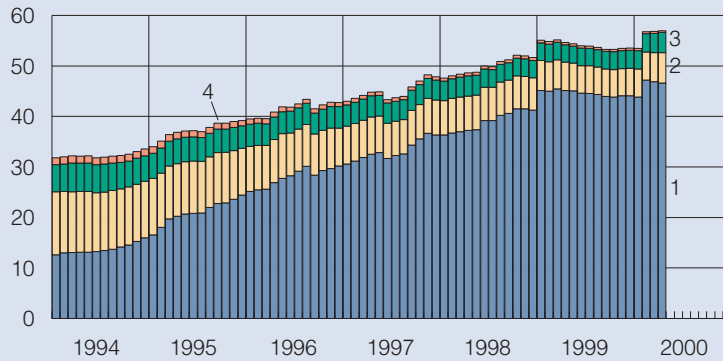
End-month stock

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

EUR billion



End-month stock

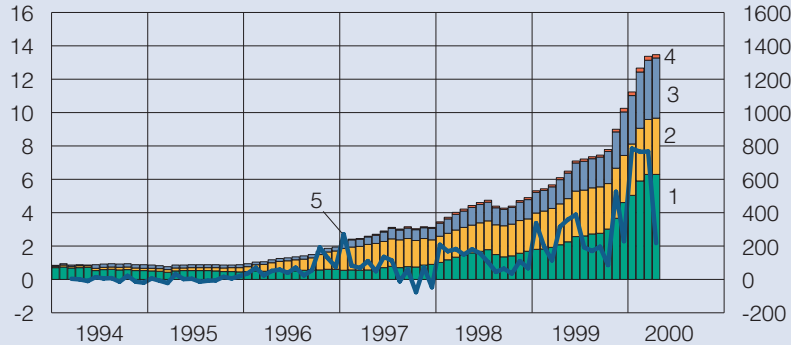
1. Central government
2. Financial institutions
3. Companies
4. Other

Source: Statistics Finland.

40. Mutual funds registered in Finland

EUR billion

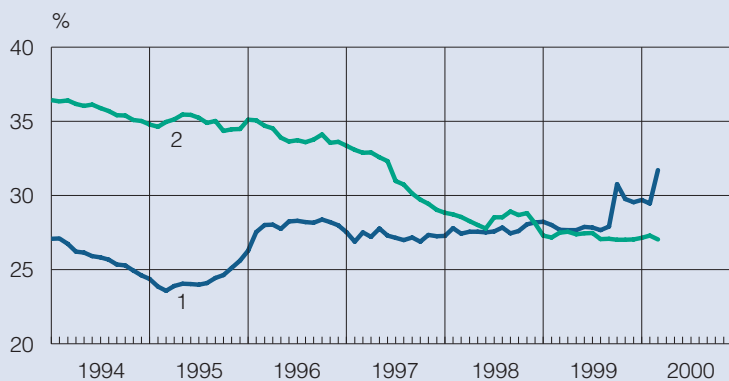
EUR million



1. Equity funds (left-hand scale)
2. Fixed income funds (left-hand scale)
3. Balanced funds (left-hand scale)
4. Risk funds (left-hand scale)
5. All funds: net subscriptions (right-hand scale)

Source: HEX Helsinki Exchanges.

41. Central government revenue and expenditure in Finland

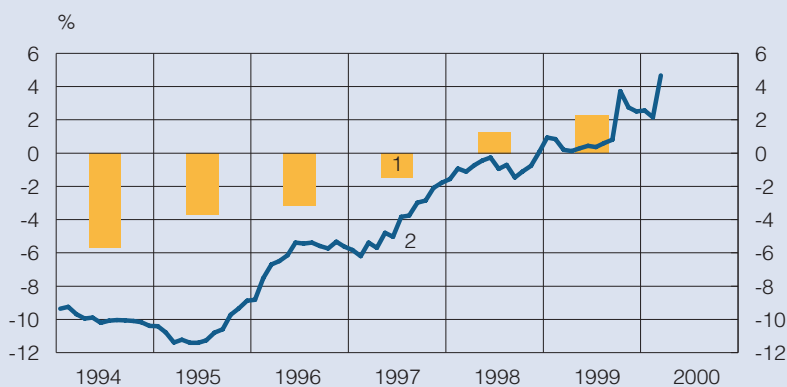


Excluding financial transactions
12-month moving totals, % of GDP

1. Revenue
2. Expenditure

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

42. Public sector balances in Finland

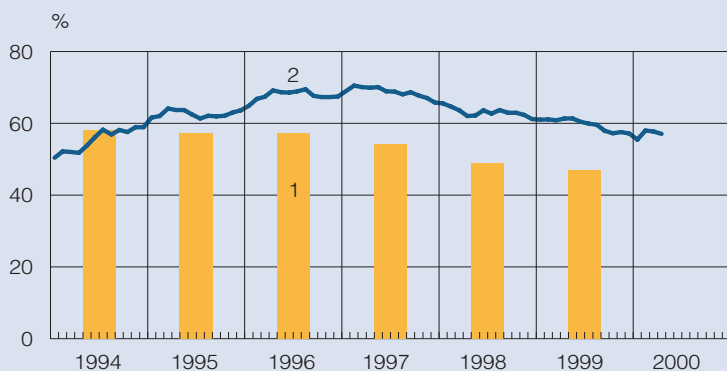


% of GDP

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

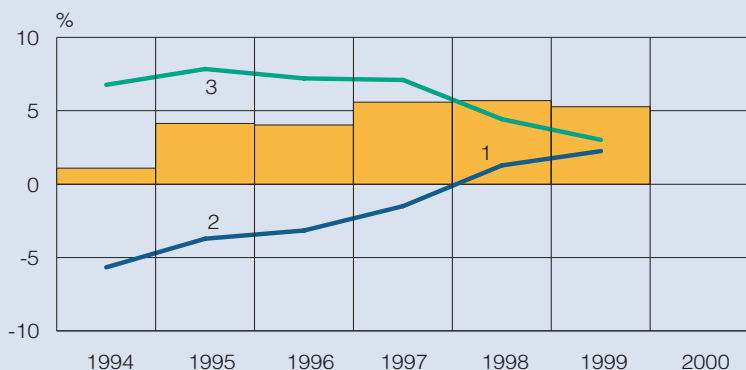


% of GDP

1. General government debt
2. Central government debt

Sources: Statistics Finland and
State Treasury.

44. Net lending in Finland by sector

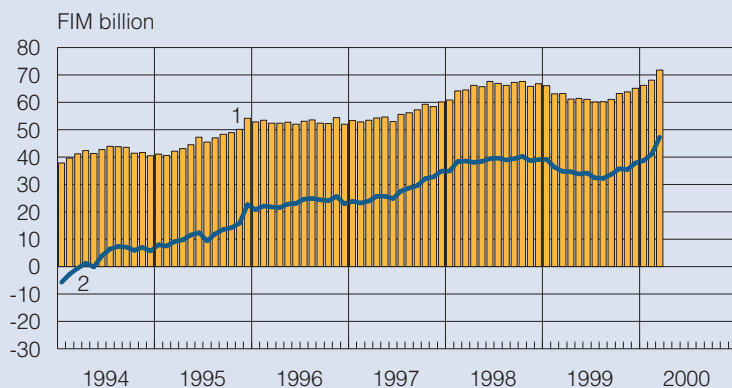


Main sectoral financial balances, % of GDP

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

Sources: Bank of Finland and Statistics Finland.

45. Finland: goods account and current account

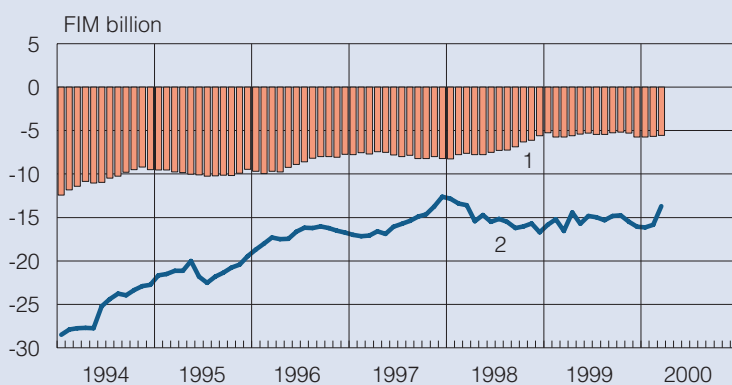


12-month moving totals

1. Goods account, fob
2. Current account

Source: Bank of Finland.

46. Finland: services account and income account

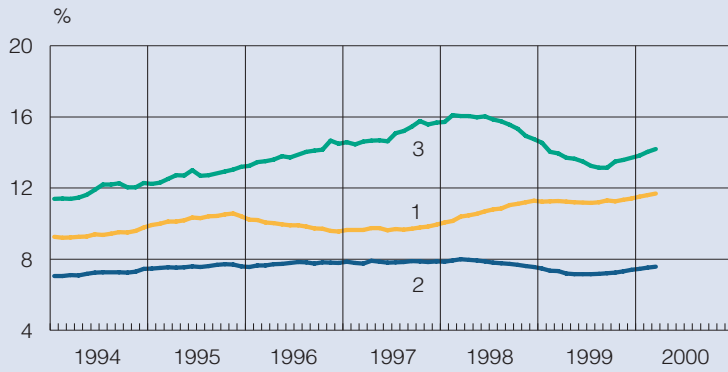


12-month moving totals

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

Source: Bank of Finland.

47. Regional distribution of Finnish exports

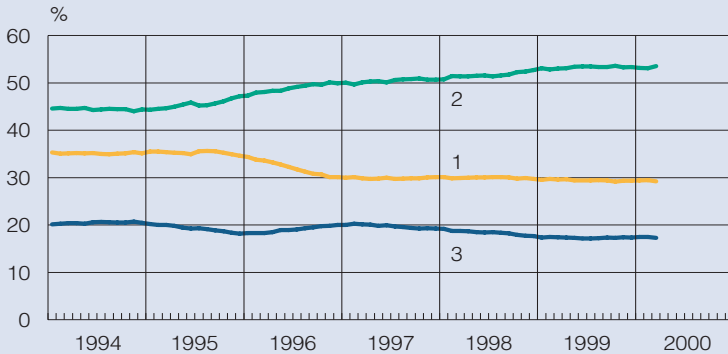


12-month moving totals,
% of GDP

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

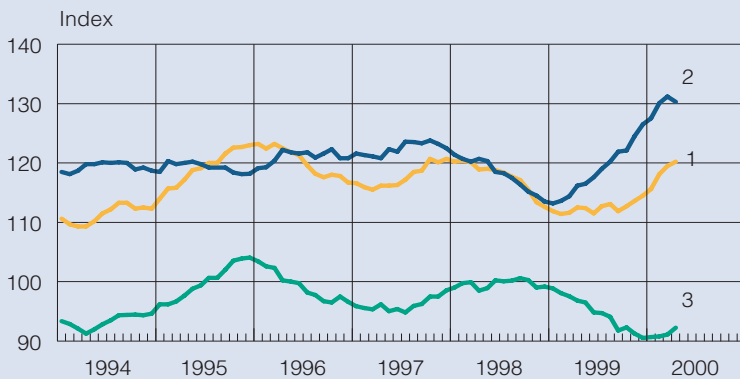


12-month moving totals,
percentage of total exports

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



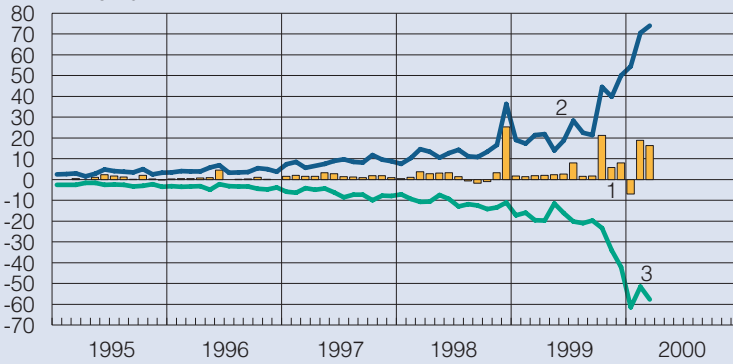
1990 = 100

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

Source: Statistics Finland.

50. Non-residents' portfolio investment in Finnish shares

FIM billion

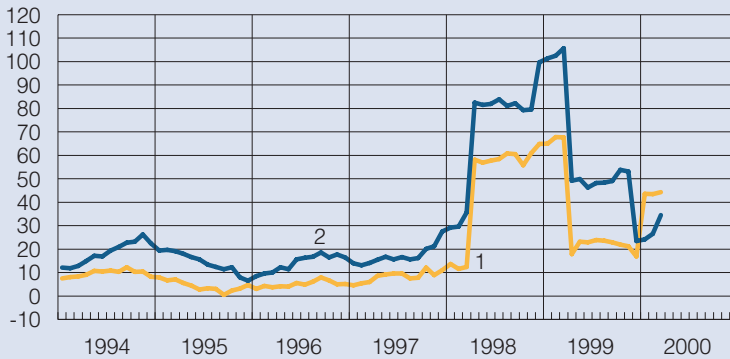


1. Net sales
2. Sales to non-residents
3. Repurchases from non-residents

Source: Bank of Finland.

51. Finland: direct investment

FIM billion



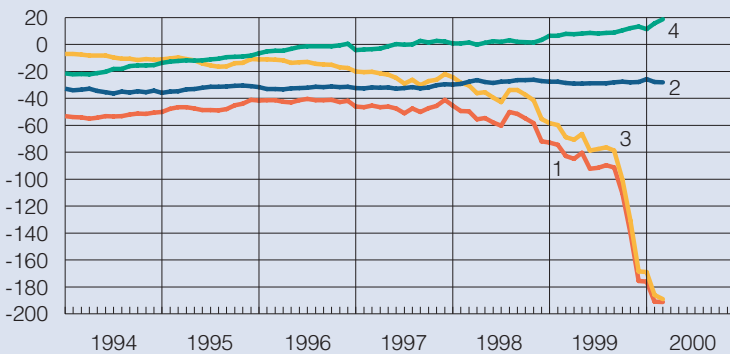
12-month moving totals

1. In Finland
2. Abroad

Source: Bank of Finland.

52. Finland's net international investment position

%

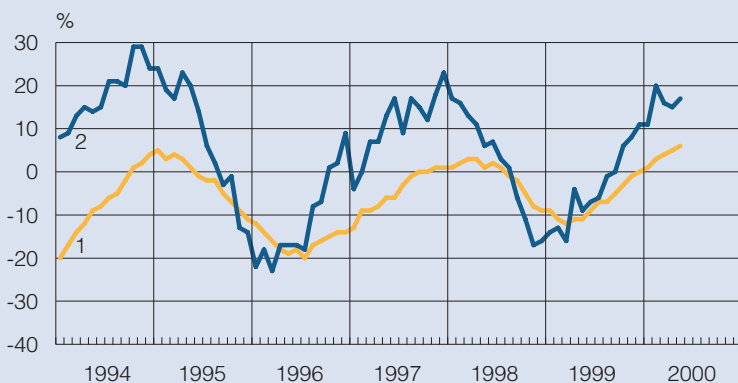


% of GDP

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.

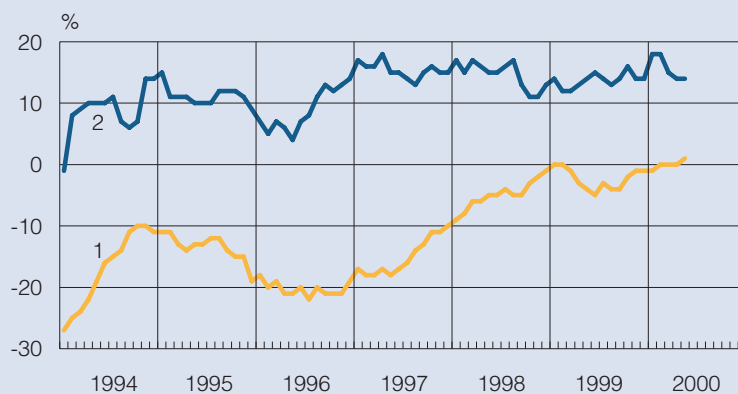
53. Industrial confidence indicator in the euro area and Finland



- 1. Euro area countries
- 2. Finland

Source: European commission.

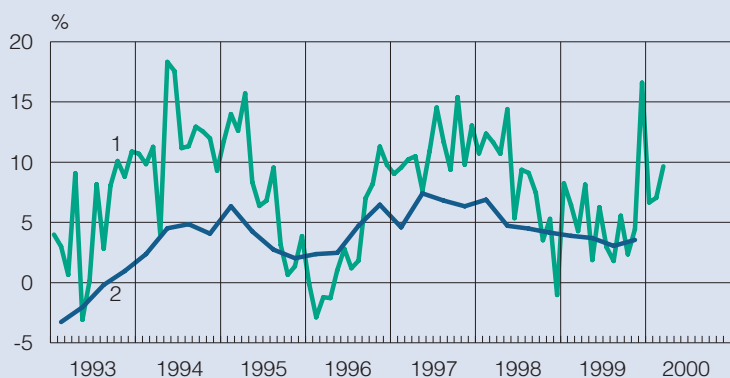
54. Consumer confidence indicator in the euro area and Finland



- 1. Euro area countries
- 2. Finland

Source: European commission.

55. Finland: GDP and industrial production

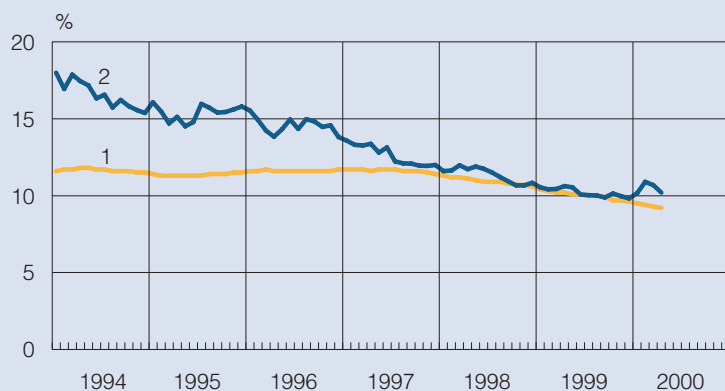


Percentage change from previous year

- 1. Industrial production
- 2. Gross domestic product

Source: Statistics Finland.

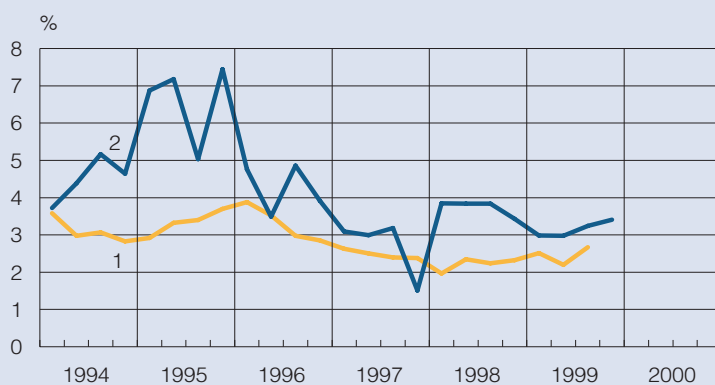
56. Unemployment rate in the euro area and Finland



- 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

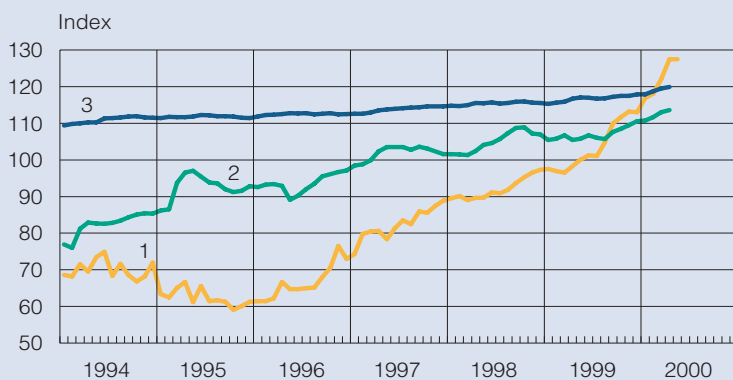


Percentage change from previous year

- 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 m²)
- 2. Stumpage prices
- 3. Consumer prices

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

The Organization of the Bank of Finland

1 May 2000

The Parliamentary Supervisory Council

**Ilkka Kanerva, Chairman, Virpa Puisto, Vice Chairman,
Olavi Ala-Nissilä, Ben Zyskowicz, Antero Kekkonen, Anneli Jäätteenmäki,
Martti Tiuri, Kari Uotila, Mauri Pekkarinen**

Anton Mäkelä, Secretary to the Parliamentary Supervisory Council

The Board

Matti Vanhala
Governor

Esko Ollila
Deputy Governor

Matti Louekoski
Member of the Board

Matti Korhonen
Member of the Board

Heikki T. Hämäläinen, Secretary to the Board

Pentti Koivikko, Director

Departments and other units

Pentti Pikkarainen
Economics
Antti Suvanto*

Kjell Peter Söderlund
International Secretariat

Heikki Koskenkylä
Financial Markets
Harry Leinonen*
Ralf Pauli*

Urpo Levo
Payment Instruments

Markus Fogelholm
Market Operations

Armi Westin
Information Technology

Raimo Hyvärinen
Payments and
Settlement

Esa Ojanen
Administration

Antti Juusela
Communications

Jyrki Ahvonen
Security

Aura Laento
Personnel
Anton Mäkelä*

Juha Tarkka
Research
David Mayes*

Taina Kivelä
Internal Audit

Heikki T. Hämäläinen
Management
Secretarial Staff

Arno Lindgren
Legal Affairs

Terhi Kivilahti
Development and
Budget

Martti Lehtonen
Statistics

Antero Arimo
Publication and
Language Services

* Adviser to the Board

Branch offices: Kuopio, Oulu, Tampere, Turku

The Financial Supervision Authority functions as an independent body in connection with the Bank of Finland; the Director General is K. Jännäri.

Pekka Sutela
Institute for
Economies in Transition
