

<b>Is there scope for inflation differentials in EMU?</b> by Timo Tyrväinen	3
<b>Domestic factors have deepened output fluctuations in Finland</b> by Helvi Kinnunen	7
Item: Survey on foreign exchange and derivative markets, spring 1998	12
Measures concerning monetary and foreign exchange policy and the financial markets	13
Finland in brief	14
Statistics • List of tables on page	S1
Charts • List of charts on page	S29
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# Is there scope for inflation differentials in EMU<sup>1</sup>?

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According to the Maastricht Treaty, the European Central Bank (ECB) is obliged to conduct monetary policy with the aim of maintaining price stability in the euro area. If inflation rates were to differ widely across the euro countries, the situation could become problematic.

From the viewpoint of the ECB, wide inflation differentials could complicate the conduct of monetary policy because of the confusing and possibly inconsistent inflation picture that would result. Cross-country inflation differentials make it difficult to evaluate overall inflation pressures. For a member country, a problem arises if relative prices change so as to strengthen the 'real' exchange rate. If the competitiveness of companies located in a high-inflation country begins to weaken, that country's long-run outlook for employment could be jeopardized.

## **Balassa-Samuelson model**

In 1964 Bela Balassa and Paul Samuelson presented an analytical framework that has since been used widely as a tool for explaining cross-country inflation differentials. What is interesting in the EMU context is that the Balassa-Samuelson model focuses on inflation differentials driven by real factors whereas tendencies deriving from monetary factors take a back seat. This feature is of particular interest in an analysis of an area with a common monetary policy.

Balassa and Samuelson noted that the inflation rate, ie the *speed of a rise in the price level*, is generally higher in countries with relatively low *per capita* income. On the other hand, *price levels* are higher in the more highly developed countries. Accordingly, inflation can be seen as part of a *catch-up* process, ie the process of cross-country convergence in productivity levels.

The explanation provided by the Balassa-Samuelson model is based on the fact that the economy consists of two distinct sectors, one being open to international competition and the other sheltered from such competition. The open (tradables) sector enjoys faster technical development and productivity growth. A rise in productivity

in the tradables sector will bid up nominal wages throughout the economy, since wages in the domestically oriented (nontradables) sector tend to track wages in the tradables sector. In the nontradables sector, where productivity improves more slowly, producers can increase wages only if they are able to pass the increases on to the consumer via price increases. In this process, the relative price of the nontradables – to a large extent services – rises continuously.

The result of wage-wage linkages is that sectoral productivity growth differentials are translated directly into sectoral inflation differentials, ie dual inflation. The greater the productivity differential between the tradables and nontradables sectors, the greater the inflation differential and hence the higher the degree of dual inflation. Dual inflation as such is a well-known phenomenon in almost all countries.

If the degree of dual inflation differs across countries, so will overall inflation rates. For this reason, the Balassa-Samuelson model predicts that, within a monetary union, inflation will tend to be higher in those countries in which productivity grows exceptionally fast in the tradables sector and/or exceptionally slowly in the nontradables sector.

It is well known that there are significant differences between EMU countries in respect of labour productivity and per capita income (see Tyrväinen 1998). In the study on which this article is based (Alberola-Tyrväinen 1998), an attempt was made to evaluate the possible consequences of this on inflation differentials across euro countries.

## **Actual productivity and inflation**

Table 1 shows actual productivity and inflation rates since 1985. Average annual changes in sectoral productivity are given in columns C and D and the differences between them are given in column B. Column A contains average sectoral inflation differentials, ie it reports on how much faster prices have risen per year in the nontradables sector.

Table 1 provides information only for the later years of the period studied, which is advantageous in that it enabled inclusion of all the countries on a roughly commensurate basis. Another advantage is that more recent developments are more likely to contain the best information for evaluation of near-future trends.

<sup>1</sup> This article is based on a study by Alberola and Tyrväinen (1998).

**Table 1. Average annual changes in labour productivity and sectoral differentials in productivity growth and price changes**

	Period	Sectoral inflation differential (A)	Sectoral productivity growth differential (B)=(C)-(D)	Change in productivity, tradables (C)	Change in productivity, non-tradables (D)
Germany	1985-93	0.8	-0.2	1.2	1.4
France	1985-95	1.2	1.9	3.3	1.4
Italy	1985-95	2.6	2.7	3.9	1.2
Spain	1985-93	3.3	2.1	2.3	0.2
Netherlands	1985-95	0.1	2.4	2.6	0.2
Belgium	1985-94	0.9	2.2	3.0	0.8
Austria	1985-95	1.4	2.9	3.6	0.8
Finland	1985-95	2.5	3.5	5.8	2.3
Portugal	1987-93	4.8	4.6	4.5	-0.2

The table gives rise to a number of interesting observations. First, there are pronounced differences in the sectoral inflation differentials. For Portugal the cross-sector inflation differential is 4.8 percentage points and for Spain 3.3, whereas for the Netherlands it is practically nil. Secondly, the relationship between productivity and inflation differentials appears to be much looser than one would expect on the basis of the Balassa-Samuelson model, as the figures in columns A and B differ considerably for many countries. Thirdly, in Spain productivity growth has been slow in both the tradables and nontradables sectors, even though Spain can be considered a potential catch-up economy. This calls into question the underlying presumption of the Balassa-Samuelson model that productivity grows faster in countries with lower per capita income. Fourthly, Spain and Portugal in particular (along with the Netherlands) have recorded the slowest productivity growth in the nontradables sector. This argues against the hypothesis put forward by Bernard and Jones (1996) and others that the services are presently leading the way in the catch-up process.

The above discussion suggests that the theoretical Balassa-Samuelson model may not provide a fully accurate description of productivity trends and resulting inflation pressures in the EMU countries. For this reason, the study underlying this article incorporated an extended version of the Balassa-Samuelson model, the aim being to provide a framework that would give a better and more realistic picture of the mechanisms at work in the EMU countries.

### **Past as prologue**

The empirical part of the study covers eight countries. The tradables sector is defined to comprise manufacturing and transport while the nontradables include all other private-sector activities ex-

cept agriculture. For some of the countries, data was available from the start of the 1960s, but for others the time series start only in the mid-1970s.

The estimations<sup>2</sup> provide evidence that there exists a distinct long-run relationship between sectoral productivity gaps and inflation differentials. However, it is often the case that a reasonable relationship can be defined only if trend-like changes in relative wages are allowed to enter the model. This stems from the fact that one of the model's underlying assumptions - that wage paths in the two sectors are uniform - is not supported by the data from most of the countries studied. In many cases wage-wage links have thus been less straightforward than the above-described theoretical framework assumes. The extended version of the Balassa-Samuelson model that is used in the study takes this empirical finding into account. This extended model receives support in respect of all the countries studied.

Based on the estimation results, a simulation framework was constructed for use in evaluating how inflation differentials would develop if the behaviour of economic agents were to remain unchanged after launch of monetary union. In order to provide a benchmark, it was assumed that the ECB conducts its monetary policy so that the average annual inflation rate for the euro area is 2 per cent. A third assumption was that developments in tradables prices are uniform across the monetary union.

Table 2 gives the simulation results. The figures in the first column are based on the longest available time series on productivity and relative wages for each country. The problem in making comparisons here is that the time spans differ greatly as between countries. For the middle column, the source data start from 1975. Figures in the right-hand column are based on inflation and productivity trends starting in 1985.

As mentioned above, the most recent years probably contain the best information for evaluating developments over the next few years.

The main finding of the study is that there will likely be significant long-run inflation differentials across euro countries despite the area-wide monetary policy. If euro-area-wide inflation is to be 2 per cent p.a., some countries could experience inflation rates above 3 per cent compared to rates of about 1 per cent in other countries. In Italy and Spain, where inflation rates have been high in the past, inflation will continue to be above the average. Somewhat surprisingly, Belgium also belongs to this group. It appears that Germany, France, Austria and Finland will have below-average inflation rates.

<sup>2</sup> The estimations were carried out using the Johansen procedure, which is the most advanced tool available for analysing long-run relationships between variables.

Because, in the simulations, the prices of tradables follow a path that is uniform over the EMU area,  $\Delta p_t$  is the same for all the countries. Cross-country inflation differentials are thus entirely the result of cross-country differentials in nontradables inflation. Productivity differentials along with even a small degree of wage-wage linkage suffice to ensure that dual inflation will not disappear in the EMU environment. This also means that overall inflation rates will differ across countries.

### **Is Finland structurally prone to inflation?**

In the model employed in the study, the inflation path is explained by real factors; monetary variables are not taken into account. Nonetheless, one can argue that for many countries it would appear that the latter are key to an explanation of past inflation. This is evidenced eg by the findings in respect of Belgium and Finland. In light of the real factors, Belgium qualifies as inflation-prone but not Finland, which is clearly at odds with a priori judgement.

The explanation as regards both countries might be that monetary factors have historically played a major role. In Belgium monetary policy has long been considered so Germanically tight, due to exchange rate targeting, as to offset real-factor inflation pressures. Thus monetary policy has in a sense neutralized structural inflation.

For Finland the situation could have been the reverse. Inflation has broken out even in the absence of real causes and has thus been sustained largely by monetary and exchange rate policies.

Hence Finland's decades-old proneness to inflation appears to have been based on monetary factors. This conclusion does not square with arguments raised eg in the debate over Finland's pending membership in the EMU, concerning whether real factors explain Finland's inflation bias. Under the presumption that domestic inflation was caused by real factors, it was asserted that Finland's joining the EMU would portend particular adjustment problems.

Comparison of the columns in Table 2 adds a new dimension to the discussion. Based on the middle column, Finland indeed appears to be inflation-prone. This can be understood as a reflection of the fact that Finland was in the process of induction into the club of structurally inflation-prone economies in the late 1970s and early 1980s as result of the then-esteemed 'solidarity' maxim by which wages should rise equally across the board, regardless of sectoral differences in productivity gains. The source data for the left column start with 1960, and because the 'solidarity' years are less heavily represented here, there is no particular inflation proneness discernible. The same is true for the right column, where the source data start with 1985, after the heyday of 'solidarity'.

It should be kept in mind that the simulations performed here are based on the assumption that

**Table 2. Simulated annual inflation rates in EMU countries, %**

	Non-tradables CPI weight $\delta$	Full sample		Starting 1975		Starting 1985	
		$\Delta p$	$\Delta p_N$	$\Delta p$	$\Delta p_N$	$\Delta p$	$\Delta p_N$
Germany	0.62	1.7	2.5	<b>1.3</b>	1.7	<b>1.3</b>	1.8
France	0.69	1.5	2.1	1.7	2.3	1.6	2.1
Italy	0.68	2.0	2.8	2.4	3.2	2.4	3.3
Spain	0.68	<b>3.6</b>	5.1	3.1	4.3	<b>3.5</b>	4.8
Netherlands	0.72	2.1	2.7	2.3	2.9	2.1	2.8
Belgium	0.69	3.1	4.4	<b>3.1</b>	4.3	2.7	3.6
Austria	0.69	1.5	2.0	1.8	2.4	1.5	2.0
Finland	0.62	<b>1.1</b>	1.6	2.4	3.6	1.5	2.1
EMU		<b>2.0</b>	<b>2.8</b>	<b>2.0</b>	<b>2.7</b>	<b>2.0</b>	<b>2.7</b>
		$\Delta p_T = 0.4$		$\Delta p_T = 0.5$		$\Delta p_T = 0.5$	

Highest and lowest overall national inflation rates are in bold type. For each country, overall inflation is  $\Delta p = (1-\delta)\Delta p_T + \delta\Delta p_N$ , where  $\Delta p_T$  is tradables inflation,  $\Delta p_N$  is nontradables inflation and  $\delta$  is the weight of nontradables in the national CPI. The simulations are based on the assumption that tradables inflation,  $\Delta p_T$ , is the same in all the countries and that average inflation for the EMU area is 2 per cent p.a.

past trends will continue in the EMU environment, which is hardly likely to be the case. In fact, the heightening of competition can be expected to change the behaviour of economic agents and markets. These changes will probably reduce the inflation differentials as monetary convergence progresses. This means that the inflation differentials presented above most likely represent the upper bound on the actual differentials.

It is interesting to compare our results with those from a study by Cecchetti et al (1998), in which price convergence was examined for 15 US cities for the period 1918 – 1995. Over a period of six consecutive, nonoverlapping ten-year periods, the average differential in annual inflation rates for these cities ranged from 1 percentage point to 1.6 percentage points. Alberola & Marqués (1998) showed that annual inflation differentials across Spanish provinces have been even larger, ranging between 1.5 and 2 percentage points. These differentials have been fairly stable over periods of both high and low aggregate inflation.

In light of these results, the magnitudes of our own estimates appear reasonable.

### **Some conclusions with respect to policy**

The primary objective of the European Central Bank will be to maintain price stability across the euro area. Although price stability is not defined in the Maastricht Treaty, it can only mean a very low average rate of increase in prices. The calculations referred to above indicate that the inflation picture that the ECB will face as it decides on its policy settings will be multidimensional and will also include conflicting elements.

As regards the economic and structural policies of the EMU countries, we would offer a couple of recommendations. First, the problems associated with inflation differentials can be mitigated by seeing that prerequisites are in place for productivity growth in the nontradables sector. Secondly, structural policies that weaken wage-wage linkages will help alleviate inflation pressures that might otherwise result from excessive wage demands, particularly in the nontradables sector.

14 September 1998

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- Key words: sectoral productivity, inflation differentials, EMU, Balassa–Samuelson model

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# Domestic factors have deepened output fluctuations in Finland

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One of the prime concerns regarding Finland's participation in the Economic and Monetary Union has been the divergence in output structures between Finland and the other euro countries and the possibly resulting divergence in business cycles and susceptibility to country-specific disturbances. Of particular concern has been that, because of the forest industry's relative importance in Finnish exports and its sensitivity to international economic fluctuations, the Finnish economy might be highly susceptible to country-specific disturbances (shocks) that could generate serious pressures for adaptation in other sectors of the economy once monetary and exchange rate policies are no longer nationally determined.

In general, fluctuations in a country's economic growth rate can be attributed to aggregate factors, ie to international economic disturbances, domestic factors or industry-specific factors. When an economy reacts to international shocks, such as wide swings in prices of oil and other primary commodities, in more or less the same way as other countries, we refer to symmetric shocks; asymmetric shocks, by contrast, affect a single country. The main sources of asymmetric shocks are domestic factors, such as country-specific cyclical movements, other country-specific factors and cross-country differences in growth rates in a particular industry. Country-specific factors unrelated to the business cycle or the industry derive from differences in national economic policies, as well as from structural factors. Industry-specific shocks are usually caused by changes in technology and production methods that affect developments in a given industry in a similar manner across countries. If a country's output structure is highly concentrated in a particular industry, an industry-specific shock can also generate an asymmetric shock. In Finland a typical forest-industry-specific shock might be induced by a significant fall or rise in the price of pulp.

Asymmetric shocks to the Finnish economy vs other EU countries have been analysed in several studies<sup>1</sup>. This article is based on a study by Kinnunen (1997) covering nine EU countries over the period 1978–1993. The aim of the study was to determine the extent to which one can explain output variations in Finland and the nine EU countries

in terms of uniform cyclical factors, country-specific factors and industry-specific factors. The study also attempted to determine the significance of country-specific cyclical movements and how the countries differed in respect of cross-industry gaps in average growth rates. The significance of domestic factors in explaining output variation depends on country-specific factors, country-specific cyclical movements and differences between countries as to cross-industry gaps in average growth rates. The study covered the major industries in both the manufacturing and nontradables sectors.

## **Domestic sources of disturbances important in Finland**

In terms of the average rate, Finland's economic growth in 1978–1993 did not differ greatly from that of other EU countries (Table 1a). The only exception was Sweden, which had a much lower average growth rate. The differences between Finland and both Germany and France were negligible. Industry-specific analysis indicates that manufacturing output in Finland grew in 1978–1993 at a substantially faster rate than in the other EU countries on average (Chart). These gaps are significant vs France, Germany, Sweden and the UK. The gaps for the nontradables (sheltered) sector appear to be narrower, except for the 1990s, when there was a pronounced decline in sector output in Finland, particularly in wholesale and retail trade and construction.

Moreover, output fluctuations have been somewhat greater in Finland than in the other countries, albeit the differences are not significant (Table 1b). On the other hand, output fluctuations in nontradables have clearly been more pronounced in Finland than in other EU countries on average. The biggest difference is in wholesale and retail trade. Variations in construction activity have also been greater in Finland than in the other countries. Compared with the core euro countries, ie France, Germany and Italy, output fluctuations have been significantly wider in Finland in both wholesale-retail trade and construction.

<sup>1</sup> See eg Tarkka and Åkerholm (1993) and Ahonen and Pyyhtiä (1996).

**Table 1a. Average output growth by industry and country, 1978–1993, %**

Industry	Country									
	AT	DK	FI	FR	DE	GR	IT	SE	UK	Total
PRM	1.0	2.5	<b>0.6</b>	2.1	1.7	0.9	1.3	1.0	2.3	<b>1.5</b>
MIN	0.1	3.0	<b>4.0</b>	0.5	-2.1	2.6	2.2	-2.1	2.2	<b>1.2</b>
MANU	2.0	1.3	<b>3.0</b>	0.4	0.8	0.4	2.6	1.0	1.0	<b>1.4</b>
ELEC	2.6	4.3	<b>3.5</b>	4.8	2.2	4.9	1.1	4.0	4.4	<b>3.5</b>
CONST	1.1	-1.6	<b>-0.6</b>	0.3	0.2	-0.4	0.2	0.5	1.1	<b>0.1</b>
SALE	2.3	1.6	<b>1.1</b>	1.4	2.1	1.7	2.1	1.5	2.1	<b>1.8</b>
TRANS	4.0	3.3	<b>3.6</b>	4.4	3.7	4.1	4.4	3.3	2.6	<b>3.7</b>
FIN	3.4	1.8	<b>3.7</b>	3.0	3.5	3.7	3.3	2.3	2.9	<b>3.1</b>
SERV	3.6	0.8	<b>1.7</b>	4.3	5.6	2.3	3.3	1.1	5.2	<b>3.1</b>
GOV	1.9	2.0	<b>2.1</b>	2.2	1.6	1.5	2.3	1.4	0.4	<b>1.7</b>
<b>Total</b>	<b>2.2</b>	<b>1.9</b>	<b>2.3</b>	<b>2.3</b>	<b>1.9</b>	<b>2.2</b>	<b>2.3</b>	<b>1.4</b>	<b>2.4</b>	<b>2.1</b>

**Table 1b. Variance of output growth by industry and country, 1978–1993, %**

Industry	Country									
	AT	DK	FI	FR	DE	GR	IT	SE	UK	Total
PRM	0.25	0.57	<b>0.37</b>	0.36	0.78	0.69	0.15	0.26	0.51	<b>0.42</b>
MIN	1.92	0.29	<b>0.30</b>	0.58	0.47	0.25	0.03	1.67	0.69	<b>0.69</b>
MANU	0.08	0.09	<b>0.22</b>	0.07	0.14	0.10	0.11	0.13	0.13	<b>0.12</b>
ELEC	0.26	0.91	<b>0.08</b>	0.12	0.08	0.10	0.13	0.40	0.67	<b>0.30</b>
CONST	0.12	0.72	<b>0.68</b>	0.12	0.09	0.41	0.07	0.18	0.36	<b>0.29</b>
SALE	0.06	0.11	<b>0.41</b>	0.03	0.12	0.07	0.03	0.08	0.14	<b>0.11</b>
TRANS	0.04	0.25	<b>0.13</b>	0.05	0.06	0.07	0.08	0.23	0.07	<b>0.10</b>
FIN	0.01	0.17	<b>0.11</b>	0.06	0.01	0.02	0.02	0.03	0.05	<b>0.05</b>
SERV	0.03	0.05	<b>0.08</b>	0.02	0.04	0.04	0.02	0.03	0.65	<b>0.13</b>
GOV	0.01	0.05	<b>0.06</b>	0.01	0.01	0.11	0.03	0.04	0.01	<b>0.04</b>
<b>Total</b>	<b>0.28</b>	<b>0.33</b>	<b>0.25</b>	<b>0.16</b>	<b>0.21</b>	<b>0.20</b>	<b>0.08</b>	<b>0.31</b>	<b>0.33</b>	<b>0.24</b>

PRM = Agriculture, hunting, forestry and fishing  
 MIN = Mining and quarrying  
 MANU = Manufacturing  
 ELEC = Electricity, gas and water  
 CONST = Construction  
 SALE = Wholesale and retail trade, restaurants and hotels  
 TRANS = Transport, storage and communications  
 FIN = Finance, insurance, real estate and business services  
 SERV = Other private services  
 GOV = Government services

AT = Austria  
 DK = Denmark  
 FI = Finland  
 FR = France  
 DE = Germany  
 GR = Greece  
 IT = Italy  
 SE = Sweden  
 UK = United Kingdom

Finland's higher degree of variability in output growth compared to the other countries is further underscored by an analysis of the domestic sources of the variation (Table 2). For Finland, domestic factors are considerably more important than for other EU countries. Domestic factors explain more than a third of output fluctuation in Finland, more than a fifth in Italy and 12–14 per cent in Austria, Sweden, UK, Greece and Denmark. In France the corresponding share is less than a tenth. According to this analysis, in Finland country-specific cyclical movements were the most important domestic source of shocks to the growth rate, whereas country-specific factors unrelated to

the business cycle or the industry turned out to be of negligible importance.

The importance of domestic factors for Finnish output variations has found support also in earlier studies<sup>2</sup>. However, less attention was paid in these studies to the fundamental importance of the non-

<sup>2</sup> Tarkka and Åkerholm (1993) came to the conclusion that fluctuations in common with other EU countries were relatively rare and that country-specific disturbances played a key role in variations in total output. Starck (1990) estimated that domestic factors accounted for more than half of short-term fluctuations in total output in Finland in 1960–1988. On the other hand, Ahonen and Pyyhtiä (1996) concluded that shocks to manufacturing output in 1973–1994 were transmitted to Finland, Sweden and Germany at the same time.

**Table 2. Share of domestic factors in output shock by country, 1978–1993, %**

	Source of shock			Total
	Country-specific factors	Country-specific industry factors	Country-specific cyclical factors	
Austria	0.0	1.6	12.8	14.3
Denmark	0.1	4.6	8.8	13.5
Finland	0.1	5.8	29.3	35.2
France	0.3	3.2	5.3	8.9
Germany	0.2	9.1	10.3	19.6
Greece	0.0	3.2	10.7	13.9
Italy	0.5	12.3	11.1	23.9
Sweden	1.6	3.5	8.4	13.5
United Kingdom	0.3	3.1	8.5	12.0

**Table 3. Share of domestic factors in output shock by country, 1978–1989, %**

	Source of shock			Total
	Country-specific factors	Country-specific industry factors	Country-specific cyclical factors	
Austria	1.4	10.4	2.2	14.0
Denmark	0.3	9.9	5.5	15.7
Finland	13.1	12.8	19.0	44.9
France	0.1	5.2	8.8	14.0
Germany	3.2	3.4	9.2	15.8
Greece	0.2	10.8	7.5	18.5
Italy	0.1	12.0	19.7	31.7
Sweden	0.7	7.6	5.9	14.1
United Kingdom	0.4	6.9	3.6	10.9

tradables sector as a source of output variation. The importance of nontradables in output variations in Finland is due not only to the exceptional circumstances prevailing at the start of the 1990s, when a severe recession focused specifically on the Finnish nontradables sector. Exclusion of the recession period from the analysis did not reduce the significance of domestic factors but, contrary to expectations, actually increased it (Table 3). However, the importance of the different domestic factors changed when the recession years were excluded. Overall country-specific cyclical conditions diminished in importance whereas other country-specific factors gained importance as a source of output variability. The importance of country-specific fluctuations within industries also turned out to be greater when the period of recession was excluded from the analysis. In other words, prior to the 1990s the key domestic sources of output variations in Finland were structural factors and domestic economic policies, which is why both the average output growth rate and average gaps in growth rates across industries have developed differently in Finland as compared to other EU countries. However, exclusion of the recession years from the data resulted in a reduction in growth rate variation for the nontradables sector to less than the EU average.

### **Participation in monetary union will mitigate domestic disturbances**

In the 1980s and early 1990s disturbances in Finland's economic growth have clearly been to a greater extent country-specific than has been the case in the other EU countries. This could be due to Finland's economic policies or to a difference in the way the country has reacted to international economic disturbances. The fact that the difference is

particularly pronounced in respect of the nontradables sector suggests that Finland's economic policies may have tended to exacerbate rather than stabilize cyclical movements<sup>3</sup>. This suggests that, contrary to common belief, the high volatility of the rate of economic growth was not, at least directly, the result of wide fluctuations in forestry industry output. Finland's faster-than-average growth in the 1980s was at least partly the result of expansive fiscal policy as well as the simultaneous liberalization of capital flows and resultant ineffectiveness of monetary policy. These factors and the structural change induced by the tight economic policies of the early 1990s exacerbated output fluctuations, especially in the domestic markets.

If it is the economic policies pursued in Finland that are behind the fluctuations, past country-specific shocks do not portend problems for Finland in the context of monetary union. In fact, participation in monetary union could very well have a stabilizing effect on the operating environment of companies and households and hence help to mitigate output shocks.

The main change that monetary union will bring as regards the nontradables sector is a significant reduction in the volatility of interest rates and in devaluation-related changes in exchange rates, which, combined with the elimination of currency risk, will improve the economy's long-run growth potential. At the same time, low inflation and inflation expectations, as well as a more neutral tax system that no longer provides excessive borrowing incentives, will increase the efficiency of investment and improve the allocation of productive capital. In

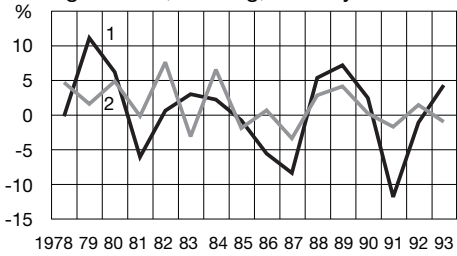
<sup>3</sup>For example, Peisa and Haaparanta (1997) came to the same conclusion on the basis of a detailed examination of disturbances to the Finnish economy and related economic policy measures.



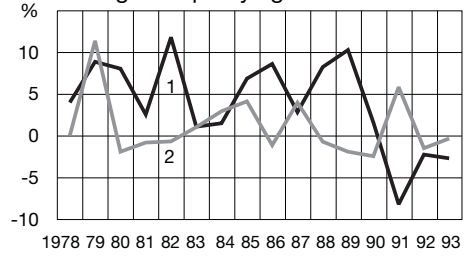
**Chart.**

**Average output growth in Finland and in nine EU countries**

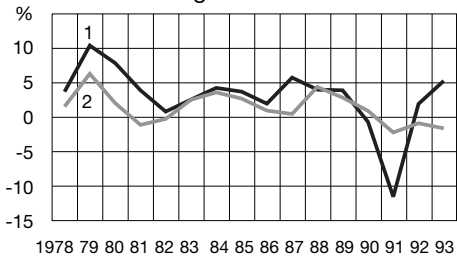
Agriculture, hunting, forestry and fishing



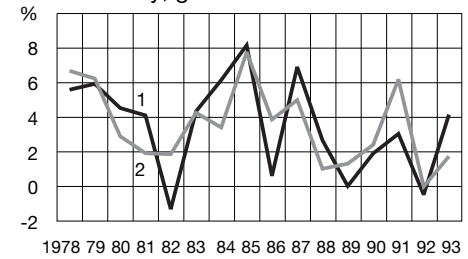
Mining and quarrying



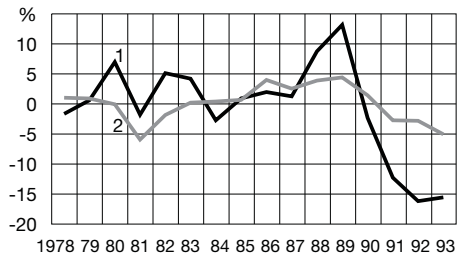
Manufacturing



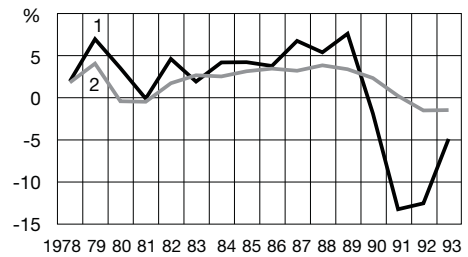
Electricity, gas and water



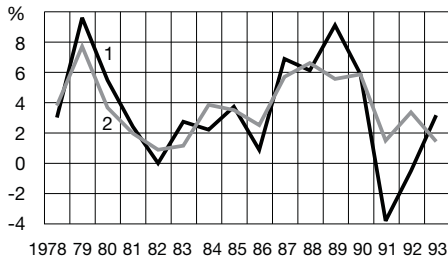
Construction



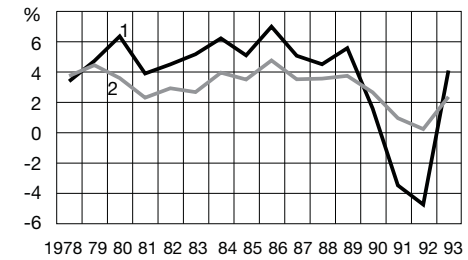
Wholesale and retail trade, restaurants and hotels



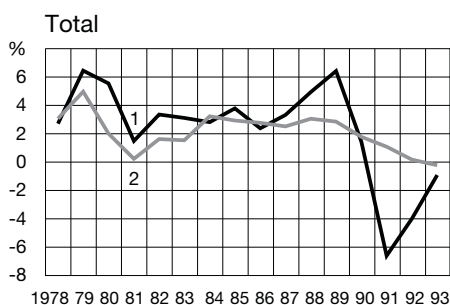
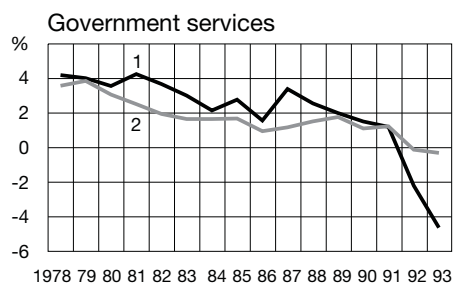
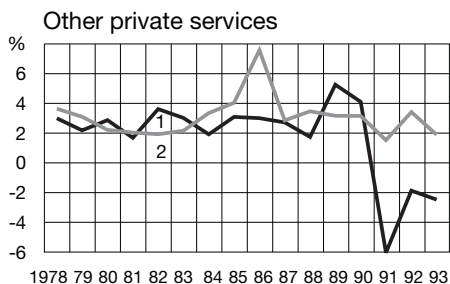
Transport, storage and communication



Finance, insurance, real estate and business services



1. Finland  
2. EU countries



1. Finland  
2. EU countries

addition, international disturbances will no longer induce overreaction in the domestic financial markets nor will they be transmitted to domestic demand, as in the pre-monetary-union era.

6 October 1998

- Key words: output by industry, asymmetric shock, EU countries

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## Item

### **Survey on foreign exchange and derivative markets, spring 1998**

Every three years the Bank for International Settlements (BIS) conducts a survey of activity in national foreign exchange (FX) and derivatives markets in order to determine the size and structure of the corresponding global markets. In this connection, the Bank of Finland conducted a study of financial institutions operating in Finland. These financial institutions were asked to provide data on their transactions in FX and OTC derivative contracts in April and on outstanding contracts as at end-June. The results now being released concern the transaction amounts. The BIS will publish the results in respect of global turnover in October 1998.

#### **Average daily turnover in foreign exchange and OTC derivatives markets FIM 36 billion.**

In April the average daily notional amount of FX and OTC derivatives transactions carried out by financial institutions operating in Finland was slightly less than FIM 36 billion. This represented an increase of about 17 per cent compared to April 1995. Total turnover has been adjusted to eliminate double counting of transactions between financial institutions operating in Finland. Transactions in foreign exchange, including OTC FX derivatives, accounted for 68 per cent of the total turnover and OTC interest rate derivatives for the remaining 32 per cent.

Average daily turnover for FX and OTC FX derivatives was FIM 24.2 billion, of which 62 per cent was accounted for by FX swaps, 26 per cent by spot transactions, and 12 per cent by other types of transactions. Compared to 1995, the share of FX swaps rose by 14 percentage points.

Average daily turnover for OTC interest rate derivatives was FIM 11.7 billion. FRAs were the most important type of instrument, accounting for 84 per cent of the total turnover. Interest rate swaps accounted for 16 per cent.

**Finnish markka the most frequently transacted currency.** The Finnish markka was one of the currencies involved in 60 per cent of the total turnover in FX and OTC FX derivatives. By far the most frequently transacted currency pair was the markka and the US dollar, which accounted for 48 per cent of the total turnover. Survey results indicate that the Deutschemark declined in importance, from a share of 55 per cent in 1995 to just 33 per cent. The Finnish markka was also the most important currency in transactions in OTC interest rate derivatives, accounting for 62 per cent of the total turnover.

#### **Finnish financial institution's counterparty most often a foreign financial institution.**

In April, the financial institutions operating in Finland carried out 67 per cent of their turnover in FX and OTC FX derivatives with financial institutions operating abroad as counterparties. The comparable figure for transactions in OTC interest rate derivatives was even higher, at 78 per cent. Nonfinancial companies however increased in importance as counterparties compared to 1995. Their involvement in FX and OTC derivatives transactions rose by 8 percentage points to 22 per cent. Correspondingly, transactions with resident financial institutions declined by 7 percentage points from 1995, accounting for only 7 per cent of the total turnover.

# Measures concerning monetary and foreign exchange policy and the financial markets

1997

## SEPTEMBER

**Tender rate.** On 15 September, the Bank of Finland raises its tender rate from 3.00 per cent to 3.25 per cent. In addition, the interest rate on banks' excess reserves is raised from 1.00 per cent to 1.25 per cent.

## NOVEMBER

**Money market tenders.** As at 3 November, the Bank of Finland shortens the maturity applied in its money market tenders from one month to two weeks. The normal settlement day for these tenders will be the banking day following the trade day.

**Liquidity credit.** As at 3 November, the Bank of Finland shortens the maturity applied in its liquidity credit from seven days to one day. The Bank of Finland also abolishes the limits on collateralized liquidity credit.

1998

## JANUARY

### **Finnish deposit guarantee scheme revised.**

The Finnish deposit guarantee scheme is revised as from the start of 1998 by amendment and extension of the Act on Credit Institutions (1229/97). All deposit banks must now belong to a common deposit guarantee fund. Instead of the previous full coverage, the guarantee is now limited to a maximum of FIM 150 000 per depositor/bank.

## MARCH

**Tender rate.** On 19 March, the Bank of Finland raises its tender rate from 3.25 per cent to 3.40 per cent. In addition, the interest rate on banks' excess reserves is raised from 1.25 per cent to 1.40 per cent.

## APRIL

**Abolishment of stamp tax on lending.** Parliament has abrogated the stamp tax as it applies to lending and mortgages, effective with respect to agreements concluded on or after 29 April 1998.

# Finland in brief

## 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 8 % 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 5 147 349 (31 December 1997) and an average population density of 17 per square kilometre. The largest towns are Helsinki (Helsingfors), the capital, with 539 363 inhabitants, Espoo (Esbo) 200 834, Tampere (Tammerfors) 188 726, Vantaa (Vanda) 171 297 and Turku (Åbo) 168 772.

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 1994 to 1 March 2000, is Mr Martti Ahtisaari.

Parliament, comprising 200 members, is elected by universal suffrage for a period of four years. Following the parliamentary elections of 1995, the seats of the various parties in Parliament are distributed as follows:

Social Democratic Party 63; Centre Party 44; National Coalition Party 39; Left Wing Alliance 22; Swedish People's Party 12; Green League 9; Christian League 7; Progressive Finnish Party 2; Rural Party 1; and Ecological Party 1.

Of the 18 ministerial posts in the present Government appointed in April 1995, 7 are held by the Social Democratic Party, 5 by the National Coalition Party, 2 by the Left Wing Alliance, 2 by the Swedish People's Party, 1 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. Imports from the USSR were also progressively freed from customs duties. 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 will proceed to Stage Three of EMU in 1999.

## The economy

**Output and employment.** Of the gross domestic product of FIM 538 billion in basic values in 1997, 2 % was generated in agriculture and fishing, 3 % in forestry, 27 % in industry, 6 % in construction, 11 % in trade, restaurants and hotels, 9 % in transport and communications, 3 % in finance and insurance, 22 % in other private services and 18 % by producers of government services. Of total employment of 2.2 million persons in 1997, 7.0 % were engaged in primary production, 27.4 % in industry and construction and 65.6 % in services.

In 1997, expenditure on the gross domestic product in purchasers' values amounted to FIM 622 billion and was distributed as follows: net exports 9 % (exports 40 %, imports -31 %), gross fixed capital formation 17 %, private consumption 53 % and government consumption 21 %. Finland's tax ratio (gross taxes including compulsory employment pension contributions relative to GDP) was 47.0 per cent, 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, 3.7 % in 1980-89 and 3.6 % in 1990-96. Finland's GDP per capita in 1997 was USD 23 302.

**Foreign trade.** EU countries absorb the bulk of Finnish merchandise exports. In 1993-1997 their average share was 51.7 %. Over the same period, Finland's exports to other European countries (including Russia) accounted for 22.1 % and to the rest of the world for 26.2 %. The regional distribution of Finland's merchandise imports in the same period has been quite similar to that of

exports: EU countries accounted for 53.8 %, other European countries for 22.3 % and the rest of the world for 24.0 %.

In 1997, the share of forest industry products in total merchandise exports was 30.8 %, the share of metal and engineering products 43.3 % and the share of other goods 25.9 %. Raw materials and intermediate goods (incl. crude oil) accounted for 60.9 % of merchandise imports, fuels for 4.4 %, investment goods for 15 % and consumption goods for 21.9 %.

**Forest resources.** Finland has fairly abundant forest resources but only limited amounts of other raw materials. The growing stock comprises 1 937 million cubic metres, of which 46 % is pine, 36 % spruce, 15 % birch and 3 % other broad-leaved species.

According to the latest National Forest Inventory (1989–1994), the annual volume increment is about 75.4 million cubic metres. During the same time period, the average annual drain has been about 55 million cubic metres.

## **Finance and banking**

**Currency.** Finland has had its own monetary system since 1865. The currency unit is the markka (plural: markkaa), abbreviation FIM, which is divided into 100 penniä (singular: penni). From 1 November 1977 to 7 June 1991 the external value of the markka was officially expressed in terms of a trade-weighted currency index, which was permitted to fluctuate within a prescribed range (from 30 November 1988 the range was 6 percentage points). From 7 June 1991 to 7 September 1992, the markka was pegged to the European Currency Unit, the ECU. The fluctuation margins and the midpoint were set so as to correspond to the fluctuation margins and midpoint of the old currency index. The midpoint was first 4.87580 (FIM/ECU). Owing to the devaluation of the markka on 15 November 1991, the midpoint was increased to 5.55841 and the fluctuation limits to 5.39166 and 5.72516. On 8 September 1992, the fluctuation limits of the markka were abandoned and the markka was allowed to float. On 14 October 1996, the markka was joined to the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS) at the central rate of 5.80661 per ECU. As from 16 March 1998 the ECU central rate is FIM 6.01125.

**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 once Finland joins the euro area. In performing the tasks of the ESCB, the Bank of Finland will act in accord with guidelines and instructions issued by the ECB. Under the Treaty, the primary objective on 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 on a proposal of 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 4 branch offices in other towns.

**Other banks** ( 31 Dec 1997). Finland has three major groups of deposit banks with a total of 1 242 offices. There are two big commercial banks with national branch networks and five smaller ones. The commercial banks have a total of 10 foreign branches, subsidiaries and associate banks and 16 representative offices abroad. There are 40 savings banks and 294 cooperative banks, both with extensive branch networks. In addition, 6 foreign banks have branches and 7 foreign banks have representative offices in Finland.

**Financial markets.** Of the total stock of FIM 726 billion in outstanding domestic credit at end-September 1997, 48 % was accounted for by deposit banks, 6 % by insurance companies, 23 % by pension insurance institutions, 12 % by other credit institutions, and 11 % by state and local authorities and social security funds.

In the money market, 72 % of the instruments in value terms, which totalled about FIM 134 billion at end-December 1997, were accounted for by bank certificates of deposit (including central bank paper). Other negotiable money market instruments consist of Treasury bills, commercial paper and local authority paper.

At end-March 1998, there are 81 companies on the official list, 32 on the OTC list and 15 on the brokers list for the HEX, Helsinki Exchanges. Total market capitalization for the official list was FIM 518 billion, the OTC list FIM 6 billion, and the brokers list FIM 8 billion, at end-March 1998. Domestic bonds and debentures in circulation at end-March 1998 totalled FIM 289 billion; government bonds comprised 76 % of the total. Turnover on the HEX, Helsinki Exchanges amounted to FIM 187 billion in 1997. In January–March 1998 share turnover amounted to FIM 60 billion.

<b>1. The balance sheet of the Bank of Finland</b>	S2
1.1 The balance sheet of the Bank of Finland	S2
1.2 Time series for the balance sheet items of the Bank of Finland	S3
<b>2. The Bank of Finland's operations in the money and foreign exchange markets and the banks' forward exchange position</b>	S4
2.1 The Bank of Finland's minimum reserve system and standing facilities	S4
2.2 The Bank of Finland's money market transactions	S4
2.3 The Bank of Finland's transactions in foreign currencies and the stock of reserve assets	S5
2.4 Forward exchange contracts	S5
<b>3. Rates of interest</b>	S6
3.1 Money market rates and rates applied by the Bank of Finland	S6
3.2 The Bank of Finland's liquidity facility	S6
3.3 Weighted Eurorates and commercial ECU interest rate	S6
3.4 Rates of interest applied by banks	S7
3.5 Yields on bonds and shares	S7
<b>4. Rates of exchange</b>	S8
4.1 Middle rates	S8
4.2 Markka value of the ECU and currency indices	S9
4.3 Deviations of ERM currencies' markka rates from central rates	S9
<b>5. Financial markets and money supply</b>	S10
5.1 Bank funding from the public	S10
5.2 Bank lending to the public	S10
5.3 Money supply	S11
5.4 Liabilities and assets of the central government	S11
5.5 Markka bond market	S12
a) Issues	S12
b) Stock	S12
c) Turnover	S13
5.6 Helsinki Stock Exchange	S13
<b>6. Balance of payments, foreign liabilities and assets</b>	S14
6.1 Current account	S14
6.2 Capital and financial account	S15
6.3 Finland's international investment position	S16
6.4 Finland's net international investment position (liabilities less assets), by sector	S17
<b>7. Foreign trade</b>	S18
7.1 Exports, imports and the trade balance	S18
7.2 Foreign trade: indices of volume, prices and terms of trade	S18
7.3 Foreign trade by main groups	S18
7.4 Foreign trade by regions and countries	S19
<b>8. Domestic economic developments</b>	S20
8.1 Supply and use of resources	S20
8.2 Volume of industrial production	S20
8.3 Indicators of domestic supply and demand	S21
8.4 Wages and prices	S22
8.5 Labour, employment and unemployment	S23
8.6 Central government finances: revenue, expenditure and financial balance	S24
<b>Notes and explanations to the statistical section</b>	S25

# 1. The balance sheet of the Bank of Finland

## 1.1 The balance sheet of the Bank of Finland, mill. FIM

	1997		1998		
	31 Dec	8 Sep	15 Sep	23 Sep	30 Sep
<b>ASSETS</b>					
<b>Reserve assets</b>	51 455	51 531	50 303	46 956	46 152
Gold	1 742	1 742	1 742	1 742	1 742
Special drawing rights	1 772	1 585	1 563	1 736	1 726
IMF reserve tranche	3 036	3 827	3 775	3 767	3 970
ECU-claim on the European Monetary Institute	4 078	2 913	2 910	2 910	2 912
Foreign exchange assets	40 827	41 464	40 313	36 800	35 802
<b>Other foreign claims</b>	3 342	2 828	2 827	2 827	2 601
Markka subscription to Finland's quota in the IMF	3 281	2 410	2 410	2 409	2 183
European Central Bank capital share <sup>1</sup>	61	418	418	418	418
<b>Claims on financial institutions</b>	2 951	115	115	103	103
Liquidity credits	–	–	–	–	–
Securities with repurchase commitments	–	–	–	–	–
Term credits	–	–	–	–	–
Bonds	114	77	77	65	65
Other	2 837	39	39	39	39
<b>Claims on the public sector</b>	2 015	2 028	2 028	2 028	2 033
Treasury bills	–	–	–	–	–
Bonds	–	–	–	–	–
Total coinage	2 015	2 028	2 028	2 028	2 033
Other	–	–	–	–	–
<b>Claims on corporations</b>	1 762	1 612	1 612	1 612	1 612
Financing of domestic deliveries (KTR)	26	6	6	6	6
Other	1 736	1 606	1 606	1 606	1 606
<b>Other assets</b>	635	564	568	579	538
Accrued items	528	472	475	488	442
Other	107	92	92	91	96
<b>Valuation account</b>	–	–	–	–	–
<b>Total</b>	62 159	58 679	57 453	54 105	53 039
<b>LIABILITIES</b>					
<b>Foreign liabilities</b>	4 911	3 954	3 943	3 995	3 759
Allocations of special drawing rights	1 046	1 023	1 009	1 007	1 001
IMF markka accounts	3 281	2 410	2 410	2 410	2 183
Other	584	521	524	579	574
<b>Notes and coin in circulation</b>	17 817	16 784	16 769	16 671	16 634
Notes	15 923	14 881	14 867	14 768	14 733
Coin	1 894	1 904	1 902	1 903	1 900
<b>Certificates of deposit</b>	10 500	10 550	12 670	11 710	9 110
<b>Liabilities to financial institutions</b>	10 681	8 807	6 046	3 962	5 702
Reserve deposits	7 911	8 807	6 046	3 962	5 701
Term deposits	–	–	–	–	–
Other	2 770	0	0	0	0
<b>Liabilities to the public sector</b>	–	–	–	–	–
Current accounts	–	–	–	–	–
Other	–	–	–	–	–
<b>Liabilities to corporations</b>	32	10	10	9	9
Deposits for investment and ship purchase	32	10	10	9	9
Other	–	–	–	–	–
<b>Other liabilities</b>	55	222	287	274	298
Accrued items	23	172	247	234	257
Other	32	50	41	40	41
<b>Valuation account</b>	258	447	–176	–422	–377
<b>Provisions</b>	12 140	12 140	12 140	12 140	12 140
Pension provision	1 601	1 601	1 601	1 601	1 601
Other	10 540	10 540	10 540	10 540	10 540
<b>Capital accounts</b>	5 764	5 764	5 764	5 764	5 764
Primary capital	5 000	5 000	5 000	5 000	5 000
Reserve fund	764	764	764	764	764
Net earnings	–	–	–	–	–
<b>Total</b>	62 159	58 679	57 453	54 105	53 039

<sup>1</sup> Until 1 July 1998 Share in the European Monetary Institute.



## 1.2 Time series for the balance sheet items of the Bank of Finland, mill. FIM

End of period	Foreign sector								Public sector		
	Gold	Special drawing rights	IMF reserve tranche	ECU-claim on the European Monetary Institute	Foreign exchange assets	Reserve assets (1+2+3+4+5)	Other claims, net	Net claims (6+7)	Claims	Liabilities	Net claims (9-10)
	1	2	3	4	5	6	7	8	9	10	11
1993	2 180	664	1 747	.	28 882	33 473	-1 324	32 148	1 788	784	1 004
1994	2 180	1 537	1 354	.	47 672	52 743	-1 114	51 629	1 806	93	1 713
1995	1 742	1 569	1 685	3 363	40 506	48 865	-2 082	46 783	1 882	75	1 807
1996	1 742	1 344	1 953	2 541	28 817	36 397	-1 826	34 571	1 906	-	1 906
1997	1 742	1 772	3 036	4 078	40 827	51 455	-1 569	49 886	2 015	-	2 015
1997											
Sep	1 742	1 588	2 081	3 958	52 686	62 055	-1 750	60 305	1 939	-	1 939
Oct	1 742	1 489	2 068	4 031	54 754	64 085	-1 941	62 144	1 947	-	1 947
Nov	1 742	1 234	2 271	4 071	41 920	51 238	-2 256	48 982	1 955	-	1 955
Dec	1 742	1 772	3 036	4 078	40 827	51 455	-1 569	49 886	2 015	-	2 015
1998											
Jan	1 742	1 323	3 065	3 310	40 268	49 709	-1 389	48 320	2 019	-	2 019
Feb	1 742	1 230	3 389	3 318	38 830	48 510	-1 413	47 097	2 020	-	2 020
Mar	1 742	1 680	3 399	3 334	34 412	44 567	-1 362	43 205	2 017	-	2 017
Apr	1 742	1 558	3 351	2 727	37 034	46 414	-1 611	44 803	2 019	-	2 019
May	1 742	1 203	3 541	2 721	39 418	48 626	-1 414	47 212	2 024	-	2 024
Jun	1 742	1 714	3 588	2 735	42 171	51 950	-1 472	50 478	2 026	-	2 026
Jul	1 742	1 664	3 521	2 917	42 910	52 753	-1 049	51 704	2 026	-	2 026
Aug	1 742	1 600	3 538	2 923	42 372	52 175	-1 151	51 024	2 026	-	2 026
Sep	1 742	1 726	3 970	2 912	35 802	46 152	-1 158	44 994	2 033	-	2 033

End of period	Domestic financial sector				Corporate sector				
	Term claims on deposit banks, net	Reserve deposits of deposit banks	Other claims on financial institutions, net	Net claims (12+13+14)	Claims in the form of special financing	Special deposits and other items, net	Net claims (16+17)	Notes and coin in circulation	Out-standing CDs issued by the Bank of Finland
	12	13	14	15	16	17	18	19	20
1993	7 337	-6 398	-463	476	496	720	1 216	14 994	14 837
1994	1 480	-6 526	-347	-5 392	316	1 285	1 601	14 315	35 236
1995	7 076	-15 676	655	-7 945	185	1 706	1 891	15 611	27 090
1996	11 626	-6 829	372	5 169	70	1 623	1 692	16 891	15 530
1997	-	-7 911	181	-7 730	26	1 704	1 730	17 817	10 500
1997									
Sep	9 214	-4 458	226	4 982	33	1 767	1 800	16 046	36 760
Oct	15 103	-13 983	188	1 308	26	1 792	1 819	16 144	34 900
Nov	4 411	-11 612	184	-7 017	26	1 684	1 710	16 381	12 200
Dec	-	-7 911	181	-7 730	26	1 704	1 730	17 817	10 500
1998									
Jan	1 929	-5 642	157	-3 556	26	1 713	1 739	16 416	13 740
Feb	3 648	-10 365	155	-6 562	21	1 715	1 736	16 274	9 360
Mar	-	-8 417	153	-8 264	18	1 718	1 736	16 190	3 100
Apr	-	-6 255	132	-6 123	14	1 723	1 737	16 845	6 900
May	1 962	-5 089	132	-2 995	14	1 593	1 607	16 909	12 820
Jun	5 286	-8 326	117	-2 923	14	1 594	1 608	16 932	15 350
Jul	2 711	-6 131	116	-3 304	14	1 594	1 608	17 178	16 900
Aug	-	-11 710	116	-11 594	9	1 596	1 605	17 047	7 800
Sep	-	-5 701	104	-5 597	6	1 597	1 603	16 634	9 110

## 2. The Bank of Finland's operations in the money and foreign exchange markets and the banks' forward exchange position

### 2.1 The Bank of Finland's minimum reserve system and standing facilities

	Reserve requirement			Required reserves <sup>1</sup> , mill. FIM	Excess reserves, mill. FIM	Total reserves, mill. FIM (4+5)	Liquidity credits, mill. FIM
	On deposits payable on demand, %	On other deposits, %	On other items, %				
	1	2	3	4	5	6	7
1993	2.0	1.5	1.0	6 398	.	.	440
1994	2.0	1.5	1.0	6 526	.	.	14
1995	2.0	1.5	1.0	6 557	.	.	123
I-IX	2.0	1.5	1.0	6 530	616	7 146	37
X-XII	2.0	1.5	1.0	6 652	440	7 092	121
1997	2.0	1.5	1.0	6 717	747	7 464	1
1997							
Sep	2.0	1.5	1.0	6 769	521	7 290	-
Oct	2.0	1.5	1.0	6 799	1 020	7 818	-
Nov	2.0	1.5	1.0	6 911	892	7 803	-
Dec	2.0	1.5	1.0	6 999	310	7 309	-
1998							
Jan	2.0	1.5	1.0	6 995	321	7 317	-
Feb	2.0	1.5	1.0	6 947	147	7 095	-
Mar	2.0	1.5	1.0	6 947	895	7 842	0
Apr	2.0	1.5	1.0	6 866	198	7 065	-
May	2.0	1.5	1.0	6 834	1 197	8 031	3
Jun	2.0	1.5	1.0	6 918	179	7 098	-
Jul	2.0	1.5	1.0	6 985	115	7 100	-
Aug	2.0	1.5	1.0	7 015	293	7 308	-
Sep	2.0	1.5	1.0	7 053	547	7 600	0

<sup>1</sup> As of 2 October 1995, the minimum reserve requirement is fulfilled on an averaging basis; until 2 October 1995, end of month figures.

### 2.2 The Bank of Finland's money market transactions, mill. FIM

During period	Purchases of money market instruments	Sales of money market instruments	Matured money market instruments, net	Money market transactions, net (1-2-3)
	1	2	3	4
1993	86 521	146 899	-50 486	-9 892
1994	35 540	351 820	-295 165	-21 115
1995	50 435	434 810	-393 930	9 555
1996	94 080	250 980	-190 562	33 662
1997	128 220	422 500	-294 770	490
1997				
Sep	12 300	34 630	-23 120	790
Oct	12 200	36 900	-28 830	4 130
Nov	11 400	15 700	-18 480	14 180
Dec	0	22 430	-26 110	3 680
1998				
Jan	2 000	30 040	-27 770	-270
Feb	4 280	23 540	-19 260	0
Mar	0	7 000	-9 610	2 610
Apr	0	10 400	-7 850	-2 550
May	2 000	17 870	-10 650	-5 220
Jun	5 350	25 365	-20 365	350
Jul	3 750	37 300	-29 970	-3 580
Aug	0	21 800	-29 180	7 380
Sep	0	21 780	-20 520	-1 260

### 2.3 The Bank of Finland's transactions in foreign currencies and the stock of reserve assets, mill FIM

During period	Intervention in the foreign exchange market			Spot transactions related to forward contracts, net	Central government's foreign exchange transactions, net	Reserve assets (end of period)	
	Spot purchases	Spot sales	Forward exchange intervention = change in forward exchange position			mill. FIM	mill. USD
	1	2	3	4	5	6	7
1993	25 120	-45 080	7 460	-6 910	33 240	29 517	5 628
1994	20 930	-12 900	9 060	-8 930	24 660	33 473	5 787
1995	4 910	-5 470	-6 170	9 170	-10 135	52 743	11 120
1996	7 360	-7 320	-	-	-13 868	48 865	11 211
1997	47 620	-1 470	-	4 310	-37 540	36 397	7 838
1997							
Sep	-	-	-70	-	-1 240	62 055	11 707
Oct	-	-	-3 160	3 100	-800	64 085	12 342
Nov	-	-	-1 560	1 560	-15 300	51 238	9 602
Dec	-	-	-	-	-610	51 455	9 492
1998							
Jan	-	-	-	-	-2 730	49 709	8 974
Feb	-	-	-	-	-1 410	48 510	8 825
Mar	5 330	-	2 800	-2 780	-6 590	44 567	7 950
Apr	4 860	-	-620	-540	-1 280	46 414	8 529
May	-	-	7 040	-8 060	8 250	48 626	8 970
Jun	-	-	-3 730	-3 790	-130	51 950	9 458
Jul	-	-	-2 510	-5 230	-1 200	52 753	9 743
Aug	-	-530	-20	-3 260	-360	52 175	9 705
Sep	-	-	-	-	-	46 152	9 052

### 2.4 Forward exchange contracts between Finnish markka and other currencies, mill. FIM

Stock at end of period	Finnish banks' forward contracts						Non-residents' forward contracts with Finnish customers (excl. Finnish banks)			The Bank of Finland's forward contracts	
	With Finnish customers (excl. Finnish banks)			With foreign customers			Total	Currency purchases from Finnish customers	Currency sales to Finnish customers	Net	Net currency sales
	Currency purchases from Finnish customers	Currency sales to Finnish customers	Net	Currency purchases from foreign customers	Currency sales to foreign customers	Net					
	1	2	3	4	5	6	7	8	9	10	11
1993	38 373	23 721	14 652	14 346	21 895	-7 548	7 104	11 632	2 173	9 459	1 939
1994	51 096	22 093	29 003	19 236	32 791	-13 555	15 448	18 372	4 780	13 592	-6 080
1995	60 280	19 095	41 185	31 837	48 906	-17 069	24 116	12 829	6 871	5 957	-
1996	53 520	21 793	31 726	44 068	72 021	-27 953	3 773	15 871	6 908	8 963	-
1997	66 649	37 507	29 142	105 128	127 793	-22 665	6 477	23 490	14 552	8 938	-
1997											
Aug	74 387	33 124	41 263	60 935	99 872	-38 936	2 327	28 558	17 323	11 235	-4 690
Sep	69 721	36 411	33 310	68 654	93 287	-24 632	8 678	24 439	16 998	7 441	-4 690
Oct	68 258	37 917	30 340	92 393	116 191	-23 798	6 542	24 034	19 297	4 737	-1 578
Nov	68 813	36 778	32 035	93 566	115 303	-21 737	10 298	28 528	17 234	11 294	-
Dec	66 649	37 507	29 142	105 128	127 793	-22 665	6 477	23 490	14 552	8 938	-
1998											
Jan	66 113	32 546	33 568	95 925	116 620	-20 695	12 873	19 041	7 592	11 449	-
Feb	70 214	32 074	38 140	91 570	118 695	-27 125	11 015	22 024	6 215	15 809	-
Mar	67 157	33 100	34 057	96 525	121 046	-24 521	9 536	19 762	6 366	13 396	-2 766
Apr	61 717	36 202	25 516	90 097	109 915	-19 818	5 698	22 235	5 892	16 344	-2 211
May	60 290	29 129	31 161	93 234	112 666	-19 432	11 729	21 843	5 825	16 018	-9 150
Jun	60 173	30 487	29 686	81 673	102 646	-20 972	8 714	21 293	4 791	16 502	-5 382
Jul	58 821	28 217	30 604	83 545	104 528	-20 982	9 622	21 841	5 621	16 220	-2 981
Aug	60 485	27 303	33 182	83 161	111 094	-27 933	5 249	21 370	6 375	14 995	-2 999

### 3. Rates of interest

#### 3.1 Money market rates and rates applied by the Bank of Finland, per cent

Average of daily observations	Interbank overnight rate	HELIBOR				Bank of Finland rates		
		1 month	3 months	6 months	12 months	Liquidity credit rate	Excess-reserve rate <sup>1</sup>	Base rate
		1	2	3	4	5	6	7
1993	7.71	7.85	7.73	7.59	7.47	8.95	4.95	6.85
1994	4.38	5.11	5.35	5.78	6.33	7.11	3.11	5.27
1995	5.26	5.63	5.76	5.97	6.34	7.63	3.63	5.20
1996	3.66	3.58	3.63	3.74	3.99	5.57	1.57	4.38
1997	2.87	3.10	3.23	3.41	3.69	5.07	1.07	4.00
1997								
Sep	3.06	3.15	3.31	3.52	3.89	5.14	1.14	4.00
Oct	2.75	3.29	3.57	3.91	4.26	5.25	1.25	4.00
Nov	2.90	3.35	3.65	4.00	4.32	5.25	1.25	4.00
Dec	3.20	3.31	3.60	3.87	4.18	5.25	1.25	4.00
1998								
Jan	2.80	3.30	3.48	3.63	3.86	5.25	1.25	4.00
Feb	3.18	3.29	3.42	3.56	3.74	5.25	1.25	4.00
Mar	3.10	3.36	3.47	3.58	3.76	5.31	1.31	4.00
Apr	3.30	3.50	3.63	3.75	3.93	5.40	1.40	4.00
May	3.20	3.57	3.75	3.86	4.04	5.40	1.40	4.00
Jun	3.48	3.54	3.73	3.83	3.99	5.40	1.40	4.00
Jul	3.51	3.51	3.67	3.76	3.92	5.40	1.40	4.00
Aug	3.56	3.51	3.61	3.70	3.83	5.40	1.40	4.00
Sep	2.95	3.50	3.54	3.59	3.66	5.40	1.40	4.00

<sup>1</sup> Call money deposit rate until 2 October 1995.

#### 3.2 The Bank of Finland's liquidity facility

The Bank of Finland's tender rate, %	Liquidity credit: interest rate margin, %-points	Liquidity credit: maturity, days	Call money deposits: interest rate margin, %-points	Excess-reserve rate		
1	2	3	4	5		
1993	7.87	1993	+2.00	7	-2.00	.
1994	5.11	1994	+2.00	7	-2.00	.
1995	5.63	1995	+2.00	7	.	2.25
1996	3.57	1996	+2.00	7	.	1.00
1997	3.07	1997	+2.00	1	.	1.25
1997		1997				
Sep	3.14	Sep	+2.00	7	.	1.25
Oct	3.25	Oct	+2.00	7	.	1.25
Nov	3.25	Nov	+2.00	1	.	1.25
Dec	3.25	Dec	+2.00	1	.	1.25
1998		1998				
Jan	3.25	Jan	+2.00	1	.	1.25
Feb	3.25	Feb	+2.00	1	.	1.25
Mar	3.31	Mar	+2.00	1	.	1.40
Apr	3.40	Apr	+2.00	1	.	1.40
May	3.40	May	+2.00	1	.	1.40
Jun	3.40	Jun	+2.00	1	.	1.40
Jul	3.40	Jul	+2.00	1	.	1.40
Aug	3.40	Aug	+2.00	1	.	1.40
Sep	3.40	Sep	+2.00	1	.	1.40
13.3.1996	3.75	13.3.1996				1.75
14.6.1996	3.60	14.6.1996				1.60
5.7.1996	3.50	5.7.1996				1.50
23.8.1996	3.25	23.8.1996				1.25
18.9.1996	3.10	18.9.1996				1.10
9.10.1996	3.00	9.10.1996				1.00
15.9.1997	3.25	15.9.1997				1.25
19.3.1998	3.40	19.3.1998				1.40

#### 3.3 Weighted Eurorates and commercial ECU interest rate, per cent

Average of daily observations	ECU	3 currencies	Commercial ECU
	3 months		
	1	2	3
1993	8.0	5.9	8.1
1994	5.9	5.2	6.1
1995	5.9	5.2	6.0
1996	4.4	4.3	4.4
1997	4.3	4.4	4.3
1997			
Sep	4.3	4.5	4.3
Oct	4.5	4.6	4.5
Nov	4.6	4.8	4.6
Dec	4.5	4.8	4.5
1998			
Jan	4.4	4.6	4.3
Feb	4.4	4.6	4.4
Mar	4.3	4.6	4.3
Apr	4.3	4.6	4.3
May	4.3	4.6	4.3
Jun	4.3	4.6	4.3
Jul	4.3	4.6	4.2
Aug	4.3	4.6	4.2
Sep	4.2	4.5	4.2

### 3.4 Rates of interest applied by banks, per cent

Average for period	Lending						Markka deposits and other markka funding					
	New credits				Average lending rate	Of which: Commercial banks	24-month tax-exempt deposits <sup>1</sup>	36-month tax-exempt deposits <sup>1</sup>	Other tax-exempt deposits, max. rate of interest <sup>1</sup>	Average rate of interest on deposits	Average rate of interest on other funding	Average rate of interest on markka funding
	Cheque account and postal giro credits	Bills of exchange	Loans	New lending, total								
	1	2	3	4	5	6	7	8	9	10	11	12
1993	9.69	13.55	9.40	9.75	10.20	9.92	3.50	4.50	2.00	4.78	8.86	6.15
1994	7.32	11.55	7.13	7.35	8.18	7.91	3.25	4.25	2.00	2.99	5.96	4.01
1995	7.85	11.33	7.30	7.46	8.04	7.75	2.75	3.75	2.00	3.13	6.29	4.08
1996	5.61	9.61	5.31	5.43	6.49	6.15	2.00	3.00	2.00	2.15	4.31	2.78
1997	4.83	9.66	4.73	4.81	5.64	5.29	.	.	2.00	1.47	..	..
1997												
Aug	4.17	9.77	4.75	4.80	5.54	5.18	2.00	.	2.00	1.42	..	..
Sep	4.99	9.42	4.69	4.77	5.57	5.22	2.00	.	2.00	1.42	..	..
Oct	4.08	9.70	4.95	4.97	5.61	5.27	2.00	.	2.00	1.44	..	..
Nov	6.06	9.52	4.98	5.08	5.67	5.35	2.00	.	2.00	1.43	..	..
Dec	6.07	9.21	4.74	4.83	5.74	5.43	.	.	2.00	1.44	..	..
1998												
Jan	4.54	9.58	4.75	4.80	5.71	5.41	.	.	2.00	1.44	..	..
Feb	5.43	9.26	4.75	4.84	5.71	5.40	.	.	2.00	1.43	..	..
Mar	5.91	9.23	4.74	4.83	5.60	5.34	.	.	2.00	1.37	..	..
Apr	5.81	9.21	4.82	4.89	5.60	5.34	.	.	2.00	1.37	..	..
May	6.28	9.09	4.91	4.98	5.60	5.34	.	.	2.00	1.35	..	..
Jun	6.00	9.12	4.86	4.93	5.61	5.36	.	.	2.00	1.37	..	..
Jul	5.46	9.32	4.73	4.79	5.61	5.36	.	.	2.00	1.37	..	..
Aug	5.94	9.22	4.83	4.90	5.58	5.32	.	.	2.00	1.37	..	..

<sup>1</sup> End of period.

### 3.5 Yields on bonds and shares, per cent

Period	Bonds				Shares
	Reference rates calculated by the Bank of Finland		Taxable government bonds		Share yield
	3 years	5 years	5 years	10 years	
	1	2	3	4	5
1993	8.5	8.9	8.2	8.8	1.2
1994	8.5	9.3	8.4	9.1	1.0
1995	8.2	8.9	7.9	8.8	2.4
1996	5.8	6.8	6.0	7.1	2.1
1997	5.0	5.7	4.9	6.0	2.0
1997					
Aug	5.0	5.7	4.9	5.9	2.0
Sep	5.2	5.8	4.9	5.8	2.0
Oct	5.3	5.9	5.1	5.7	1.9
Nov	5.4	5.9	5.1	5.8	2.0
Dec	5.2	5.8	4.8	5.6	2.0
1998					
Jan	5.0	5.5	4.6	5.3	1.8
Feb	4.9	5.4	4.5	5.2	2.0
Mar	4.9	5.4	4.4	5.0	2.5
Apr	4.9	5.4	4.5	5.0	2.4
May	4.9	5.5	4.6	5.1	2.4
Jun	4.9	5.4	4.5	5.0	2.5
Jul	4.8	5.2	4.6	4.9	2.5
Aug	4.6	4.9	4.4	4.7	2.9

## 4. Rates of exchange

### 4.1 Middle rates, FIM

Average of daily quotations	New York 1 USD	Montreal 1 CAD	London 1 GBP	Dublin 1 IEP	Stockholm 1 SEK	Oslo 1 NOK	Copenhagen 1 DKK	Reykjavik 1 ISK	Frankfurt am Main 1 DEM	Amsterdam 1 NLG	Brussels 1 BEF	Zurich 1 CHF
	1	2	3	4	5	6	7	8	9	10	11	12
1993	5.7189	4.434	8.582	8.371	0.7350	0.8059	0.8822	0.0846	3.4584	3.0787	0.1655	3.8706
1994	5.2184	3.824	7.982	7.799	0.6758	0.7393	0.8207	0.0745	3.2169	2.8684	0.1561	3.8179
1995	4.3658	3.181	6.891	6.999	0.6123	0.6889	0.7790	0.0674	3.0471	2.7202	0.1481	3.6941
1996	4.5905	3.367	7.164	7.345	0.6847	0.7111	0.7921	0.0689	3.0530	2.7247	0.1484	3.7211
1997	5.1944	3.753	8.506	7.871	0.6799	0.7339	0.7859	0.0732	2.9939	2.6603	0.1451	3.5785
1997												
Sep	5.3561	3.862	8.571	7.931	0.6954	0.7318	0.7862	0.0747	2.9932	2.6579	0.1450	3.6364
Oct	5.2695	3.803	8.595	7.730	0.6958	0.7444	0.7874	0.0737	2.9981	2.6613	0.1454	3.6278
Nov	5.2205	3.696	8.809	7.844	0.6902	0.7395	0.7916	0.0735	3.0130	2.6731	0.1461	3.7093
Dec	5.3714	3.768	8.925	7.830	0.6899	0.7413	0.7934	0.0749	3.0220	2.6817	0.1465	3.7327
1998												
Jan	5.4948	3.815	8.988	7.599	0.6858	0.7333	0.7946	0.0755	3.0268	2.6859	0.1467	3.7261
Feb	5.5022	3.835	9.018	7.573	0.6812	0.7282	0.7958	0.0760	3.0328	2.6908	0.1470	3.7570
Mar	5.5420	3.913	9.203	7.584	0.6956	0.7311	0.7962	0.0764	3.0348	2.6927	0.1471	3.7242
Apr	5.5063	3.854	9.205	7.651	0.7039	0.7312	0.7960	0.0764	3.0356	2.6957	0.1471	3.6565
May	5.3917	3.732	8.830	7.650	0.7009	0.7242	0.7975	0.0756	3.0391	2.6970	0.1473	3.6485
Jun	5.4430	3.717	8.973	7.659	0.6891	0.7192	0.7979	0.0763	3.0394	2.6966	0.1473	3.6460
Jul	5.4649	3.681	8.984	7.645	0.6841	0.7168	0.7977	0.0764	3.0396	2.6966	0.1474	3.6101
Aug	5.4365	3.548	8.879	7.636	0.6690	0.7053	0.7984	0.0758	3.0411	2.6967	0.1475	3.6388
Sep	5.1834	3.406	8.707	7.617	0.6562	0.6843	0.7991	0.0739	3.0437	2.6980	0.1475	3.6966

Average of daily quotations	Paris 1 FRF	Rome 1 ITL	Vienna 1 ATS	Lisbon 1 PTE	Madrid 1 ESP	Athens 1 GRD	Tallinn 1 EEK	Tokyo 1 JPY	Melbourne 1 AUD	Seoul 1 KRW	ECU Commercial 1 XEU	SDR 1 XDR
	13	14	15	16	17	18	19	20	21	22	23	24
1993	1.0096	0.00364	0.4916	0.0356	0.0451	0.025	0.4323	0.05168	3.885	.	6.685	7.98671
1994	0.9406	0.00324	0.4573	0.0314	0.0390	0.0215	0.4021	0.05106	3.814	.	6.175	7.46629
1995	0.8748	0.00268	0.4331	0.0291	0.0350	0.0189	0.3809	0.04663	3.238	.	5.644	6.61879
1996	0.8978	0.00298	0.4340	0.0298	0.0363	0.0191	0.3816	0.04225	3.593	.	5.751	6.66357
1997	0.8894	0.00305	0.4255	0.0296	0.0355	0.0190	0.3742	0.04303	3.859	.	5.864	7.14420
1997												
Sep	0.8904	0.00307	0.4254	0.0295	0.0355	0.0190	0.3741	0.04434	3.876	0.00589	5.872	7.28131
Oct	0.8936	0.00306	0.4260	0.0294	0.0355	0.0190	0.3748	0.04355	3.800	0.00569	5.891	7.21962
Nov	0.9000	0.00308	0.4281	0.0295	0.0357	0.0192	0.3766	0.04172	3.630	0.00507	5.961	7.17348
Dec	0.9028	0.00308	0.4295	0.0296	0.0357	0.0192	0.3777	0.04152	3.562	0.00368	5.980	7.27353
1998												
Jan	0.9038	0.00308	0.4303	0.0296	0.0357	0.0192	0.3784	0.04253	3.611	0.00325	5.978	7.38238
Feb	0.9048	0.00307	0.4311	0.0296	0.0358	0.0192	0.3791	0.04377	3.711	0.00340	5.989	7.42807
Mar	0.9053	0.00308	0.4314	0.0297	0.0358	0.0182	0.3794	0.04298	3.712	0.00373	6.018	7.44954
Apr	0.9055	0.00307	0.4315	0.0296	0.0357	0.0174	0.3794	0.04169	3.592	0.00397	6.017	7.39411
May	0.9063	0.00308	0.4319	0.0297	0.0358	0.0176	0.3799	0.03995	3.396	0.00385	5.986	7.24735
Jun	0.9066	0.00309	0.4320	0.0297	0.0358	0.0179	0.3799	0.03873	3.283	0.00390	6.003	7.25578
Jul	0.9067	0.00308	0.4321	0.0297	0.0358	0.0182	0.3799	0.03887	3.378	0.00423	6.007	7.27034
Aug	0.9071	0.00308	0.4322	0.0297	0.0358	0.0181	0.3802	0.03759	3.208	0.00414	5.998	7.21242
Sep	0.9077	0.00308	0.4325	0.0297	0.0358	0.0177	0.3805	0.03855	3.050	0.00378	5.986	7.07388

## 4.2 Markka value of the ECU and currency indices

Average of daily observations	Markka value of the ECU FIM/ECU	Currency indices, 1982=100	
		Trade-weighted currency index	Payments currency index
	1	2	3
1993	6.69420	132.4	136.0
1994	6.19108	123.2	125.5
1995	5.70936	111.6	111.6
1996	5.83028	115.3	115.8
1997	5.88125	118.4	122.6
1997			
Sep	5.89038	119.5	125.0
Oct	5.89974	119.4	124.2
Nov	5.94676	119.4	124.0
Dec	5.97130	119.5	125.8
1998			
Jan	5.98008	120.1	127.1
Feb	5.98982	120.4	127.3
Mar	6.00921	121.3	128.1
Apr	6.00867	121.2	127.7
May	5.98172	119.9	126.0
Jun	5.99629	119.6	126.4
Jul	5.99793	119.6	126.6
Aug	5.99022	118.6	125.8
Sep	5.97723	117.3	122.9

## 4.3 Deviations of ERM currencies' markka rates from central rates, per cent

Average of daily observations	ECU	DEM	FRF	NLG	DKK	BEF	ESP	ATS	PTE	IEP	ITL	GRD
Central rate as of												
16 Mar 1998	6.01125	3.04001	0.906420	2.69806	0.796976	0.147391	0.0357345	0.432094	0.0296571	7.54951	0.00307071	0.0168382
	1	2	3	4	5	6	7	8	9	10	11	12
1995	-1.69	0.23	-3.48	0.82	-2.25	0.49	-2.02	0.24	-1.84	-4.52	..	..
1996	0.30	0.43	-0.95	0.99	-0.61	0.65	1.49	0.44	0.40	0.21	-3.07	..
1997	0.46	-1.52	-1.88	-1.40	-1.39	-1.56	-0.78	-1.53	-0.12	7.38	-0.72	..
1997												
Sep	0.62	-1.54	-1.77	-1.49	-1.36	-1.62	-0.73	-1.56	-0.59	8.20	-0.11	..
Oct	0.78	-1.38	-1.41	-1.36	-1.20	-1.38	-0.63	-1.40	-0.75	5.47	-0.29	..
Nov	1.58	-0.89	-0.71	-0.92	-0.67	-0.89	-0.18	-0.92	-0.46	7.02	0.14	..
Dec	2.00	-0.59	-0.40	-0.61	-0.45	-0.62	0.03	-0.59	-0.26	6.83	0.40	..
1998												
Jan	2.15	-0.43	-0.28	-0.45	-0.29	-0.45	-0.07	-0.42	-0.21	3.68	0.16	..
Feb	2.32	-0.24	-0.18	-0.27	-0.15	-0.30	0.13	-0.24	-0.14	3.32	0.09	..
Mar	1.18	-0.17	-0.12	-0.20	-0.10	-0.19	0.17	-0.17	-0.01	1.81	0.36	..
Apr	-0.04	-0.15	-0.10	-0.09	-0.12	-0.18	0.02	-0.15	-0.14	1.35	0.06	3.46
May	-0.49	-0.03	-0.01	-0.04	0.07	-0.06	0.18	-0.04	0.13	1.33	0.30	4.31
Jun	-0.25	-0.02	0.02	-0.05	0.12	-0.04	0.17	-0.03	0.13	1.46	0.55	6.36
Jul	-0.22	-0.01	0.03	-0.06	0.09	0.00	0.20	0.00	0.12	1.26	0.39	8.32
Aug	-0.35	0.04	0.08	-0.05	0.17	0.04	0.21	0.03	0.18	1.15	0.30	7.30
Sep	-0.57	0.12	0.14	0.00	0.27	0.09	0.20	0.10	0.14	0.90	0.30	5.12

## 5. Financial markets and money supply

### 5.1 Bank funding from the public, mill. FIM

End of period	Tax-exempt				Subject to withholding tax			Other taxable			Markka deposits, total (4+7+10)	Foreign currency deposits	Other markka funding	Total funding (11+12+13)
	Cheque and trans- actions accounts	Time deposits	Other deposits	Total (1+2+3)	Cheque and trans- actions accounts	Other deposits	Total (5+6)	Cheque and trans- actions accounts	Other deposits	Total (8+9)				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1993	88 881	66 361	1 457	156 699	10 360	51 943	62 303	32 098	17 664	49 762	268 764	15 788	62 599	347 151
1994	96 796	63 329	1 895	162 021	9 467	47 908	57 375	37 279	18 739	56 018	275 414	13 332	58 067	346 813
1995	106 997	63 599	2 611	173 207	10 916	45 529	56 445	45 558	16 163	61 721	291 373	14 843	50 675	356 891
1996	132 113	29 672	27 140	188 926	10 746	25 207	35 953	48 329	10 438	58 767	283 646	12 495	55 046	351 187
1997*	140 891	46 976	19 119	206 985	7 883	14 446	22 329	52 472	9 293	61 765	291 079	12 272	74 141	377 491
1997*														
Aug	136 678	52 854	15 575	205 107	8 207	14 379	22 586	48 581	9 569	58 150	285 843	11 434	73 195	370 472
Sep	135 206	53 811	14 845	203 862	8 277	14 167	22 443	49 347	9 239	58 587	284 892	12 468	77 982	375 342
Oct	136 104	51 855	16 358	204 316	8 482	14 108	22 590	51 018	9 275	60 293	287 199	12 278	82 490	381 967
Nov	138 140	50 930	16 516	205 586	7 798	14 083	21 881	51 174	9 123	60 297	287 765	12 101	66 002	365 868
Dec	141 197	46 998	19 119	207 313	7 883	14 452	22 335	52 478	9 293	61 771	291 418	12 293	74 140	377 852
1998*														
Jan	142 456	48 794	18 294	209 544	7 817	14 155	21 972	51 564	9 591	61 155	292 671	11 571	74 295	378 537
Feb	141 697	48 569	18 784	209 049	6 456	13 734	20 190	49 261	9 480	58 741	287 981	10 982	74 473	373 436
Mar	140 679	48 734	19 424	208 837	6 422	13 491	19 913	54 335	9 497	63 832	292 582	10 297	76 224	379 102
Apr	142 089	48 617	20 140	210 846	6 424	13 509	19 934	51 679	9 544	61 223	292 003	10 579	70 349	372 931
May	143 063	48 457	20 840	212 360	6 498	13 208	19 706	52 620	9 694	62 315	294 381	11 421	80 936	386 738
Jun	142 581	48 242	21 236	212 058	6 214	13 253	19 467	55 707	9 627	65 334	296 859	10 330	68 855	376 044
Jul	142 891	49 193	20 509	212 593	6 190	13 192	19 382	53 053	9 699	62 752	294 727	11 838	65 501	372 066
Aug	142 424	49 180	20 813	212 418	6 115	12 933	19 047	54 823	9 576	64 400	295 865	10 754	61 281	367 900

### 5.2 Bank lending to the public, mill. FIM

End of period	Non-financial corporations	Financial and insurance institutions (excl. banks)	General government (excl. central government)	Non-profit institutions	Households	Foreign sector	Markka-lending, total (1+2+3+4+5+6)	Foreign currency lending	Total lending (7+8)
1993	83 285	9 304	4 036	12 802	171 540	103	281 070	69 819	350 889
1994	81 130	11 121	3 367	13 016	162 913	124	271 670	47 078	318 748
1995	78 601	13 045	2 918	12 645	155 990	253	263 452	33 124	296 575
1996	82 894	18 554	3 052	13 088	152 594	119	270 301	24 130	294 430
1997*	77 351	21 257	3 241	13 453	155 388	.	270 691	16 252	286 943
1997*									
Aug	78 637	19 006	2 976	13 467	154 484	.	268 570	16 802	285 371
Sep	78 597	19 613	3 071	13 617	155 003	.	269 900	16 378	286 278
Oct	78 392	20 566	3 055	13 573	155 567	.	271 151	18 314	289 465
Nov	76 557	21 218	3 215	13 709	156 005	.	270 703	16 928	287 630
Dec	77 351	21 257	3 241	13 453	155 391	.	270 693	16 246	286 939
1998*									
Jan	77 916	21 485	3 240	13 152	155 347	.	271 140	16 352	287 492
Feb	78 339	22 196	3 450	13 166	155 873	.	273 024	17 431	290 455
Mar	77 948	22 033	3 422	13 278	156 561	.	273 242	17 569	290 812
Apr	78 706	22 529	3 533	13 327	157 416	.	275 511	20 317	295 828
May	79 401	23 107	3 678	13 533	159 048	.	278 767	19 879	298 646
Jun	81 560	23 258	3 462	13 603	160 359	.	282 242	19 291	301 533
Jul	83 005	23 982	3 400	13 740	161 980	.	286 108	16 912	303 020
Aug	82 983	24 037	3 397	13 896	164 064	.	288 377	16 821	305 197



### 5.3 Money supply, mill. FIM

End of period	Foreign assets, net	Domestic credit			Other items, net	Monetary aggregates		
		Net claims on the central government	Claims on the public	Total (2+3)		M <sub>1</sub>	M <sub>2</sub> (1+4+5)	M <sub>3</sub>
	1	2	3	4	5	6	7	8
1993	-25 989	1 848	403 742	405 589	-100 006	141 759	279 595	322 408
1994	12 844	6 092	365 712	371 804	-97 953	154 357	286 696	328 509
1995	25 481	19 837	353 340	373 177	-94 870	175 921	303 788	329 820
1996	40 638	12 821	350 230	363 052	-106 399	204 834	297 291	325 473
1997*	69 620	12 184	339 143	351 327	-115 351	215 763	305 596	353 735
1997*								
Aug	72 388	5 162	339 432	344 594	-117 141	207 465	299 841	348 202
Sep	87 246	3 686	340 221	343 906	-132 758	206 332	298 394	350 813
Oct	83 239	5 621	342 934	348 555	-130 718	209 482	301 077	353 981
Nov	71 173	9 482	340 584	350 067	-119 399	211 188	301 841	345 743
Dec	69 620	12 184	339 143	351 327	-115 011	216 074	305 936	354 075
1998*								
Jan	66 191	11 714	339 957	351 671	-111 144	215 883	306 718	363 671
Feb	62 245	8 967	342 763	351 729	-111 978	211 429	301 996	356 204
Mar	56 528	15 201	342 135	357 337	-107 688	215 030	306 176	365 046
Apr	54 520	16 845	346 736	363 581	-111 758	214 532	306 343	361 023
May	65 054	11 399	349 423	360 821	-117 082	216 593	308 793	367 202
Jun	72 727	4 511	350 798	355 309	-117 019	218 659	311 017	356 391
Jul	65 153	12 163	351 671	363 834	-119 595	216 799	309 392	355 798
Aug	..	..	..	..	..	217 592	310 094	353 203

### 5.4 Liabilities and assets of the central government, mill. FIM

End of period	Foreign currency-denominated debt			Markka-denominated debt				Total (4+5+6+7)	Central government debt (3+8)	Out-standing lending	Cash funds
	Bonds	Other debt	Total (1+2)	Public bonds	Other long-term liabilities	Treasury notes and bills	Miscellaneous items				
	1	2	3	4	5	6	7	8	9	10	11
1993	142 824	12 753	155 577	71 082	16 060	22 824	-9 700	100 266	255 843	66 439	36 487
1994	160 587	15 975	176 562	93 008	17 100	33 153	-12 300	130 961	307 523	67 658	43 012
1995	158 545	13 756	172 301	143 948	17 492	37 864	-12 300	187 004	359 305	66 629	41 878
1996	158 847	16 161	175 008	177 700	17 187	37 620	-12 300	220 479	395 487	63 842	38 369
1997	142 717	25 839	168 556	214 876	16 545	30 388	-12 300	249 745	418 301	64 564	33 868
1997											
Sep	154 425	25 586	180 011	202 789	16 573	39 063	-12 300	246 332	426 343	66 004	48 389
Oct	154 826	25 462	180 288	204 172	16 573	34 599	-12 300	243 310	423 598	66 151	48 685
Nov	141 898	25 597	167 495	216 455	16 557	34 458	-12 300	255 396	422 891	65 837	42 539
Dec	142 717	25 839	168 556	214 876	16 545	30 388	-12 300	249 745	418 301	64 564	33 868
1998											
Jan	143 626	26 312	169 938	214 642	16 545	31 081	-12 300	250 164	420 102	64 989	..
Feb	143 776	26 265	170 041	217 195	16 545	25 712	-12 300	247 349	417 390	65 295	..
Mar	137 141	26 233	163 374	218 647	16 494	27 949	-12 300	250 987	414 361	65 924	..
Apr	132 022	25 735	157 757	220 246	16 310	24 755	-12 300	249 168	406 925	66 097	..
May	140 798	24 581	165 379	221 126	16 239	20 142	-12 417	245 318	410 697	65 937	..
Jun	141 919	24 942	166 861	231 777	15 651	20 489	-12 417	255 787	422 648	65 936	..
Jul	137 248	24 681	161 929	231 748	15 644	21 608	-12 417	256 910	418 839	66 265	..
Aug	137 754	24 766	162 520	238 147	15 644	23 396	-12 417	265 097	427 617	..	..
Sep	136 296	24 278	160 574	240 451	15 644	20 529	-12 417	264 523	425 097	..	..

## 5.5 Markka bond market

### A) Issues, mill. FIM

During period	Corporations	Financial institutions	Central government	Local government	Others	Total (1+2+3+4+5)
	1	2	3	4	5	6
1993	11 691	10 481	36 512	2 235	63	60 981
1994	4 053	9 899	31 553	593	–	46 099
1995	643	4 487	66 557	26	–	71 713
1996	3 213	9 074	62 139	20	–	74 447
1997*	2 383	7 041	57 165	–	–	66 589
1997*						
Aug	–	218	3 375	–	–	3 593
Sep	820	783	10 431	–	–	12 034
Oct	1	387	7 424	–	–	7 812
Nov	553	1 210	6 393	–	–	8 156
Dec	60	1 112	–	–	–	1 172
1998*						
Jan	–	714	14 651	–	–	15 365
Feb	401	1 763	4 032	–	–	6 196
Mar	491	825	6 505	–	–	7 821
Apr	1 001	875	3 392	–	–	5 268
May	220	877	2 430	–	–	3 528
Jun	422	376	10 842	–	–	11 640
Jul	–	10	–	–	–	10
Aug	–	400	6 492	–	–	6 892

### B) Stock, mill. FIM

End of period	By sector					By type of loan			Total (1+2+3+4+5) = (6+7+8)
	Corporations	Financial institutions	Central government	Local government	Others	Public issues		Private placings	
						Taxable	Taxfree		
	1	2	3	4	5	6	7	8	9
1993	32 459	73 893	73 682	6 884	2 009	119 552	10 391	58 984	188 927
1994	30 179	66 467	94 865	6 981	953	141 935	7 581	49 929	199 445
1995	26 480	55 223	145 177	5 814	357	186 799	5 034	41 218	233 051
1996	25 266	44 849	179 419	4 362	100	220 037	2 956	31 003	253 996
1997*	23 327	41 046	216 215	3 648	84	258 481	1 345	24 494	284 320
1997*									
Aug	23 103	40 512	193 780	3 924	91	233 700	1 663	26 047	261 410
Sep	23 844	40 656	204 128	3 918	90	245 241	1 477	25 918	272 636
Oct	23 433	40 545	211 426	3 910	88	252 212	1 366	25 824	279 402
Nov	23 709	41 138	217 794	3 860	86	259 724	1 349	25 514	286 587
Dec	23 327	41 046	216 215	3 648	84	258 481	1 345	24 494	284 320
1998*									
Jan	22 774	43 700	215 980	3 632	84	261 271	1 131	23 768	286 170
Feb	23 012	44 944	218 534	3 489	84	265 528	1 003	23 532	290 063
Mar	23 341	42 322	219 982	3 483	82	265 134	845	23 231	289 210
Apr	24 228	42 654	221 344	3 470	82	268 427	837	22 514	291 778
May	23 838	43 282	222 225	3 470	81	270 136	743	22 017	292 896
Jun	21 591	42 002	232 875	3 464	80	279 616	736	19 660	300 012
Jul	21 153	41 961	232 847	3 464	80	279 581	734	19 190	299 505
Aug	21 098	42 074	239 246	3 446	80	286 282	656	19 006	305 944

### C) Turnover, mill. FIM

During period	Primary dealers' transactions in benchmark government bonds		
	Purchases from other primary dealers	Purchases from customers	Sales to customers
	1	2	3
1993	42 945	95 647	117 489
1994	173 096	150 908	176 647
1995	133 357	190 069	215 879
1996	201 528	222 584	242 310
1997	258 634	264 994	291 056
1997			
Sep	28 032	34 507	37 825
Oct	40 705	33 503	31 670
Nov	17 106	19 655	19 411
Dec	21 198	16 515	16 656
1998			
Jan	22 397	23 508	25 746
Feb	12 826	15 971	16 099
Mar	17 211	22 000	23 870
Apr	14 448	15 315	18 415
May	12 010	14 332	14 337
Jun	11 048	10 520	12 932
Jul	14 767	16 204	16 980
Aug	39 894	28 539	32 104
Sep	62 286	33 882	30 915

### 5.6 Helsinki Stock Exchange

Average of daily observations	Share prices										Turnover <sup>1</sup> , mill. FIM		
	HEX index (28 Dec 1990=1000)										Shares and subscriptions rights	Bonds and debentures	Total
	All-share index	Banks and finance	Insurance	Trade	Construction	Forest industries	Metal and engineering	Telecommunications and electronics	Chemicals	Conglomerates			
1	2	3	4	5	6	7	8	9	10	11	12	13	
1993	1 240	608	644	-	-	1 695	1 749	-	-	1 751	46 337	59 977	106 314
1994	1 847	719	802	-	-	2 284	2 675	-	-	3 068	68 671	2 147	70 818
1995	1 918	500	638	-	-	2 062	2 255	-	-	4 251	83 019	1 075	84 094
1996	2 032	460	820	-	-	2 040	2 564	-	-	5 681	101 265	541	101 806
1997	3 207	822	1 576	2 255	1 006	2 712	3 408	1 416	900	7 477	186 088	488	186 576
1997													
Sep	3 480	883	1 627	2 209	989	3 001	3 543	1 662	885	7 445	15 719	43	15 762
Oct	3 733	1 016	1 921	2 268	994	3 204	3 607	1 833	926	7 689	24 739	33	24 772
Nov	3 448	1 022	1 925	2 279	946	2 737	3 231	1 631	901	7 593	15 163	27	15 190
Dec	3 303	1 080	2 105	2 370	926	2 508	3 065	1 449	900	7 757	17 764	53	17 817
1998													
Jan	3 430	1 136	2 128	2 526	956	2 589	3 045	1 499	933	8 324	15 485	53	15 538
Feb	3 851	1 190	2 418	2 639	1 005	2 886	3 167	1 804	988	9 848	20 050	43	20 093
Mar	4 249	1 270	2 570	2 759	1 009	3 278	3 393	2 085	1 054	10 813	24 260	173	24 433
Apr	4 705	1 393	2 957	2 876	1 073	3 460	3 506	2 450	1 135	11 614	25 985	38	26 023
May	4 925	1 344	3 024	2 832	1 145	3 673	3 748	2 632	1 121	11 547	18 303	21	18 324
Jun	4 823	1 335	2 838	2 825	1 208	3 427	3 642	2 624	1 113	10 804	27 508	10	27 518
Jul	5 317	1 430	3 263	2 741	1 145	3 293	3 662	3 272	1 112	10 979	27 302	11	27 313
Aug	4 880	1 239	2 733	2 582	1 020	2 767	3 281	3 117	1 110	10 004	22 544	8	22 552
Sep	4 265	1 003	1 959	2 266	816	2 544	2 693	2 891	879	7 975	24 911	8	24 919

<sup>1</sup> During period.

## 6. Balance of payments, foreign assets and liabilities

### 6.1 Current account, mill. FIM

During period	Exports of goods, fob	Transport receipts	Travel receipts	Other services receipts	Services receipts, total (2+3+4)	Exports of goods and services (1+5)	Investment income	Transfers and other income	Current account receipts (6+7+8)	Imports of goods, cif	Transport expenditure	Travel expenditure	Other services expenditure
	1	2	3	4	5	6	7	8	9	10	11	12	13
1993	132 550	10 430	7 079	9 379	26 888	159 438	6 137	6 506	172 080	101 559	5 646	9 237	17 008
1994	152 022	11 385	7 314	11 808	30 508	182 530	9 617	4 919	197 067	118 684	5 862	8 697	16 800
1995	172 820	11 900	7 536	14 986	34 422	207 242	12 929	8 596	228 767	125 450	6 029	10 450	19 150
1996*	182 436	12 400	8 778	15 315	36 492	218 928	15 375	7 698	242 002	138 110	5 545	10 979	16 921
1997*	208 765	13 145	10 172	15 597	38 913	247 678	20 251	8 707	276 636	157 170	6 423	11 762	17 277
1996*													
I	42 631	2 995	2 037	3 473	8 505	51 136	4 242	1 446	56 824	33 496	1 386	2 720	4 299
II	48 126	3 127	2 233	3 729	9 089	57 215	4 511	2 076	63 802	34 520	1 371	2 783	4 088
III	41 925	3 251	2 425	4 158	9 833	51 758	3 110	1 339	56 206	31 990	1 406	2 676	3 997
IV	49 754	3 026	2 084	3 955	9 066	58 820	3 512	2 837	65 169	38 102	1 382	2 801	4 540
1997*													
I	46 239	3 216	2 000	3 274	8 490	54 728	4 311	1 913	60 953	35 832	1 548	2 536	4 282
II	52 517	3 296	2 570	4 040	9 905	62 422	5 842	2 087	70 352	39 597	1 655	3 025	4 348
III	52 522	3 297	3 021	4 052	10 370	62 892	4 756	1 652	69 301	38 483	1 627	3 015	3 997
IV	57 487	3 336	2 581	4 231	10 148	67 635	5 341	3 055	76 031	43 258	1 593	3 186	4 650
1998*													
I	57 304	3 576	2 853	3 964	10 393	67 697	4 850	2 035	74 581	42 707	1 689	2 927	4 608
II	57 461	3 593	2 420	3 761	9 774	67 235	6 113	1 689	75 036	41 872	1 826	2 944	4 673

During period	Services expenditure, total (11+12 +13)	Imports of goods and services (10+14)	Investment expenditure	Transfers and other expenditure	Current account expenditure (15+16 +17)	Trade account (1-10)	Transport (2-11)	Travel (3-12)	Other services (4-13)	Services account (20+21 +22)	Goods and services account (19+23)	Investment income, net (7-16)	Transfers and others, net (8-17)	Current account (24+25 +26)= (9-18)
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
1993	31 891	133 450	34 580	10 390	178 421	30 991	4 784	-2 159	-7 629	-5 004	25 988	-28 443	-3 885	-6 340
1994	31 359	150 043	31 801	8 596	190 440	33 339	5 523	-1 382	-4 992	-851	32 487	-22 184	-3 676	6 627
1995	35 629	161 080	32 529	12 627	206 237	47 370	5 870	-2 914	-4 164	-1 207	46 162	-19 600	-4 032	22 531
1996*	33 444	171 554	32 900	14 520	218 974	44 326	6 855	-2 201	-1 606	3 048	47 374	-17 525	-6 821	23 027
1997*	35 462	192 632	34 767	15 154	242 553	51 595	6 722	-1 591	-1 680	3 451	55 046	-14 516	-6 447	34 083
1996*														
I	8 405	41 902	8 529	4 010	54 441	9 135	1 609	-683	-827	99	9 234	-4 287	-2 563	2 384
II	8 241	42 762	10 773	3 862	57 396	13 606	1 756	-550	-358	848	14 453	-6 262	-1 786	6 406
III	8 075	40 066	6 556	3 055	49 677	9 935	1 845	-251	164	1 758	11 692	-3 447	-1 716	6 529
IV	8 723	46 825	7 042	3 593	57 460	11 652	1 645	-717	-585	343	11 994	-3 530	-756	7 709
1997*														
I	8 366	44 198	8 627	4 497	57 323	10 407	1 667	-536	-1 008	123	10 530	-4 316	-2 584	3 630
II	9 028	48 625	11 105	3 283	63 012	12 920	1 640	-455	-308	877	13 798	-5 262	-1 195	7 340
III	8 639	47 122	7 389	3 788	58 299	14 039	1 670	5	55	1 730	15 770	-2 633	-2 135	11 002
IV	9 429	52 687	7 645	3 587	63 919	14 229	1 744	-605	-419	720	14 949	-2 304	-532	12 112
1998*														
I	9 224	51 931	10 001	4 794	66 726	14 597	1 887	-74	-644	1 169	15 766	-5 151	-2 760	7 855
II	9 444	51 315	13 099	3 514	67 928	15 589	1 767	-524	-912	331	15 920	-6 986	-1 825	7 108

## 6.2 Capital and financial account, mill. FIM

During period	Capital account, imports of capital	Financial account											Total (2+8+12)
		Direct investment in Finland	Portfolio investment in Finland					Other investment in Finland					
			Shares	Bonds	Of which: markka-denominated bonds	Money market instruments	Financial derivatives	Total (3+4+6+7)	Trade credits	Loans	Other capital	Total (9+10+11)	
1	2	3	4	5	6	7	8	9	10	11	12	13	
1993	0	4 945	12 748	30 353	3 616	-4 382	..	38 719	4 467	5 457	-29 801	-19 877	23 787
1994	0	8 240	13 400	21 977	-5 783	-2 134	59	33 302	3 107	647	-1 392	2 361	43 903
1995	487	4 642	8 734	-17 868	-3 634	1 421	2 588	-5 125	-1 216	-6 985	8 376	176	-307
1996*	596	5 093	8 937	-4 624	6 250	1 016	1 501	6 830	-3 383	12 737	187	9 540	21 463
1997*	1 296	8 709	20 774	-4 259	17 137	2 776	616	19 907	-632	10 533	6 315	16 217	44 832
1996*													
I	0	1 759	1 216	2 635	1 155	502	1 119	5 472	-3 416	4 632	-552	665	7 895
II	0	486	6 143	-5 184	2 516	363	754	2 076	-735	4 717	-3 119	863	3 425
III	0	2 522	374	-4 841	277	-254	-180	-4 902	-42	2 516	6 484	8 957	6 576
IV	596	326	1 204	2 766	2 303	406	-192	4 185	809	872	-2 627	-945	3 566
1997*													
I	0	2 512	5 121	4 126	952	2 197	-94	11 349	-822	6 608	16 464	22 250	36 111
II	450	2 744	7 579	5 234	9 562	-1 751	28	11 091	-1 731	3 193	-7 150	-5 688	8 147
III	0	722	3 460	2 790	9 959	-2 252	438	4 435	867	5 016	3 438	9 322	14 479
IV	846	2 731	4 614	-16 410	-3 336	4 582	245	-6 969	1 052	-4 283	-6 437	-9 667	-13 905
1998*													
I	66	2 905	5 064	-8 943	1 095	-2 752	-226	-6 857	492	475	4 926	5 893	1 942
II	4	50 481	9 663	12 112	6 644	-1 819	-851	19 104	-730	833	-5 023	-4 920	64 665

During period	Capital account, exports of capital	Financial account											Errors and omissions	
		Direct investment abroad	Portfolio investment abroad					Other investment abroad				Total (15+20+24)		Change in central bank's reserve assets (increase -)
			Shares	Bonds	Money market instruments	Financial derivatives	Total (16+17+18+19)	Trade credits	Loans	Other capital	Total (21+22+23)			
14	15	16	17	18	19	20	21	22	23	24	25	26	27	
1993	0	8 050	873	767	1 932	..	3 571	1 923	-839	9 576	10 660	22 282	-1 219	6 055
1994	0	22 447	434	-4 294	-855	-279	-4 994	1 213	-7 460	9 762	3 516	20 968	-25 504	-4 058
1995	206	6 539	892	3 685	-5 492	-168	-1 084	3 839	-2 712	11 750	12 877	18 332	1 480	-5 652
1996*	340	16 516	3 386	15 455	364	-172	19 033	982	4 523	15 945	21 449	56 999	14 075	-1 822
1997*	0	25 579	8 764	15 116	-628	371	23 624	3 917	6 761	2 985	13 663	62 866	-10 788	-6 558
1996*														
I	61	5 508	567	4 019	2 424	-26	6 983	-670	2 416	6 458	8 205	20 696	7 254	3 224
II	0	6 798	1 041	3 041	162	71	4 315	779	-2 064	4 834	3 549	14 662	8 457	-3 626
III	0	3 793	728	4 179	-2 457	-51	2 399	-792	1 565	1 945	2 718	8 910	-1 132	-3 065
IV	279	417	1 050	4 216	235	-166	5 336	1 665	2 606	2 708	6 979	12 731	-505	1 645
1997*														
I	0	3 022	1 791	6 595	4 286	13	12 685	918	3 244	-3 360	802	16 509	-22 134	-1 098
II	0	7 013	2 420	5 264	-2 783	275	5 176	189	1 127	7 390	8 706	20 895	3 031	1 928
III	0	4 226	1 603	541	-2 975	52	-778	966	14 562	4 869	20 397	23 845	-2 968	1 332
IV	0	11 318	2 951	2 716	844	31	6 541	1 844	-12 172	-5 914	-16 242	1 617	11 283	-8 720
1998*														
I	0	12 553	2 632	1 447	-1 101	-199	2 779	1 282	5 903	-8 304	-1 119	14 213	7 878	-3 527
II	0	55 883	2 420	1 497	-143	-36	3 738	457	-3 565	1 734	-1 373	58 248	-8 330	-5 200

### 6.3 Finland's international investment position, mill. FIM

Position at end of period	Assets											Total assets (1+6+11)
	Direct investment abroad	Portfolio investment					Other investment					
		Shares	Bonds	Money market instruments	Financial derivatives	Total (2+3+4+5)	Trade credits	Loans	Currency and deposits	Other	Total (7+8+9+10)	
1	2	3	4	5	6	7	8	9	10	11	12	
1993	53 090	1 783	10 709	11 030	447	23 968	26 256	35 981	5 799	91 127	159 162	236 221
1994	59 451	1 984	5 109	9 115	488	16 696	25 500	24 847	8 257	109 847	168 451	244 598
1995	65 350	3 216	9 619	2 736	177	15 748	28 358	20 381	7 290	115 543	171 571	252 669
1996*	82 038	7 260	25 077	3 478	-21	35 793	29 929	25 438	5 895	124 541	185 803	303 634
1997*	112 916	17 542	42 386	3 222	1 404	64 554	30 357	34 228	6 949	148 881	220 415	397 884
1996*												
I	73 551	3 984	14 063	5 670	169	23 886	27 980	23 594	5 435	121 308	178 317	275 754
II	79 164	4 999	16 834	5 842	93	27 768	28 892	21 499	5 523	118 075	173 989	280 922
III	81 377	5 835	20 620	3 176	48	29 679	27 902	22 873	6 488	119 349	176 612	287 668
IV	82 038	7 260	25 077	3 478	-21	35 793	29 929	25 438	5 895	124 541	185 803	303 634
1997*												
I	85 993	9 701	32 595	7 672	171	50 139	26 391	29 406	5 732	147 414	208 942	345 074
II	94 939	13 148	39 010	5 156	610	57 924	26 976	31 175	6 689	155 502	220 341	373 204
III	100 481	15 188	39 750	2 316	813	58 066	28 097	45 983	5 149	165 778	245 007	403 554
IV	112 916	17 542	42 386	3 222	1 404	64 554	30 357	34 228	6 949	148 881	220 415	397 884
1998*												
I	127 197	22 787	45 240	2 182	1 381	71 589	32 070	40 318	7 585	134 721	214 694	413 481
II	146 313	24 816	45 971	2 014	1 452	74 253	32 337	36 783	6 707	143 826	219 653	440 218

Position at end of period	Liabilities												Total liabilities (13+19+24)
	Direct investment in Finland	Portfolio investment					Other investment						
		Shares	Bonds	Of which: markka-denominated bonds	Money market instruments	Financial derivatives	Total (14+15+17+18)	Trade credits	Loans	Currency and deposits	Other	Total (20+21+22+23)	
13	14	15	16	17	18	19	20	21	22	23	24	25	
1993	24 391	30 375	266 269	27 402	14 995	-6 103	305 536	18 206	90 825	4 025	54 188	167 243	497 170
1994	31 846	60 558	258 823	22 285	10 309	-5 179	324 511	19 852	82 649	3 430	46 566	152 498	508 855
1995	36 894	63 746	228 676	19 638	10 099	1 545	304 066	18 540	69 249	2 568	53 557	143 914	484 874
1996*	40 854	108 932	229 919	26 284	10 888	3 358	353 097	14 863	83 295	1 733	55 279	155 170	549 120
1997*	49 705	172 393	243 731	45 169	14 110	5 401	435 635	14 027	98 073	2 760	64 258	179 118	664 459
1996*													
I	38 422	68 674	241 085	20 699	11 192	2 195	323 146	14 873	77 934	1 518	55 412	149 737	511 305
II	38 616	80 962	234 317	23 855	11 126	2 833	329 239	14 214	81 836	1 939	51 588	149 577	517 431
III	40 808	91 198	225 308	23 656	11 286	2 651	330 443	13 940	82 365	1 742	57 734	155 781	527 032
IV	40 854	108 932	229 919	26 284	10 888	3 358	353 097	14 863	83 295	1 733	55 279	155 170	549 120
1997*													
I	43 361	129 824	240 590	27 538	13 258	2 451	386 123	13 794	90 723	2 624	72 506	179 647	609 131
II	46 141	162 713	254 004	37 495	11 813	696	429 226	12 092	97 073	2 870	66 344	178 379	653 747
III	46 860	201 959	257 986	47 881	9 267	2 312	471 524	12 978	102 146	2 737	69 899	187 761	706 145
IV	49 705	172 393	243 731	45 169	14 110	5 401	435 635	14 027	98 073	2 760	64 258	179 118	664 459
1998*													
I	52 625	246 199	239 267	46 407	11 033	5 024	501 523	14 496	99 936	3 097	69 817	187 347	741 495
II	71 219	319 437	246 865	52 648	9 552	5 476	581 330	13 769	99 493	3 034	64 257	180 554	833 102

6.4 Finland's net international investment position (assets less liabilities)<sup>1</sup>, by sector, mill. FIM

Position at end of period	Corporate sector	Households and nonprofit institutions	Banks	Bank of Finland	Other financial institutions	Central government	Local government	Net (1+2+3+4+5+6+7)	Net interest and dividend expenditure	Net interest and dividend expenditure in relation to current account receipts, %
	1	2	3	4	5	6	7	8	9	10
1993	-54 315	3 436	-45 658	33 279	-29 737	-164 892	-3 062	-260 949	21 897	12.7
1994	-82 428	3 503	-33 800	52 606	-21 931	-179 113	-3 093	-264 257	20 296	10.3
1995	-72 374	2 293	-18 970	47 708	-13 297	-174 481	-3 085	-232 205	17 490	7.6
1996*	-107 386	1 409	12 904	35 522	-1 785	-183 703	-2 448	-245 486	16 477	6.8
1997*	-152 238	2 670	11 136	50 931	11 327	-187 896	-2 503	-266 574	16 116	5.8
1996*										
I	-75 341	2 643	-4 613	42 679	-9 630	-188 118	-3 169	-235 550	4 025	7.1
II	-83 471	2 736	4 569	33 647	-5 689	-185 184	-3 118	-236 510	6 000	9.4
III	-92 233	1 219	3 932	34 482	-1 893	-182 336	-2 535	-239 364	3 185	5.7
IV	-107 386	1 409	12 904	35 522	-1 785	-183 703	-2 448	-245 486	3 268	5.0
1997*										
I	-130 453	1 709	-6 310	59 120	3 277	-189 002	-2 396	-264 056	4 716	7.7
II	-159 014	1 862	11 161	58 737	8 058	-198 950	-2 396	-280 543	5 662	8.0
III	-191 202	2 417	20 471	61 333	9 492	-202 647	-2 456	-302 591	3 033	4.4
IV	-152 238	2 670	11 136	50 931	11 327	-187 896	-2 503	-266 574	2 704	3.6
1998*										
I	-208 537	2 986	1 485	44 268	13 953	-179 872	-2 297	-328 014	3 464	4.6
II	-277 565	3 424	5 351	51 524	16 773	-190 010	-2 380	-392 884	8 971	12.0

<sup>1</sup> Finland's net international investment position (NIIP) is expressed as external assets less external liabilities.

## 7. Foreign trade

### 7.1 Exports, imports and the trade balance, mill. FIM

During period	Exports, fob	Imports, cif	Balance (1-2)
	1	2	3
1993	134 114	103 165	30 949
1994	154 164	120 612	33 552
1995	176 021	128 556	47 465
1996	186 336	141 720	44 616
1997*	211 696	159 190	52 506
1997*			
Jul	18 121	12 324	5 797
Aug	16 455	12 254	4 201
Sep	18 964	14 857	4 107
Oct	20 811	15 272	5 539
Nov	19 630	14 142	5 488
Dec	18 055	14 795	3 260
1998*			
Jan	17 917	13 254	4 664
Feb	20 220	13 983	6 238
Mar	20 294	16 534	3 761
Apr	20 704	14 636	6 069
May	18 544	14 680	3 865
Jun	19 320	13 615	5 706
Jul	18 300	13 300	5 000

### 7.2 Foreign trade: indices of volume, prices and terms of trade, 1990=100

Period	Volume (seasonally adjusted)		Prices		Terms of trade
	Exports	Imports	Exports	Imports	
	1	2	3	4	5
1993	120.6	83.6	109.7	119.6	91.7
1994	136.5	98.0	111.4	119.3	93.3
1995	145.7	104.6	119.2	119.2	100.0
1996	153.1	113.5	120.2	121.1	99.3
1997*	177.4	126.1	117.7	122.4	96.2
1997*					
Jul	190.4	126.3	117.2	123.6	94.8
Aug	176.9	122.9	118.5	123.5	96.0
Sep	188.4	139.1	118.7	123.3	96.3
Oct	194.4	136.0	120.7	123.8	97.5
Nov	182.7	129.7	120.1	123.2	97.5
Dec	179.9	136.2	120.7	122.5	98.5
1998*					
Jan	184.5	135.4	120.2	121.4	99.0
Feb	202.5	138.8	120.4	120.7	99.8
Mar	196.5	150.8	120.1	120.2	99.9
Apr	198.6	136.2	118.9	120.7	98.5
May	183.5	140.2	119.0	120.3	98.9
Jun	192.1	136.8	118.8	118.5	100.3
Jul	190.6	140.9	118.4	118.3	100.1

### 7.3 Foreign trade by main groups, mill. FIM

During period	Exports by industries, fob					Imports by use of goods, cif				
	Wood industry products	Paper industry products	Chemical industry products	Metal and engineering industry products	Other goods	Raw materials (excl. crude oil)	Crude oil, fuels and lubricants	Finished goods		Other goods
								Investment goods	Consumer goods	
	1	2	3	4	5	6	7	8	9	10
1993	10 910	37 430	14 205	48 158	23 411	54 792	10 904	15 396	21 066	1 007
1994	14 198	41 249	15 725	55 895	27 097	66 156	11 687	17 227	24 684	858
1995	13 451	48 754	15 877	69 336	28 603	71 397	9 685	19 660	25 514	2 300
1996	12 688	44 602	18 482	78 969	31 595	72 970	12 944	22 004	30 897	2 905
1997*	15 423	49 674	20 743	91 757	34 099	84 129	12 886	23 904	34 899	3 372
1997*										
Jun	1 301	3 726	1 709	7 672	2 875	7 394	1 065	1 965	2 650	283
Jul	1 063	4 303	1 672	8 606	2 477	6 416	1 151	1 750	2 817	190
Aug	934	4 333	1 741	6 752	2 695	6 896	767	1 732	2 662	197
Sep	1 456	4 437	1 700	8 197	3 174	7 696	1 061	2 326	3 192	582
Oct	1 673	4 846	2 024	8 980	3 288	7 865	1 350	2 486	3 394	177
Nov	1 398	4 285	1 907	9 029	3 011	7 530	1 140	2 321	2 921	230
Dec	1 268	4 299	1 695	8 087	2 706	7 167	1 540	2 613	3 087	388
1998*										
Jan	1 155	4 601	1 770	7 447	2 944	6 810	1 269	2 093	2 877	205
Feb	1 274	4 526	1 599	9 966	2 855	7 613	801	2 036	3 297	236
Mar	1 414	4 936	1 946	8 803	3 195	9 034	829	2 787	3 610	274
Apr	1 404	4 952	2 046	9 398	2 904	7 836	870	2 288	3 317	325
May	1 405	4 760	1 783	7 802	2 794	8 057	1 146	2 264	2 926	287
Jun	1 390	4 374	1 908	8 711	2 937	7 377	565	2 365	3 049	259



## 7.4 Foreign trade by regions and countries

Region and country	Exports, fob				Imports, cif			
	1997*		Jul 1997 – Jun 1998		1997*		Jul 1997 – Jun 1998	
	Mill. FIM	Percentage share	Mill. FIM	12-month change calculated from 12-month moving total	Mill. FIM	Percentage share	Mill. FIM	12-month change calculated from 12-month moving total
	1	2	3	4	5	6	7	8
<b>European Union<sup>1</sup></b>	113 179	53.2	122 379	15.7	95 415	59.3	101 180	13.7
Austria	2 006	0.9	2 431	33.8	1 695	1.1	1 761	11.7
Belgium and Luxembourg	4 920	2.3	5 423	15.2	4 056	2.5	4 339	5.2
Denmark	6 544	3.1	6 518	7.5	5 469	3.4	5 918	15.6
France	9 020	4.2	10 649	28.0	7 749	4.8	8 609	25.2
Germany	23 440	11.0	25 533	15.9	23 400	14.5	25 052	13.5
Greece	1 245	0.6	2 326	122.1	399	0.2	348	-4.7
Ireland	1 745	0.8	1 791	33.1	1 455	0.9	1 588	31.9
Italy	6 334	3.0	7 586	35.0	6 471	4.0	7 152	20.0
Netherlands	8 769	4.1	9 269	14.1	6 478	4.0	7 171	29.4
Portugal	1 200	0.6	1 317	29.1	1 225	0.8	1 125	-0.1
Spain	4 626	2.2	5 246	20.1	2 273	1.4	2 706	28.1
Sweden	20 926	9.8	21 390	5.2	19 470	12.1	20 328	14.2
United Kingdom	21 313	10.0	21 761	9.3	12 589	7.8	12 481	-1.1
<b>Rest of Europe</b>	42 868	20.1	47 641	30.2	27 681	17.2	28 538	9.3
Of which:								
Estonia	6 759	3.2	7 415	28.9	2 189	1.4	2 402	26.9
Norway	6 230	2.9	7 032	28.0	5 905	3.7	6 295	4.0
Poland	3 774	1.8	3 923	12.8	1 797	1.1	1 685	6.5
Russia	15 529	7.3	17 282	39.0	12 532	7.8	12 457	6.6
Switzerland	2 086	1.0	2 323	16.8	2 673	1.7	2 745	8.2
<b>Non-European industrialized countries<sup>2</sup></b>	23 933	11.2	26 105	19.7	22 559	14.0	24 856	23.6
Of which:								
Australia	2 677	1.3	2 447	3.1	1 020	0.6	1 094	-6.3
Japan	4 033	1.9	3 863	-11.1	8 596	5.3	9 314	21.8
U.S.A.	14 783	6.9	17 391	29.3	11 807	7.3	13 332	28.8
<b>Dynamic Asian economies<sup>3</sup></b>	16 782	7.9	16 659	12.0	7 322	4.5	7 959	16.8
Of which:								
China	3 807	1.8	5 547	76.7	2 868	1.8	3 005	23.5
Hong Kong	3 957	1.9	4 234	38.3	635	0.4	801	13.5
South Korea	2 459	1.2	1 942	-27.8	706	0.4	830	7.5
<b>Other countries</b>	16 080	7.6	16 254	5.4	8 020	5.0	7 810	8.1
<b>Total</b>	212 841	100.0	229 037	17.8	160 996	100.0	170 344	14.1
Of which:								
Africa	3 339	1.6	3 822	46.4	1 379	0.9	1 391	34.9
Asia	29 947	14.1	28 363	-1.5	18 899	11.7	19 874	14.7
Central and South America	3 569	1.7	4 342	80.0	3 517	2.2	3 511	31.9
North America	16 839	7.9	19 421	31.5	12 861	8.0	14 342	27.6
Europe	156 047	73.3	170 020	19.5	123 096	76.5	129 719	12.7
Oceania	3 100	1.5	2 858	5.0	1 242	0.8	1 286	-11.2

<sup>1</sup> Including exports / imports to EU unspecified by country.

<sup>2</sup> Australia, Canada, Japan, New Zealand, United States.

<sup>3</sup> China, Hong Kong, Malaysia, Singapore, South Korea, Taiwan, Thailand.

## 8. Domestic economic developments

### 8.1 Supply and use of resources, mill. FIM, 1990 prices (seasonally adjusted figures)

Period	Consumption expenditure		Fixed investment		Change in stocks, incl. statistical discrepancy	Domestic demand (1+2+3+4+5)	Exports	Imports	GDP (6+7-8)
	Private	Public	Private	Public					
	1	2	3	4	5	6	7	8	9
1993	240 177	103 028	60 638	13 890	10 221	427 954	142 459	113 842	456 571
1994	244 761	102 728	60 543	14 107	22 236	444 375	161 376	128 411	477 340
1995	255 968	104 645	69 718	13 338	20 568	464 237	174 580	137 327	501 490
1996	264 872	108 197	74 721	14 827	14 956	477 573	185 360	143 611	519 322
1997	273 700	108 995	84 629	15 822	16 903	500 049	209 172	158 689	550 532
1996									
I	65 886	26 706	18 315	3 582	5 294	119 783	44 040	36 200	127 623
II	65 504	27 028	18 168	3 667	2 371	116 738	46 209	35 048	127 899
III	66 267	27 153	19 090	3 778	3 709	119 997	46 309	35 322	130 984
IV	67 215	27 310	19 148	3 800	3 582	121 055	48 802	37 041	132 816
1997									
I	67 501	26 913	19 172	3 847	4 347	121 780	48 703	37 413	133 070
II	67 883	27 233	21 049	4 063	5 312	125 540	51 427	39 762	137 205
III	68 692	27 398	22 077	4 007	3 096	125 270	54 718	40 659	139 329
IV	69 624	27 451	22 331	3 905	4 148	127 459	54 324	40 855	140 928
1998*									
I	69 732	27 393	22 010	3 709	4 850	127 694	58 280	43 715	142 259
II	70 819	27 639	22 506	3 946	6 792	131 702	54 260	42 190	143 772

### 8.2 Volume of industrial production, 1995=100 (seasonally adjusted figures)

Period	Total industry	Mining and quarrying	Manu- facturing	Wood and paper industry (23.5)	Metal industry (36.2)	Other manu- facturing (30.3)	Energy
	(100.0)	(1.1)	(90.0)				(8.9)
	1	2	3	4	5	6	7
1993	84.9	90.2	83.7	89.2	72.6	92.5	96.0
1994	94.2	102.0	93.4	99.5	85.1	98.4	101.6
1995	100.1	99.3	100.1	100.0	100.2	100.0	100.0
1996	103.8	100.7	103.3	97.0	107.4	103.5	109.1
1997*	113.2	123.5	113.5	110.9	120.0	107.2	109.0
1997*							
Jul	117.0	140.7	117.1	112.8	124.7	109.8	109.1
Aug	114.0	92.2	114.8	113.2	121.7	107.2	109.7
Sep	115.3	141.5	115.8	110.5	120.5	105.8	104.8
Oct	119.8	136.3	120.3	113.7	123.8	108.2	108.9
Nov	117.8	135.0	118.3	118.5	124.6	110.2	111.3
Dec	121.6	128.1	122.6	120.1	131.2	112.5	111.8
1998*							
Jan	118.5	114.3	119.7	114.7	129.6	110.2	106.8
Feb	119.6	117.2	120.6	116.5	130.7	109.9	110.9
Mar	121.3	120.6	122.1	116.1	134.6	109.7	114.0
Apr	122.9	125.1	124.0	118.3	136.4	111.6	112.1
May	123.2	111.3	124.7	120.7	136.9	111.7	109.3
Jun	119.1	61.7	120.8	111.2	133.7	110.2	112.1
Jul	125.5	77.0	128.4	115.8	149.7	111.7	111.3

### 8.3 Indicators of domestic supply and demand, 1990=100 (seasonally adjusted figures)

Period	Volume of wholesale trade	Volume of retail trade	Volume of construction of buildings	Of which:		Imports of investment goods	Monthly GDP indicator
				Residential buildings	Industrial buildings		
	1	2	3	4	5	6	7
1993	68.5	78.1	46.9	47.2	35.6	72.9	89.8
1994	73.0	79.7	42.2	45.1	35.2	84.4	93.7
1995	76.2	82.6	42.0	41.1	49.9	88.5	97.8
1996	77.8	86.0	43.5	38.8	52.0	106.2	100.7
1997*	82.7	89.2	53.4	53.4	63.0	118.8	106.6
1997*							
Jul	93.9	79.6	52.8	52.5	65.4	120.7	107.4
Aug	93.5	80.5	53.7	52.7	66.4	109.9	106.7
Sep	93.2	81.1	55.3	54.3	66.1	128.1	107.9
Oct	93.9	80.9	56.8	55.5	66.7	132.4	108.5
Nov	93.2	82.5	58.0	56.5	67.0	117.6	109.1
Dec	95.3	83.4	58.7	58.2	66.5	130.2	110.3
1998*							
Jan	95.1	82.4	58.7	58.2	66.5	120.6	109.0
Feb	95.1	83.4	58.7	58.0	65.0	132.0	110.2
Mar	95.1	85.5	58.8	58.0	64.7	135.7	112.3
Apr	96.3	84.2	58.0	59.1	64.1	127.0	111.9
May	95.8	84.5	56.8	58.5	62.1	121.5	112.9
Jun	96.8	84.5	57.9	59.6	63.6	132.7	111.5
Jul	..	..	58.8	60.8	63.1	..	112.7

## 8.4 Wages and prices, 1990=100

Period	Index of wage and salary earnings	By sectors			Consumer price index	Indicator of underlying inflation	Basic price index for domestic supply	By origin		Producer price index for manufacturing	By marketing area		Building cost index
		Private	Of which: Manufacturing (SIC3)	Public				Domes- tic goods	Import- ed goods		Export- ed goods	Home market goods	
	1	2	3	4	5	6	7	8	9	10	11	12	13
1993	109.2	108.8	110.0	110.1	109.7	109.9	104.8	100.8	119.3	105.5	109.2	103.9	100.7
1994	111.4	111.6	115.0	111.1	110.9	111.4	106.2	102.8	118.7	107.1	110.2	105.8	102.2
1995	116.6	117.4	123.1	114.7	112.0	111.3	106.9	103.8	118.5	110.8	118.0	107.7	103.5
1996	121.2	122.0	127.8	119.3	112.6	111.4	105.9	102.0	120.1	110.9	118.5	107.6	102.7
1997	123.7	124.4	130.8	122.0	114.0	112.3	107.6	104.0	120.9	111.4	116.8	109.1	105.2
1997													
Aug	..	..	..	..	114.4	112.5	108.2	104.5	122.0	112.2	117.6	109.9	106.0
Sep	..	..	..	..	114.6	112.8	108.4	104.8	121.8	112.3	117.8	110.0	106.1
Oct	..	..	..	..	114.9	113.1	108.7	105.0	122.3	113.0	119.8	110.0	106.3
Nov	..	..	..	..	114.8	112.9	108.5	104.9	121.7	112.8	119.2	110.0	106.2
Dec	..	..	..	..	114.8	113.0	108.2	104.8	121.0	112.8	119.9	109.7	106.3
1997													
II	123.6	124.4	130.9	121.7	114.0	112.2	107.1	103.6	120.2	110.7	115.3	108.7	104.8
III	123.8	124.6	131.3	121.9	114.4	112.5	108.2	104.5	122.0	112.0	117.2	109.7	105.9
IV	124.2	125.3	132.3	121.9	114.9	113.0	108.5	104.9	121.7	112.9	119.6	109.9	106.3
1998													
Jan	..	..	..	..	115.0	112.7	107.5	104.2	119.9	112.0	119.4	108.9	106.6
Feb	..	..	..	..	114.9	112.7	107.1	103.9	119.3	112.0	119.5	108.5	106.6
Mar	..	..	..	..	115.2	112.9	107.0	103.9	118.8	111.9	119.4	108.6	107.0
Apr	..	..	..	..	115.7	113.4	106.9	103.6	119.2	111.3	118.2	108.4	107.4
May	..	..	..	..	115.7	113.6	106.9	103.7	118.8	111.3	118.2	108.4	107.7
Jun	..	..	..	..	115.9	113.9	106.4	103.6	117.1	111.1	118.0	108.1	107.9
Jul	..	..	..	..	115.6	113.5	106.3	103.6	116.9	110.8	117.7	107.9	108.0
Aug	..	..	..	..	115.8	..	106.0	103.5	116.0	110.3	116.9	107.5	108.1
1998 <sup>1</sup>													
I	127.7	128.8	135.7	125.3	115.0	112.7	107.2	104.0	119.3	112.0	119.4	108.7	106.7
II	128.0	129.1	136.0	125.5	115.8	113.6	106.7	103.6	118.4	111.2	118.1	108.3	107.7

<sup>1</sup> Preliminary figures for columns 1-4.

## 8.5 Labour, employment and unemployment *(seasonally adjusted figures)*

Period	Labour force participation rate among 15-74 year olds	Labour force	Total employment (4+5) = (6+7+8)	By industrial status			By industry		Unemployed	Unemployment rate
				Self-employed	Wage and salary earners	Agriculture, forestry and fishing	Mining, manufacturing and energy supply	Other industries		
%										
	1	2	3	4	5	6	7	8	9	10
1993	65.3	2 484	2 041	312	1 729	173	424	1 444	444	17.9
1994	64.8	2 480	2 024	312	1 712	167	426	1 430	456	18.4
1995	65.1	2 497	2 068	304	1 764	158	456	1 454	430	17.2
1996	65.0	2 503	2 096	302	1 794	148	459	1 489	408	16.3
1997*	64.3	2 484	2 170	323	1 846	153	463	1 553	314	12.6
1997*										
Aug	64.0	2 476	2 175	329	1 846	147	475	1 553	301	12.1
Sep	64.1	2 475	2 178	319	1 858	144	458	1 576	298	12.0
Oct	63.9	2 468	2 174	326	1 848	154	459	1 561	293	11.9
Nov	64.2	2 486	2 192	332	1 860	146	463	1 583	294	11.8
Dec	64.8	2 511	2 211	329	1 882	149	472	1 589	300	11.9
1998*										
Jan	64.3	2 484	2 196	313	1 883	144	464	1 588	288	11.5
Feb	64.6	2 501	2 205	321	1 884	146	475	1 584	296	11.8
Mar	64.4	2 495	2 193	307	1 886	144	461	1 588	303	12.1
Apr	64.3	2 491	2 196	305	1 891	144	467	1 586	295	11.8
May	65.0	2 528	2 223	316	1 908	138	491	1 595	305	12.0
Jun	64.7	2 514	2 222	318	1 904	143	464	1 615	293	11.7
Jul	64.7	2 513	2 225	316	1 909	138	467	1 619	289	11.5
Aug	64.9	2 524	2 240	315	1 926	143	503	1 595	284	11.3

## 8.6 Central government finances: revenue, expenditure and financial balance,

mill FIM, cash flow basis

During period	Revenue							Expenditure			
	Direct taxes	Indirect taxes	Other taxes and similar revenue	Other revenue	Revenue before financial transactions (1+2+3+4)	Redemptions of loans granted by the state	Revenue before borrowing (5+6)	Consumption	Transfers and subsidies	Of which:	
										Local government	Other domestic sectors
	1	2	3	4	5	6	7	8	9	10	11
1993	31 667	67 291	1 443	28 823	129 224	7 366	136 593	46 880	108 608	42 720	63 535
1994	34 588	68 124	1 792	24 095	128 599	7 308	135 900	48 750	108 155	40 388	65 519
1995	40 092	66 902	1 720	35 837	144 550	7 923	152 473	51 446	113 644	39 481	67 514
1996	48 357	73 943	1 947	39 778	164 024	9 893	173 918	53 696	110 039	33 199	69 533
1997	52 548	78 273	3 686	38 716	173 223	8 413	181 637	54 596	101 948	30 133	64 125
1997											
Aug	4 034	6 841	181	1 590	12 646	339	12 985	3 975	6 801	1 363	4 855
Sep	3 869	6 859	178	3 857	14 763	251	15 014	4 611	7 596	2 413	4 575
Oct	3 744	6 392	1 407	1 839	13 382	506	13 888	4 037	9 934	2 409	6 971
Nov	5 733	6 835	201	5 057	17 826	878	18 704	4 616	7 271	2 501	4 507
Dec	4 143	6 770	251	5 918	17 082	28	17 110	6 451	11 394	2 502	8 542
1998											
Jan	3 236	7 632	409	3 000	14 277	80	14 358	5 343	11 871	3 887	5 783
Feb	4 909	7 571	1 264	3 708	17 452	72	17 524	4 035	8 339	3 309	4 607
Mar	4 810	7 442	222	4 527	17 001	3 783	20 783	5 161	6 240	264	5 527
Apr	4 254	5 638	244	4 150	14 286	337	14 623	3 658	8 249	2 570	5 174
May	8 445	6 816	227	2 357	17 845	629	18 475	3 122	7 915	2 648	4 828
Jun	4 112	6 702	265	2 680	13 759	577	14 336	5 603	8 867	2 301	5 954
Jul	5 036	6 915	326	1 680	13 957	189	14 145	5 452	7 725	2 447	4 636
Aug	4 861	7 418	692	2 284	15 255	227	15 482	3 891	7 486	2 157	4 779

During period	Expenditure					Financial balance			
	Fixed investment	Other expenditure	Expenditure before financial transactions (8+9+12+13)	Lending and other financial investment	Expenditure before redemptions of state debt (14+15)	Revenue surplus (5-14)	Net borrowing requirement (7-16)	Net borrowing	Cash surplus (18+19)
1993	4 306	18 076	177 870	19 753	197 623	-48 646	-61 030	84 036	23 009
1994	3 737	22 281	182 923	17 886	200 760	-54 324	-64 860	73 193	8 336
1995	3 208	26 336	194 635	16 765	211 399	-50 085	-58 926	54 071	-4 854
1996	3 325	29 911	196 972	13 756	210 747	-32 947	-36 828	33 845	-2 983
1997	3 317	24 636	184 497	10 542	195 037	-11 274	-13 400	10 371	-3 028
1997									
Aug	253	286	11 315	494	11 809	1 331	1 176	-987	189
Sep	326	2 860	15 393	641	16 034	-630	-1 020	8 777	7 757
Oct	297	1 957	16 225	682	16 906	-2 843	-3 018	-3 021	-6 039
Nov	234	734	12 855	589	13 444	4 971	5 260	-3 608	1 651
Dec	590	579	19 014	-286	18 730	-1 932	-1 620	-5 652	-7 271
1998									
Jan	217	3 658	21 089	587	21 676	-6 812	-7 318	417	-6 901
Feb	203	1 165	13 742	453	14 196	3 710	3 328	-2 821	507
Mar	169	7 033	18 603	4 456	23 059	-1 602	-2 276	-3 653	-5 928
Apr	223	5 472	17 602	522	18 124	-3 316	-3 501	-5 358	-8 859
May	265	2 013	13 315	508	13 822	4 530	4 653	5 713	10 366
Jun	262	2 117	16 849	606	17 455	-3 090	-3 119	11 215	8 096
Jul	280	1 108	14 565	767	15 331	-608	-1 186	-793	-1 979
Aug	278	678	12 333	562	12 895	2 922	2 587	8 187	10 774

# Notes and explanations to the statistical section

## General

### Source

Unless otherwise stated, the source or compiler of figures is the Bank of Finland.

### Symbols used

*	Preliminary
r	Revised
0	Less than half the final digit shown
.	Logically impossible
..	Data not available
—	Nil
S	Affected by strike
—	Break in series

Owing to rounding of figures, the sum of the individual items in the tables may differ from the total shown.

## Notes and explanations to tables

### 1 The balance sheet of the Bank of Finland

**Table 1.2** *Domestic financial sector.* Term claims on deposit banks, net (Column 12) = bank certificates of deposit held by the Bank of Finland + securities with repurchase commitments + term credits – term deposits. Other claims on financial institutions, net (Column 14) = till-money credits to deposit banks (until May 1993) + bonds + other claims on financial institutions + liquidity credits – call money deposits (until September 1995) – other liabilities to financial institutions.

### 2 The Bank of Finland's operations in the money and foreign exchange markets and the banks' forward exchange position

**Table 2.1** From 2 October 1995, banks fulfil their minimum reserve requirement as a monthly average of deposits. From October 1995, the requirement and deposits are shown for the month during which the requirement is to be fulfilled. Before deposits were shown for the previous month, because deposits were matched with the requirement on the last banking day of that month. The requirement is determined on the basis of the reserve base two months earlier (up to September 1995 one month earlier). The reserve base was changed on 31 March 1995 to comply with the new balance sheet format. Liquidity credits (Column 7): see explanations, Table 3.2.

**Table 2.2** Money market instruments are the instruments used by the Bank of Finland in its money market operations. Matured money market instruments, net, comprise both instruments purchased and sold. Money market transactions are recorded according to trade dates.

**Table 2.3** Foreign exchange transactions are recorded according to trade dates. In addition to spot transactions (Columns 1, 2, 4 and 5) the Bank of Finland's foreign exchange reserves are affected by interest payment and by changes in both the prices of securities and exchange rates. Spot transactions related to forward contracts (Column 4) refer to the combined effects on the foreign

exchange reserves of forward transactions in the form of swaps and maturing forward transactions. The central government's foreign exchange transactions (Column 5) comprise transactions related to drawings and redemptions of government loans and associated interest payments.

**Table 2.4** The markka value of forward contracts is given.

### 3 Rates of interest

**Table 3.1** The interbank overnight rate (Column 1) is weighted using amounts of interbank deposits as weights. Since 1 June 1995, HELIBOR rates (Helsinki Interbank Offered Rate) (Columns 2–5) have been calculated on the basis of the bid rates (offered rates for funds) quoted for their own certificates of deposit by all the banks that have been accepted by the Bank of Finland as counterparties in money market operations. An additional condition is that a bank gives regular quotations. The highest and lowest rates quoted for each maturity are omitted and an arithmetic average calculated for the remaining rates. The quotations are taken daily at 1 p.m.

**Table 3.2** The Bank of Finland's tender rate (Column 1) is determined in tenders held by the Bank of Finland, in which the banks are asked to make bids or offers for money market instruments with a maturity of one month. The tender rate is the weighted average of accepted bids or offers, expressed as a simple annual interest rate. If, when requesting bids or offers, the Bank of Finland announces an acceptable interest rate (fixed-rate tender), the tender rate is the same as the rate announced by the Bank. The monthly and annual values for the tender rate are the arithmetic means of calendar day figures.

Credit institutions which are subject to the minimum reserve requirement and maintain a current account with the Bank of Finland may obtain liquidity credit to cover overdrafts and to fulfil their minimum reserve requirement. They can obtain liquidity credit with a maturity of 1 day, 7 days, 14 days, 21 days or 28 days. The maturity of liquidity credit is determined by the Bank of Finland. The rate of interest on liquidity credit is obtained by adding together the Bank of Finland's tender rate and the interest rate margin for liquidity credit. The call money deposit rate in use prior to October 1995 was obtained by subtracting the interest rate margin for call money deposits from the Bank of Finland's tender rate. Since 2 October 1995, the monthly average of a bank's call money deposits exceeding the minimum reserve requirement has been treated as excess reserve. The interest rate paid on excess reserves is determined separately by the Bank of Finland. The values for maturity and interest rate margins are the last values recorded in each period.

**Table 3.3** The rates shown are based on the lending rates quoted for the respective currencies in the Euro-market. ECU (Column 1): the weights of the ECU basket. 3 currencies (Column 2): DEM 60, USD 30 and GBP 10 per cent.

**Table 3.4** *Lending.* New credits (Columns 1–4): rates of interest on new credits drawn during the month are average monthly rates weighted by loan amounts. Annual rates are arithmetic average of monthly observations until 1987 after which they are weighted by loan amounts. Average lending rates (Columns 5 and 6) are all weighted by

loan amounts. As from January 1989, the loans of Postipankki Ltd have been included in the commercial banks' outstanding stock of loans. *Deposits.* 24-month and 36-month tax-exempt deposits (Columns 7 and 8): from May (September) 1992, 24-month (36-month) deposits are tax-exempt if they carry a rate of interest which is at most the Bank of Finland's base rate less two percentage points (one percentage point). In the period from January 1989 to April 1992, 24-month deposits (Column 7) were tax-exempt if they carried a rate of interest which was at most the Bank of Finland's base rate less one percentage point. Other tax-exempt deposits (Column 9): in the period from January 1989 to April 1992, deposits other than 24-month deposits were tax-exempt if they carried a rate of interest which was at most the Bank of Finland's base rate less 4 percentage points. From May 1992, deposits other than 24-month or 36-month deposits are tax-exempt if they carry a maximum rate of interest as prescribed by law. The maximum rate was first set at 4.5 per cent. From May 1993 until November 1993 it was 2.5 per cent and thereafter 2.0 per cent. All markka deposits (Column 10): the stock of deposits comprises all markka deposits by the public. The monthly and annual average rates of interest are weighted by deposit amounts. Other funding (Column 11): CDs outstanding + promissory notes + bonds. The average rate of interest is weighted by amounts. Total markka funding (Column 12); markka deposits by the public + banks' other markka funding. The rate of interest is weighted by amounts.

**Table 3.5** Reference rates (Columns 1 and 2) are calculated by the Bank of Finland as the monthly averages of the offered rates for taxable, fixed-rate bonds quoted daily by the five largest banks. The yields on five-year and ten-year government bonds (Columns 3 and 4) are calculated by the Bank of Finland as averages of the bid rates quoted daily by the primary dealers. As from 1 July 1998 the five-year yield is based on quotations for a fixed-rate bullet serial bond (1/93, 15 March 1993 – 15 March 2004). As from 24 November 1997 the ten-year yield is based on quotations for a fixed-rate bullet serial bond (1/97, 25 April 1997–2008). The share yield (Column 5) is the weighted effective yield on shares quoted on the Helsinki Stock Exchange. Source: Statistics Finland.

#### 4 Rates of exchange

**Table 4.2** FIM/ECU (Column 1): The markka value of the ECU is calculated as the sum of the dollar amounts of the currencies in the ECU valued at current market rates quoted daily at noon Finnish time. The markka was floated on 8 September 1992, continuing until 14 October 1996, when it was joined to the EU's Exchange Rate Mechanism (ERM) at the central rate of 5.80661 per ECU. As from 16 March 1998 the ECU central rate is FIM 6.01125. Trade-weighted currency index (Column 2): The weights are moving averages of the shares of (currently) 16 countries in Finland's foreign merchandise trade (only convertible currencies are included). The payments currency index (Column 3): The weights are moving averages of shares of payments currencies (16 convertible currencies) in Finland's foreign trade.

**Table 4.3** The table shows the deviations of the markka's market exchange rate (markka value of the foreign currency) as a percentage of the ERM central rate for each currency. A plus (+) indicates that the markka is weaker than its central rate value against the other currency; the intervention limit is (central rate) +16.121 per cent. A minus (-) indicates that the markka is stronger than its central rate value against the other currency; the intervention limit is (central rate) -13.881 per cent.

#### 5 Financial markets and money supply

**Table 5.1** The public comprises all entities except the central government, deposit banks and the Bank of Finland. Markka deposits are classified according to tax treatment. The tax status (exempt vs subject to withholding tax) of deposits held by households and estates is determined by the rate of interest. Time deposits that are tax-exempt under income tax law (maximum interest rate: 2 per cent) were transferred in connection with a statistical revision from other deposits (column 3) to time deposits (column 2) at the start of 1997. The remaining traditional 24- and 36-month tax-exempt deposits matured in 1996 and 1997 as the law on deposits tax relief expired. The withholding tax is a final tax collected at source by banks in connection with the payment of interest. Deposits under 'Other taxable' (columns 8–10) are held by entities other than households and estates, ie mostly by enterprises and local governments, and interest earned on them is taxed as ordinary income. Other markka funding (column 13) comprises CDs issued by banks, money market promissory notes and repo sales. The figures for bank CDs include only CDs held by entities other than banks, the Bank of Finland and the central government.

**Table 5.2** The public comprises all entities except the central government, deposit banks and the Bank of Finland. Loans granted from central government funds are not included in markka lending. Banks' markka lending to the foreign sector (column 6) comprises foreign economic units located in Finland, eg foreign embassies, consulates and units of international organizations. As from 1 Jan 1997 lending to these entities is no longer included in domestic lending, pursuant to the new classification of institutional sectors. The breaks in series at end-1996 are due to the statistical revision. Since the revision, these columns do not include lending by foreign branches of Finnish deposit banks nor do columns 1–7 and 9 any longer include bonds, debentures and other bearer instruments held by banks and classified as investment assets.

**Table 5.3** Foreign assets, net (Column 1) = the Bank of Finland's foreign claims + banks' foreign claims (incl. foreign claims of banks' foreign branches) – the Bank of Finland's foreign liabilities – banks' foreign liabilities (incl. foreign liabilities of banks' foreign branches). *Domestic credit.* Net claims on the central government (Column 2) = the Bank of Finland's claims on the central government + banks' claims on the central government – the central government's deposits with the Bank of Finland and Postipankki – loans granted from state funds through banks. Claims on the public (incl. local government), (Column 3) = the Bank of Finland's claims on the private sector + banks' claims on the private sector (loans to the public, bonds and debentures (excl. government bonds and bank debentures), claims on other financial institutions, shares held by banks). Other items, net (Column 5) = capital accounts and other items of the Bank of Finland (incl. private sector time deposits with the Bank of Finland) + capital accounts of deposit banks + unclassified assets and liabilities of deposit banks, net (bank debentures, bank CDs held by the public, other market funding and foreign currency deposits by the public).  $M_1$  (Column 6) = currency in circulation – banks' till money + markka cheque and postal giro account deposits and transactions account deposits held by the public.  $M_2$  (Column 7) =  $M_1$  + quasi-money (markka time deposits held by the public, excl. deposits with the Bank of Finland).  $M_3$  (Column 8) =  $M_2$  + bank CDs held by the public.



**Table 5.4** Source: State Treasury Office. Other foreign currency-denominated debt (Column 2) consists of other bonds and debentures and long-term promissory notes. Other bonds and debentures are so-called private placings; long-term promissory notes are bank loans. Miscellaneous items (Column 7) consist of two minus items, the liability to the State Pension Fund and the liability to the State Fund for Nuclear Waste Disposal, which are intragovernmental debts. In the September 1997 issue of the Bulletin, columns 7, 8 and 9 were retroactively revised for the whole period shown. Outstanding lending (Column 10) comprises the stock of loans granted from the central government budget and from extra-budgetary funds. Cash funds (Column 11) comprise the cash funds held in central government accounting offices, funds held in cheque and postal giro accounts, as well as placements of central government cash funds. The main part of the latter is reserved for covering transferable allocations budgeted in previous years.

**Table 5.5** Sources: Table A: Financial Supervision from the beginning of 1994. Table B: Statistics Finland. Table C: Finnish Central Securities Depository from 1 August 1997. Tables A and B include markka-denominated bonds issued by Finnish issuers in Finland and abroad as well as those issued by foreign issuers in Finland. As from 15 January 1997 the following act as primary dealers: Alfred Berg Finland, Den Danske Bank, Evli Fixed Income Securities, Goldman Sachs International, Merita Bank, Okobank, Postipankki, Skandinaviska Enskilda Banken, Svenska Handelsbanken AB (publ) and Unibank A/S. Customers include all parties other than primary dealers.

**Table 5.6** Source: The Helsinki Stock Exchange. The table has been expanded to take into account the change in the Helsinki Stock Exchange classification of listed companies as from the start of 1997. Column 3 now includes only insurance.

## 6 Balance of payments, foreign assets and liabilities

**Table 6.1** The figures for the trade and goods and services accounts are compiled in accordance with the System of National Accounts. The figures for investment income and expenditure (Columns 7 and 16) include reinvested earnings on direct investment. Preliminary data on reinvested earnings in the previous year have been included in the current account figures (the annual figure is divided evenly between quarterly figures).

**Tables 6.2–6.4** Since the beginning of 1994, the former capital account of Finland's balance of payments has been compiled according to the IMF's new recommendations (IMF Balance of Payments Manual, Fifth Edition, 1993).

**Table 6.2** The capital account (Columns 1 and 14) reflects unrequited capital transfers such as forgiven debts and aid from EU funds.

In the financial account financial derivatives include payments arising from currency and interest rate swaps related to loans, ie outstanding loans are recorded according to the original loan contract. Medium-term notes (MTNs) are included under bonds (Columns 4 and 17). The category other investment (Columns 9–12 and 21–24) covers transactions related to trade credits, loans, currency and deposits and other assets and liabilities. Transactions in assets and liabilities related to short- and long-term supplier credits and advance payments related to imports and exports are recorded under trade credits (Columns 9 and 21). The item 'Other capital' (Columns 11 and 23) includes transactions in currency and deposits and short- and long-term assets and liabilities of different sectors not

covered by any of the items above. In addition, this category includes changes in the central government's subscriptions to and quotas in international organizations as well as transactions in the Bank of Finland's short- and long-term assets and liabilities (excl. reserve items). The most important sub-item under the item 'other capital' comprises banks' other short-term assets and liabilities (in practice interbank deposits). The central bank's reserve assets (Column 26) comprise gold, special drawing rights (SDRs), the reserve position in the IMF, ECU-claim on the ECB and foreign exchange assets. A negative figure implies an increase in reserves.

**Table 6.3** The data are classified as in Table 6.2. The items have been translated into markkaa using the spot rates for each date; thus the figures include the impact of changes in exchange rates.

**Table 6.4** This contains data on Finland's net international investment position (assets less liabilities) classified by sector.

As of January 1998, Finland's net international investment position (NIIP) is expressed as external assets less external liabilities.

## 7 Foreign trade

Source: The National Board of Customs (except for table 7.2). All tables refer to foreign trade in goods.

**Table 7.2** The volume indices (Columns 1 and 2) are calculated from the export and the import values, deflated by the price indices (Columns 3 and 4). Deflation and seasonal adjustments are carried out by the Bank of Finland. The export and the import price indices are provided by Statistics Finland. The terms of trade (Column 5) is the ratio of the export price index to the import price index, multiplied by 100.

**Table 7.4** In addition to all EU countries, those countries are listed whose shares of Finland's exports are at least 1 per cent.

## 8 Domestic economic developments

**Tables 8.1 – 8.5** Source: Statistics Finland. Seasonal adjustment for tables 8.1 and 8.2 is provided by Statistics Finland, for tables 8.3 and 8.5 by the Bank of Finland.

**Table 8.2** Volume index of industrial production has been revised. The new base year is 1995 = 100. Industrial classification has also been slightly revised. The indices are adjusted for the number of working days in each month. This causes small differences in the annual averages from the corresponding unadjusted figures.

**Table 8.3** The indices of wholesale and retail trade (Columns 1 and 2) are seasonally adjusted by Statistics Finland. The monthly GDP indicator (Column 7) is a weighted index of 11 readily available output indicators for various industries.

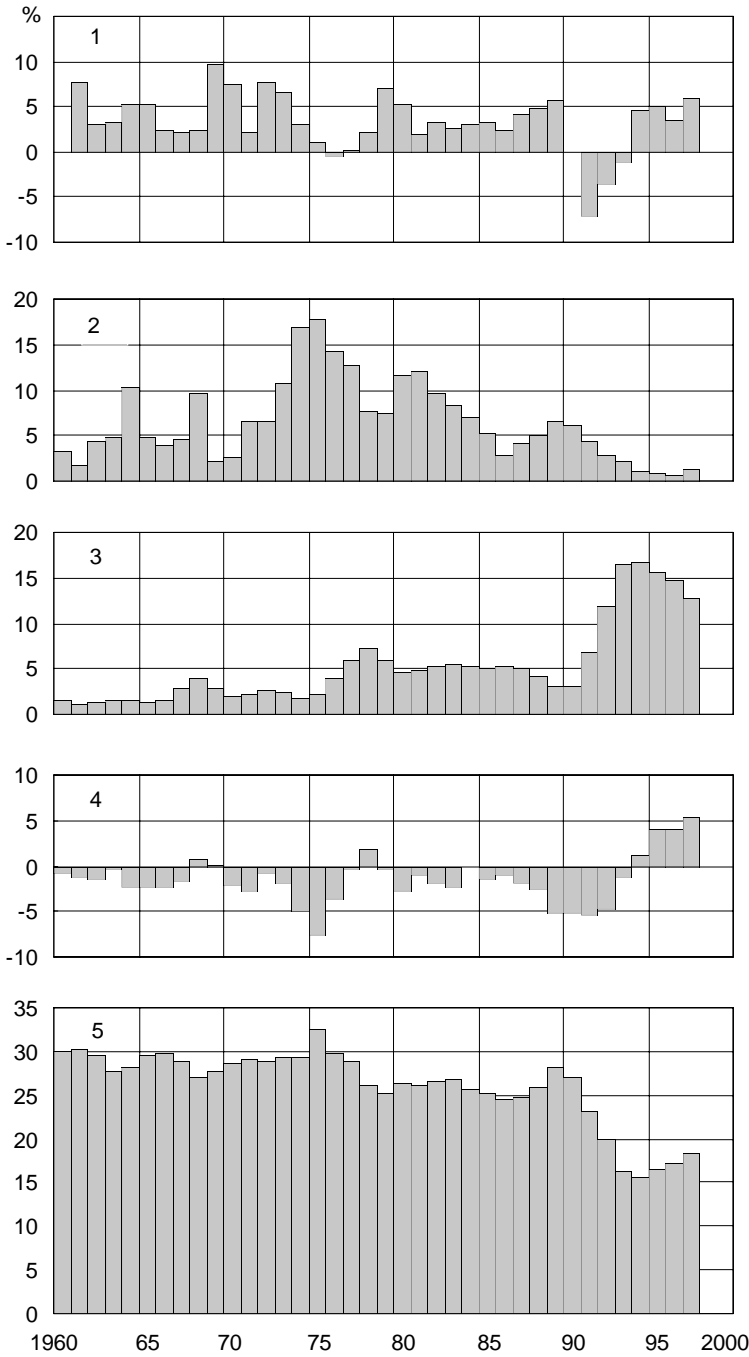
**Table 8.4** The indicator of underlying inflation (Column 6) is the consumer price index from which the effect of indirect taxes, subsidies and housing-related capital costs (house prices and mortgage interest payments) has been removed (see the article by Pentti Pikkarainen and Timo Tyrväinen in the June – July 1993 issue of the Bulletin). Statistics Finland calculates the indicator and publishes it together with the consumer price index on the 15th of every month (or the next business day). It is lagged by one month in comparison with the consumer price index.

**Table 8.5** Starting with 1997, all the data in the table are consistent with EU standards. All data will be revised as from the beginning of 1998 and will be available later. Therefore there is presently a discontinuity in the series.

**Table 8.6** Source: Ministry of Finance.

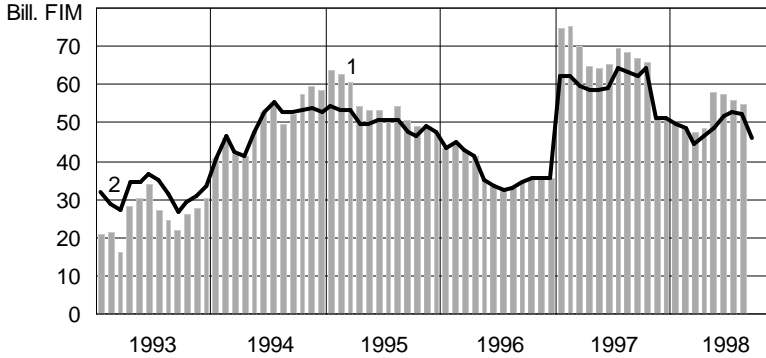
1. Long-term indicators	S30
2. The Bank of Finland's foreign exchange reserves and forward position	S31
3. Forward market	S31
4. Interest rates set by the Bank of Finland	S31
5. Banks' liquidity position at the Bank of Finland	S32
6. Liquidity management interest rates	S32
7. HELIBOR interest rates, daily	S32
8. HELIBOR interest rates, monthly	S33
9. Bond yields	S33
10. Differential between Finnish and German interest rates	S33
11. Differential between German and selected EU-countries' 10-year interest rates	S34
12. ERM exchange rates: deviation from DEM central parity	S34
13. ERM exchange rates: deviation from DEM central parity	S34
14. Bank of Finland currency index and markka value of the ECU	S35
15. Daily spot rates for the markka against the Deutschemark and US dollar	S35
16. Daily spot rates for the markka against the pound sterling and Swedish krona	S35
17. Monthly spot rates for the markka against the Deutschemark and US dollar	S36
18. Monthly spot rates for the markka against the pound sterling and Swedish krona	S36
19. Banks' markka lending rates and markka funding rates	S36
20. Bank funding from the public	S37
21. Bank lending to the public	S37
22. Money supply	S37
23. Current account	S38
24. Balance of payments	S39
25. Net interest and dividend expenditure	S40
26. Finland's net international investment position	S40
27. Share market	S40
28. Foreign trade	S41
29. Foreign trade: prices and terms of trade	S41
30. Finland's export performance	S41
31. Production	S42
32. Fixed investment	S42
33. Employment and the unemployment rate	S43
34. Prices and wages	S43
35. Central government finances	S44
36. Central government debt	S44

## 1. Long-term indicators



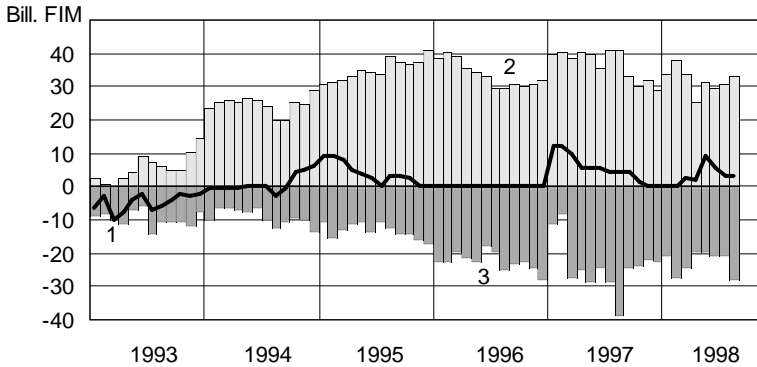
1. GDP, change in volume from the previous year, per cent
2. Consumer prices, change from the previous year, per cent
3. Unemployment rate, per cent
4. Current account, as a percentage of GDP
5. Fixed investment, as a percentage of GDP

## 2. The Bank of Finland's foreign exchange reserves and forward position



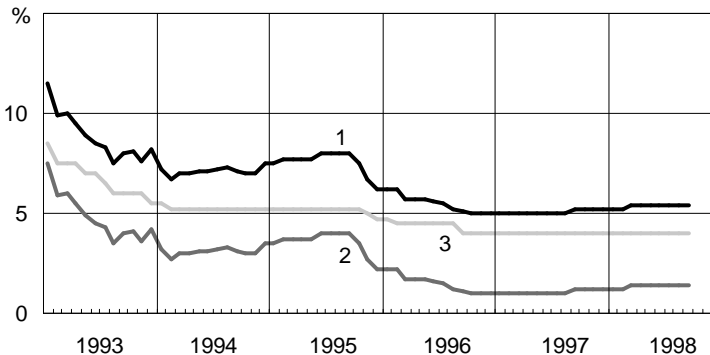
1. Foreign exchange reserves plus forward position
2. Foreign exchange reserves

## 3. Forward market



1. Forward exchange purchased by the Bank of Finland
2. Forward exchange sold to banks by domestic customers
3. Forward exchange sold to banks by foreign customers

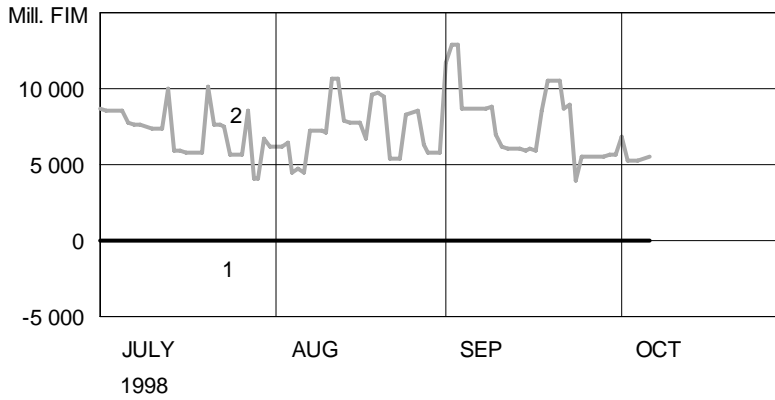
## 4. Rates of interest set by the Bank of Finland



1. Liquidity credit rate (up to 2 July 1992 call money credit rate)
2. Excess-reserve rate (call money deposit rate until 2 October 1995)
3. Base rate

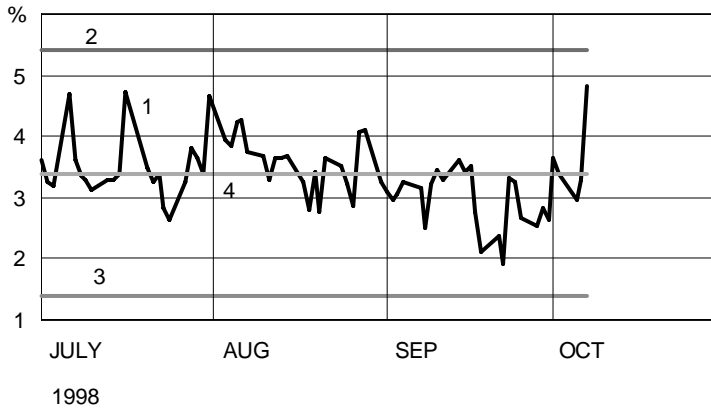
End-of-month observations

## 5. Banks' liquidity position at the Bank of Finland



1. Liquidity credits (-)
2. Reserve deposits

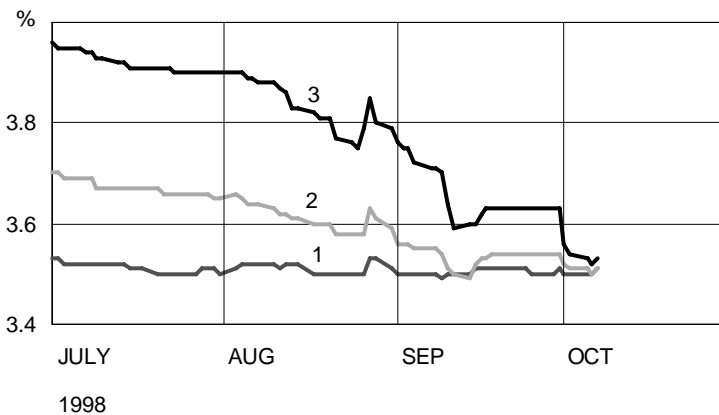
## 6. Liquidity management interest rates



1. Inter-bank overnight rate
2. Liquidity credit rate
3. Excess-reserve rate
4. Tender rate

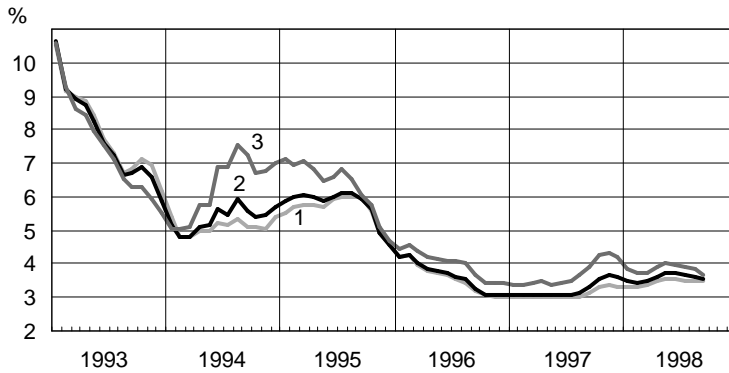
Daily observations

## 7. HELIBOR rates of interest, daily



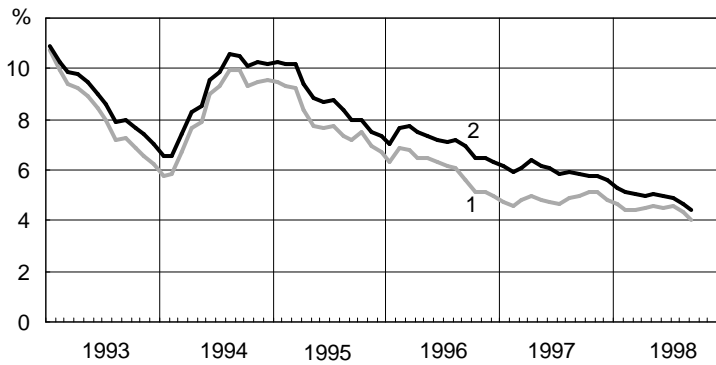
1. 1-month HELIBOR
2. 3-month HELIBOR
3. 12-month HELIBOR

## 8. HELIBOR interest rates, monthly



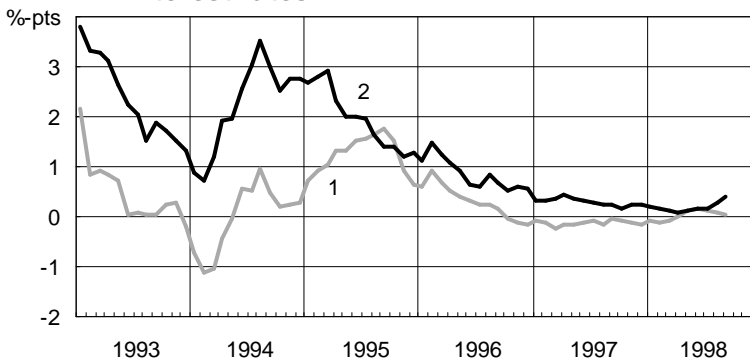
1. 1-month HELIBOR
2. 3-month HELIBOR
3. 12-month HELIBOR

## 9. Bond yields



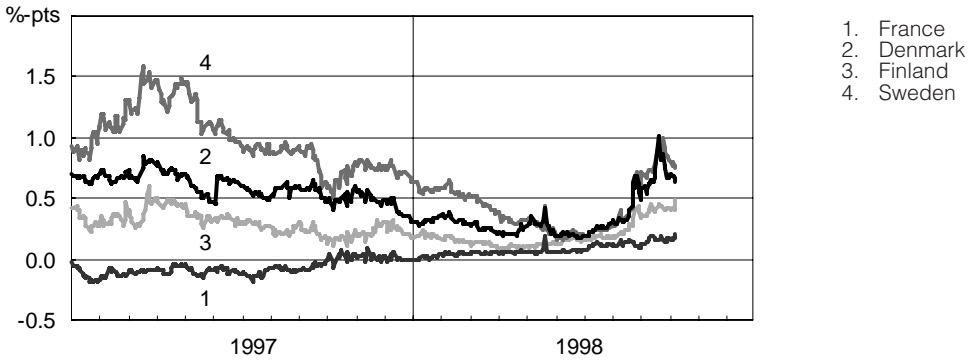
1. Yield on 5-year government bonds
2. Yield on 10-year government bonds

## 10. Differential between Finnish and German interest rates

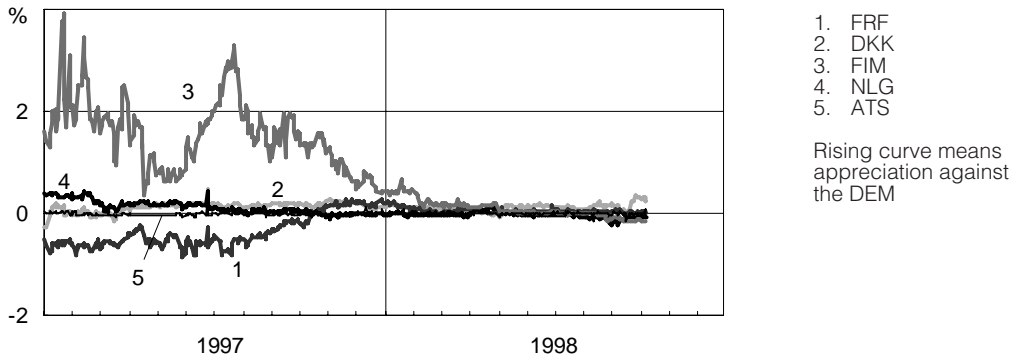


1. 3-month HELIBOR minus 3-month DEM eurorate
2. 10-year Finnish government bond yield minus 10-year German government bond yield

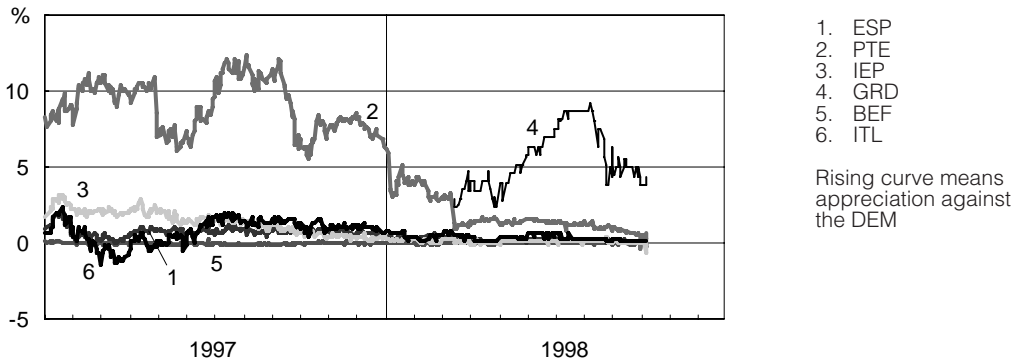
### 11. Differential between German and selected EU-countries' 10-year interest rates



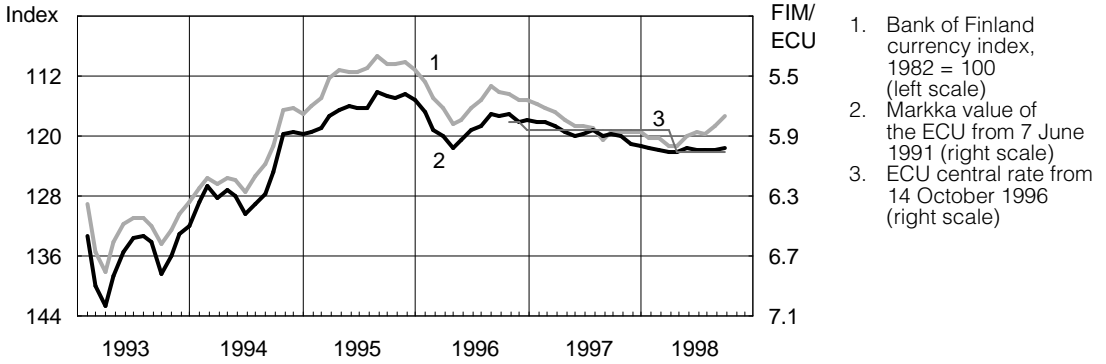
### 12. ERM exchange rates: deviation from DEM central parity



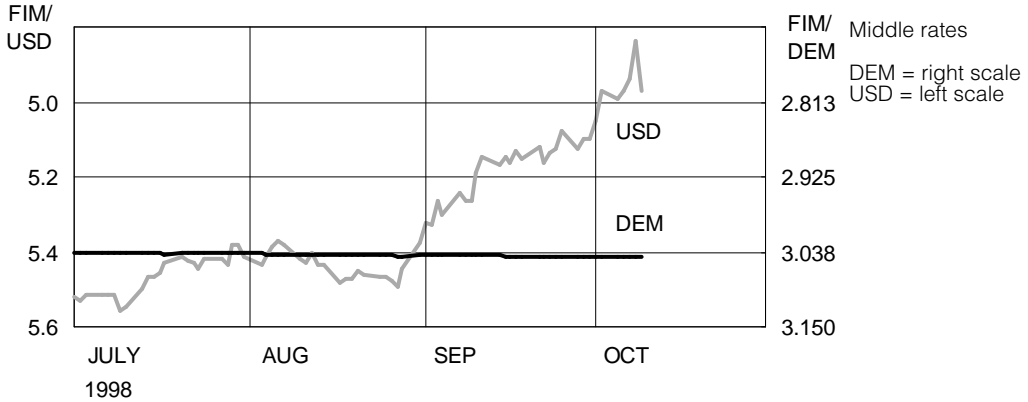
### 13. ERM exchange rates: deviation from DEM central parity



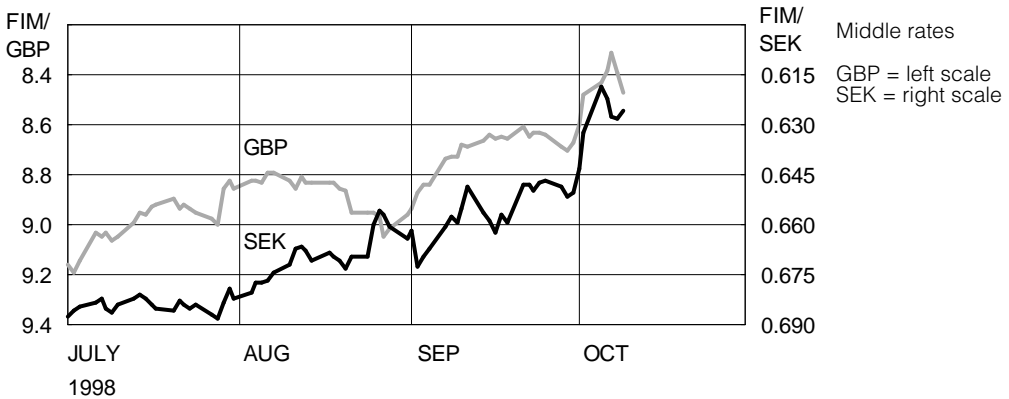
#### 14. Bank of Finland currency index and markka value of the ECU



#### 15. Daily spot rates for the markka against the Deutschmark and US dollar

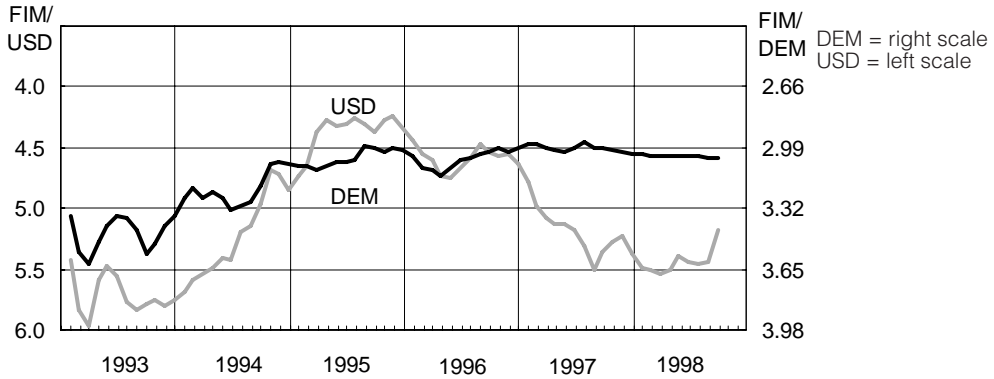


#### 16. Daily spot rates for the markka against the pound sterling and Swedish krona

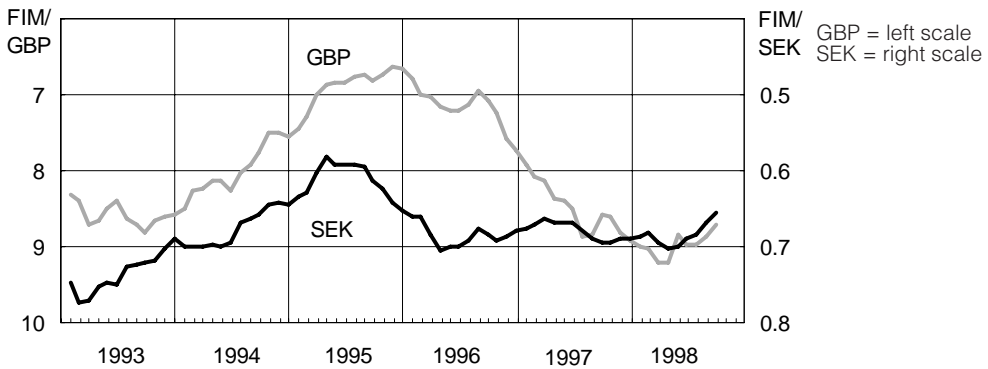




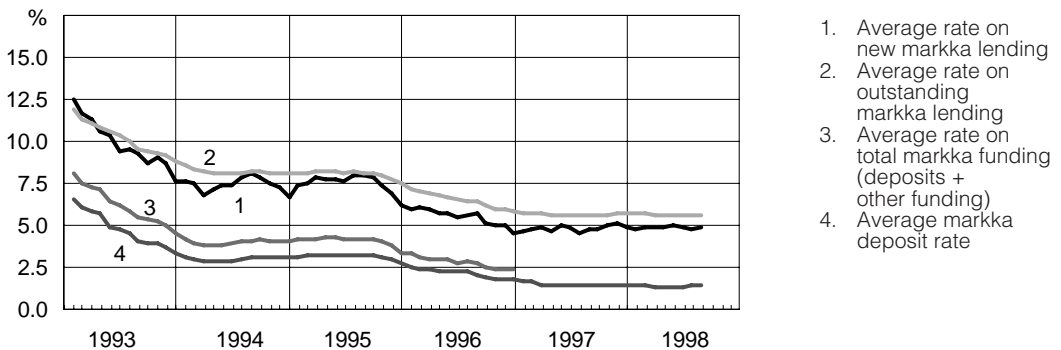
### 17. Monthly spot rates for the markka against the Deutschemark and US dollar



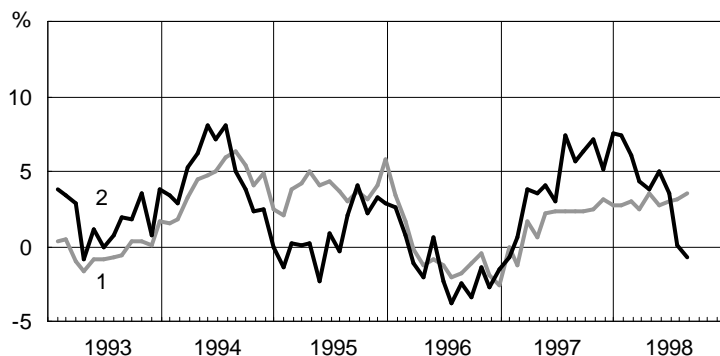
### 18. Monthly spot rates for the markka against the pound sterling and Swedish krona



### 19. Banks' markka lending rates and markka funding rates



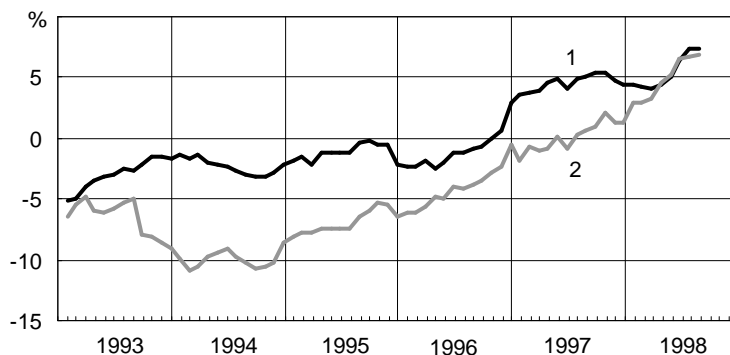
## 20. Bank funding from the public



1. Markka deposits
2. Total funding

Change from the corresponding month of the previous year, per cent

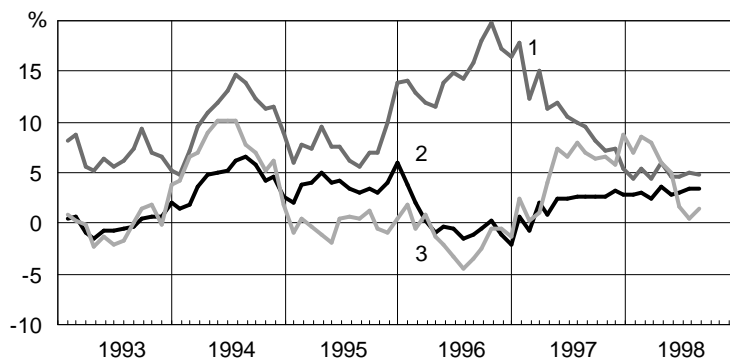
## 21. Bank lending to the public



1. Markka lending
2. Total lending

Change from the corresponding month of the previous year, per cent

## 22. Money supply



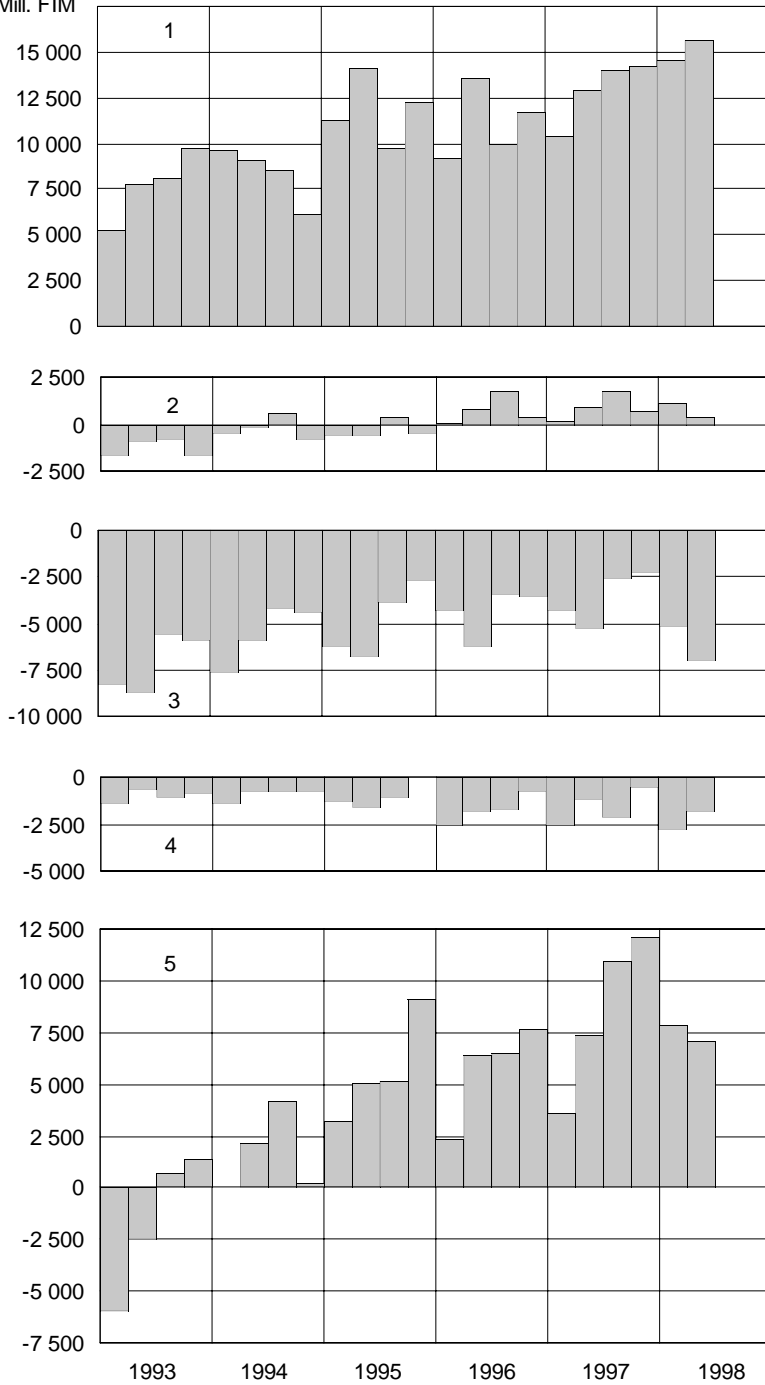
1. Narrow money (M1)
2. Broad money (M2)
3. M2 + bank CDs held by the public (M3)

Change from the corresponding month of the previous year, per cent

## 23. Current account

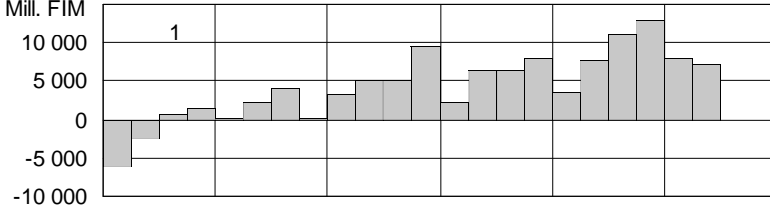
Mill. FIM

1. Trade account
2. Services account
3. Investment income account
4. Unrequited transfers account and other items, net
5. Current account

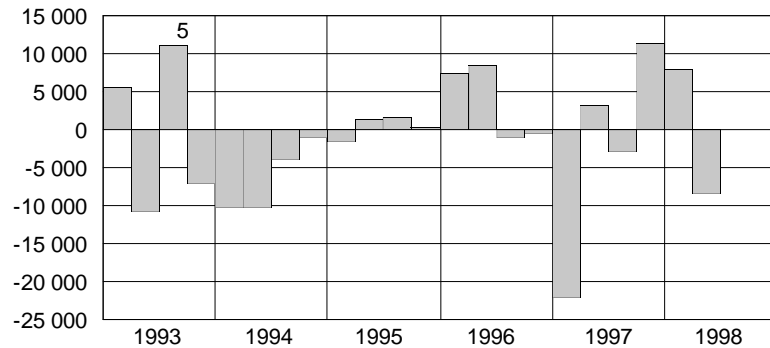
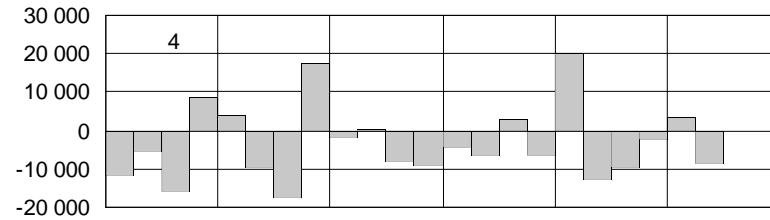
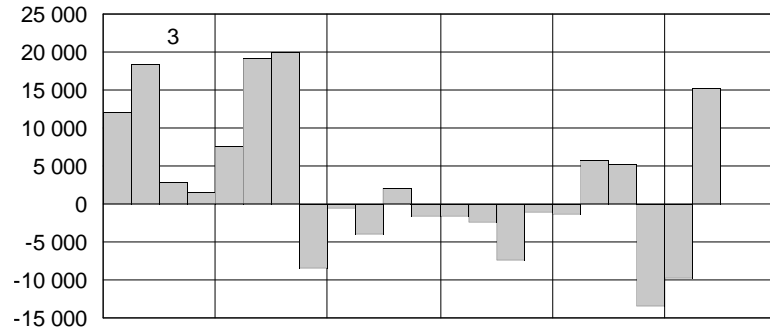
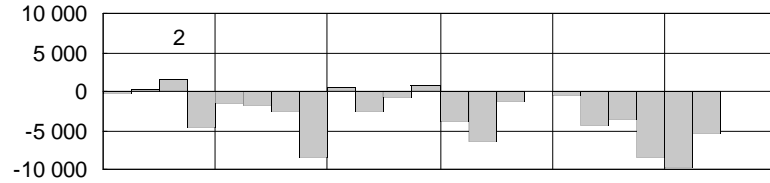


## 24. Balance of payments

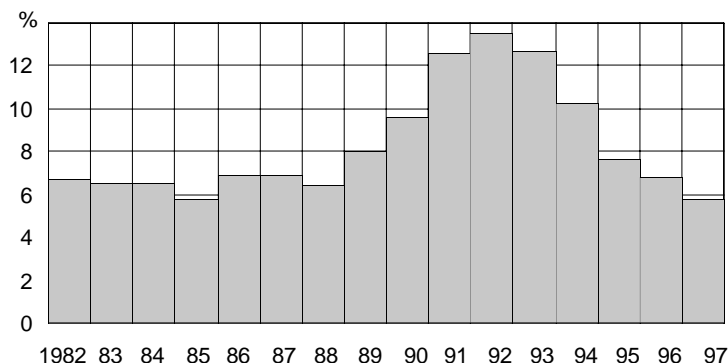
Mill. FIM



1. Current and capital account
2. Direct investment
3. Portfolio investment
4. Other investment
5. Change in central bank's reserve assets (increase = -)

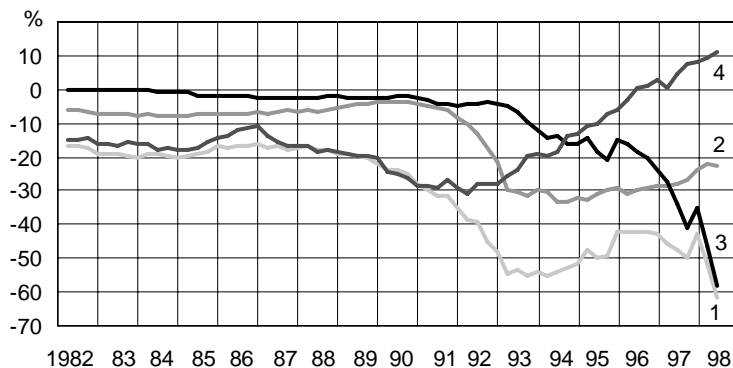


## 25. Net interest and dividend expenditure



As per cent of current account receipts

## 26. Finland's net international investment position

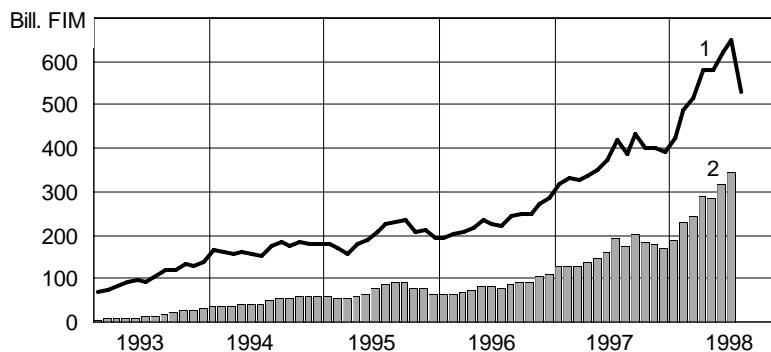


As a per cent of GDP

1. Total NIIP
2. Central government (in foreign currencies)
3. Government and other markka-denominated securities
4. Other, net (excl. Bank of Finland's foreign reserve assets)

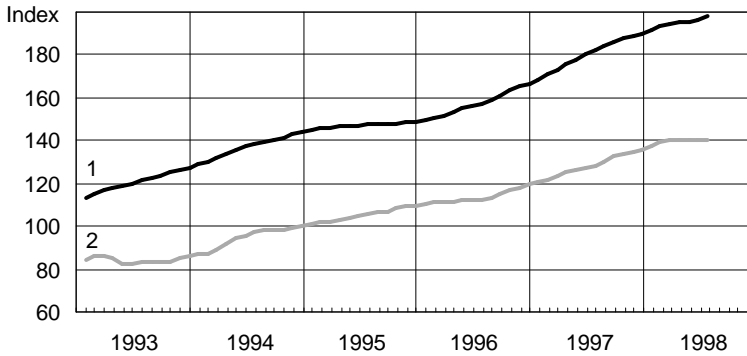
Finland's net international investment position (NIIP) is expressed as external assets less external liabilities.

## 27. Share market



1. Market capitalization of listed shares
2. Non-residents' holdings of Finnish shares

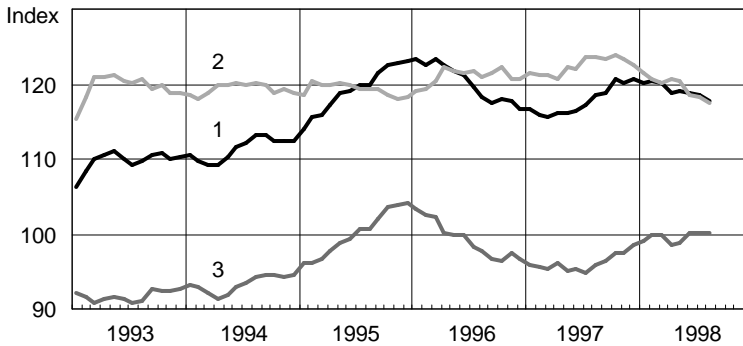
## 28. Foreign trade



1. Exports of goods
2. Imports of goods

Volume index, 1990 = 100, trend

## 29. Foreign trade: prices and terms of trade



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

Index 1990 = 100

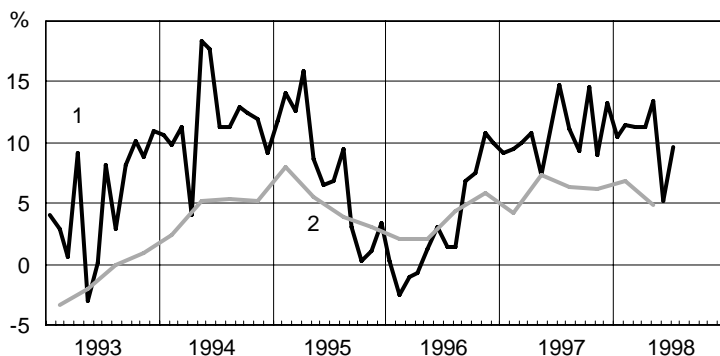
## 30. Finland's export performance



1. Value of exports to OECD countries in relation to imports of OECD countries
2. Volume of exports to OECD countries in relation to imports of OECD countries

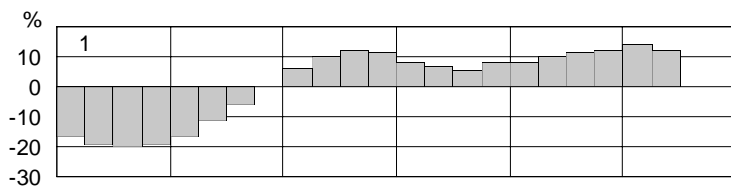
1980 = 100

### 31. Production

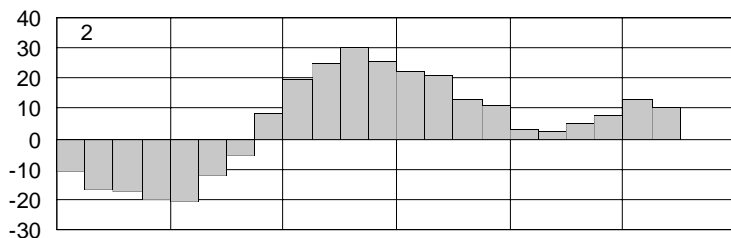


1. Industrial production, change in volume from the corresponding month of the previous year, per cent
2. GDP, change in volume from the corresponding quarter of the previous year, per cent

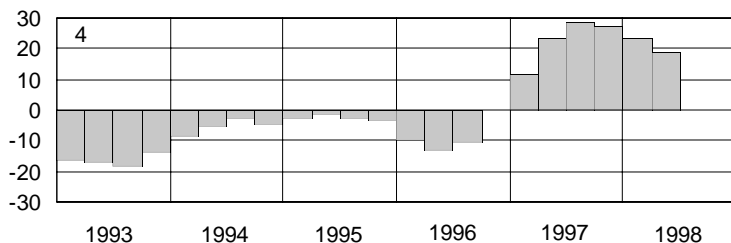
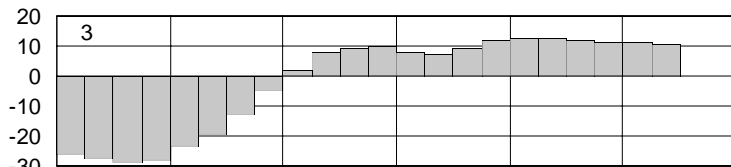
### 32. Fixed investment



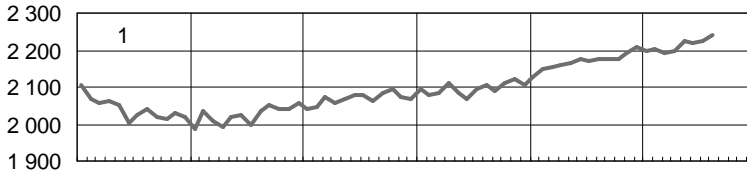
1. Total fixed investment
2. Investment in machinery and equipment
3. Building investment, excl. residential buildings
4. Residential buildings



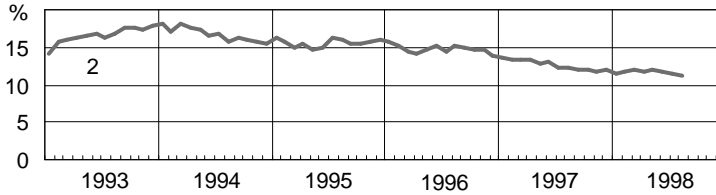
Four-quarter volume change calculated from four-quarter moving totals and plotted at the last quarter, per cent



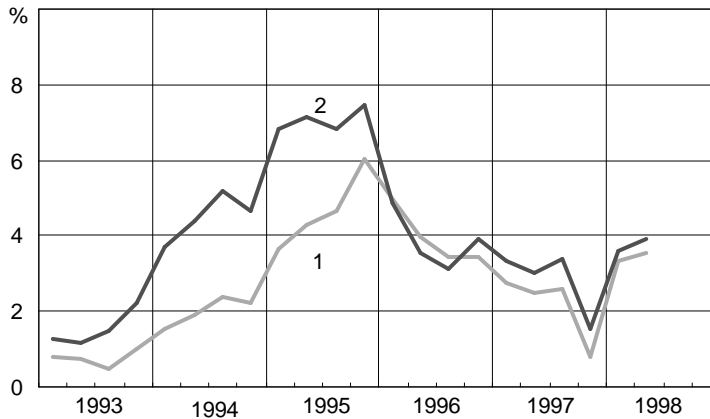
### 33. Employment and the unemployment rate



1. Employment, 1000 persons
2. Unemployment rate, per cent

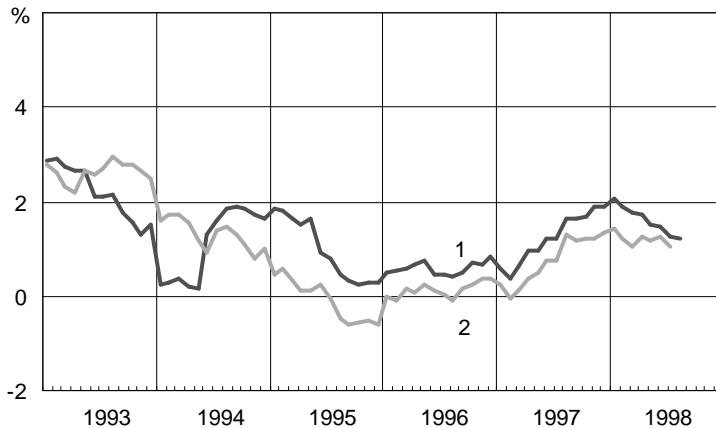


### 34. Prices and wages



1. Index of wage and salary earnings, all wage and salary earners
2. Index of wage and salary earnings, manufacturing workers

Change from the corresponding quarter of the previous year, per cent

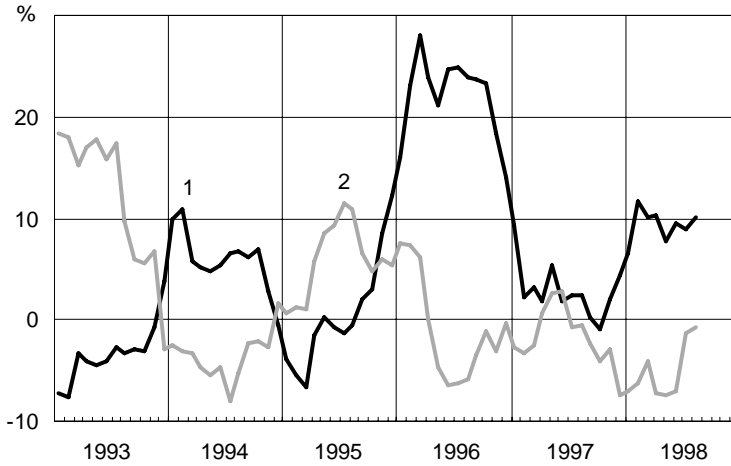


1. Consumer price index
2. Indicator of underlying inflation

Change from the corresponding month of the previous year, per cent

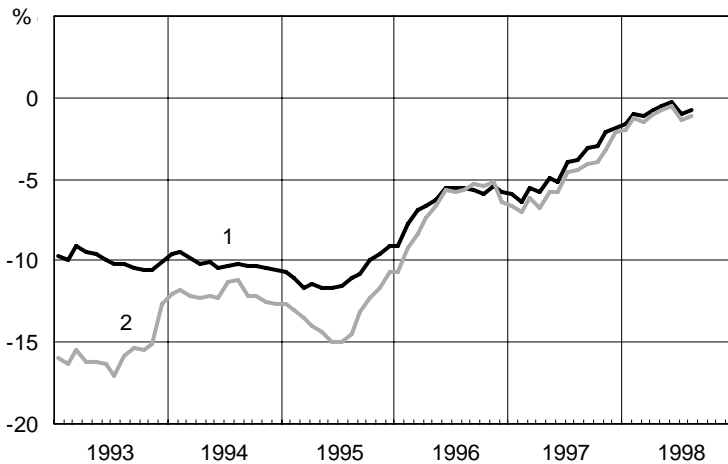


### 35. Central government finances



1. Revenue excl. borrowing
2. Expenditure excl. redemptions of central government debt

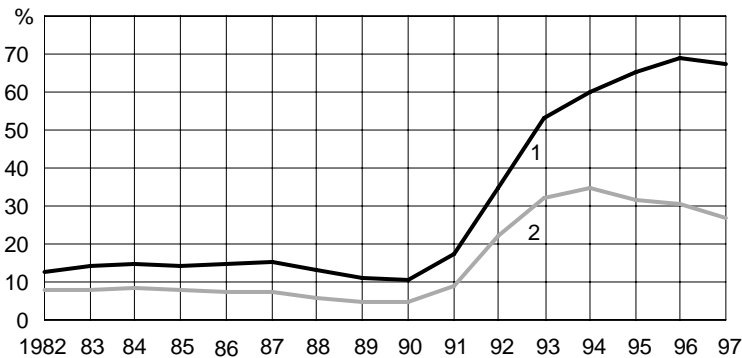
12-month changes calculated from 12-month moving totals and plotted at the last month, per cent



1. Revenue surplus (revenue less expenditure excl. financial transactions) (surplus = +)
2. Net borrowing requirement (net borrowing = -)

12-month moving total as a percentage of GDP, plotted at the last month

### 36. Central government debt



1. Total debt
2. Of which: foreign currency-denominated debt

As a percentage of GDP

# BANK OF FINLAND

24 September 1998

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## THE PARLIAMENTARY SUPERVISORY COUNCIL

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ILKKA KANERVA, Chairman  
JOHANNES KOSKINEN, Vice Chairman  
OLAVI ALA-NISSILÄ

KIMMO SASI  
TUULIKKI HÄMÄLÄINEN  
MAURI PEKKARINEN

VIRPA PUJSTO  
MARTTI KORHONEN  
ANNELI JÄÄTTEENMÄKI

ANTON MÄKELÄ, Secretary to the Parliamentary Supervisory Council

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## THE BOARD

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MATTI VANHALA, Governor  
ESKO OLLILA, Deputy Governor

MATTI LOUEKOSKI  
MATTI KORHONEN

HEIKKI T. HÄMÄLÄINEN, Secretary to the Board

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## DIRECTOR

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PENTTI KOIVIKKO

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## DEPARTMENTS AND OTHER UNITS

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Accounting ESA OJANEN, in addition to own duties

Market Operations MARKUS FOGELHOLM

Administration ESA OJANEN

Monetary Policy PENTTI PIKKARAINEN,  
Adviser to the Board: KARI PUUMANEN

Communications ANTTI JUUSELA

Organization and Management Development  
ESA OJANEN, in addition to own duties

Economics ANTTI SUVANTO

Payment Instruments URPO LEVO

Financial Markets HEIKKI KOSKENKYLÄ,  
Adviser to the Board: RALF PAULI

Payments and Settlement RAIMO HYVÄRINEN

Information Services MARTTI LEHTONEN

Personnel AURA LAENTO,  
Adviser to the Board: ANTON MÄKELÄ

Information Technology PERTTI SIMOLA

Publication and Language Services ANTERO ARIMO

Internal Audit TAINA KIVELÄ

Research JUHA TARKKA,  
Adviser to the Board: DAVID MAYES

International Secretariat KJELL PETER SÖDERLUND

Security JYRKI AHVONEN

Legal Affairs ARNO LINDGREN

Management Secretarial Staff HEIKKI T. HÄMÄLÄINEN

**Institute for Economies in Transition** PEKKA SUTELA

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## BRANCH OFFICES

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Kuopio, Oulu, Tampere, Turku

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## FINANCIAL SUPERVISION AUTHORITY

(functions as an independent body in connection with the Bank of Finland; it has its own organization chart)

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KAARLO JÄNNÄRI, Director General

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