



# BULLETIN

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Measuring the external value of  
the markka

Divisia indices for money in  
the Finnish context

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# Measuring the external value of the markka

by **Veli-Matti Mattila**, Economist  
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**R**ates of exchange are determined by supply and demand in the foreign exchange markets. The rates of exchange of a single currency, such as the Finnish markka, generally change by different amounts or even in different directions. Only seldom does a currency weaken or strengthen by an equal amount against all other currencies.

In May last year, for instance, one Deutschemark was valued at 3.10 Finnish markkaa and one US dollar at 4.76 Finnish markkaa. In May this year the value of a Deutschemark was 3.02 markkaa and that of a US dollar 5.13 markkaa. Consequently, the markka had strengthened – ie appreciated in economists' terms – against the Deutschemark and weakened (depreciated) against the US dollar. Because the changes in markka exchange rates differed against different currencies, the overall change is not obvious. Can we say whether the markka weakened or strengthened over the period in question?

Movements in the external value of a currency can be measured by means of an 'effective' exchange rate, which is an average external value of the currency relative to a basket of currencies. For example, the Bank of Finland currency index shows how the markka's external value changes with respect to the currencies of Finland's most important trading partners. The weights of the currencies in the index are determined by the shares of the respective countries in Finland's foreign trade. Hence the index is also called the trade-weighted currency index. According to the index, the markka weakened over the period May 1996 – May 1997 (Chart 1).

The Bank of Finland currency index is also an example of a nominal exchange rate index. By deflating a nominal exchange rate index by different cost or price indices one obtains different measures of the real exchange rate. These show how eg unit labour costs or consumer prices have changed relative to corresponding costs or prices in other countries, measured in terms of the same currency.

## **The Bank of Finland currency index**

Calculation of the Bank of Finland currency index started in the early 1970s when the Bretton Woods system, based on fixed exchange rates, collapsed and the need arose for a new measure of the markka's external value. Initially, the index was used

only for internal monitoring purposes at the Bank. Use of the index was made official in 1977 via an amendment of the Currency Act, and from 1977 until 1991 the external value of the markka was defined by means of the Bank of Finland currency index.<sup>1</sup> The currency index also served as the official intermediate target for Finnish monetary policy: the Bank of Finland was obliged to ensure that the index number stayed within the fluctuation range set by the Council of State.<sup>2</sup> Since June 1991 the currency index has not had an official role in monetary policy.

During the period 1977–1991 calculation of the currency index and determination of included currencies and weights were specified in detail in legislation on the index. Under these provisions, the index had to include all countries accounting for at least one per cent of the combined value of Finnish merchandise imports and exports in each of the three preceding calendar years. It was also required that the country's currency be convertible, ie that it could be exchanged for foreign currencies and used eg as a payment medium in merchandise trade. The convertibility requirement was incorporated in the provisions at the start of 1984, resulting in removal of the Soviet rouble from the index.

If a country met the criteria for trade share and currency convertibility, it was included in the currency index. Its currency was then used in the calculation of the index if it was quoted by the Bank of Finland or generally used in trade between Finland and the concerned country. Otherwise, a country's trade share was added to the weight of the currency quoted by the Bank of Finland and most commonly used in Finland's trade with that country. This practice was applied eg to Iran in the 1970s.

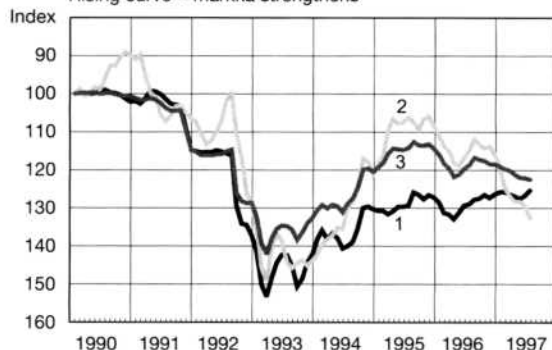
In June 1991 the markka was pegged to the currency unit of the European Communities, the ECU, and since then the currency index has not had official status as an intermediate target for monetary policy. The markka was floated in September 1992 and joined to the European exchange rate mechanism (ERM) in October 1996.

<sup>1</sup> Ilkka Puro discusses the Bank of Finland currency index and revisions thereof in the Bank of Finland Bulletin, Feb 1984.

<sup>2</sup> Olli-Pekka Lehmussaari reviews Finland's experiences with the currency index in the Bank of Finland Bulletin, Mar 1991.

**Chart 1.****Markka's external value**

Data adjusted so that Jan 1990 = 100  
 Rising curve = markka strengthens



1. Markka value of Deutschemark (FIM/DEM)
2. Markka value of US dollar (FIM/USD)
3. Bank of Finland currency index

Despite the changes in exchange rate regime, the Bank of Finland has continued to calculate and publish the currency index because it still serves as a useful tool for describing trends in the markka's external value from the standpoint of foreign trade. Since a country's nominal and real exchange rates often move in the same direction, at least in the short run, the index also serves as a useful indicator of price competitiveness of Finnish products.

Although the legislative provisions on the composition of the currency index have been repealed, the Bank of Finland has continued to observe the principles of these provisions in recent years. The countries included are still countries that are crucial in Finland's foreign trade and whose currencies are convertible, at least in respect of current account transactions. It is no longer required that the Bank of Finland quote the currency or that it be generally used for trade-related payments. However, sufficiently representative quotations on the currency must be available.

**Composition of the currency index**

The Bank of Finland currency index presently includes 16 currencies, of which the most important are the Deutschemark, Swedish krona, pound sterling and US dollar. The value of trade between Finland and countries included in the index accounted for almost 74 per cent of total Finnish foreign trade in 1996.

**Table 1. Weights in the currency index as from 1 July 1997**

Currency	Weight, %	Currency	Weight, %
Deutschemark	18.8	Italian lira	4.6
Swedish krona	14.9	Danish krone	4.3
Pound sterling	12.7	Belgian franc	3.8
US dollar	9.5	Estonian kroon	2.6
French franc	5.9	Spanish peseta	2.5
Japanese yen	5.5	Swiss franc	1.9
Dutch guilder	5.4	Republic of Korea won	1.4
Norwegian krone	4.8	Austrian schilling	1.4

The Bank of Finland revamped the currency index this summer, adding two new currencies: the Estonian kroon (EEK) and the Republic of Korea won (KRW). The weight of the kroon is 2.6 per cent and that of the won 1.4 per cent (Table 1). Both currencies are officially convertible currencies. The kroon's exchange rate has been unilaterally pegged to the Deutschemark at the rate of DEM 1 = EEK 8. The won's exchange rate is loosely linked to the US dollar. The Bank of Finland has been publishing the middle rate for the Estonian kroon in its daily foreign exchange list since 1992. The won was admitted to the list following its inclusion in the currency index.

Trade between Finland and Estonia has grown rapidly in recent years. In 1996 the value of this trade amounted to FIM 6.7 billion, accounting for some 2 per cent of Finland's total foreign trade. Trade between Finland and South Korea totalled about FIM 3.5 billion last year. South Korea's share in Finland's foreign trade has for several years been around one per cent.

Because the currencies of many countries are undergoing or have recently undergone significant changes in respect to convertibility, the currency index may be revised again in the future. It now appears that potential additions to the index would include the Polish zloty (PLN) and the Russian rouble (RUR). The composition of the index will naturally be affected also by changes in the country breakdown of foreign trade.

With the start of Stage Three of Economic and Monetary Union (EMU) exchange rates of participating countries will be fixed and national currencies eventually replaced by a new single currency, the euro. Finland's membership in EMU and adoption of the euro will not necessarily imply that the Bank of Finland currency index will no longer be calculated. But if it is calculated, there will be an essential change in the meaning and composition of the index. When the euro replaces the markka, the original use of the index – to measure the external value of the markka – will lose its meaning. Some of the currencies presently included in the index will also be replaced by the euro, and this will probably result in removal of the corresponding countries from the index. If calculation of the index is continued in the EMU environment on existing principles,



### **Calculation of the Bank of Finland currency index**

The value of the currency index at the time of calculation (t) is obtained by multiplying the index number for the comparison (reference) year by the average change in exchange rates:

$$(1) \quad IND_t = E_t * IND_0$$

where

$IND_t$  = index number at time of calculation

$E_t$  = average change in exchange rates at time of calculation, relative to reference year

$IND_0$  = index number for reference year.

The reference year (presently 1995) is the calendar year that precedes by two years the calendar year of the calculation.

The *average change in the exchange rate* is the weighted geometric mean of ratios of current to reference-year-average exchange rate:

$$(2) \quad E_t = \exp \left[ \sum_{i=1}^{16} w_i * LN (x_{it} / x_{i0} ) \right]$$

where

$x_{it}$  = FIM middle rate for currency  $i$  at time of calculation

$x_{i0}$  = reference-year mean of FIM middle rates for currency  $i$

$w_i$  = weight of currency  $i$ .

A currency's weight is the arithmetic mean of the respective country's foreign trade shares for the reference year and four latest-available quarters. A foreign trade share is the mean of the country's export and import shares.

the index will then reflect movements in the *euro's* external value against currencies of Finland's most important non-EMU trading partners, weighted by their respective shares in Finland's foreign trade.

### **The TCW index for the markka**

Besides the Bank of Finland currency index, changes in the value of the markka can also be monitored using other gauges. Some international organizations calculate effective exchange rates for various currencies, including the Finnish markka, which may differ eg in respect of currency composition or

method of calculating the weights. Owing to these differences, the indices may give somewhat differing pictures of how the value of a particular currency moves over time.

The International Monetary Fund (IMF), for instance, calculates effective exchange rates for the markka and many other currencies using 'total competitiveness' weights.<sup>3</sup> The weights are fixed and are calculated on the basis of trade flows of

<sup>3</sup> Effective exchange rates are also calculated eg by the Commission of the European Communities and the Bank for International Settlements.

**Chart 2.****Bank of Finland currency index and markka's TCW index**

Data adjusted so that 2 Jan 1995 = 100  
Rising curve = markka strengthens



1. Bank of Finland currency index  
2. Markka's TCW index

manufactured goods during the years 1989–1991 between 22 industrial countries, including all the EU countries. The weights take into account both bilateral trade between countries – as in the Bank of Finland currency index (see Box) – and competition between countries in third markets. Thus, the weight of the Swedish krona in the markka's TCW index takes into account not only bilateral trade between Finland and Sweden but also competition between Finland and Sweden in other markets.

The markka's TCW index includes 20 currencies, ie four more than does the Bank of Finland currency index.<sup>4</sup> The additional currencies are the Australian, Canadian and New Zealand dollars, Irish punt, Greek drachma and Portuguese escudo. The currencies recently added to the Bank of Finland currency index,

<sup>4</sup> Both indices include Luxembourg in the Belgian franc's weight.

<sup>5</sup> The Bank of Finland currency index, shown in Chart 2, was calculated on the basis of currencies included in the index in 1995 and 1996. Accordingly, the Estonian kroon and Republic of Korea won are not included. The old weights of the currency index are provided in the Bank of Finland's statistical review 'Financial Markets'.

**Table 2. Weights in the markka's TCW index**

Currency	Weight, %	Currency	Weight, %
Deutschemark	22.1	Norwegian krone	3.0
Swedish krona	16.2	Swiss franc	2.5
Pound sterling	11.5	Spanish peseta	2.4
US dollar	8.9	Austrian schilling	1.7
French franc	7.3	Canadian dollar	1.0
Italian lira	5.6	Portuguese escudo	0.9
Japanese yen	5.2	Irish punt	0.6
Dutch guilder	3.8	Greek drachma	0.3
Danish krone	3.5	Australian dollar	0.2
Belgian franc	3.1	New Zealand dollar	0.1

Estonian kroon and Republic of Korea won, are not included in the markka's TCW index.

Although there are differences in the currency composition and weighting of the TCW index and the Bank of Finland currency index, the indices have given very similar pictures of movements in the value of the markka in recent years (Chart 2).<sup>5</sup> This is explained by the fact that the weighting and currency composition differences had roughly offsetting effects. Although the weight of the Deutschemark has been greater in the TCW index than in the Bank of Finland currency index, the combined weight of the Deutschemark and currencies that closely track its exchange rate movements, such as the Belgian franc, Dutch guilder and Austrian schilling, has been virtually the same in both indices. Similarly, inclusion of the Irish punt in the TCW index in effect increases the weight of the pound sterling, as their exchange rates often move in the same direction.

The Bank of Finland will continue to use its own currency index as a measure of the markka's external value. In addition, the Bank will monitor other measures – such as the TCW index and markka value of the ECU – in order to get other perspectives on developments in the value of the markka.

27 June 1997

- Key words: currency index, effective exchange rate, exchange rate

# Divisia indices for money in the Finnish context

by **Jori Petteri Kiviniemi**, Economist  
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**M**oney supply measures have long been a subject of interest in the literature on macro-economic and monetary policy. As they provide a means to assess monetary conditions and are a potentially useful source of corroborative information about price developments, practically all central banks compile and track monetary aggregates. Monetary aggregates became the focal point of monetary strategy for a number of central banks in the late 1970s after the US Federal Reserve started to announce money supply targets. Yet, even in the heyday of money targeting, which extended well into the 1980s, some economists challenged the short-term usefulness of basing policy on changes in money.<sup>1</sup>

One long-recognized drawback of monetary aggregates is that the monetary assets they measure are assumed to be perfect substitutes, thereby ignoring the very real issue of liquidity. For example, the 1959 Radcliffe Report by the UK's Committee on the Working of the Monetary System noted this problem, and thus rejected monetary measures to restrict the quantity of money in favour of tools directly aimed at controlling the liquidity of the monetary system.

With the liberalization of financial markets in the 1980s, the information value of standard monetary aggregates waned. Financial innovations, in particular, were found to cause surprising fluctuations in the aggregates, which, if taken as leading indicators, produced misleading inferences about output and price developments. Of course, most central banks today use money supply as an indicator; but with the awareness that no single indicator can be the basis of policy. Rather, the goal is to form a coherent outlook, and monetary aggregates may help or even play a central role in this respect.

To get at the explanatory power of money, particularly that of monetary aggregates, components of monetary aggregates can be weighted so that their index value accurately reflects the substitutability and liquidity of the monetary assets they represent.<sup>2</sup>

Divisia measures of money represent the most established weighted approach to monetary aggregation.<sup>3</sup>

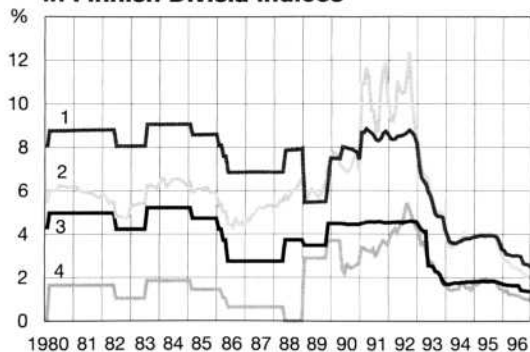
For a monetary policymaker, construction of a weighted index is justified as long as it offers potential to improve assessment of monetary conditions beyond what is already provided by standard aggregates. In this article, we seek to identify what, if any, additional leading or corroborative information might be provided by Divisia indices of money in the Finnish context.

## Data set

We examine a data set based on monetary aggregates; M2 for the period 1/80 to 12/82, and M3 from 1/83 to 12/96. The following table provides some brief definitions of some of the monetary assets used calculating monetary indices in Finland. A net interest weighting, ie interest after taxes, is used for valuing deposits (see Chart 1). Net interest calcula-

**Chart 1.**

### Net interest rates used in Finnish Divisia indices

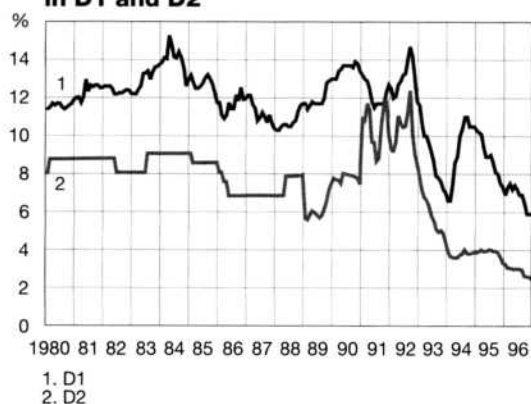


1. Time deposits
2. Other deposits
3. Transaction accounts
4. Chequable deposits

<sup>1</sup> Finland never set official money targets based on monetary aggregates.

<sup>2</sup> For more on the specifics of the Finnish situation, see Kjell Peter Söderlund, 'Monetary Aggregates and Indices in Finland', Bank of Finland Bulletin, April 1988, Vol 62 No. 4; and Jori Petteri Kiviniemi, 'The Application of Monetary Divisia Indices to the Case of Finland' (in Finnish), Bank of Finland Discussion Papers, 11/97.

<sup>3</sup> François Divisia, 'L'indice Monétaire et la Théorie de la Monnaie', Revue d'Economie Politique, Vol. 39, 1925, pp. 980-1008.

**Chart 2.****Interest on benchmark assets used in D1 and D2**

tions are made for each component depending on whether the interest on the asset in question is subject to personal income tax, corporate tax or withholding tax.

**Table. M3 components used for calculation of Divisia indices for Finland**

Monetary asset	Definition
Cash	Notes and coin in circulation with the public
Chequable and non-interest-bearing transfer service deposits	Taxed and non-taxed chequable deposits and non-interest-bearing transfer service deposits <sup>4</sup>
Transaction accounts	Taxed and non-taxed interest-bearing 'transaction accounts' <sup>5</sup> and sight deposits
Time deposits	Taxed and non-taxed interest-bearing 12-, 24- and 36-month deposits; other time bank deposits
Other deposits	Certificates of deposit, other taxed and non-taxed markka-denominated interest-bearing deposits held by the public

<sup>4</sup> Taxed interest-bearing transfer service deposits include deposits subject to source tax and other taxable accounts.

<sup>5</sup> The term 'transaction account' designates the most common type of bank account used by average people and was coined by local banks as a generic response to consumer protection issues and service packaging possibilities.

### User costs, benchmark rates and weights

For our discussion, we compare two alternative Divisia series, D1 and D2, using different approaches to determining the interest rates for benchmark assets (see Chart 2) to see if they give results that are representative of actual historical outcomes and thereby judge how much and what kind of information they offer.<sup>6</sup> User cost is calculated as the difference between net interest on a monetary asset and the benchmark rate for the asset. In the case of D1, the benchmark rate is the 3- to 6-year fixed interest on taxed bonds for the period 1/80 to 12/87 and thereafter the Bank of Finland's five-year reference rate.<sup>7</sup> D2 uses the maximum net interest offered for the listed assets.

User costs are considered when determining asset weightings (see Charts 3 and 4, and box). Because user costs are used in D2 in the calculation of a benchmark rate ie maximum net interest, situations may arise where the user cost is zero. Indeed, when user cost is zero for two consecutive years, even the weighting could be zero (Charts 1, 2 and 4).

Weights are analysed to determine the substitutability of various monetary assets. Asset weightings also change over time.<sup>8</sup> In the case of D1, the weighting for transaction accounts falls gradually from the beginning of 1981 to the beginning of 1990, and thereafter hovers around 0.4. The weights for time deposits and other deposits move counter to the trend for transaction accounts until mid-1995, and thereafter a negative dependence can still be detected between time deposits and transaction accounts. It appears deposits sloshed back and forth between transaction accounts, time deposits and other deposits up until mid-1995, when a trend towards putting deposits into time deposits is established. Notably, there is a steady fall in the weighting for cash and an increase in the weighting for chequing and sight accounts throughout the entire period studied.

In the D2 Divisia series, the changes in weightings (see Chart 4) have been considerably larger and on occasion at odds with the direction of change in D1 weights for eg transaction accounts. In D2, it is also notable that time deposits and other deposits develop asymmetrically. The asymmetry

<sup>6</sup> Two Divisia indices are calculated in order to highlight the theoretical problems associated with benchmark interest rates. The completely illiquid monetary assets demanded by theory are absent from Finnish financial markets. For the sake of comparison, therefore, we decided to calculate our own D1 index which complies almost fully with the theoretical requirements of Divisia weighting. We then compare D1 values against the D2 Divisia index which has been calculated in Finland.

<sup>7</sup> Due to heavy regulation of its financial markets, Finland's bond markets and secondary markets were still relatively undeveloped at the beginning of the 1990s. Thus, in a sense, benchmark interest rates could be said to provide a relatively good description of interest on illiquid monetary assets.

<sup>8</sup> The changes are due to new asset classifications used in calculating Divisia indices, development of payments systems and changes in taxation.



is due to the interest rate on assets used as a benchmark interest rate. The weighting of transaction accounts falls steadily at the beginning of the 1980s, then levels off. Between early 1984 and early 1988, it climbs back to original levels, and then fluctuates until 1992, when it begins to climb steadily again. D2 weighting in the 1990s behave quite differently from D1: the D2 weights for chequing and sight accounts remain relatively stable throughout the period. Thus on the basis of D2, one might conclude that economic agents have increasingly preferred to transform their illiquid assets into more liquid assets throughout the 1990s. This contradicts D1 weighting developments. The development of weighting for cash in D2, however, is almost identical to that for D1.

Generally, we note that D2 weightings tend to emphasize the more liquid assets. Cash held by the public and transaction accounts have clearly greater weights than in D1.

### Divisia developments

Divisia indices for money are calculated on a monthly basis exploiting 12-month changes in monetary assets such that the indices describe 12-month changes in transaction services. In other words, an index value of 1.1 would mean 12-month growth of 10 per cent (see Chart 5).

Development of D1 and D2 is relatively similar from the start of the period until 12/86, when growth of transaction services slows. The shift reflects a major slowdown in the overall growth in deposits, and can be interpreted as anticipation on the part of households of the release of non-taxed bank certificates of deposit maturing in January 1987.

From 1/87 to the end of 1988, we see a clear acceleration in the growth of transaction services in both Divisia indices. Thereafter, strong growth shifts to other deposits. During 1987, this was mainly due to growth in the amount of bank certificates of deposit held by the public.

D1 growth picks up again in 12/88 when tax laws are revised. The change induces particularly strong growth in 24-month time deposits.<sup>9</sup> D2 misses this shift altogether, because the weight for time deposits at that point was zero (see Chart 4).

Both Divisia series react to the strike by members of the bank employees' union during 1/90 and 2/90. Anticipating lack of access to other monetary assets while the banks are closed, people revert to cash. We see a tremendous growth in transaction services, as people withdraw cash to get through the strike. D2 reacts more strongly to the strike than D1, because cash has a greater weight in D2 than in D1.

D1 and D2 both reflect the contraction in the total deposit stock in January 1991, when in addition to the bank strike Finnish economic output was

Chart 3.

### D1 asset weights

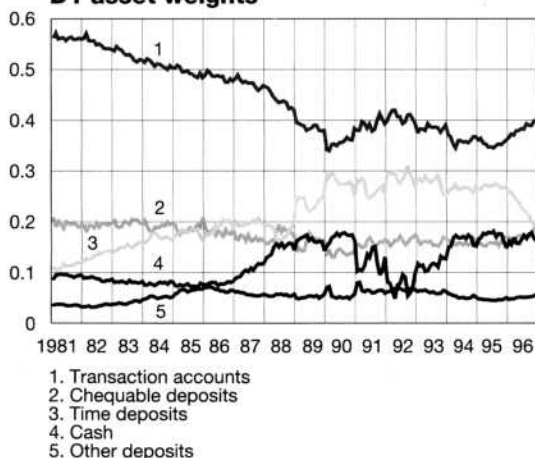
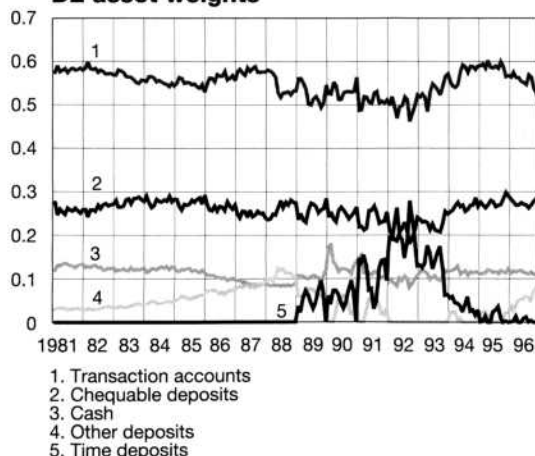


Chart 4.

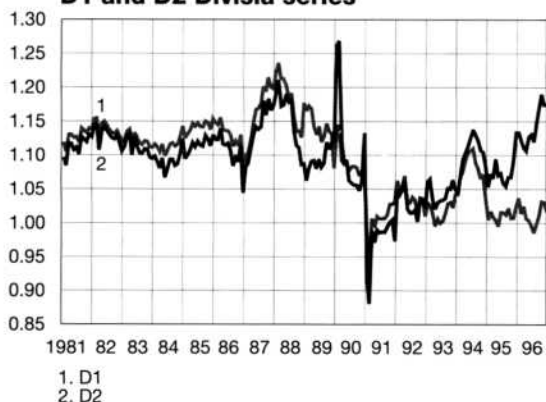
### D2 asset weights



<sup>9</sup> See Helka Jokinen, Heikki Solttila, 'Effects of the Withholding Tax', Bank of Finland Bulletin, October 1991, Vol 64 No. 10.

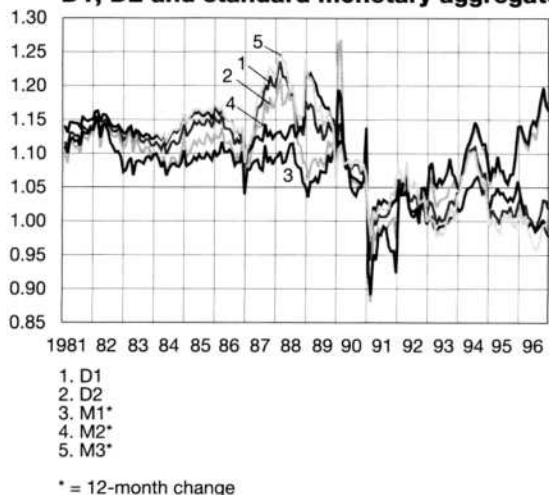
**Chart 5.**

**D1 and D2 Divisia series**



**Chart 6.**

**D1, D2 and standard monetary aggregates**



also contracting. After the strike, people return cash to the banks, and revert to more convenient transaction services. There is a heightened demand for transaction services as the amount of cash in circulation falls.

Economic recession and banking crisis forced the Bank of Finland to intervene heavily in financial markets throughout the early 1990s. As a result of these operations, the amount of bank certificates of deposit held by the public grew dramatically. There was also growth in other deposits and the total deposit stock. During 1994, this growth can be seen clearly in both D1 and D2.

From the beginning of 1995, the development for both indices follow fairly similar paths. Highly liquid monetary assets, ie cash and transaction account deposits, grow briskly. Given their weighting, D2 also grows strongly.

**Divisia indices vs. monetary aggregates**

A simple approach to comparing the relative information performance of various monetary aggregates involves comparing 12-month changes against other aggregates (see Chart 6) or against other economic variables (see Chart 7) to see how well they catch and possibly lead various shocks.

During the period investigated, we see that D1 and D2 clearly follow the development of M2 and M1 until 1987 when Finland's financial markets are deregulated. M1 and M2 fail to reflect the radical change in circumstances or give leading information of impending economic overheating; ie M1 does not react at all and M2 only slightly (see Chart 7). Thus, if D1 and D2 react to such a known shock, we can compare their relative performance vis-à-vis the narrower M1 and M2. The broader M3, on the other hand, reacts to these shocks like a monetary Divisia index. In terms of anticipating development of inflation and total output during the period 1988-89, one can say that D1, D2 and M3 all do a good job in foreseeing acceleration in inflation and growth in output.

D1, M2 and M3 all react to a brief 'tax shock' at the end of 1988, although D1's reaction is not as pronounced. However, M1 and D2 react to the increased amount of transaction services in the completely wrong direction. One can only speculate as to what aspect of D1 makes it so different from M2 and M3 in this case. We know that D1's sensitivity to transient shocks is lower than for M2 and M3, yet it still reacts better than M1 or D2.

As to the bank strike, D1 can be said to have reacted correctly, because liquidity in the financial markets grew dramatically. M1 and D2, on the other hand, overreact when we consider the shock's overall meaning to the economy. Both M2 and M3 show no reaction to the strike.

Following the bank strike, D1 develops in line with M3 to the end of the studied period. This interpretation is also corroborated by the time series

## Defining a Divisia index for money

A Divisia index framed according to monetary theory is referred to as a Divisia index for money or monetary Divisia index. It weights each component according to the extent to which they provide monetary services.

The discrete time approximation for Divisia index  $D^t$  is

$$(1) \quad \frac{D^t}{D^{t-1}} = \prod_{i=1}^n \left( \frac{q_i^t}{q_i^{t-1}} \right)^{\frac{1}{2}(\sigma_i^t + \sigma_i^{t-1})}$$

where

- $D^t$  = the Divisia measure at time  $t$
- $q_i$  = the holding of asset  $i$
- $\sigma_i$  = weight for asset  $i$  user costs
- $n$  = number of monetary assets.

The weight describes the market value of transaction services provided by monetary asset  $i$  in relation to the total market value of all transaction services. To determine market value, we calculate two components, price of asset  $\pi_i$  and quantity of asset  $q_i$  such that

$$(2) \quad \sigma_i^t \equiv \frac{\pi_i^t q_i^t}{\sum_{i=1}^n \pi_i^t q_i^t}$$

The price component describes the user cost of monetary assets.<sup>10</sup> User cost is calculated by subtracting the net interest on asset  $i$  after taxes, eg the net return on savings deposits  $r_i$  from the return on a comparable illiquid monetary asset, a so-called benchmark return  $R$ . This difference is discounted from the present return on the illiquid monetary asset such that

$$(3) \quad \pi_i = \frac{R - r_i}{1 + R}$$

When using a Divisia index for money, it should be noted that potential income indicates a relative change in transaction services, not an absolute level. In empirical studies, a change in transaction services is considered to reflect a change in the money supply.

<sup>10</sup> See William A. Barnett, 'The User Cost of Money', *Economics Letters* 1 (1978), pp. 145-149.

**Chart 7.**

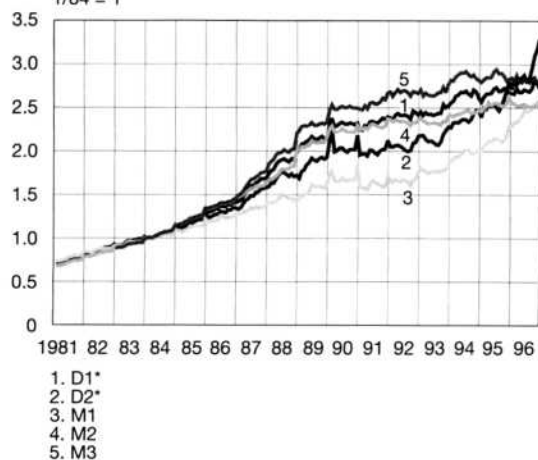
**12-month changes in Finland's CPI and GDP**



**Chart 8.**

**D1, D2 and standard monetary aggregates**

1/84 = 1



\* = indexed

(see Chart 8). Growth is slightly above M3 until the beginning of 1993, and thereafter slightly below until the end of the period. D2 clearly lags M1 throughout the bank strike, especially after the beginning of 1994. Indexed time series further support these observations.

Generally speaking, D1 is a very similar type of indicator for inflation compared to M3, although it is better at leading growth in output because it captures such changes as the increase in economic activity at the start of 1990 as well as the subsequent decline in economic activity. Clearly, D1 also reacted better to economic shocks than either M1 or M2, mainly because D1 comprises more information, for example, about the state of financial markets.

D2's indicator properties are evidently quite similar to those of M1, while D2 offers absolutely no new information for monetary policy that isn't already available in M1. Perhaps it could add some information when forecasting growth in output, but this information is less than what is already available in D1, because D2 reacts incorrectly in certain situations.

**Conclusions**

While it would be inappropriate here to make sweeping conclusions about the information value of Divisia indices for money in relation to monetary aggregates, in the Finnish context at least, a clear advantage can be seen in the way D1 shows a consistently correct reaction to each monetary shock in the period studied. Standard monetary aggregates, depending on the type of shock, do not always do this, and D2 behaviour is harder to interpret. D2 also has theoretical shortcomings in how its benchmark rates have been selected. As some weightings may be inappropriate, D2 may miss certain types of monetary shocks (or overreact in other cases). Generally, D1 seems to be a significantly better indicator for monetary policy purposes than D2. In addition, D1's design is based on theory and performs better on average than standard monetary aggregates.

30 August 1997

- Keywords: monetary policy, monetary aggregates, weighted monetary aggregates, inflation indicator



## Item

### **Supplementary budget**

The first supplementary budget for 1997 was approved by Parliament on 10 October 1997. Because domestic economic activity has been generally in line with prior projections, it appears that no significant changes will be needed in the 1997 budget.

In accord with an earlier government decision, some additional funds will be granted to certain government agencies and ministries for research and development activities. Other items included in the supplementary budget relate almost exclusively to essential increases or decreases in government expenditures and receipts. In net terms, total government expenditure will decrease by FIM 1.6 billion to a total of FIM 188.7 billion.

The revenue side of the supplementary budget includes gross tax increases of FIM 4.9 billion, compared to the original 1997 budget, mainly in the

form of increased corporate taxes. In net terms, government tax revenue will increase by only FIM 2.3 billion. This is because income accruing from certain other taxes is estimated to be less than originally projected. The supplementary budget includes some other, mainly one-off, increases in revenue, such as repayments on capital support provided to banks during the banking crisis.

The supplementary budget contemplates a reduction in the central government's net borrowing requirement of FIM 8.6 billion, which would reduce the total requirement to FIM 19.7 billion or 4½ per cent of GDP in 1997. At the same time, the EMU financial deficit, ie the net borrowing requirement of the entire public sector (central and local governments and social security funds) should decline to 1½ per cent of GDP. This is in line with the 1998 budget proposal presented to Parliament in September.

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

1996

## **OCTOBER**

**Tender rate.** On 9 October, the Bank of Finland lowers its tender rate from 3.10 per cent to 3.00 per cent. In addition, the interest rate on banks' excess reserves is cut from 1.10 per cent to 1.00 per cent.

**Finland joins the ERM.** Finland joins the EU Exchange Rate Mechanism (ERM) as of 14 October 1996.

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.

# 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 5 132 320 (31 December 1996) and an average population density of 17 per square kilometre. The largest towns are Helsinki (Helsingfors), the capital, with 532 053 inhabitants, Espoo (Esbo) 196 260, Tampere (Tammerfors) 186 026, Vantaa (Vanda) 168 778 and Turku (Åbo) 166 929.

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.

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's negotiations to join the European Union were concluded in spring 1994. The accession treaty was signed in Corfu in June. In autumn 1994, a consultative referendum was held in which the majority of the voters (56.9 %) were in favour of membership. The Finnish Parliament ratified the accession treaty in November. The accession treaty having been ratified by each Member State, Finland became a member of the European Union on 1 January 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.

Finland's development cooperation programmes channel assistance via international organizations and, bilaterally, to a number of African, Asian and Latin American countries.

## The economy

**Output and employment.** Of the gross domestic product of FIM 500 billion in basic values in 1996, 2 % was generated in agriculture and fishing, 2 % in forestry, 26 % in industry, 6 % in construction, 11 % in trade, restaurants and hotels, 9 % in transport and communications, 4 % in finance and insurance, 21 % in other private services and 19 % by producers of government services. Of total employment of 2.1 million persons in 1996, 7.1 % were engaged in primary production, 27.6 % in industry and construction and 65.3 % in services.

In 1996, expenditure on the gross domestic product in purchasers' values amounted to FIM 574 billion and was distributed as follows: net exports 8 % (exports 38 %, imports -30 %), gross fixed capital formation 16 %, private consumption 54 % and government consumption 22 %. Finland's tax ratio (gross taxes including compulsory employment pension contributions relative to GDP) was 48.2 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 1996 was USD 22 000.

**Foreign trade.** EU countries absorb the bulk of Finnish merchandise exports. In 1992–1996 their average share was 51.7 %. Over the same period, Finland's exports to other European countries (including Russia) accounted for 23.4 % and to the rest of the world for 24.9 %. The regional distribution of Finland's merchandise imports in the same period has been quite similar to that of exports: EU countries accounted for 51.4 %, other European countries for 24.7 % and the rest of the world for 23.9 %.

In 1996, the share of forest industry products in total merchandise exports was 30 %, the share of metal and engineering products 40 % and the share of other goods 30 %. Raw materials and intermediate goods (incl. crude oil) accounted for 59 % of merchandise imports, fuels for 5 %, investment goods for 15 % and consumption goods for 21 %.

**Forest resources.** Finland has fairly abundant forest resources but only limited amounts of other raw materials. The growing stock comprises 1 973 million cubic metres, of which 46 % is pine, 36 % spruce, 15 % birch and 3 % other broad-leaved species.

The annual growth increment totals 75.4 million cubic metres and the total drain was about 59 million cubic metres in 1996.

## **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 25 November 1996 the ECU central rate is FIM 5.85424.

**The Central Bank.** The Bank of Finland (Suomen Pankki – Finlands Bank), founded in 1811, operates under the supervision of the Parliamentary Supervisory Council, the nine members of which are entrusted with overall supervision of the Bank and certain specific decisions such as fixing the Bank's base rate and the limits for other rates. The Governor and a maximum of five other Members of the Board are appointed by the President of the Republic. The Board manages all affairs not expressly entrusted to the Parliamentary Supervisory Council, including the terms of banks' central bank finance and open market operations in the money and foreign exchange market. The powers vested in the Bank and its independence of the Government make the Bank of Finland one of the world's stronger central banks. In practice, the Bank liaises closely with the Government, so as to coordinate economic policy. The Bank of Finland has a head office in Helsinki and 4 branch offices in other towns.

**Other banks** (31 December 1996). Finland has three major groups of deposit banks with a total of 1 447 offices. There are two big commercial banks with national branch networks and five smaller ones. The commercial banks have a total of 14 foreign branches, subsidiaries and associate banks and 18 representative offices abroad. There are 40 savings banks and 298 cooperative banks with their own extensive branch networks. In addition, four foreign banks have branches in Finland and nine foreign banks have representative offices.

**Financial markets.** Of the total stock of FIM 712 billion in outstanding domestic credit at end-June 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, 68 % of the instruments, which totalled approximately FIM 165 billion at end-June 1997, were bank certificates of deposit (including central bank paper). Other negotiable money market instruments consist of Treasury bills, commercial paper and local authority paper.

There are 75 listed companies on the Helsinki Stock Exchange, with a market capitalization value of FIM 371 billion (at end-June 1997). Domestic bonds and debentures in circulation at end-June 1997 totalled FIM 259 billion; government bonds made up 73 % of the total. Turnover on the Stock Exchange in 1996 amounted to FIM 102 billion; the share of shares and subscription rights in the total was about 99 %. In January–June 1997 share turnover amounted to FIM 82 billion.



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# 1. The balance sheet of the Bank of Finland

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

	1996		1997		
	31 Dec	8 Sep	15 Sep	23 Sep	30 Sep
<b>ASSETS</b>					
<b>Reserve assets</b>	36 397	63 127	61 988	62 384	62 055
Gold	1 742	1 742	1 742	1 742	1 742
Special drawing rights	1 344	1 692	1 676	1 448	1 588
IMF reserve tranche	1 953	2 118	2 101	2 085	2 081
ECU-claim on the European Monetary Institute	2 541	3 964	3 943	3 953	3 958
Foreign exchange assets	28 817	53 611	52 525	53 156	52 686
<b>Other foreign claims</b>	3 853	4 131	4 131	4 131	4 131
Markka subscription to Finland's quota in the IMF	3 794	4 071	4 071	4 071	4 071
Share in the European Monetary Institute	59	60	60	60	60
<b>Claims on financial institutions</b>	13 497	10 184	9 584	11 940	11 940
Liquidity credits	-	-	-	-	-
Securities with repurchase commitments	11 626	7 432	6 846	9 214	9 214
Term credits	-	-	-	-	-
Bonds	196	152	138	126	126
Other claims on financial institutions	1 676	2 600	2 600	2 600	2 600
<b>Claims on the public sector</b>	1 906	1 939	1 937	1 937	1 939
Treasury bills	-	-	-	-	-
Bonds	-	-	-	-	-
Total coinage	1 906	1 939	1 937	1 937	1 939
Other claims on the public sector	-	-	-	-	-
<b>Claims on corporations</b>	2 266	1 900	1 900	1 900	1 899
Financing of domestic deliveries (KTR)	70	34	34	34	33
Other claims on corporations	2 197	1 866	1 866	1 866	1 866
<b>Other assets</b>	598	957	822	871	798
Accrued items	490	856	722	772	696
Other assets	108	101	100	99	102
<b>Valuation account</b>	-	-	-	-	-
<b>Total</b>	<b>58 518</b>	<b>82 239</b>	<b>80 361</b>	<b>83 163</b>	<b>82 762</b>
<b>LIABILITIES</b>					
<b>Foreign liabilities</b>	5 680	5 833	5 835	5 890	5 881
Allocations of special drawing rights	951	1 046	1 038	1 030	1 028
IMF markka accounts	3 794	4 071	4 071	4 071	4 071
Other foreign liabilities	934	715	725	788	782
<b>Notes and coin in circulation</b>	16 891	16 299	16 245	16 012	16 046
Notes	15 076	14 476	14 423	14 194	14 229
Coin	1 815	1 823	1 822	1 818	1 817
<b>Certificates of deposit</b>	15 530	31 070	31 070	34 240	36 760
<b>Liabilities to financial institutions</b>	8 329	11 460	10 417	9 752	6 958
Reserve deposits	6 829	8 960	7 917	7 251	4 458
Term deposits	-	-	-	-	-
Other liabilities to financial institutions	1 500	2 500	2 500	2 500	2 500
<b>Liabilities to the public sector</b>	-	-	-	-	-
Current accounts	-	-	-	-	-
Other liabilities to the public sector	-	-	-	-	-
<b>Liabilities to corporations</b>	574	115	106	103	99
Deposits for investment and ship purchase	574	115	106	103	99
Other liabilities to corporations	-	-	-	-	-
<b>Other liabilities</b>	220	80	94	76	79
Accrued items	193	40	58	41	44
Other liabilities	27	40	36	35	36
<b>Valuation account</b>	260	6 348	5 561	6 057	5 905
<b>Provisions</b>	5 270	5 270	5 270	5 270	5 270
Pension provision	1 516	1 516	1 516	1 516	1 516
Other provisions	3 754	3 754	3 754	3 754	3 754
<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>	<b>58 518</b>	<b>82 239</b>	<b>80 361</b>	<b>83 163</b>	<b>82 762</b>

## 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
1992	2 180	564	1 732	.	25 041	29 517	-2 998	26 519	2 446	90	2 356
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
1996											
Sep	1 742	1 412	1 928	2 614	27 619	35 315	-1 774	33 541	5 998	-	5 998
Oct	1 742	1 017	1 915	2 519	29 510	36 703	-1 863	34 840	5 982	-	5 982
Nov	1 742	1 044	1 945	2 541	29 713	36 985	-2 088	34 897	5 987	-	5 987
Dec	1 742	1 344	1 953	2 541	28 817	36 397	-1 826	34 571	1 906	-	1 906
1997											
Jan	1 742	1 370	1 937	2 528	54 432	62 009	-1 292	60 717	1 907	-	1 907
Feb	1 742	1 544	1 983	2 544	54 189	62 002	-1 370	60 632	1 907	-	1 907
Mar	1 742	1 514	1 930	2 532	51 982	59 700	-1 268	58 432	1 907	-	1 907
Apr	1 742	1 186	1 986	4 011	49 851	58 775	-1 227	57 548	1 904	-	1 904
May	1 742	1 121	1 998	4 000	49 607	58 468	-1 267	57 201	1 908	-	1 908
Jun	1 742	1 100	1 963	3 984	50 322	59 111	-1 397	57 714	1 921	-	1 921
Jul	1 742	1 557	2 023	3 965	55 189	64 475	-1 533	62 942	1 921	-	1 921
Aug	1 742	1 711	2 031	3 978	54 008	63 470	-1 622	61 848	1 926	-	1 926
Sep	1 742	1 588	2 081	3 958	52 686	62 055	-1 750	60 305	1 939	-	1 939

End of period	Domestic financial sector				Corporate sector				
	Term claims on deposit banks, net	Reserve deposits of deposit banks <sup>1</sup>	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
1992	3 738	-13 165	4 022	-5 405	747	-2 651	-1 904	14 508	4 880
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
1996									
Sep	10 147	-3 676	443	6 914	102	1 630	1 732	15 331	24 650
Oct	10 683	-5 131	394	5 946	92	1 662	1 754	15 296	24 920
Nov	7 041	-4 145	1 100	3 996	74	1 591	1 665	15 449	22 160
Dec	11 626	-6 829	372	5 169	70	1 623	1 692	16 891	15 530
1997									
Jan	14 277	-5 082	336	9 531	68	1 797	1 865	15 659	47 370
Feb	12 104	-1 404	324	11 024	63	1 856	1 918	15 590	47 520
Mar	18 158	-10 649	319	7 828	59	1 919	1 978	16 131	41 950
Apr	17 070	-6 717	294	10 647	50	1 784	1 834	16 064	41 700
May	12 568	-8 091	283	4 760	42	1 669	1 712	16 068	34 760
Jun	9 558	-10 397	258	-581	42	1 695	1 738	16 315	29 110
Jul	10 575	-3 651	252	7 176	42	1 712	1 754	16 359	40 170
Aug	8 225	-12 522	252	-4 045	37	1 748	1 785	16 287	28 440
Sep	9 214	-4 458	226	4 982	33	1 767	1 800	16 046	36 760

## 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	I-IX 2.0	1.5	1.0	6 557			123
	X-XII 2.0	1.5	1.0	6 530	616	7 146	37
1996	2.0	1.5	1.0	6 652	440	7 092	121
1996							
Sep	2.0	1.5	1.0	6 636	1 634	8 270	-
Oct	2.0	1.5	1.0	6 703	631	7 334	-
Nov	2.0	1.5	1.0	6 596	136	6 732	233
Dec	2.0	1.5	1.0	6 578	992	7 570	186
1997							
Jan	2.0	1.5	1.0	6 560	423	6 983	-
Feb	2.0	1.5	1.0	6 590	992	7 582	-
Mar	2.0	1.5	1.0	6 582	1 478	8 060	-
Apr	2.0	1.5	1.0	6 589	566	7 156	18
May	2.0	1.5	1.0	6 623	598	7 221	-
Jun	2.0	1.5	1.0	6 612	1 165	7 777	-
Jul	2.0	1.5	1.0	6 786	378	7 164	-
Aug	2.0	1.5	1.0	6 813	626	7 439	-
Sep	2.0	1.5	1.0	6 779	521	7 300	-

<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
1992	76 230	137 940	-60 417	-1 293
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
1996				
Sep	11 900	24 650	-15 530	2 780
Oct	10 600	24 920	-12 030	-2 290
Nov	7 900	19 340	-23 630	12 190
Dec	12 650	15 530	-6 430	3 550
1997				
Jan	17 100	47 370	-2 780	-27 490
Feb	15 500	47 520	-28 660	-3 360
Mar	1 450	41 950	-47 030	6 530
Apr	24 200	41 700	-13 630	-3 870
May	5 700	34 760	-34 700	5 640
Jun	9 600	32 760	-22 160	-1 000
Jul	10 420	36 520	-22 950	-3 150
Aug	8 350	30 260	-26 320	4 410
Sep	12 300	34 630	-23 120	790



### 2.3 The Bank of Finland's transactions in convertible currencies, mill. FIM

During period	Intervention in the foreign exchange market			Spot transactions related to forward contracts, net	Central government's foreign exchange transactions, net
	Spot purchases	Spot sales	Forward exchange intervention = change in forward exchange position		
	1	2	3	4	5
1992	20 050	-70 640	-1 650	390	45 060
1993	25 120	-45 080	7 460	-6 910	33 240
1994	20 930	-12 900	9 060	-8 930	24 660
1995	4 910	-5 470	-6 170	9 170	-10 135
1996	7 360	-7 320	-	-	-13 868
1996					
Aug	1 350	-	-	-	-658
Sep	2 310	-	-	-	-2 210
Oct	2 200	-	-	-	-690
Nov	-	-480	-	-	30
Dec	-	-	-	-	-950
1997					
Jan	38 340	-	12 620	-12 260	-250
Feb	-	-	430	-	-1 660
Mar	1 460	-720	-2 610	2 540	-3 490
Apr	-	-690	-4 240	3 070	-8 160
May	-	-60	-100	-	-930
Jun	2 880	-	70	-	-870
Jul	4 940	-	-1 310	6 300	-3 560
Aug	-	-	-70	-	-670

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

Stock at end of period	Finnish banks' forward contracts						Total	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				Net	Currency purchases from Finnish customers	Currency sales to Finnish customers		Net
	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	
1992	39 195	32 939	6 256	21 142	32 339	-11 197	-4 941	1 614	1 929	-315	7 133	
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	-	
1996												
Aug	56 042	26 638	29 404	43 992	68 884	-24 891	4 513	17 407	7 513	9 894	-	
Sep	54 160	23 422	30 738	46 476	69 507	-23 031	7 707	18 761	7 536	11 225	-	
Oct	54 587	24 466	30 120	50 823	73 163	-22 341	7 779	18 988	6 902	12 085	-	
Nov	53 072	22 459	30 614	51 554	76 001	-24 446	6 168	18 476	7 649	10 827	-	
Dec	53 520	21 793	31 726	44 068	72 021	-27 953	3 773	15 871	6 908	8 963	-	
1997												
Jan	61 066	21 103	39 964	61 130	72 501	-11 371	28 593	18 219	5 597	12 622	-12 185	
Feb	60 646	20 139	40 507	58 008	66 207	-8 199	32 308	18 779	5 040	13 740	-12 185	
Mar	62 218	23 415	38 803	57 783	85 313	-27 530	11 273	18 160	5 138	13 023	-9 924	
Apr	65 819	25 160	40 659	59 142	84 411	-25 268	15 391	20 854	10 927	9 927	-5 589	
May	65 324	25 735	39 588	53 735	82 076	-28 340	11 248	22 115	9 477	12 638	-5 589	
Jun	65 886	30 056	35 830	58 688	83 157	-24 468	11 362	24 007	12 681	11 326	-5 589	
Jul	71 933	31 074	40 859	55 146	83 978	-28 831	12 028	30 797	14 976	15 821	-4 690	
Aug	74 387	33 124	41 263	60 935	99 872	-38 936	2 327	28 558	17 323	11 235	-4 690	

### 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 <sup>1</sup>	Excess-reserve rate <sup>2</sup>	Base rate
		1	2	3	4	5	6	7
1992	13.32	13.49	13.27	13.08	12.96	14.90	7.41	9.17
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
1996								
Sep	3.16	3.19	3.28	3.43	3.67	5.19	1.19	4.25
Oct	3.11	3.04	3.10	3.20	3.40	5.03	1.03	4.00
Nov	3.29	3.02	3.08	3.21	3.46	5.00	1.00	4.00
Dec	3.11	3.02	3.08	3.20	3.40	5.00	1.00	4.00
1997								
Jan	2.68	3.02	3.07	3.16	3.34	5.00	1.00	4.00
Feb	2.85	3.01	3.07	3.17	3.34	5.00	1.00	4.00
Mar	2.51	3.01	3.07	3.18	3.42	5.00	1.00	4.00
Apr	3.24	3.02	3.08	3.21	3.48	5.00	1.00	4.00
May	2.51	3.01	3.08	3.19	3.40	5.00	1.00	4.00
Jun	2.76	3.00	3.07	3.19	3.42	5.00	1.00	4.00
Jul	2.85	3.00	3.08	3.22	3.50	5.00	1.00	4.00
Aug	3.02	3.01	3.13	3.31	3.68	5.00	1.00	4.00
Sep	3.06	3.15	3.31	3.52	3.89	5.14	1.14	4.00

<sup>1</sup> Call money credit rate until 2 July 1992.

<sup>2</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
1992	13.85	1992	+1.00	7	-3.00	
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
1996		1996				
Sep	3.19	Sep	+2.00	7		1.10
Oct	3.03	Oct	+2.00	7		1.00
Nov	3.00	Nov	+2.00	7		1.00
Dec	3.00	Dec	+2.00	7		1.00
1997		1997				
Jan	3.00	Jan	+2.00	7		1.00
Feb	3.00	Feb	+2.00	7		1.00
Mar	3.00	Mar	+2.00	7		1.00
Apr	3.00	Apr	+2.00	7		1.00
May	3.00	May	+2.00	7		1.00
Jun	3.00	Jun	+2.00	7		1.00
Jul	3.00	Jul	+2.00	7		1.00
Aug	3.00	Aug	+2.00	7		1.00
Sep	3.14	Sep	+2.00	7		1.25
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

<sup>1</sup> July-December.

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

Average of daily observations	ECU	3 currencies		Commercial ECU
		1	2	
	3 months			
1992	10.4	7.8		10.6
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
1996				
Sep	4.2	4.1		4.3
Oct	4.1	4.1		4.2
Nov	4.1	4.2		4.2
Dec	4.1	4.3		4.2
1997				
Jan	4.1	4.3		4.2
Feb	4.1	4.3		4.2
Mar	4.2	4.3		4.2
Apr	4.3	4.4		4.4
May	4.3	4.5		4.3
Jun	4.1	4.3		4.2
Jul	4.2	4.3		4.2
Aug	4.3	4.4		4.4
Sep	4.3	4.5		4.3

### 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
1992	14.04	15.86	13.32	13.75	12.46	12.13	7.50	8.50	4.50	7.41	12.84	9.14
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
1996												
Aug	6.19	9.74	5.51	5.66	6.42	6.04	2.50	3.50	2.00	2.07	4.09	2.71
Sep	6.24	9.95	4.92	5.06	6.23	5.87	2.00	3.00	2.00	1.93	3.92	2.52
Oct	5.63	9.73	4.90	5.04	5.99	5.67	2.00	3.00	2.00	1.84	3.72	2.39
Nov	5.12	9.58	4.87	4.98	5.94	5.62	2.00	3.00	2.00	1.80	3.77	2.38
Dec	5.21	9.04	4.38	4.48	5.83	5.48	2.00	3.00	2.00	1.73	3.92	2.35
1997												
Jan	4.03	9.99	4.63	4.65	5.75	5.39	2.00	.	2.00	1.69	..	..
Feb	5.59	10.01	4.67	4.79	5.70	5.35	2.00	.	2.00	1.61	..	..
Mar	5.51	9.97	4.78	4.91	5.67	5.32	2.00	.	2.00	1.48	..	..
Apr	6.03	9.68	4.53	4.64	5.65	5.29	2.00	.	2.00	1.47	..	..
May	5.25	9.83	4.85	4.96	5.62	5.27	2.00	.	2.00	1.45	..	..
Jun	5.46	9.31	4.84	4.93	5.59	5.24	2.00	.	2.00	1.43	..	..
Jul	5.45	9.69	4.43	4.53	5.57	5.21	2.00	.	2.00	1.42	..	..
Aug	4.17	9.77	4.75	4.80	5.54	5.18	2.00	.	2.00	1.42	..	..

<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
1992	13.1	13.0	12.0	11.5 <sup>1</sup>	2.5
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
1996					
Aug	5.8	6.9	6.1	7.2	1.8
Sep	5.4	6.5	5.6	6.9	2.4
Oct	5.0	5.9	5.1	6.5	2.4
Nov	5.0	5.9	5.1	6.5	2.3
Dec	5.0	5.9	5.0	6.3	2.2
1997					
Jan	4.8	5.7	4.8	6.1	2.2
Feb	4.7	5.5	4.6	5.9	1.8
Mar	4.8	5.6	4.8	6.1	2.1
Apr	5.0	5.8	5.0	6.4	2.3
May	4.9	5.7	4.8	6.2	2.2
Jun	4.9	5.7	4.8	6.1	2.1
Jul	4.9	5.6	4.7	5.9	2.0
Aug	5.0	5.7	4.9	5.9	2.0

<sup>1</sup> November and December only.

## 4. Rates of exchange

### 4.1 Middle rates, FIM

Average of daily quotations	New York	Montreal	London	Dublin	Stockholm	Oslo	Copenhagen	Reykjavik	Frankfurt am Main	Amsterdam	Brussels	Zurich
	1 USD	1 CAD	1 GBP	1 IEP	1 SEK	1 NOK	1 DKK	1 ISK	1 DEM	1 NLG	1 BEF	1 CHF
	1	2	3	4	5	6	7	8	9	10	11	12
1992	4.4835	3.706	7.875	7.636	0.7714	0.7222	0.7444	0.0778	2.8769	2.5552	0.1397	3.2000
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
1996												
Sep	4.5383	3.313	7.075	7.309	0.6834	0.7029	0.7826	0.0680	3.0145	2.6889	0.1464	3.6860
Oct	4.5714	3.383	7.245	7.352	0.6925	0.7049	0.7803	0.0681	2.9918	2.6669	0.1452	3.6337
Nov	4.5500	3.400	7.571	7.576	0.6869	0.7162	0.7839	0.0687	3.0106	2.6843	0.1461	3.5703
Dec	4.6398	3.409	7.726	7.709	0.6799	0.7173	0.7809	0.0692	2.9883	2.6635	0.1450	3.4927
1997												
Jan	4.7765	3.541	7.924	7.791	0.6764	0.7408	0.7803	0.0700	2.9754	2.6498	0.1443	3.4297
Feb	4.9757	3.672	8.089	7.898	0.6720	0.7508	0.7794	0.0707	2.9729	2.6468	0.1441	3.4264
Mar	5.0716	3.702	8.141	7.932	0.6622	0.7448	0.7834	0.0713	2.9886	2.6558	0.1448	3.4601
Apr	5.1307	3.681	8.360	7.965	0.6678	0.7360	0.7876	0.0721	3.0003	2.6680	0.1454	3.5109
May	5.1337	3.722	8.382	7.780	0.6694	0.7271	0.7922	0.0729	3.0169	2.6825	0.1462	3.5903
Jun	5.1732	3.737	8.503	7.797	0.6680	0.7177	0.7869	0.0735	2.9966	2.6637	0.1452	3.5881
Jul	5.3051	3.854	8.869	7.942	0.6793	0.7134	0.7783	0.0747	2.9641	2.6325	0.1436	3.5832
Aug	5.5097	3.967	8.838	8.004	0.6891	0.7221	0.7850	0.0759	2.9903	2.6550	0.1448	3.6380
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

Average of daily quotations	Paris	Rome	Vienna	Lisbon	Madrid	Athens	Tallinn	Tokyo	Melbourne	Seoul	ECU Commercial	SDR
	1 FRF	1 ITL	1 ATS	1 PTE	1 ESP	1 GRD	1 EEK	1 JPY	1 AUD	1 KRW	1 XEU	1 XDR
	13	14	15	16	17	18	19	20	21	22	23	24
1992	0.8486	0.00364	0.4088	0.0332	0.0438	0.024	0.4060	0.03546	3.289	..	5.798	6.31546
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
1996												
Sep	0.8854	0.00299	0.4284	0.0295	0.0358	0.0190	0.3768	0.04132	3.598	..	5.714	6.57191
Oct	0.8846	0.00300	0.4253	0.0296	0.0355	0.0191	0.3740	0.04071	3.620	..	5.731	6.58126
Nov	0.8898	0.00301	0.4279	0.0298	0.0358	0.0191	0.3763	0.04052	3.625	..	5.782	6.60942
Dec	0.8845	0.00304	0.4247	0.0296	0.0355	0.0189	0.3735	0.04075	3.702	..	5.767	6.67218
1997												
Jan	0.8817	0.00305	0.4229	0.0298	0.0355	0.0190	0.3719	0.04051	3.712	..	5.777	6.75569
Feb	0.8806	0.00301	0.4225	0.0296	0.0351	0.0190	0.3716	0.04048	3.818	..	5.771	6.88718
Mar	0.8859	0.00299	0.4246	0.0297	0.0352	0.0190	0.3736	0.04138	3.998	..	5.801	6.98562
Apr	0.8908	0.00303	0.4263	0.0299	0.0356	0.0190	0.3750	0.04086	3.997	..	5.853	7.03636
May	0.8945	0.00305	0.4286	0.0299	0.0357	0.0189	0.3771	0.04335	3.975	..	5.880	7.12016
Jun	0.8878	0.00305	0.4258	0.0297	0.0355	0.0189	0.3745	0.04527	3.902	..	5.855	7.19320
Jul	0.8785	0.00304	0.4213	0.0293	0.0351	0.0189	0.3705	0.04609	3.939	0.00596	5.846	7.30859
Aug	0.8873	0.00306	0.4250	0.0295	0.0354	0.0191	0.3738	0.04672	4.085	0.00614	5.886	7.45951
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

## 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
1992	5.80140	116.4	115.7
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
1996			
Sep	5.76093	114.0	114.5
Oct	5.75237	114.3	114.9
Nov	5.81220	115.1	115.2
Dec	5.79898	115.2	115.9
1997			
Jan	5.80159	115.8	117.4
Feb	5.80357	116.4	119.4
Mar	5.82954	116.8	120.5
Apr	5.87626	117.8	121.6
May	5.90366	118.6	122.1
Jun	5.88180	118.7	122.4
Jul	5.86447	119.0	123.8
Aug	5.90587	120.4	126.4
Sep	5.89038	119.5	124.7

## 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
Central rate as of											
25 Nov. 1996	5.85424	3.04000	0.906422	2.69806	0.796976	0.147391	0.0357345	0.432094	0.029657	7.32960	0.00307071
	1	2	3	4	5	6	7	8	9	10	11
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
1996											
Sep	-0.79	-0.84	-2.32	-0.34	-1.80	-0.66	0.10	-0.85	-0.48	-0.28	-2.75
Oct	-0.93	-1.58	-2.40	-1.16	-2.09	-1.46	-0.56	-1.58	-0.18	0.31	-2.35
Nov	-0.10	-0.97	-1.84	-0.51	-1.64	-0.87	0.10	-0.98	0.43	3.36	-2.10
Dec	-0.94	-1.70	-2.42	-1.28	-2.02	-1.63	-0.70	-1.71	-0.14	5.17	-1.16
1997											
Jan	-0.90	-2.13	-2.73	-1.79	-2.10	-2.07	-0.78	-2.12	0.39	6.29	-0.74
Feb	-0.87	-2.21	-2.85	-1.90	-2.20	-2.26	-1.79	-2.23	-0.21	7.76	-2.04
Mar	-0.42	-1.69	-2.27	-1.57	-1.70	-1.73	-1.45	-1.73	0.29	8.22	-2.53
Apr	0.38	-1.31	-1.73	-1.12	-1.18	-1.34	-0.52	-1.34	0.88	8.67	-1.31
May	0.84	-0.76	-1.31	-0.58	-0.60	-0.84	0.02	-0.80	0.97	6.14	-0.53
Jun	0.47	-1.43	-2.06	-1.27	-1.26	-1.49	-0.74	-1.45	0.01	6.37	-0.61
Jul	0.17	-2.50	-3.08	-2.43	-2.35	-2.58	-1.65	-2.50	-1.04	8.36	-0.86
Aug	0.88	-1.64	-2.11	-1.60	-1.50	-1.74	-0.92	-1.65	-0.47	9.20	-0.30
Sep	0.62	-1.54	-1.77	-1.49	-1.36	-1.62	-0.73	-1.56	-0.59	8.20	-0.11



## 5. Other domestic financing

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

End of period	Cheque and giro deposits	Trans-action deposits	Time deposits	Other deposits	Markka deposits, total (1+2+3+4)	Foreign currency deposits	Total deposits (5+6)	Other funding	Total funding (7+8)
	1	2	3	4	5	6	7	8	9
1992	34 832	88 526	114 771	21 218	259 347	14 626	273 973	65 557	339 530
1993	36 379	92 357	112 413	21 766	262 915	14 883	277 798	63 173	340 971
1994	41 200	99 691	108 922	19 838	269 650	12 774	282 424	44 228	326 651
1995	52 496	110 455	103 573	22 166	288 689	13 679	302 369	37 851	340 220
1996	58 016	131 632	49 827	45 963	285 438	12 358	297 796	40 315	338 111
1995 Dec	52 496	110 455	103 573	22 166	288 689	13 679	302 369	37 851	340 220
1996 Jan	49 611	112 796	95 511	25 399	283 316	13 011	296 327	50 008	346 335
Feb	50 458	114 837	92 259	24 321	281 875	14 184	296 059	38 431	334 490
Mar	47 744	117 393	88 832	24 956	278 925	13 951	292 876	41 906	334 782
Apr	48 998	118 926	85 803	25 557	279 285	14 896	294 182	43 472	337 653
May	49 759	120 368	82 956	26 065	279 148	15 399	294 547	46 802	341 349
Jun	50 372	123 941	77 448	29 039	280 800	13 816	294 617	43 867	338 483
Jul	49 770	123 827	74 304	31 319	279 221	13 735	292 955	42 524	335 479
Aug	49 632	124 983	71 631	32 613	278 859	12 857	291 717	47 258	338 975
Sep	51 578	124 477	67 805	33 601	277 462	13 706	291 168	53 697	344 865
Oct	53 460	127 084	63 616	34 720	278 880	12 938	291 818	48 272	340 090
Nov	52 682	128 841	59 728	35 853	277 104	12 050	289 154	47 988	337 142
Dec	58 016	131 632	49 827	45 963	285 438	12 358	297 796	40 315	338 111

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

End of period	Cheque account and postal giro credits	Bills of exchange	Loans	Markka lending, total (1+2+3)	Foreign currency credits	Total lending (4+5)
	1	2	3	4	5	6
1992	16 045	3 335	252 163	271 544	95 168	366 712
1993	14 217	2 223	248 406	264 846	66 931	331 777
1994	13 241	1 301	242 417	256 958	45 138	302 096
1995	12 348	901	235 074	248 323	32 252	280 575
1996	11 712	628	238 839	251 179	23 302	274 481
1995 Dec	12 348	901	235 074	248 323	32 252	280 575
1996 Jan	12 150	792	234 104	247 046	32 406	279 452
Feb	12 182	853	235 211	248 246	31 240	279 486
Mar	12 262	835	235 623	248 719	30 734	279 453
Apr	12 142	834	235 029	248 005	31 704	279 709
May	12 117	763	235 306	248 187	29 035	277 221
Jun	11 936	747	237 366	250 049	29 206	279 255
Jul	11 722	698	236 967	249 387	27 516	276 903
Aug	11 872	685	237 913	250 471	26 540	277 011
Sep	11 803	659	237 999	250 462	26 131	276 593
Oct	11 522	640	238 811	250 974	25 311	276 285
Nov	11 725	616	239 174	251 515	24 736	276 251
Dec	11 712	628	238 839	251 179	23 302	274 481

### 5.3 Money supply, mill. FIM

End of period	Foreign assets, net	Domestic credit			Other items, net	Monetary aggregates		
		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
1992	-68 099	81	439 937	440 018	-97 909	134 829	274 011	310 733
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
1996								
Aug	34 402	25 936	349 733	375 669	-117 975	189 292	292 096	325 470
Sep	33 218	15 243	349 521	364 764	-106 967	190 781	291 016	329 848
Oct	31 312	17 873	349 742	365 615	-105 768	195 621	293 160	332 372
Nov	36 768	16 834	350 532	367 366	-111 862	196 631	292 273	326 535
Dec	40 638	12 821	350 230	363 052	-106 399	204 834	297 291	325 473
1997*								
Jan	53 240	14 975	335 976	350 951	-105 893	206 956	298 298	339 801
Feb	56 614	9 887	338 163	348 050	-111 763	200 605	292 901	328 095
Mar	56 842	10 209	337 213	347 421	-105 201	206 040	299 062	338 407
Apr	58 658	14 411	337 724	352 134	-115 138	202 323	295 654	340 840
May	63 106	16 769	338 988	355 757	-118 574	206 912	300 289	349 640
Jun	73 782	3 256	337 432	340 689	-112 576	209 080	301 894	350 332
Jul	73 668	6 226	337 876	344 102	-118 495	206 628	299 276	353 820
Aug	..	..	..	..	..	207 465	299 841	348 202

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

End of period	Foreign currency-denominated debt			Markka-denominated debt				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				Total (4+5+6+7)
	1	2	3	4	5	6	7	8	9	10	11
1992	100 244	6 143	106 387	40 578	13 555	14 762	-9 700	59 195	165 582	61 671	19 781
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	66 855	41 878
1996	158 847	16 161	175 008	177 700	17 187	37 620	-12 300	220 479	395 487	64 316	38 369
1996											
Sep	156 467	15 694	172 161	167 234	17 219	46 627	-12 300	218 959	391 120	64 300	44 278
Oct	157 132	15 908	173 040	172 555	17 219	40 147	-12 300	217 820	390 860	64 438	38 903
Nov	159 449	16 292	175 741	174 696	17 198	36 909	-12 300	216 756	392 497	63 764	42 220
Dec	158 847	16 161	175 008	177 700	17 187	37 620	-12 300	220 479	395 487	64 316	38 369
1997											
Jan	159 222	20 920	180 142	180 261	17 187	40 506	-12 300	225 926	406 068	64 637	38 322
Feb	162 085	21 502	183 587	183 752	17 187	43 932	-12 300	232 769	416 356	64 957	51 137
Mar	158 001	21 195	179 196	187 972	17 149	43 821	-12 300	236 879	416 075	65 096	44 839
Apr	155 575	21 828	177 403	192 178	16 865	43 658	-12 300	240 588	417 991	66 479	41 543
May	155 880	23 054	178 934	194 126	16 865	44 045	-12 417	242 806	421 740	65 951	46 841
Jun	159 454	24 635	184 089	186 952	16 581	42 797	-12 417	234 131	418 220	65 979	37 376
Jul	156 183	25 261	181 444	190 450	16 574	44 522	-12 417	239 416	420 860	65 569	37 195
Aug	155 814	24 994	180 808	192 441	16 574	41 545	-12 417	238 430	419 238	..	37 233
Sep	154 425	25 586	180 011	202 789	16 573	39 063	-12 417	246 215	426 226	..	..

## 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
1992	6 984	15 043	12 965	2 674	4	37 671
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
1996*						
Aug	-	306	9 671	-	-	9 977
Sep	20	770	5 373	-	-	6 163
Oct	600	600	6 976	-	-	8 176
Nov	1 109	1 392	2 656	-	-	5 157
Dec	63	1 412	3 538	-	-	5 013
1997*						
Jan	-	377	4 608	-	-	4 985
Feb	417	432	4 836	-	-	5 685
Mar	75	1 380	4 660	-	-	6 115
Apr	6	988	4 258	-	-	5 252
May	-	1 071	2 201	-	-	3 276
Jun	451	289	5 472	-	-	6 212
Jul	-	-	3 508	-	-	3 508
Aug	-	425	3 375	-	-	3 800

### 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
1992	26 624	82 153	44 005	5 238	3 358	89 382	13 918	58 078	161 378
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*	25 245	44 656	179 419	4 362	140	219 863	2 956	31 003	253 822
1996*									
Aug	24 756	49 075	179 304	4 638	148	219 241	3 360	35 320	257 921
Sep	24 649	48 067	168 951	4 652	148	208 317	3 113	35 037	246 467
Oct	25 184	46 793	174 273	4 642	145	213 851	2 974	34 212	251 037
Nov	25 641	47 288	176 414	4 641	142	217 494	2 962	33 670	254 126
Dec	25 245	44 656	179 419	4 362	140	219 863	2 956	31 003	253 822
1997*									
Jan	25 091	43 814	181 980	4 357	140	222 769	2 614	29 999	255 382
Feb	24 727	41 827	185 472	4 302	140	226 058	2 393	28 017	256 468
Mar	25 514	43 257	189 688	4 126	99	231 672	2 118	28 894	262 684
Apr	25 462	44 214	193 517	4 126	99	236 936	2 107	28 375	267 418
May	24 336	43 819	195 466	3 977	93	238 090	1 842	27 759	267 691
Jun	23 872	42 300	188 292	3 943	91	229 911	1 833	26 754	258 498
Jul	23 402	41 461	191 789	3 932	91	232 715	1 829	26 131	260 675
Aug	23 103	41 564	193 780	3 924	91	234 752	1 663	26 047	262 462

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
1992	10 744	12 156	13 354
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
1996			
Sep	20 680	26 345	29 739
Oct	26 298	25 293	26 064
Nov	12 545	16 312	20 612
Dec	9 510	12 084	14 868
1997			
Jan	25 954	23 993	23 081
Feb	12 586	13 762	18 477
Mar	24 965	20 852	24 048
Apr	18 425	17 110	21 183
May	14 193	16 206	21 661
Jun	15 845	20 927	23 502
Jul	17 873	23 428	27 905
Aug	21 752	25 146	25 637
Sep	28 032	34 507	37 825

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 subscription 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	
1992	772	425	467	-	-	1 123	1 206	-	-	890	10 277	15 377	25 654
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
1996													
Sep	2 131	401	862	-	-	2 188	2 778	-	-	6 125	7 204	49	7 253
Oct	2 217	520	967	-	-	2 087	2 764	-	-	6 367	10 410	53	10 463
Nov	2 317	573	977	-	-	2 017	2 744	-	-	6 442	10 676	39	10 715
Dec	2 446	588	1 006	-	-	2 131	2 850	-	-	6 692	10 379	60	10 438
1997													
Jan	2 674	633	1 183	2 047	1 001	2 241	2 984	1 107	834	6 605	16 271	95	16 366
Feb	2 850	714	1 384	2 180	1 021	2 349	3 232	1 151	894	6 862	15 554	43	15 597
Mar	2 907	723	1 365	2 215	1 041	2 521	3 336	1 140	891	7 228	10 786	26	10 811
Apr	2 826	654	1 357	2 200	1 017	2 487	3 276	1 100	877	7 148	12 401	43	12 444
May	3 045	705	1 420	2 272	1 015	2 713	3 481	1 241	922	7 887	12 254	24	12 278
Jun	3 135	679	1 442	2 362	1 031	2 732	3 574	1 334	926	7 927	14 405	28	14 433
Jul	3 432	839	1 590	2 361	1 064	2 919	3 768	1 565	929	7 849	15 708	28	15 736
Aug	3 530	898	1 581	2 301	1 022	3 001	3 692	1 672	913	7 705	15 325	46	15 371
Sep	3 480	883	1 627	2 209	989	3 001	3 543	1 662	885	7 445	15 719	43	15 762

<sup>1</sup> During period.

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

### 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
1992	105 809	8 643	6 089	7 730	22 462	128 272	6 423	5 920	140 614	93 187	4 360	10 962	13 369
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*	182 302	12 404	7 338	15 315	35 057	217 359	15 629	7 698	240 686	138 339	5 529	10 559	16 921
1995													
I	41 131	2 971	1 499	3 827	8 297	49 428	3 085	1 543	54 056	29 895	1 479	2 326	5 039
II	45 919	2 977	1 891	3 571	8 439	54 358	3 246	1 549	59 153	31 773	1 572	2 639	4 825
III	39 617	2 976	2 243	3 718	8 937	48 554	2 707	2 143	53 404	29 856	1 498	2 707	4 349
IV	46 154	2 976	1 903	3 870	8 749	54 903	3 892	3 360	62 155	33 926	1 481	2 779	4 937
1996*													
I	42 610	2 997	1 677	3 473	8 146	50 756	4 263	1 446	56 466	33 495	1 382	2 615	4 299
II	48 105	3 128	1 873	3 729	8 730	56 835	4 617	2 076	63 528	34 752	1 367	2 678	4 088
III	41 904	3 252	2 065	4 158	9 474	51 378	3 183	1 339	55 900	31 989	1 402	2 571	3 994
IV	49 683	3 027	1 724	3 955	8 706	58 389	3 566	2 837	64 792	38 102	1 377	2 696	4 540
1997*													
I	45 854	3 183	1 589	3 337	8 109	53 962	3 494	2 127	59 584	35 395	1 500	2 471	4 214
II	51 853	3 324	2 047	4 020	9 392	61 244	5 083	2 482	68 809	38 715	1 482	2 744	4 281

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
1992	28 690	121 878	30 424	10 347	162 649	12 622	4 283	-4 873	-5 639	-6 228	6 394	-24 001	-4 428	-22 035
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*	33 009	171 348	32 783	14 520	218 651	43 963	6 875	-3 221	-1 606	2 048	46 011	-17 154	-6 821	22 035
1995														
I	8 844	38 739	9 295	2 825	50 858	11 235	1 492	-827	-1 212	-546	10 689	-6 209	-1 282	3 198
II	9 036	40 809	10 067	3 191	54 067	14 145	1 406	-748	-1 254	-597	13 549	-6 822	-1 641	5 086
III	8 554	38 410	6 630	3 205	48 244	9 761	1 478	-464	-631	383	10 144	-3 923	-1 061	5 160
IV	9 196	43 122	6 538	3 407	53 067	12 228	1 494	-875	-1 066	-447	11 781	-2 646	-47	9 087
1996*														
I	8 296	41 792	8 530	4 010	54 332	9 115	1 614	-938	-827	-151	8 964	-4 267	-2 563	2 134
II	8 133	42 885	10 925	3 862	57 672	13 353	1 761	-805	-358	598	13 950	-6 308	-1 786	5 857
III	7 966	39 956	6 621	3 055	49 632	9 915	1 850	-506	164	1 508	11 423	-3 439	-1 716	6 267
IV	8 613	46 715	6 707	3 593	57 015	11 581	1 650	-972	-585	93	11 674	-3 141	-756	7 777
1997*														
I	8 185	43 580	8 334	4 321	56 235	10 459	1 683	-883	-876	-76	10 382	-4 840	-2 194	3 349
II	8 507	47 222	10 286	3 328	60 837	13 138	1 842	-697	-260	884	14 022	-5 204	-846	7 972

## 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: marka-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	
1992	0	1 822	397	39 309	-5 312	-1 791	..	37 915	3 639	2	-15 725	-12 084	27 653
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	5 196	8 937	-4 624	6 250	826	1 501	6 640	-3 383	12 737	-1 347	8 006	19 842
1995													
I	0	2 625	392	150	-1 423	-1 889	146	-1 200	-2 601	-333	8 549	5 615	7 040
II	0	-1 243	3 482	-9 335	-3 501	-974	523	-6 303	865	-3 206	-2 136	-4 477	-12 023
III	0	151	2 940	-2 503	932	1 618	1 079	3 134	-1 089	-3 192	-744	-5 025	-1 740
IV	487	3 109	1 920	-6 181	358	2 666	839	-756	1 609	-254	2 707	4 063	6 416
1996*													
I	0	1 643	1 216	2 635	1 155	502	1 119	5 472	-3 416	4 632	-552	665	7 779
II	0	609	6 143	-5 184	2 516	363	754	2 076	-735	4 717	-3 119	863	3 548
III	0	2 552	374	-4 841	277	-254	-180	-4 902	-42	2 516	4 371	6 844	4 493
IV	596	392	1 204	2 766	2 303	216	-192	3 995	809	872	-2 048	-366	4 021
1997*													
I	0	1 796	5 121	4 146	972	1 607	-94	10 779	-839	6 608	16 206	21 975	34 550
II	0	2 158	7 253	5 247	9 570	-1 718	28	10 811	-1 822	3 183	-6 920	-5 559	7 410

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	
1992	0	-3 372	46	321	2 748	..	3 115	3 634	3 409	7 720	14 763	14 506	9 180	-293
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	17 109	3 271	15 455	364	-172	18 918	982	4 523	15 927	21 431	57 458	14 075	1 250
1995														
I	0	2 012	-128	1 757	-2 249	-48	-668	660	-1 234	9 695	9 121	10 465	-1 691	1 918
II	104	1 290	375	104	-2 798	31	-2 288	2 379	-150	-7 809	-5 580	-6 577	1 288	-824
III	0	827	461	28	521	-37	973	-132	1 044	3 431	4 343	6 143	1 592	1 131
IV	102	2 410	184	1 797	-967	-115	899	933	-2 373	6 433	4 993	8 302	291	-7 878
1996*														
I	61	5 591	567	4 019	2 424	-26	6 983	-670	2 416	6 458	8 205	20 779	7 254	3 673
II	0	6 870	1 041	3 041	162	71	4 315	779	-2 064	4 834	3 549	14 734	8 457	-3 128
III	0	3 951	728	4 179	-2 457	-51	2 399	-792	1 565	1 927	2 700	9 050	-1 132	-580
IV	279	697	935	4 216	235	-166	5 220	1 665	2 606	2 708	6 979	12 896	-505	1 285
1997*														
I	0	2 362	847	4 504	4 250	-30	9 571	934	3 245	-3 793	386	12 319	-22 134	-3 446
II	0	4 449	1 788	4 683	-2 660	230	4 042	65	1 014	7 510	8 589	17 080	3 031	-1 333



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

Position at end of period	Liabilities												Total liabilities (1+7+12)
	Direct investment in Finland	Portfolio investment					Total (2+3+5+6)	Other investment					
		Shares	Bonds	Of which: markka denominated bonds	Money market instruments	Financial derivatives		Trade credits	Loans	Currency and deposits	Other	Total (8+9+10+11)	
1	2	3	4	5	6	7	8	9	10	11	12	13	
1992	19 348	5 138	211 361	14 366	19 391	..	235 889	13 305	78 330	11 881	78 804	182 320	437 557
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*	42 136	108 932	229 919	26 284	10 698	3 634	353 183	14 863	83 295	1 733	53 745	153 636	548 955
1995													
I	34 509	53 488	254 534	21 434	7 065	-5 996	309 092	17 218	79 143	3 369	53 433	153 163	496 764
II	33 386	79 430	243 399	18 054	5 577	-6 768	321 638	18 049	75 411	2 580	51 169	147 208	502 233
III	33 665	93 020	233 054	20 230	7 262	-520	332 815	16 930	68 882	2 364	50 032	138 208	504 688
IV	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*													
I	38 601	68 674	241 085	20 699	11 192	2 424	323 375	14 873	77 934	1 518	55 412	149 737	511 712
II	39 214	80 962	234 317	23 855	11 126	3 099	329 504	14 214	81 836	1 939	51 588	149 577	518 295
III	41 730	91 198	225 308	23 656	11 286	2 948	330 740	13 940	82 365	1 742	55 621	153 668	526 138
IV	42 136	108 932	229 919	26 284	10 698	3 634	353 183	14 863	83 295	1 733	53 745	153 636	548 955
1997*													
I	43 927	129 824	240 686	27 607	11 972	2 789	385 271	13 767	90 724	2 624	70 864	177 979	607 177
II	46 118	162 713	254 130	37 563	10 551	1 003	428 397	11 974	97 061	2 870	64 544	176 449	650 964

Position at end of period	Assets											Total assets (14+19+24)	
	Direct investment abroad	Portfolio investment					Total (15+16+17+18)	Other investment					
		Shares	Bonds	Money market instruments	Financial derivatives	Trade credits		Loans	Currency and deposits	Other	Total (20+21+22+23)		
14	15	16	17	18	19	20	21	22	23	24	25		
1992	44 921	469	8 697	7 917	..	17 083	21 389	35 251	12 665	78 257	147 562	209 565	
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*	82 802	7 145	25 077	3 478	-21	35 678	29 929	25 438	5 895	124 248	185 510	303 990	
1995													
I	60 074	1 751	6 557	5 835	157	14 300	25 254	22 668	6 352	118 897	173 172	247 546	
II	60 607	2 158	6 930	2 977	115	12 180	27 440	22 142	5 915	108 686	164 183	236 971	
III	60 880	2 661	6 870	3 503	200	13 233	27 092	22 978	6 397	108 057	164 524	238 637	
IV	65 350	3 216	9 619	2 736	177	15 748	28 358	20 381	7 290	115 543	171 571	252 669	
1996*													
I	73 693	3 984	14 063	5 670	169	23 886	27 980	23 594	5 435	121 308	178 317	275 896	
II	79 436	4 999	16 834	5 842	93	27 768	28 892	21 499	5 523	118 075	173 989	281 194	
III	81 840	5 835	20 620	3 176	48	29 679	27 902	22 873	6 488	119 331	176 594	288 113	
IV	82 802	7 145	25 077	3 478	-21	35 678	29 929	25 438	5 895	124 248	185 510	303 990	
1997*													
I	86 098	8 577	30 418	7 556	128	46 679	26 401	29 411	6 060	146 593	208 465	341 242	
II	92 431	11 279	36 184	5 163	522	53 148	26 862	31 067	7 051	154 771	219 750	365 329	

6.4 Finland's net international investment position (liabilities less assets), 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
1992	33 761	-3 260	82 343	-27 546	28 283	112 064	2 347	227 992	19 011	13.5
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*	108 799	-1 132	-14 319	-35 522	990	183 703	2 448	244 965	16 354	6.8
1995										
I	74 072	-3 359	23 396	-53 298	19 524	185 724	3 159	249 218	5 681	10.5
II	95 145	-3 495	27 092	-50 742	18 024	175 932	3 305	265 261	6 295	10.6
III	103 812	-3 599	20 558	-47 488	17 173	172 368	3 227	266 051	3 396	6.4
IV	72 374	-2 293	18 970	-47 708	13 297	174 481	3 085	232 205	2 118	3.4
1996*										
I	75 707	-2 502	4 569	-42 679	9 433	188 118	3 169	235 816	4 072	7.2
II	84 403	-2 595	-4 656	-33 647	5 294	185 184	3 118	237 102	6 113	9.6
III	93 597	-1 104	-6 157	-34 482	1 300	182 336	2 535	238 024	3 244	5.8
IV	108 799	-1 132	-14 319	-35 522	990	183 703	2 448	244 965	2 926	4.5
1997*										
I	131 693	-1 251	4 760	-59 420	-1 246	189 002	2 396	265 935	4 735	7.9
II	160 811	-1 221	-11 966	-58 737	-4 632	198 984	2 396	285 635	5 099	7.4

## 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
1992	107 463	94 947	12 516
1993	134 114	103 165	30 949
1994	154 164	120 612	33 552
1995	176 021	128 556	47 465
1996*	185 798	140 996	44 802
1996*			
Jul	13 347	10 126	3 221
Aug	14 381	10 750	3 631
Sep	15 172	12 017	3 155
Oct	17 008	13 391	3 617
Nov	18 977	12 646	6 331
Dec	14 744	12 968	1 776
1997*			
Jan	15 269	11 383	3 886
Feb	14 983	11 957	3 026
Mar	16 635	13 000	3 635
Apr	18 691	14 125	4 566
May	17 269	12 618	4 651
Jun	16 929	12 917	4 012
Jul	17 500	12 200	5 300

### 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
1992	102.7	84.7	103.1	108.6	95.0
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*	152.7	112.9	120.2	121.1	99.3
1996*					
Jul	139.1	106.2	119.6	121.8	98.2
Aug	155.6	108.0	118.2	120.9	97.8
Sep	152.9	116.7	117.6	121.6	96.7
Oct	163.3	120.7	118.0	122.3	96.5
Nov	179.0	116.5	117.8	120.8	97.5
Dec	150.7	120.4	116.7	120.8	96.6
1997*					
Jan	161.9	117.0	116.6	121.6	95.9
Feb	159.5	118.6	115.9	121.3	95.5
Mar	167.8	120.3	115.5	121.1	95.4
Apr	184.5	129.9	116.2	120.8	96.2
May	172.2	118.4	116.2	122.3	95.0
Jun	171.6	124.8	116.3	121.9	95.4
Jul	183.4	124.4	117.2	123.6	94.8

### 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
1992	7 892	32 587	12 172	35 741	19 071	49 514	9 745	13 348	20 826	1 514
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*	12 256	43 385	18 005	74 884	37 268	70 783	12 570	21 058	29 886	6 699
1996*										
Jun	1 086	3 571	1 515	8 299	2 687	6 262	831	1 954	2 340	272
Jul	844	3 576	1 466	5 256	2 205	5 051	1 166	1 260	2 443	206
Aug	899	3 670	1 659	5 503	2 650	5 617	1 017	1 541	2 398	177
Sep	1 050	3 513	1 495	6 475	2 639	6 150	1 242	1 733	2 683	209
Oct	1 263	4 098	1 728	6 982	2 937	6 683	1 402	2 167	2 911	228
Nov	1 278	3 764	1 710	9 336	2 889	6 383	1 398	2 012	2 650	203
Dec	977	3 445	1 403	6 599	2 320	6 063	1 413	2 325	2 564	603
1997*										
Jan	1 113	3 802	1 550	6 122	2 682	5 659	1 306	1 705	2 552	161
Feb	1 129	3 611	1 704	5 931	2 608	6 225	1 044	1 656	2 816	216
Mar	1 256	3 827	1 543	7 307	2 702	6 953	804	1 964	2 963	316
Apr	1 348	4 209	1 899	8 203	3 032	7 613	941	1 986	3 084	501
May	1 429	4 125	1 771	6 921	3 023	6 933	1 071	1 741	2 667	206
Jun	1 187	3 029	1 641	7 267	3 805	7 210	1 047	1 845	2 564	251

## 7.4 Foreign trade by regions and countries

Region and country	Exports, fob				Imports, cif			
	1996*		Jul 1996 – Jun 1997		1996*		Jul 1996 – Jun 1997	
	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>	101 490	54.5	104 427	2.9	85 511	60.2	87 849	8.4
Austria	1 614	0.9	1 796	22.3	1 560	1.1	1 537	-2.6
Belgium and Luxembourg	4 692	2.5	4 650	-4.1	4 146	2.9	4 111	8.0
Denmark	5 652	3.0	5 993	7.2	4 964	3.5	5 103	13.1
France	7 863	4.2	8 162	5.9	6 366	4.5	6 792	19.8
Germany	22 516	12.1	21 707	-7.5	21 344	15.0	21 863	7.8
Greece	963	0.5	1 031	10.2	367	0.3	360	-2.2
Ireland	1 096	0.6	1 335	31.9	1 157	0.8	1 166	-1.6
Italy	4 772	2.6	5 552	14.8	5 762	4.1	5 930	7.0
Netherlands	7 377	4.0	7 935	10.6	5 074	3.6	5 494	11.4
Portugal	914	0.5	996	24.9	1 035	0.7	1 075	1.6
Spain	3 979	2.1	4 274	6.9	1 963	1.4	2 097	17.4
Sweden	19 937	10.7	20 331	5.1	16 911	11.9	17 602	9.9
United Kingdom	19 010	10.2	19 562	4.2	12 540	8.8	12 389	4.0
<b>Rest of Europe</b>	33 415	17.9	36 178	19.4	23 871	16.8	26 092	18.5
Of which:								
Estonia	5 097	2.7	5 700	25.8	1 672	1.2	1 890	19.8
Norway	5 322	2.9	5 441	3.1	5 952	4.2	6 043	10.6
Poland	2 713	1.5	3 416	53.7	1 305	0.9	1 576	15.0
Russia	11 373	6.1	12 291	23.5	10 280	7.2	11 694	28.1
Switzerland	2 099	1.1	1 977	-11.3	2 434	1.7	2 532	7.6
<b>Non-European industrialized countries <sup>2</sup></b>	23 030	12.4	21 672	2.1	19 833	14.0	19 965	-3.6
Of which:								
Australia	2 045	1.1	2 349	9.4	1 239	0.9	1 166	-2.0
Japan	4 844	2.6	4 322	-14.9	7 311	5.2	7 645	-2.8
U.S.A.	14 761	7.9	13 390	6.8	10 387	7.3	10 235	-4.7
<b>Dynamic Asian economies <sup>3</sup></b>	13 833	7.4	14 819	20.2	6 514	4.6	6 787	6.6
Of which:								
China	2 707	1.5	3 129	32.8	2 088	1.5	2 419	27.8
Hong Kong	3 037	1.6	3 047	19.0	693	0.5	706	16.1
South Korea	2 723	1.5	2 683	11.0	792	0.6	771	-15.9
<b>Other countries</b>	14 568	7.8	16 305	10.2	6 224	4.4	-140 693	37.2
<b>TOTAL</b>	186 336	100.0	193 402	7.4	141 953	100.0	147 898	9.2
Of which:								
Africa	2 554	1.4	2 591	-2.4	937	0.7	1 032	38.5
Asia	27 484	14.7	28 640	10.4	16 196	11.4	17 288	7.8
Central and South America	3 075	1.7	3 191	-34.5	2 750	1.9	3 100	40.0
North America	15 825	8.5	14 679	7.1	11 229	7.9	11 092	-4.4
Europe	134 906	72.4	140 605	6.7	109 383	77.1	113 941	10.6
Oceania	2 491	1.3	2 696	5.7	1 457	1.0	1 445	6.3

<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
1992	247 363	108 799	75 338	16 899	4 534	452 933	122 059	112 989	462 003
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*	264 595	107 258	75 685	14 259	18 308	480 105	181 334	143 497	517 942
1995*									
I	63 344	25 627	17 447	3 453	4 755	114 626	44 200	33 780	125 046
II	64 148	26 215	17 150	3 316	4 174	115 003	44 474	34 058	125 419
III	64 037	26 290	18 071	3 229	6 173	117 800	42 477	34 668	125 609
IV	64 439	26 513	17 050	3 340	5 466	116 808	43 429	34 821	125 416
1996*									
I	65 906	26 535	18 144	3 475	6 296	120 356	43 120	36 207	127 269
II	65 496	26 810	18 283	3 554	3 490	117 633	44 981	35 086	127 528
III	66 213	26 894	19 610	3 636	4 349	120 702	45 510	35 420	130 792
IV	66 980	27 019	19 648	3 594	4 173	121 414	47 723	36 784	132 353
1997*									
I	66 908	26 728	18 989	3 655	5 013	121 293	47 608	37 120	131 781
II	67 367	26 925	20 356	3 929	6 631	125 208	48 813	38 605	135 416

### 8.2 Volume of industrial production, 1990=100 (seasonally adjusted figures)

Period	Total Industry	Mining and quarrying	Manu- facturing	Wood and paper industries	Metal and engineering industries	Other manufacturing	Energy and water supply
	(100.0)	(1.3)	(89.6)	(16.8)	(31.3)	(41.5)	(9.1)
	1	2	3	4	5	6	7
1992	92.4	88.4	91.4	94.6	91.1	90.2	103.0
1993	97.4	86.1	96.4	104.5	99.7	90.8	107.9
1994	108.5	96.2	108.1	117.0	119.5	95.8	114.3
1995	117.0	93.9	117.8	117.4	145.7	96.9	112.4
1996*	121.4	87.2	121.7	114.6	155.1	99.3	123.3
1996*							
Jul	120.2	52.7	120.9	115.3	151.9	99.9	123.3
Aug	120.3	151.2	120.3	116.6	153.3	99.4	122.8
Sep	124.0	85.1	124.0	119.4	157.4	100.2	126.8
Oct	124.5	85.8	124.4	120.1	159.3	100.2	128.5
Nov	126.1	85.1	126.8	123.3	162.2	100.4	121.0
Dec	127.7	79.2	128.4	120.4	164.0	101.8	125.5
1997*							
Jan	126.0	86.1	126.3	125.9	162.1	101.6	130.4
Feb	125.8	90.3	126.6	125.2	162.4	102.2	125.3
Mar	129.0	96.3	129.9	127.4	166.0	102.5	123.7
Apr	128.4	94.7	129.4	127.9	167.1	101.9	124.3
May	128.6	81.0	130.1	130.6	167.3	102.0	121.0
Jun	130.7	121.4	132.1	130.0	170.1	102.9	117.1
Jul	132.3	139.3	133.4	130.1	172.2	104.6	120.5

### 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
1992	72.7	83.0	59.9	57.3	44.8	78.1	91.1
1993	68.5	78.1	46.9	47.2	35.6	72.9	89.9
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	97.7
1996*	77.8	86.0	43.9	38.5	55.6	102.8	100.6
1996*							
Jul	87.5	79.7	44.0	35.4	51.8	105.7	100.5
Aug	87.1	75.7	43.7	33.1	52.4	100.1	100.8
Sep	85.2	77.0	45.4	35.0	52.2	109.2	102.1
Oct	89.3	81.5	45.7	37.6	51.7	114.4	103.4
Nov	87.9	77.4	46.3	41.3	51.7	108.2	102.9
Dec	87.4	78.9	47.8	45.8	53.5	112.0	103.8
1997*							
Jan	88.5	80.3	48.3	49.1	56.0	109.2	103.8
Feb	87.0	78.6	48.9	51.3	57.2	111.1	103.3
Mar	85.9	77.1	49.2	52.6	57.8	108.0	104.2
Apr	89.4	84.9	50.7	54.7	58.8	117.2	106.0
May	88.4	79.9	51.1	53.3	59.7	107.4	105.0
Jun	89.3	83.5	52.3	53.6	57.9	113.8	106.3
Jul	91.3	86.2	53.8	53.2	58.9	..	107.6



## 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 (SIC 3)	Public				Domestic goods	Imported goods		Exported goods	Home market goods	
	1	2	3	4	5	6	7	8	9	10	11	12	13
1992	108.4	108.1	108.3	109.0	107.4	107.1	101.4	99.5	108.5	101.6	102.7	101.1	100.4
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 <sup>1</sup>	121.1	121.8	127.5	119.2	112.6	111.4	105.9	102.0	120.1	110.9	118.5	107.6	102.7
1996													
Aug	..	..	..	..	112.6	111.1	105.4	101.3	120.2	109.7	116.4	106.8	103.1
Sep	..	..	..	..	112.8	111.5	105.9	101.9	120.8	109.8	115.8	107.2	103.0
Oct	..	..	..	..	113.0	111.7	106.4	102.5	120.8	110.2	116.2	107.6	103.1
Nov	..	..	..	..	112.7	111.5	105.9	102.3	119.3	110.0	116.0	107.4	103.3
Dec	..	..	..	..	112.7	111.5	106.3	102.7	119.3	110.1	115.5	107.8	103.4
1996 <sup>1</sup>													
II	120.6	121.4	127.1	118.6	112.8	111.6	105.8	101.7	121.1	111.3	120.0	107.6	102.4
III	120.7	121.4	127.0	118.9	112.7	111.3	105.6	101.5	120.7	109.9	116.7	107.0	103.0
IV	123.2	123.9	130.3	121.4	112.8	111.6	106.2	102.5	119.8	110.1	115.9	107.6	103.3
1997													
Jan	..	..	..	..	112.6	111.1	106.5	102.6	120.1	110.1	115.3	107.7	103.7
Feb	..	..	..	..	112.8	111.3	106.7	103.2	119.8	110.2	115.0	108.1	103.7
Mar	..	..	..	..	113.2	111.7	106.7	103.2	119.6	110.2	114.5	108.3	104.1
Apr	..	..	..	..	113.8	112.0	106.6	103.2	119.3	110.4	115.2	108.4	104.4
May	..	..	..	..	114.0	112.3	107.3	103.6	120.8	110.7	115.2	108.7	104.8
Jun	..	..	..	..	114.2	112.5	107.4	103.9	120.5	111.0	115.4	109.1	105.2
Jul	..	..	..	..	114.2	112.3	107.9	104.1	122.1	111.4	116.3	109.3	105.5
Aug	..	..	..	..	114.4	..	108.2	104.5	122.0	112.2	117.6	109.9	106.0
1997 <sup>1</sup>													
I	123.5	124.3	130.8	121.7	112.9	111.4	106.6	103.0	119.8	110.2	114.9	108.0	103.8
II	123.8	124.6	131.1	121.8	114.0	112.2	107.1	103.6	120.2	110.7	115.3	108.7	104.8

<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			
									1000 persons		
1	2	3	4	5	6	7	8	9	10		
1992	66.1	2 502	2 174	325	1 849	187	453	1 534	328	13.1	
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	
1996*											
Aug	65.8	2 551	2 136	332	1 803	160	452	1 524	415	16.4	
Sep	64.7	2 518	2 120	313	1 808	154	438	1 528	397	15.7	
Oct	65.0	2 532	2 134	316	1 818	162	470	1 502	398	15.6	
Nov	65.6	2 553	2 149	326	1 823	166	469	1 514	404	15.8	
Dec	65.1	2 533	2 139	323	1 816	157	452	1 531	394	15.5	
1997*											
Jan	65.4	2 530	2 133	314	1 820	153	460	1 520	397	15.6	
Feb	65.8	2 548	2 154	326	1 827	159	469	1 525	394	15.4	
Mar	65.9	2 550	2 154	319	1 836	151	457	1 546	395	15.6	
Apr	66.2	2 555	2 158	330	1 828	160	460	1 538	398	15.7	
May	66.4	2 561	2 170	327	1 843	153	463	1 553	391	15.5	
Jun	66.2	2 551	2 179	331	1 849	158	457	1 564	372	14.8	
Jul	65.1	2 511	2 169	325	1 844	156	463	1 551	342	13.6	
Aug	65.4	2 515	2 179	328	1 851	150	478	1 550	336	13.4	

## 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
1992	34 312	69 541	1 512	21 251	126 616	5 054	131 669	49 291	105 184	42 990	59 180
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
1996											
Jul	3 817	6 187	59	2 003	12 067	323	12 390	5 036	8 707	2 891	5 151
Aug	3 766	6 125	59	2 483	12 433	219	12 652	3 913	6 090	1 476	4 505
Sep	3 481	6 391	57	2 526	12 455	3 261	15 716	4 579	8 030	2 747	4 913
Oct	3 590	6 542	58	3 602	13 792	329	14 121	4 205	10 912	2 995	7 040
Nov	4 260	6 049	91	3 216	13 616	1 113	14 729	4 068	7 922	2 301	5 158
Dec	6 515	5 228	69	4 324	16 136	-1 050	15 087	6 133	11 691	2 698	8 599
1997											
Jan	3 070	6 448	121	3 151	12 790	48	12 839	3 875	11 713	3 518	6 429
Feb	3 984	5 292	63	3 363	12 702	37	12 739	3 649	8 393	3 467	4 437
Mar	6 173	8 768	353	2 692	17 986	213	18 199	4 753	8 779	3 719	4 702
Apr	3 808	5 040	219	3 072	12 139	3 262	15 401	4 102	10 571	4 062	5 786
May	5 929	6 399	179	4 036	16 543	1 030	17 573	4 199	8 482	3 687	4 223
Jun	3 928	6 110	260	2 619	12 917	551	13 468	5 440	9 483	3 447	5 304
Jul	4 133	6 519	273	1 522	12 447	1 270	13 717	4 888	1 531	-2 955	3 794

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)
1992	5 042	8 499	168 016	35 501	203 516	-41 400	-71 847	70 691	-1 155
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
1996									
Jul	316	1 154	15 214	437	15 651	-3 147	-3 261	3 900	639
Aug	334	1 090	11 427	457	11 884	1 006	768	6 829	7 597
Sep	290	4 787	17 686	586	18 272	-5 231	-2 556	-10 228	-12 784
Oct	369	1 832	17 318	489	17 807	-3 526	-3 686	-258	-3 943
Nov	260	963	13 213	479	13 693	403	1 036	-191	846
Dec	560	1 637	20 021	3 388	23 426	-3 885	-8 339	3 375	-4 965
1997									
Jan	131	5 180	20 899	538	21 437	-8 109	-8 598	9 507	909
Feb	221	663	12 926	421	13 347	-224	-608	7 344	6 736
Mar	164	4 660	18 356	425	18 780	-370	-581	1 203	622
Apr	193	3 094	17 960	4 670	22 630	-5 821	-7 229	-2 609	-9 837
May	377	752	13 810	739	14 549	2 733	3 024	3 167	6 191
Jun	203	2 121	17 247	708	17 954	-4 330	-4 486	-3 959	-8 445
Jul	328	1 750	8 497	921	9 417	3 950	4 300	209	4 509

# 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 6 May 1993 it has been 2.5 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. The five-year yield is based on quotations for a fixed-rate bullet serial bond (1/94, 15 Sep 1994 – 15 Sep 2001). As from 9 August 1996 the ten-year yield is based on quotations for a fixed-rate bullet serial bond (1/96, 18 Apr 1996–2006). 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 25 November 1996 the ECU central rate is FIM 5.85424. 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 Other domestic financing

**Table 5.1** Source: Statistics Finland. The public comprises households and non-profit institutions, enterprises

(excl. financial institutions) and the local government sector. The table is based on new classifications of Statistics Finland applied since March 1991. Series before March 1991 have been reclassified by the Bank of Finland to conform with the present table, except for columns 3 and 4 where disaggregation was not possible and combined figures are shown. Time deposits (Column 3) consist of all fixed-term deposits. Other deposits (Column 4) include mainly investment accounts with no specific time-period. Other funding (Column 8) comprises CDs, promissory notes and bonds. The figures for banks' holdings of CDs issued by other banks, as well as the CD holdings of the Bank of Finland and the central government have been netted out; netting out is done by the Bank of Finland. Hence, this column includes some liabilities held by entities not covered by the above definition of the public.

**Table 5.2** Source: Statistics Finland. The public comprises households and non-profit institutions, enterprises (excl. financial institutions) and local government. Foreign currency credits (Column 5) are mainly granted by commercial banks and Postipankki.

**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*. Claims on the central government, net (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 liabilities and assets**

**Table 6.1** The figures for the trade and goods and services accounts are compiled in accordance with the System of National Accounts. The trade figures for 1995 have been estimated on the basis of a survey of firms carried out by the Bank of Finland. The official foreign trade statistics published by the Board of Customs are delayed owing to changes in statistical systems caused by Finland's entry into the EU. 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. 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 EMI 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 (liabilities less assets) classified by sector.

## **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 is done by the Bank of Finland.

**Table 8.2** The indices of industrial production are adjusted for the number of working days in each month. This causes in small differences the annual averages from the corresponding unadjusted figures. For this reason the indices for 1990 also differ marginally from conventional base-year figures, ie 100.0.

**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.

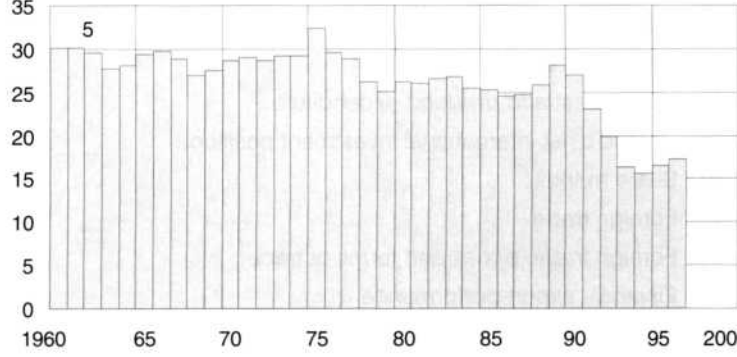
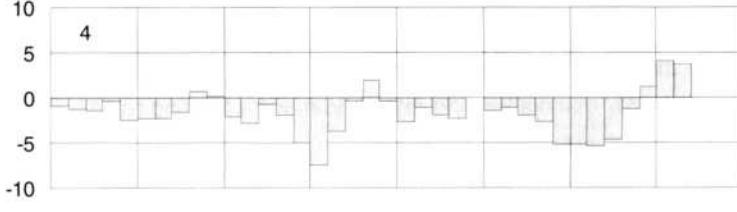
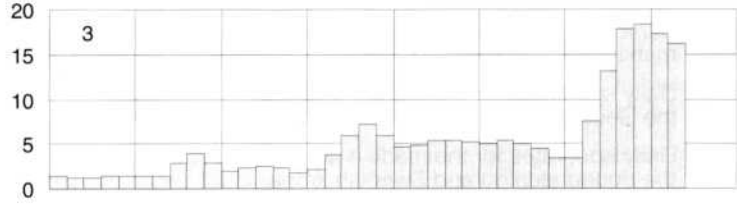
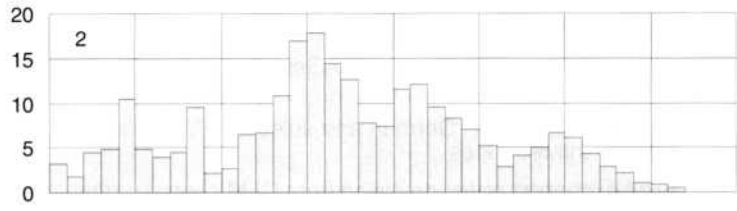
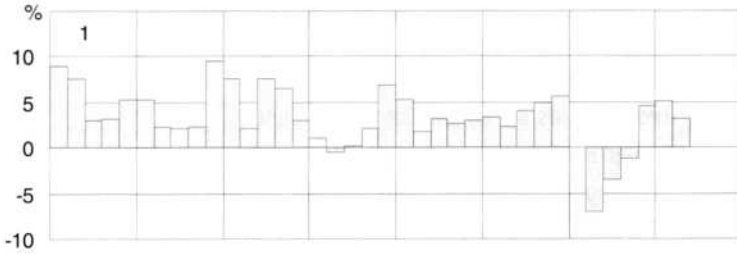
**Table 8.4** The indicator of underlying inflation (Column 6) is the consumer price index from which the effect of indirect taxes, subsidies and housing-related capital costs (house prices and mortgage interest payments) has been removed (see the article by Pentti Pikkariainen and Timo Tyrväinen in 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 8.6** Source: Ministry of Finance.



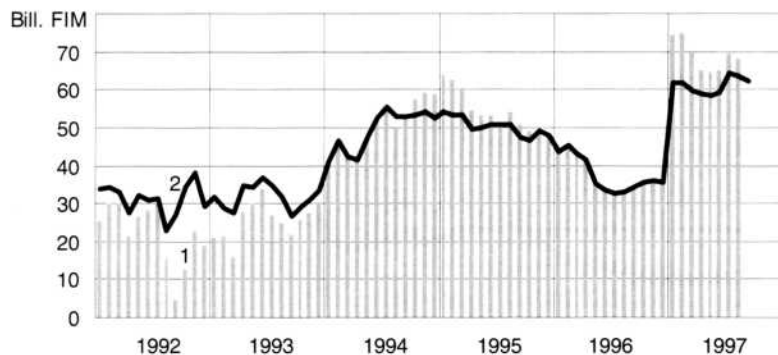
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2. The Bank of Finland's foreign exchange reserves and forward position	S31
3. Forward market	S31
4. Interest rates set by the Bank of Finland	S31
5. Banks' liquidity position at the Bank of Finland	S32
6. Liquidity management interest rates	S32
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# 1. Long-term indicators



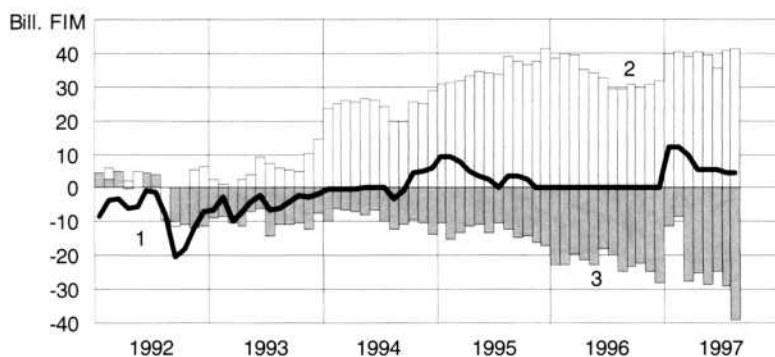
1. GDP, change in volume from the previous year, per cent
2. Consumer prices, change from the previous year, per cent
3. Unemployment rate, per cent
4. Current account, as a percentage of GDP
5. Fixed investment, as a percentage of GDP

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



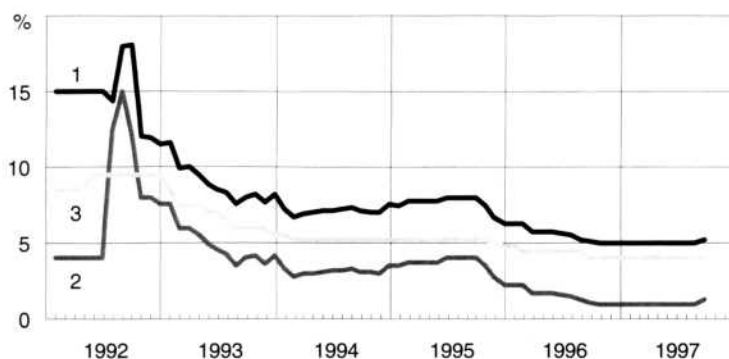
1. Foreign exchange reserves plus forward position
2. Foreign exchange reserves

## 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

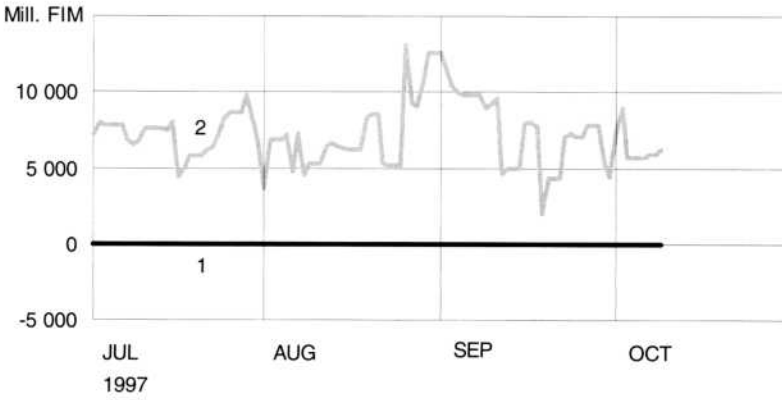
## 4. Rates of interest set by the Bank of Finland



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

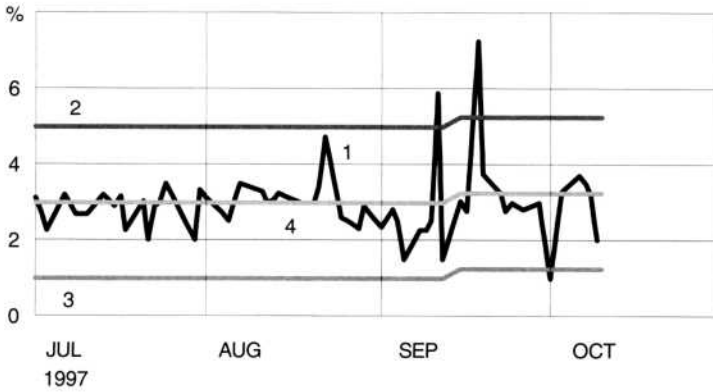
End-of-month observations

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



1. Liquidity credits (-)
2. Reserve deposits

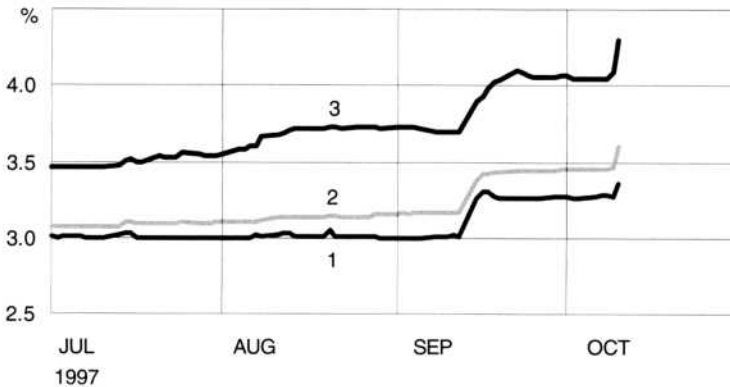
## 6. Liquidity management interest rates



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

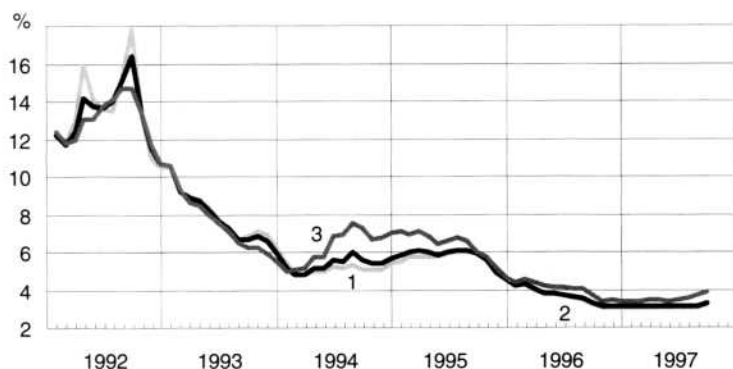
Daily observations

## 7. HELIBOR interest rates, daily



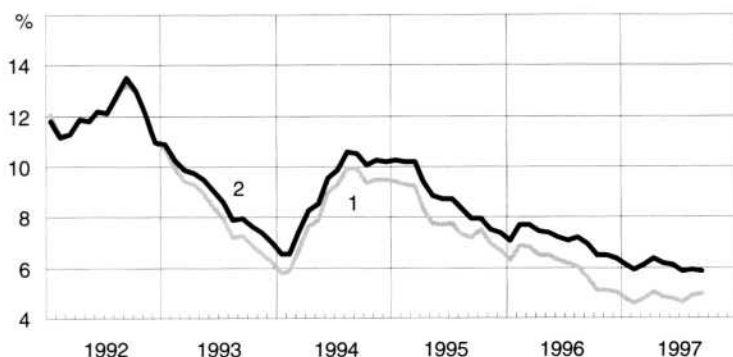
1. 1-month HELIBOR
2. 3-month HELIBOR
3. 12-month HELIBOR

## 8. HELIBOR interest rates, monthly



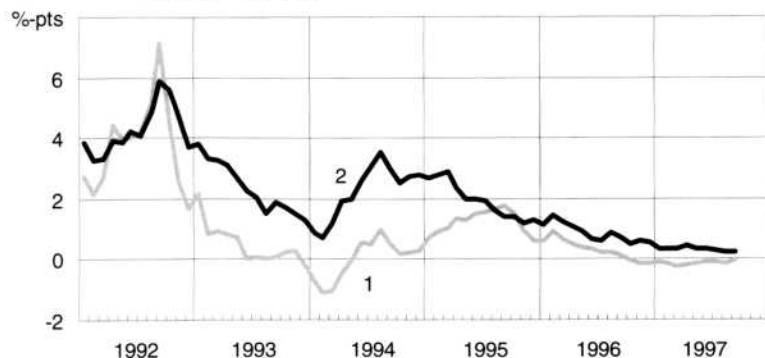
1. 1-month HELIBOR
2. 3-month HELIBOR
3. 12-month HELIBOR

## 9. Bond yields



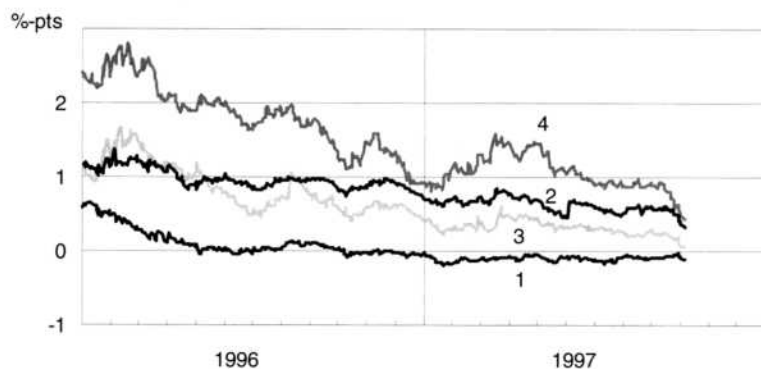
1. Yield on 5-year government bonds
2. Yield on 10-year government bonds

## 10. Differential between Finnish and German interest rates



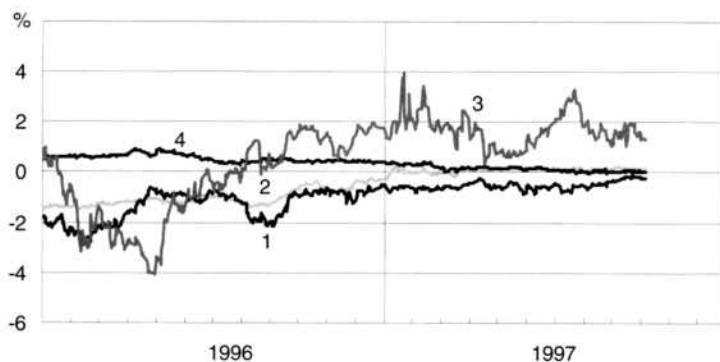
1. 3-month HELIBOR minus 3-month DEM eurorate
2. 10-year Finnish government bond yield minus 10-year German government bond yield

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



1. France
2. Denmark
3. Finland
4. Sweden

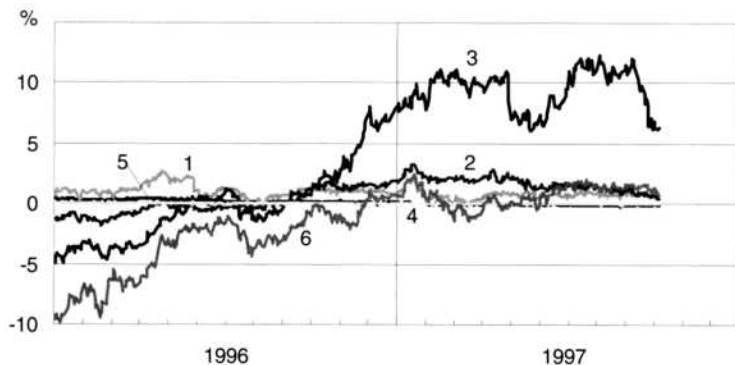
### 12. ERM exchange rates: deviation from DEM central parity



1. FRF
2. DKK
3. FIM
4. NLG

Rising curve means appreciation against the DEM

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

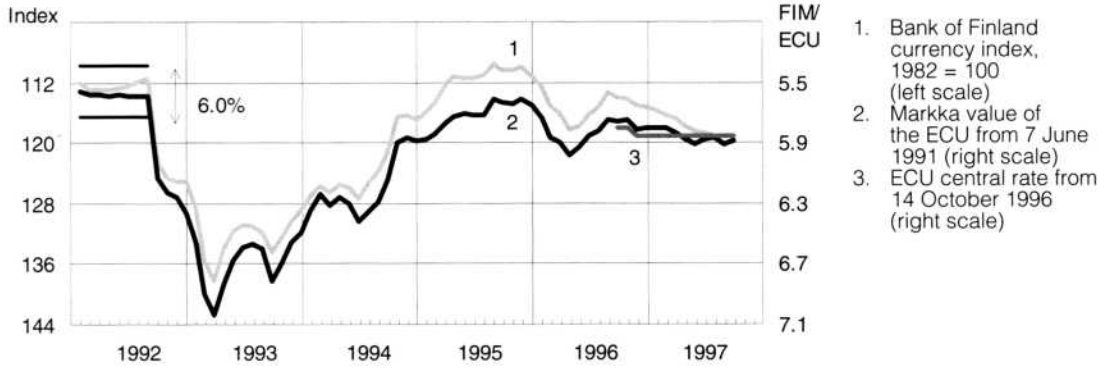


1. ESP
2. PTE
3. IEP
4. ATS
5. BEF
6. ITL

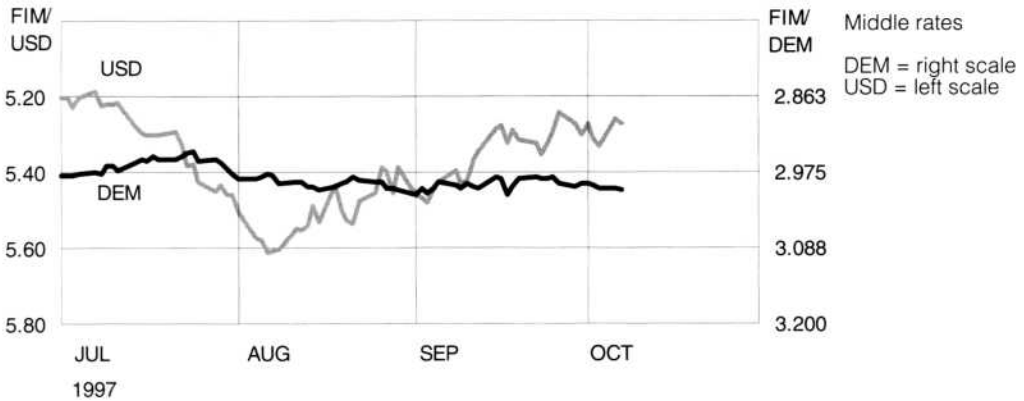
Rising curve means appreciation against the DEM



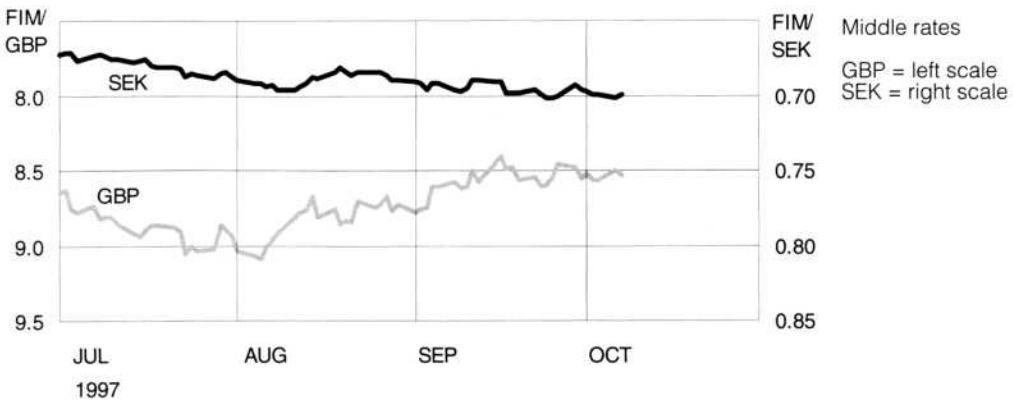
#### 14. Bank of Finland currency index and markka value of the ECU



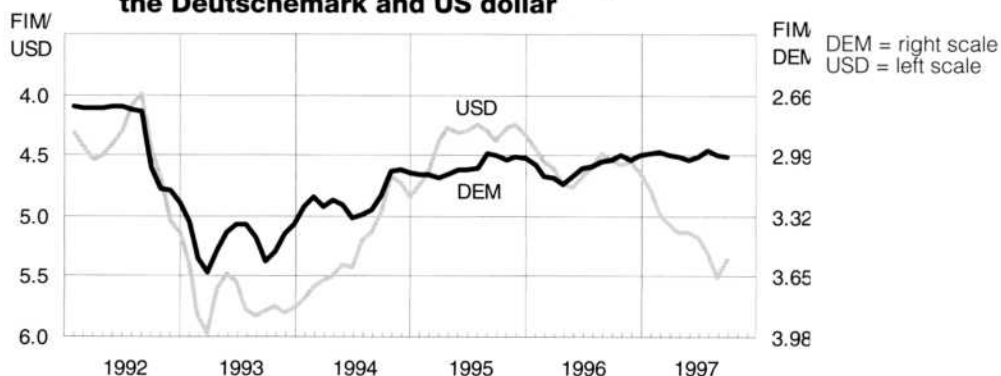
#### 15. Daily spot rates for the markka against the Deutschemark and US dollar



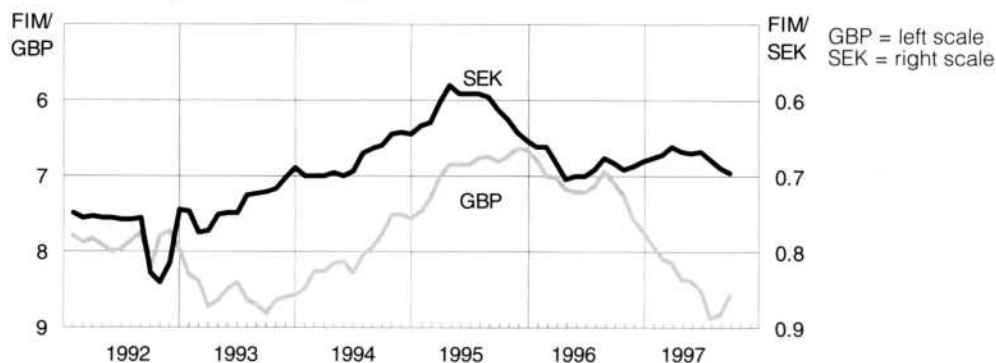
#### 16. Daily spot rates for the markka against the pound sterling and Swedish krona



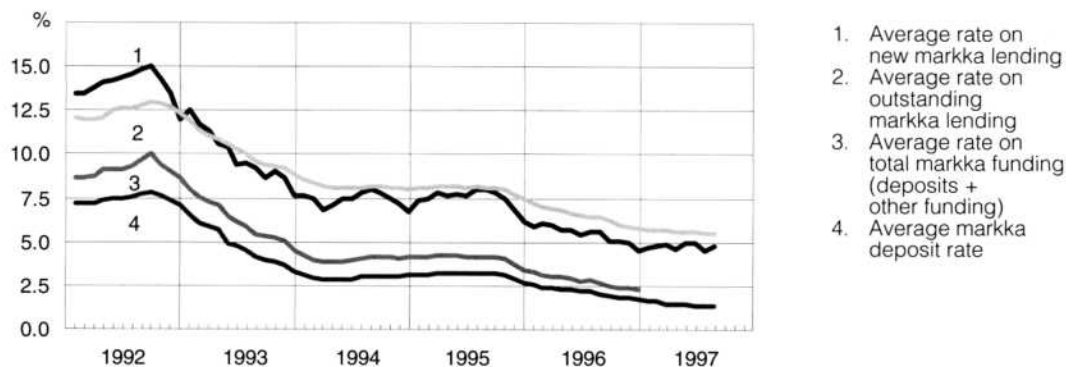
### 17. Monthly spot rates for the markka against the Deutschemerk and US dollar



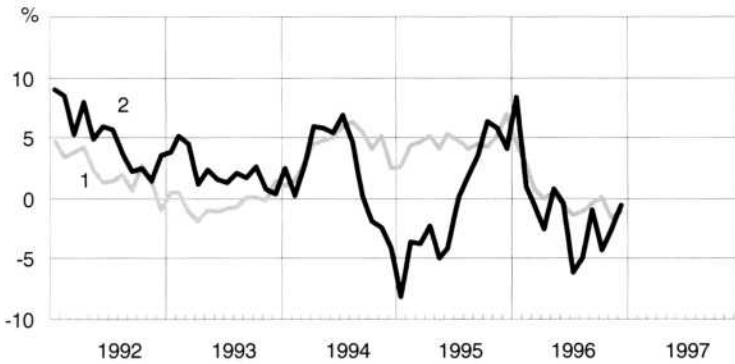
### 18. Monthly spot rates for the markka against the pound sterling and Swedish krona



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



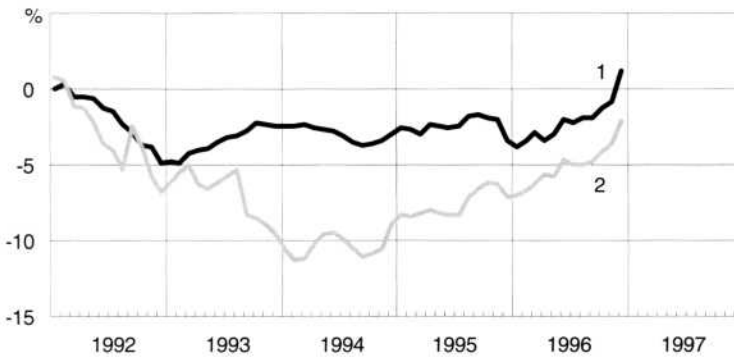
## 20. Bank funding from the public



1. Markka deposits
2. Total funding

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

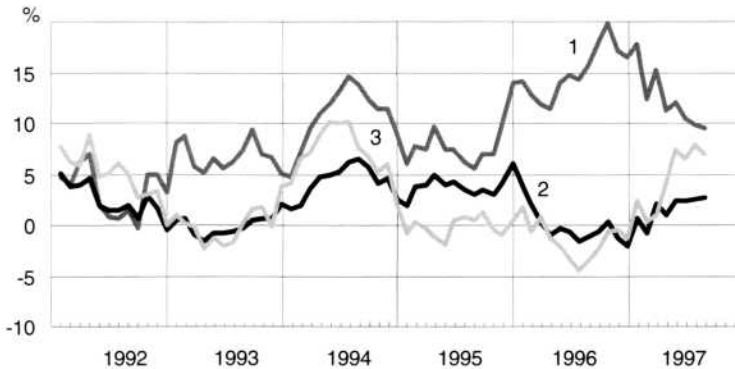
## 21. Bank lending to the public



1. Markka lending
2. Total lending

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

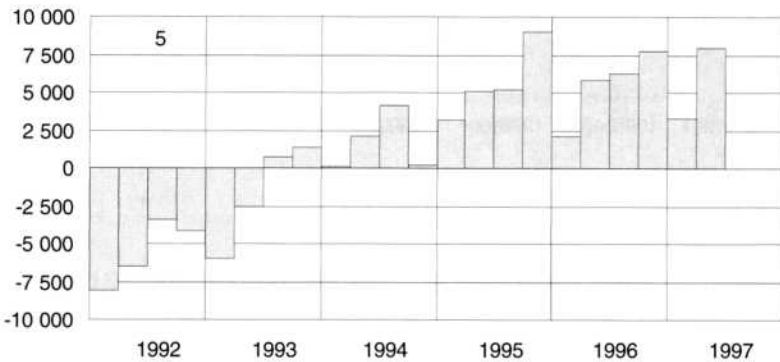
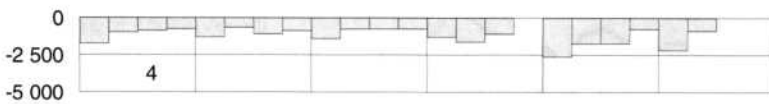
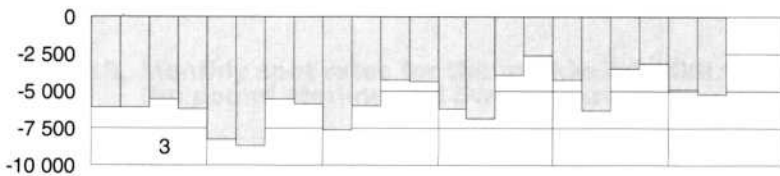
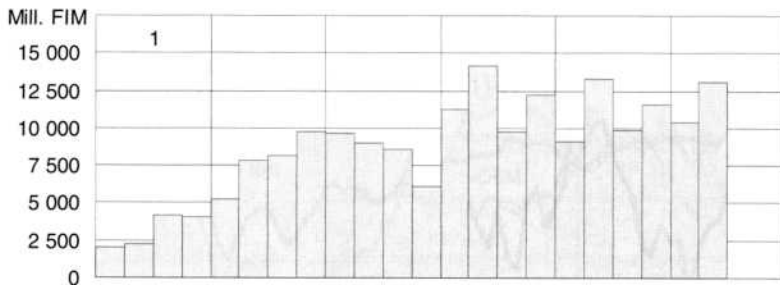
## 22. Money supply



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

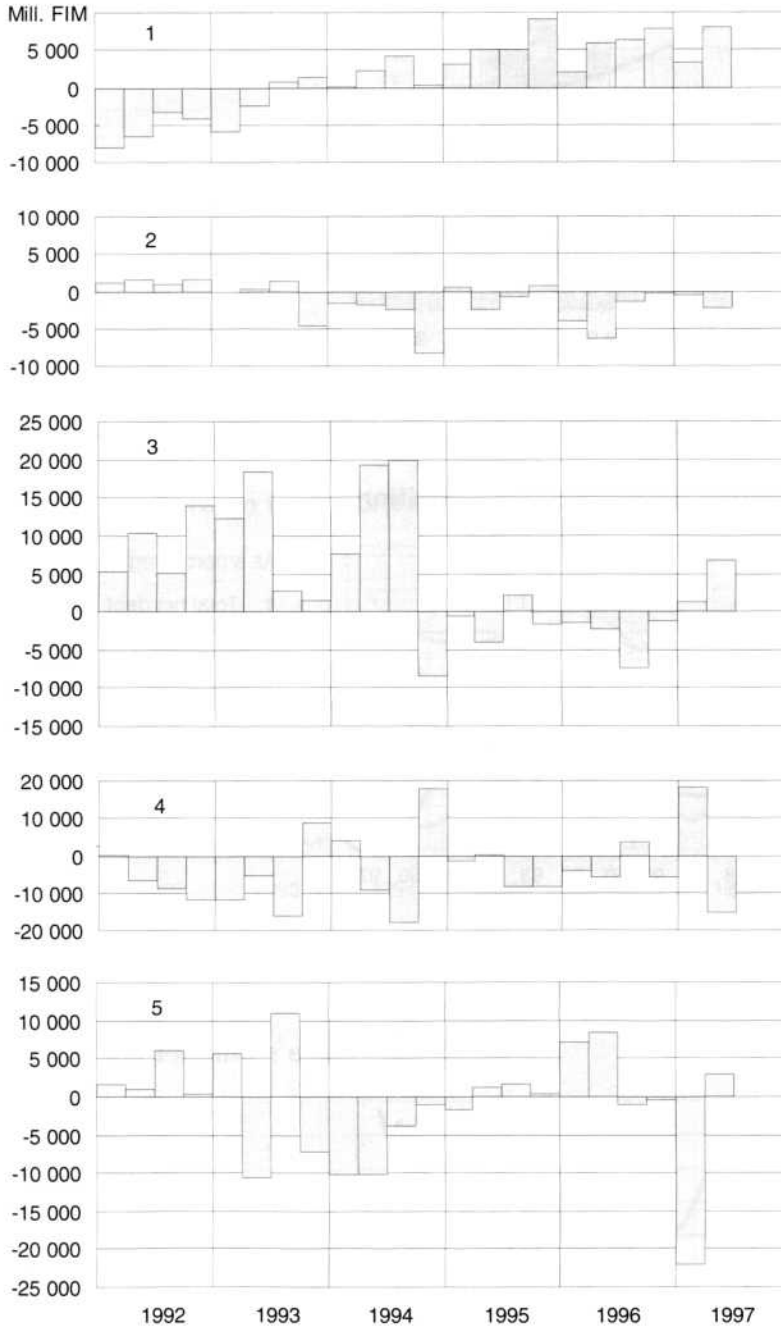
Change from the corresponding month of the previous year, per cent

## 23. Current account



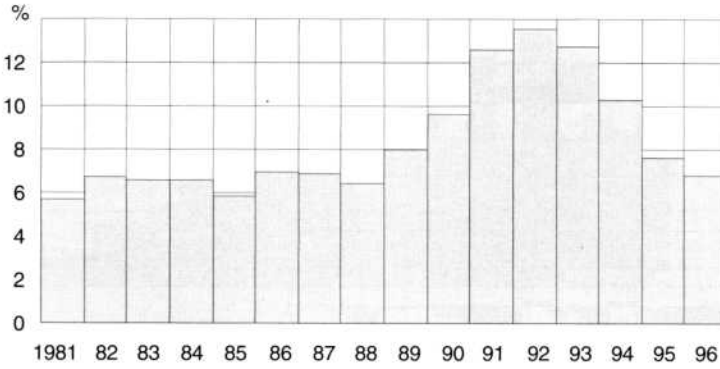
1. Trade account
2. Services account
3. Investment income account
4. Unrequited transfers account and other items, net
5. Current account

## 24. Balance of payments



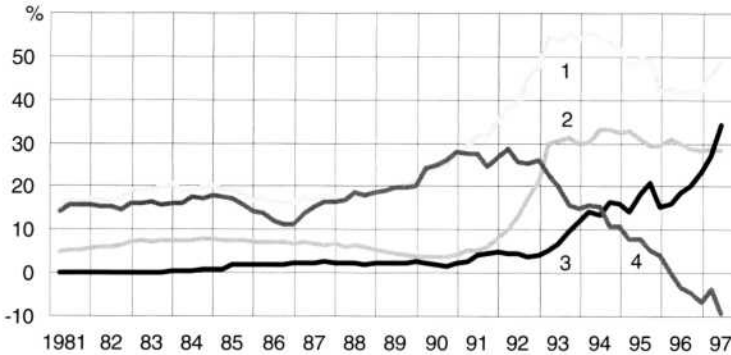
1. Current account
2. Direct investment
3. Portfolio investment
4. Other investment
5. Change in central bank's reserve assets  
(increase = -)

## 25. Net interest and dividend expenditure



As percentage of current account receipts

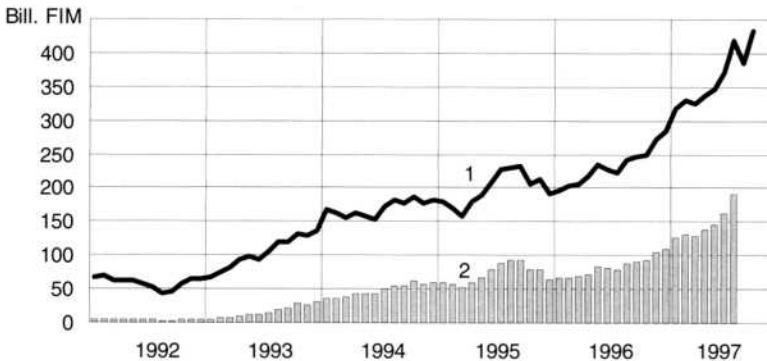
## 26. Finland's net international investment position



As a percentage of GDP

1. Total net debt
2. Central government (in foreign currencies)
3. Markka-denominated securities
4. Other, net (excl. Bank of Finland's foreign exchange)

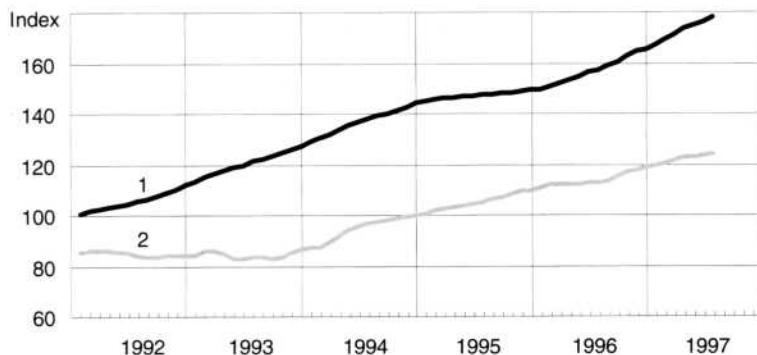
## 27. Share market



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



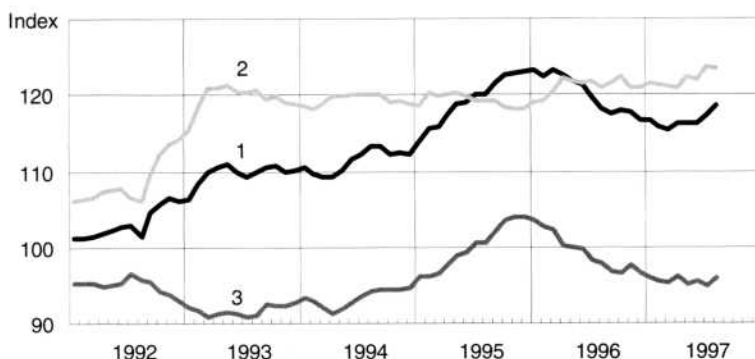
## 28. Foreign trade



1. Exports of goods
2. Imports of goods

Volume index, 1990 = 100, trend

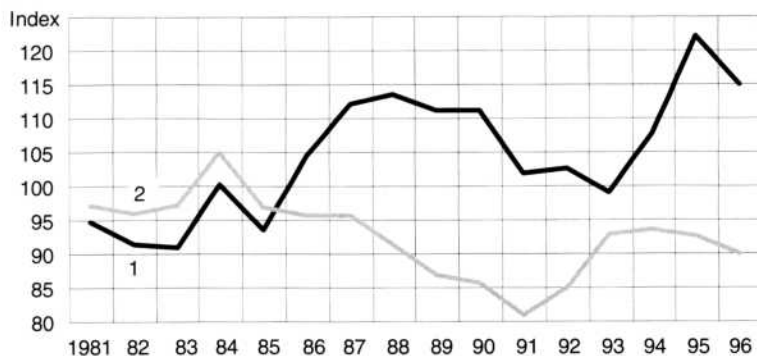
## 29. Foreign trade: prices and terms of trade



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

Index 1990 = 100

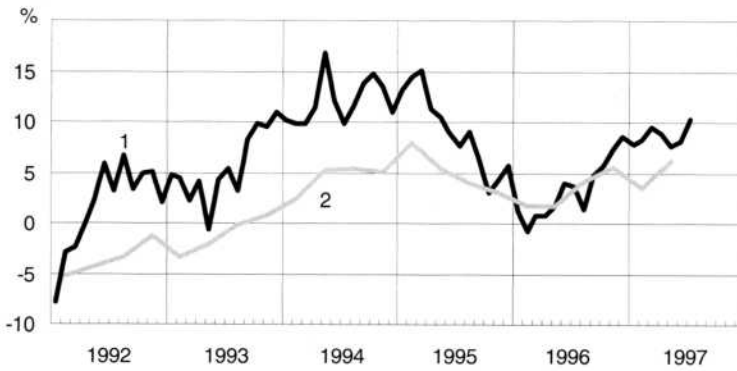
## 30. Finland's export performance



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

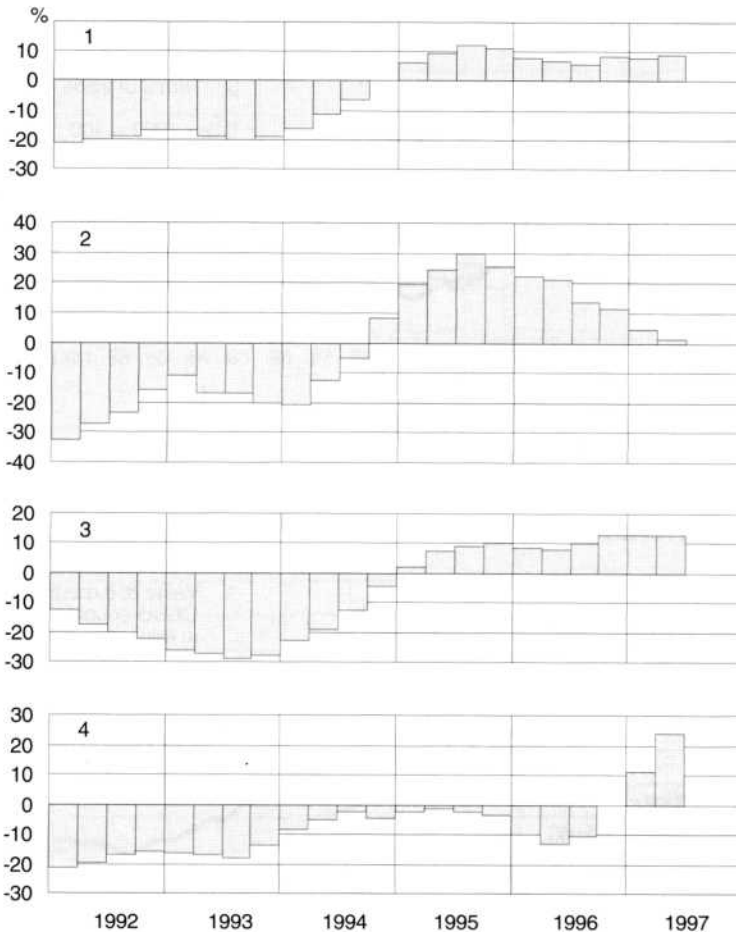
1980 = 100

### 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

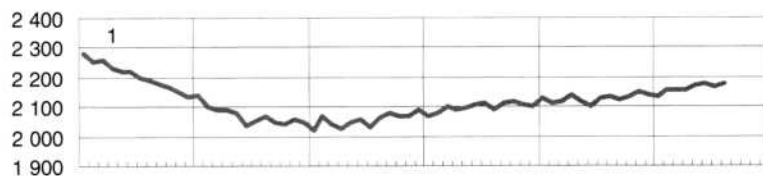
### 32. Fixed investment



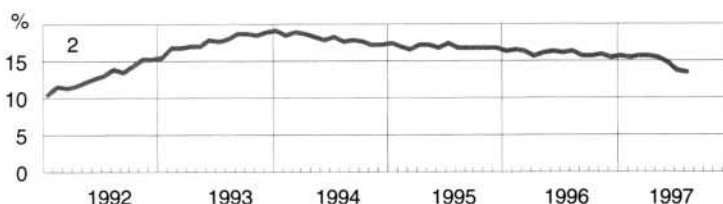
1. Total fixed investment
2. Investment in machinery and equipment
3. Building investment, excl. residential buildings
4. Residential buildings

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

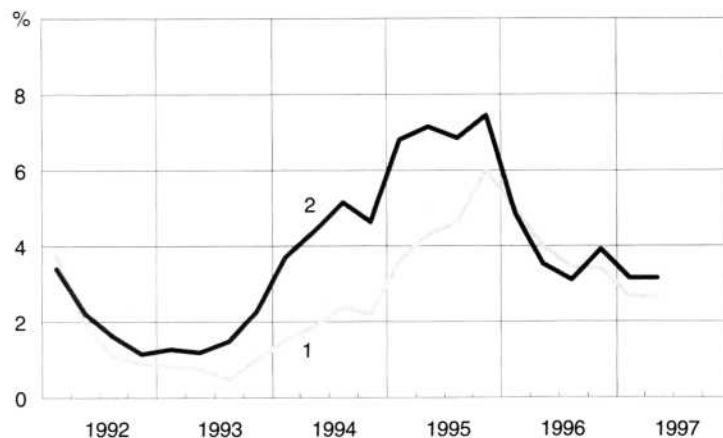
### 33. Employment and the unemployment rate



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

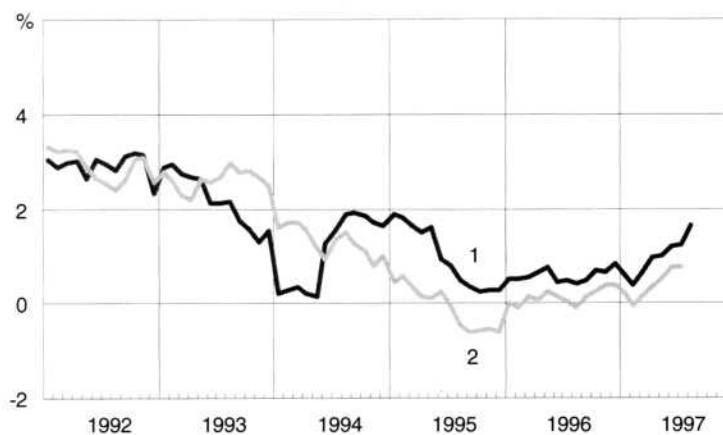


### 34. Prices and wages



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

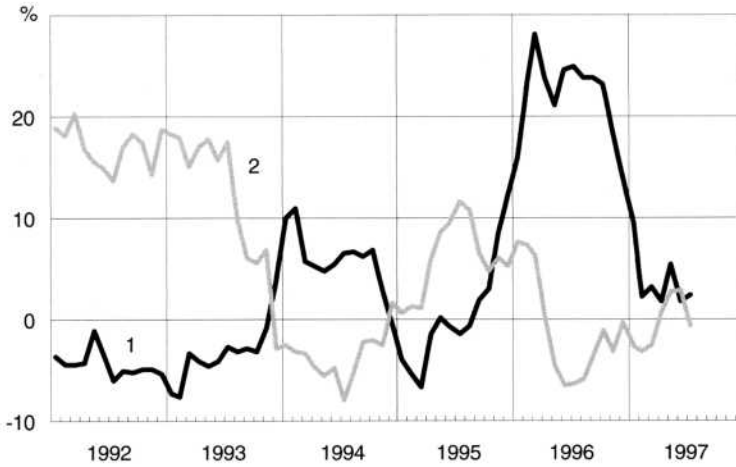
Change from the corresponding quarter of the previous year, per cent



1. Consumer price index
2. Indicator of underlying inflation

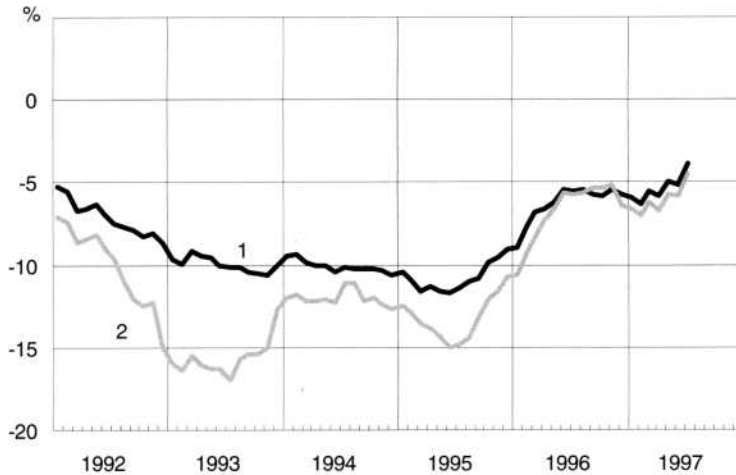
Change from the corresponding month of the previous year, per cent

### 35. Central government finances



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

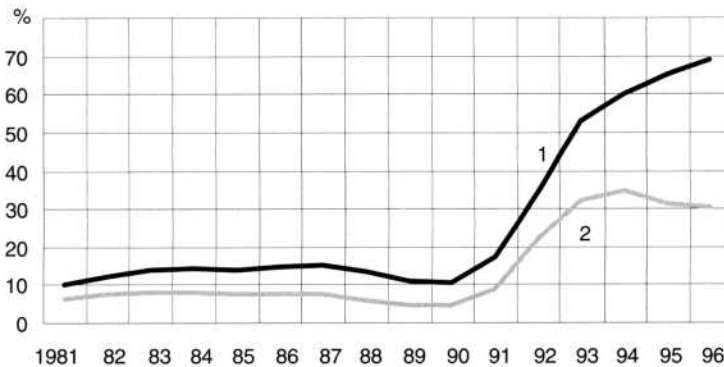
12-month changes calculated from 12-month moving totals and plotted at the last month, per cent



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