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## The foreign currency denominated foreign debt and assets

	USD million		
	1998 Dec.	1999 March	Change
<b>1 Gross foreign debt (=1a+1b)</b>	<b>23.2</b>	<b>22.8</b>	<b>-0.4</b>
a) Portfolio debt	11.0	10.7	-0.2
Medium- and long-term	10.9	10.1	-0.7
Short-term	0.1	0.6	0.5
b) Other debt	12.3	12.1	-0.2
Medium- and long-term	8.6	8.3	-0.2
Short-term	3.7	3.7	0.0
<b>2 Gross foreign assets (=2a+2b+2c)</b>	<b>14.3</b>	<b>14.4</b>	<b>0.1</b>
a) International reserves	9.3	8.8	-0.5
b) Portfolio assets	0.2	1.0	0.8
Medium- and long-term	0.2	0.2	0.0
Short-term	0.0	0.9	0.8
c) Other debt	4.7	4.5	-0.2
Medium- and long-term	1.3	1.4	0.1
Short-term	3.4	3.1	-0.3
<b>Net foreign debt (=1-2)</b>	<b>8.9</b>	<b>8.3</b>	<b>-0.6</b>

generated on derivative positions. This is recorded in short-term foreign assets.

It follows from the development of financing (see above) that the sectoral composition of foreign debt did not change significantly in the first quarter. It is true, however, that a relatively long-lasting process has begun, namely public debt is gradually taken over by the government from the NBH.

## The foreign currency denominated foreign debt by sectors

	1998		1999 March		Change USD billions
	USD billions	%	USD billions	%	
<b>(1) Gross foreign debt (=1a+1b)</b>	<b>23.2</b>	<b>100.0</b>	<b>22.8</b>	<b>100.0</b>	<b>-0.4</b>
(1a) NBH and government	13.1	56.6	12.8	56.3	-0.3
National Bank of Hungary	11.7	50.3	10.9	47.9	-0.8
Government	1.5	6.3	1.9	8.4	0.4
(1b) Public sector	10.1	43.4	10.0	43.7	-0.1
Credit institutions	5.5	23.5	5.3	23.4	-0.1
Corporate sector	4.6	19.8	4.6	20.3	0.0
<b>(2) Net foreign debt (=2a+2b)</b>	<b>8.9</b>	<b>100.0</b>	<b>8.3</b>	<b>100.0</b>	<b>-0.6</b>
2a) NBH and government	3.3	36.6	3.2	38.3	-0.1
National Bank of Hungary	2.3	25.8	1.8	21.3	-0.5
Government	1.0	10.8	1.4	17.0	0.5
(2b) Public sector	5.7	63.4	5.1	61.7	-0.5
Credit institutions	2.2	24.2	1.7	20.4	-0.5
Corporate sector	3.5	39.2	3.4	41.3	-0.1

*The "Quarterly Report on Inflation" is a publication of the National Bank of Hungary, which aims to inform the public on a regular basis about recent and expected developments in inflation, as well as about the central bank's assessment of the macroeconomic process determining inflation. The aim is for the goals of monetary policy to reach a wider public than before, such that the central bank's actions become easier to follow and interpret. This publication focuses essentially on the description and analysis of current developments of a given period. The economic and financial concepts and relationships determining future developments in inflation considered relevant by the central bank were presented in our first issue,<sup>1</sup> hence their detailed description is not given here.*



<sup>1</sup> The first issue of the "Quarterly Report on Inflation" (November 1998) is available on the home page of the National Bank of Hungary.

The marginal improvement that is found in the income on non debt-generating investments cannot yet be evaluated, since the profit transfers which are the prime determinants of this item will only take place following the compilation of annual balance sheets in May. The improvement in the balance of incomes on debt-generating investments can, however, be labelled as favourable, because usually there are higher-than-average interest payments to foreign investors in the first quarter. The most considerable saving in interest expenditures is on the part of the NBH, while a smaller improvement can also be observed in the private sector. Apart from this, no significant improvement is expected in the course of the year, taking into account the stock of foreign debt which slightly increased at the end of last year. Since, however, market conditions are still favourable we need not expect a deterioration.

It is worth mentioning that forms of financing which do not generate foreign debt (USD 462 million in direct investment in equity and USD 185 million in portfolio investment in equity) have jointly exceeded the deficit of the current account. Outflows are observed, however, in the item for intercompany loans. The development of these (as intercompany loans are relatively easier to liquidate) is to a certain degree a good indicator of the short-term expectations of strategic foreign investors in Hungary. The capital outflow through this channel therefore indicates some short-term uncertainty among such investors concerning balance of payments developments in Hungary, but the significant net inflow in the direct investment and the portfolio equity investment channel is the sign of their long-term involvement and confidence in the Hungarian economy.

The NBH and the government were also significant contributors to the financing of the current account deficit, accounting for some USD 300 million. Although the State Debt Management Agency issued bonds of EUR 500 million in February, contemporaneous amortisations on part the of the NBH led to only USD 186 million net disbursement of foreign debt. The lower volume of government securities' purchases by foreign investors is again a sign of their cautiousness fuelled by uncertain short-term expectations. The level of international reserves has only declined to a minor extent due to transactions and was mainly influenced by cross exchange rate changes on international markets.

The private sector also seemed to be overly cautious in the first quarter: their net financing from abroad in the credit channel was negligible. Compared to this situation equity purchases by foreigners can even be judged as being significant, although it is true that the rather unfavourably-accepted current account data for December were released only at the end of February and after this – in March – net equity purchases by foreign investors indeed declined.

#### Development of foreign currency denominated foreign debt and assets

In the first quarter of 1999 both gross and net external debt showed decreases, but to a large extent this can be attributed to cross exchange rate changes, namely the appreciation of the US dollar versus the euro. The only item that changed significantly since the end of last year is the almost USD 1 billion claim that was

#### Main components of the current account

	USD million		
	1997 Q1	1998 Q1	1999 Q1
<b>1 Goods</b>	<b>-402</b>	<b>-303</b>	<b>-517</b>
Credit (export)	4,489	4,740	5,217
Debit (import)	4,891	5,043	5,735
<b>2 Services</b>	<b>153</b>	<b>55</b>	<b>-31</b>
Travel, net	159	180	230
Other services, net	-6	-125	-261
<b>3 Incomes</b>	<b>-327</b>	<b>-321</b>	<b>-234</b>
on debt, net	-311	-296	-236
on non-debt, net	-16	-25	2
<b>4 Current transfers</b>	<b>99</b>	<b>187</b>	<b>183</b>
<b>Current account (1+2+3+4)</b>	<b>-477</b>	<b>-382</b>	<b>-598</b>

#### The financing of the current account

	USD million		
	1997 Q1	1998 Q1	1999 Q1
<b>1 NBH and government</b>	<b>116</b>	<b>-1,298</b>	<b>301</b>
Transactions in debt instruments	-358	-31	186
– o/w government securities	101	621	79
Change in international reserves	474	-1,267	116
<b>2 Public sector</b>	<b>-302</b>	<b>1,280</b>	<b>221</b>
Transactions in Debt Instruments	-97	836	36
Transactions in Equity	-205	443	185
<b>3 Direct Investment</b>	<b>455</b>	<b>329</b>	<b>282</b>
Equity	353	362	462
Intercompany loans	102	-32	-180
<b>4 Capital account and NEO (= 2-1)</b>	<b>208</b>	<b>71</b>	<b>-205</b>
<b>Total (1+2+3+4)</b>	<b>477</b>	<b>382</b>	<b>598</b>

increase in real income has also played a role.<sup>5</sup> Despite recovery in housing investments, this did not lead to a considerable upswing in households' demand, but could generate an extra financial requirement later in the year. On an annual account we do not expect the current high financial saving rate to remain, an increase of demand at least proportional to the growth of income is considered.

## 2 Current account and its financing

The approximately USD 600 million deficit of the current account in the first quarter of 1999 is the result of a combined USD 550 million deficit of goods and services, a USD 235 million deficit of incomes and some USD 200 million surplus of current transfers. Taking a look at seasonally adjusted data it can be seen that both the current account and the trade deficit have improved compared to the preceding two quarters. On the contrary, the services balance, similar to the previous quarter, continued its deterioration despite the improving balance of travel that performed better than in any one of the four preceding quarters. A slight improvement can be observed in the incomes balance while practically no change has taken place in the balance of current transfers.

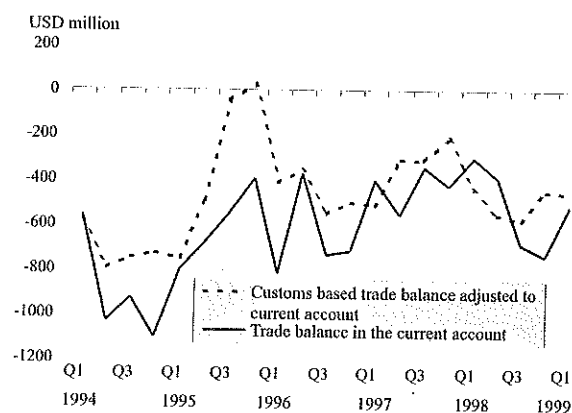
### What explains the difference between trade balances based on customs and balance of payments statistics?

External trade in the balance of payments statistics is different from the one we saw earlier based on the customs statistics. According to the former exports amounted to USD 5,217 million, while based on the latter they were USD 5,714 million. Figures for imports are USD 5,735 million and USD 6,348 million, respectively. Thus the trade deficit was USD 517 million in the balance of payments statistics, while in the customs statistics it was USD 634 million. The main discrepancy between the two recordings arises due to time lags between shipments and payments and different treatment in the accounting of processing and reprocessing as well as in-kind contributions. To overcome some of these shortages when one examines the development of the two types of statistics it is more appropriate to use the customs statistics adjusted to the balance of payments instead of the pure customs statistics data. (The adjustment diminishes the differences due to non-analogous treatment.)

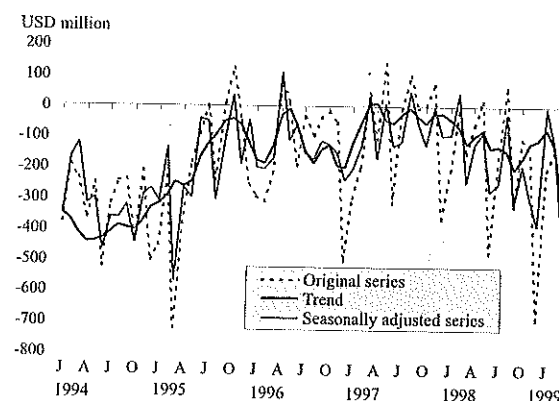
In February and March 1999, the monthly trade deficits according to the two types of statistics were indeed considerably different, but monthly data are more likely to reflect unique effects than quarterly data. Thus on the chart below we have plotted quarterly data for the trade deficit according to the two different statistics. It is easily seen that quarterly data do not exhibit a wide gap between the adjusted customs statistics and the balance of payments statistics in the first quarter of 1999.

<sup>5</sup> Following the CSO's practice we do not consider the amounts transferred to private pension funds as income growth when interpreting the development of households' incomes. This amount is recorded in the households' income item of the investment-savings balance sheet, and in the first quarter of 1999 it improves the households' net position by 1% of GDP. Concomitantly, the position of the general government is worse by the same amount. It is worth mentioning that it is only in one item, the proprietary income, that the dynamics of nominal and inflation-filtered income of households is significantly different.

Trade balances based on customs and balance of payments statistics



Development of the current account



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growth. Prolonged growth in the households' financing requirement, on the other hand, however, cannot be expected. Thus, in the event of acceleration of economic growth, the deterioration of the external equilibrium can only be stopped by improving the general government's savings position. The net financing requirement of the general government in the first quarter was markedly worse (-6.9%) than the envisaged position in the budget for the year (-2.2% of GDP operational deficit).<sup>3</sup> The commitment to the deficit determined in the budget would ensure that the general government generates significantly smaller external financing requirement in the remaining period of the year and thus the financing of the general government on a yearly basis would involve external sources up to a similar level as last year.

The extra deterioration in the general government's position in the first quarter is reflected as an additional source for the private sector – especially for enterprises. The transitory character of the deteriorating position of the general government is confirmed by the observation, that despite the additional sources the private sector has not modified its consumption and investment targets, instead it has increased net savings. Thus the economy's external position was not influenced by rearrangement between income owners.

The position of enterprises was also affected by the fact, that no profit repatriation took place in the first quarter of 1999, thus reinvested profit added to enterprises' gross savings. This cannot be considered a steady source,<sup>4</sup> however. Taking into account last year's improving enterprise profitability in the whole year, at least as high an amount of repatriated profits is expected as in 1998.

It is not easy to judge the development of business sector profitability because it was influenced by the transitory factors mentioned above (extra sources from the general government and no repatriation of profits). We foresee some deterioration in profitability, as last year those companies, that are net exporters, were able to realise an additional profit because of a transitory real depreciation of the forint, which is not expected this year. Profitability is also less favourably affected if sales opportunities turn out to be weaker than assumed and enterprises cannot adjust their current costs accordingly.

Investment activity increased again at a rate that exceeds GDP growth, although it fell short of last year's unusually high level. The decline in capacity utilisation and the expected deterioration in profitability make a surge in investment demand unlikely even if aggregate figures do not indicate that the market and income positions of the economy's sectors are different. In the remaining period of the year those sectors that are less sensitive to the business cycle may enjoy further increase in investment demand.

Households' financing capacity increased by almost 2% of GDP compared to the same period of the previous year. This is partly attributed to the effects of the pension reform in 1998 which initiated a reallocation between different forms of savings. But the fact that the increase of consumption remained below the

<sup>3</sup> The position of the general government (balance according to GFS methodology less privatization receipts) is on a cash-flow base. This implies that shifts and overlaps between quarters and yearly corrections can considerably alter seasonally specific values.

<sup>4</sup> The repatriation of dividend income has no clear seasonal pattern, therefore we cannot filter out this effect.

Operational savings and investment by sectors as a percentage of GDP\*

	1997 Q1	1997 year	1998 Q1	1998 year	1999 Q1
<b>GDP</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
+net income transfers	-3.2	-3.1	-3.3	-4.0	-2.2
+unrequited transfers	1.0	2.2	1.9	2.1	1.7
<b>Disposable income</b>	<b>97.7</b>	<b>99.1</b>	<b>98.6</b>	<b>98.1</b>	<b>99.5</b>
-private households	78.6	70.2	77.5	70.2	79.4
-general government	1.7	13.2	8.4	14.6	10.4
-corporate sector	17.4	15.6	12.7	13.3	9.7
<b>Final consumption</b>	<b>81.7</b>	<b>72.6</b>	<b>80.9</b>	<b>72.2</b>	<b>81.0</b>
-private consumption	69.0	62.0	68.4	61.8	68.3
-public consumption	12.7	10.5	12.4	10.3	12.7
<b>Gross savings**</b>	<b>16.0</b>	<b>26.5</b>	<b>17.7</b>	<b>26.0</b>	<b>18.5</b>
-private household savings	9.6	8.2	9.1	8.3	11.1
-public savings	1.7	13.2	8.4	14.6	10.4
-corporate savings	4.7	5.1	0.2	3.0	-3.0
<b>Net capital transfers</b>					
-private households	0.5	0.5	0.4	0.2	0.4
-general government	1.0	1.1	0.8	1.2	0.8
-corporate sector	-1.5	-1.6	-1.2	-1.4	-1.2
<b>Investment</b>	<b>22.5</b>	<b>27.9</b>	<b>22.3</b>	<b>30.4</b>	<b>23.1</b>
-private households	7.3	4.8	6.3	3.9	6.5
-general government	12.2	19.2	13.0	22.7	13.9
-corporate sector	3.0	3.9	2.9	3.8	2.7
<b>Net savings</b>	<b>-6.5</b>	<b>-1.4</b>	<b>-4.5</b>	<b>-4.4</b>	<b>-4.6</b>
private household savings	2.8	3.9	3.1	4.6	5.0
public savings	-9.4	-4.9	-3.7	-6.8	-2.7
corporate savings	0.2	-0.4	-3.9	-2.2	-6.9

Notes: Due to rounding, the sum of sub-entries may differ from the grand total. Data are from CSO (facts until 1995) and NBH (estimates).

\* Data are approximately on an accrual basis. Savings do not include revaluations on stocks of households' deposits and loans due to exchange rate changes. In the general government's balance (deficit according to GFS methodology less privatisation receipts) interest expenditures are on an accrual basis.

\*\* Gross savings = disposable income (including the given year's amortisation) less final consumption. Disposable income comprises the given year's gross domestic product plus net income and unrequited transfers (according to balance of payments statistics) vis-à-vis non-residents.

## 1 Net savings position

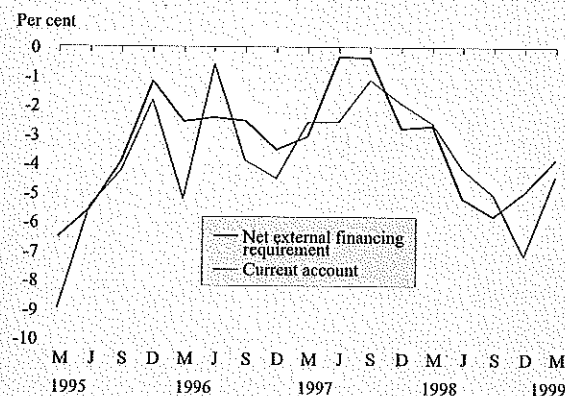
The current account is the indicator of the saving-investment balance of an economy. The saving-investment balance, however, defines a theoretical current account; the gap between domestic savings and investments is more appropriately called net financing capacity or requirement.<sup>1</sup> This figure is different from the one compiled on the basis of balance of payments statistics<sup>2</sup> but better reflects the changes in the economic agents behaviour that determine the future development of the external position.

The net financing requirement of the economy in the first quarter of 1999 was equal to that of the same period last year. Taking into account that the deterioration of the external position became significant from the second quarter of the previous year, the development of external financing this year indicates a stabilisation of the external position. This is mainly attributed to the private sector, the financing requirement of which has decreased. Meanwhile the position of the general government has worsened. The development of these positions, however, was influenced by unique factors which are not expected to occur again this year; therefore, on an annual basis the sectoral composition of the external position will significantly differ from that which resulted from a quarter with transitory effects. On the grounds of the developments in the first quarter we conclude that the increase of the external financing requirement did not continue, due to a lower growth rate in the private sector. On the one hand, the increase of the financing requirement on the part of the business sector is a natural by-product of economic

<sup>1</sup> Similar to our previous Report on Inflation but in contrast to earlier NBH publications the positions of economic agents are now given *in operational (i. e. net of inflation) terms* so they are now in more easily understandable connection with real economic decisions that determine the changes in them. While earlier the compensation for inflationary depreciation on net financial wealth was recorded as income or current saving, in the present setting only interest revenues in excess of inflationary compensation are regarded as income, and only the part of net financial wealth in excess of inflationary compensation is regarded as saving.

<sup>2</sup> The difference between the published and the theoretical current account is due to the fact that the Hungarian balance of payments statistics still uses the cash-flow approach, i.e. it does not record transactions between residents and non-residents which do not involve actual payments, while there might be cases, when it records flows that in economic terms should be labelled revaluations. In addition, some difference can be attributed to time lags between real transactions and concurrent payments. The shorter the observed time interval the greater the relative shift and difference between data compiled on accrual and cash-flow basis. This is clearly shown in the quarterly data for the current account from the balance of payments statistics and the net external financing requirement which is on accrual basis.

Development of net financing requirement and the current account in p.c. of GDP (seasonally adjusted)



The main goal of the National Bank of Hungary is to **reduce inflation permanently** to the level of inflation in the European Union. In an environment characterised by low inflation, interest rates are predictable and moderate. This facilitates long-term, rapid economic growth.

Inflation declined substantially in 1998. Economic growth accelerated, accompanied by a deterioration in the current account. Over the first five months of 1999, the external imbalance stabilised, while the reduction of inflation continued. This correction was caused by a slowdown in the growth of private sector demand. At the same time, in the first quarter of the year public sector demand continued to grow. There was no shift towards a macroeconomic path which would ensure sustainable external position even at a higher rate of economic growth.

The **rate of inflation** continued to decline in the first quarter of 1999. Following 10.3% in December 1998, the twelve-month growth rate of consumer prices averaged 9.5% in the first quarter, and 8.9% in May. This was the first time that consumer price inflation reached single-digit levels since 1987.

In the view of the National Bank of Hungary (NBH), there are **three main factors that influence the inflation rate**. These factors are continuously monitored by the Bank. **Aggregate demand and supply** are among the most important factors for achieving sustainable disinflation. The second factor is **inflationary expectations** which play a significant role in pricing behaviour and nominal wage negotiations. The third component is **imported inflation** which is the sum of foreign inflation and the change in the exchange rate of the forint. These three components determine the trend of inflation. The inflation rate is, of course, influenced by idiosyncratic factors as well, such as tax changes or supply shocks causing one-time shifts in the price level.

Among the determinants of inflation, *imported inflation*, **demand-supply conditions**, and *supply shocks* – considered as exogenous to monetary policy – supported the decline in the growth rate of domestic prices in the first quarter. In the category of *regulated prices*, price increases substantially exceeded the inflation rate, raising it by nearly 1 percentage point. The increase in consumption taxes at the beginning of the year also had an unfavourable effect. The scope of disinflationary monetary policy was restricted by slower adjustment of *inflationary expectations* to the significantly faster-than-expected decline of inflation last year. This was reflected in budget revenues which were lower than expected and in high nominal wage growth. Due to the composition of demand and the significant expansion of capacities in the services sector, inflationary inertia resulted in a less favourable external position, and affected the path of inflation only to a minor extent.

Imported inflation is influenced by three factors: changes in the inflation rate of Hungary's main trading partners, world prices and the reduction in the devaluation rate. The decline of foreign exchange import prices continued at the beginning of the year. As a result of the declining prices of energy products and commodities – due to the slowdown of world growth – trading partner countries were characterised by low inflation. Moreover, in several countries industrial products prices declined. There was a break in this trend, however, in March, and along with the rise in oil prices, inflation increased in the main trading partner countries of Hungary. The average rate of inflation in these economies is expected to be 1% higher by the end of 1999. Domestic

inflation was also influenced by the increase in oil prices. The stronger growth of foreign exchange import prices also has an inflationary effect. This effect, however, will be offset by other factors influencing domestic inflation, such as the decline in the growth of domestic demand and the expansion of capacities in the services sector. All in all, the inflationary difference against the country's main trading partners has further declined in 1999 so far, and amounted to 7.9% at a 12 month basis in May. Along with the decrease in the inflationary difference, the rate of devaluation was also reduced thereby decreasing imported inflation.

The exchange rate retained its role as a nominal anchor. In March and April, however, the inflation rate for industrial products, which are most strongly disciplined by the exchange rate, somewhat exceeded the annual depreciation of the forint. This can be attributed mainly to the rise in imported inflation, but increased exchange rate volatility may have also played a role. The growth rate of prices of market services, which are not directly influenced by the nominal exchange rate path, moved closer to that of industrial products. This reflects favourable developments in aggregate demand and supply.

Developments in aggregate demand and supply were strongly influenced by the slower-than-expected external demand. Uncertainty concerning prospects for future exports also increased. Unfavourable export developments reduced domestic demand in the private sector as well. The change in the growth of domestic and foreign demand components (4.6% and 10.7%, respectively) led to slower GDP growth. According to our estimates, real GDP growth was 3.8% compared to the same period of 1998.

As far as the different sectors of the economy are concerned, the reduction in private sector demand growth mostly happened in the corporate sector. Demand in the household sector increased at a rate similar to last year, while there was a substantial rise in public sector demand. Due to the fact that growth in household consumption and investment was lower than income growth, the external position was at a similar level as in the first quarter of last year. Taking into account that the significant deterioration of the external equilibrium position of the country, which started in the second quarter of 1998, external position figures in the first quarter of 1999 can be considered as signs of stabilisation. However, we must be cautious, since developments in the first quarter were influenced by one-time factors that cannot be counted on in the remaining part of the year. Therefore, long-term tendencies of the economic process cannot be forecasted based solely on the changes in the first quarter. The following conclusion, however, can already be drawn: the signs of overheating which characterised the first three quarters of 1998 have become less pronounced over the last two quarters.

Macroeconomic developments were influenced most strongly by changes in economic growth in Hungary's trading partners. Demand grew slower in the European Union, and the economy slipped into recession in the majority of Central and Eastern European countries. The commodities and food markets were characterised by surplus supply. In addition to these developments, uncertainties concerning future economic growth also increased due to the war in Kosovo and political changes in Russia. These unfavourable effects were mitigated by the fact that the slowdown of economic growth in Western Europe has not been felt in private consumption yet, i.e. it has not restricted Hungarian exports. The 10.7% export growth experienced in the first quarter of 1999 continued to be the engine of economic growth.

The private economy reacted flexibly to changes in the business cycle position. In the corporate sector – unlike at other times in Hungarian economic history – current expenses rapidly adjusted to the expected growth in revenues. In the manufacturing industry inventory growth normalised following the outburst of the Russian crisis (though government intervention also played a role in this). Nominal wage growth (15.2%) in the private sector declined at a higher rate than previously, along with the faster reduction in inflation. But even this lower rate of wage growth may generate cost inflationary pressures due to less favourable sales prospects than expected. Employment continued to grow at the aggregate level, which is a good indicator of the differ-

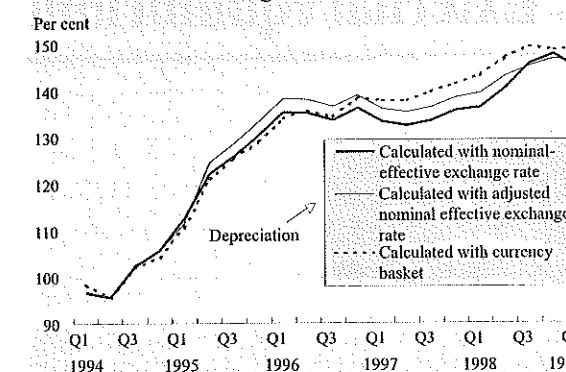
can be observed in March. However, the real exchange rate remained at a more depreciated level than it was in the first half of 1998. The fluctuations of this real exchange rate index can be only partly explained by the movements of the forint within the intervention band. It can be seen that the appreciating trend of the index adjusted for the within-the-band movements broke in the first half of 1998 and this index depreciated in the second half of 1998 as well. This depreciation was reverted in the first quarter of 1999 and the level of real exchange rate almost approached the level of a year earlier.

The volatility of the index adjusted for both the cross exchange rate and the within-the-band movements is much smaller than that of the other indices. A slight depreciation of this index can also be seen in 1998. This reflects that the differential between the weighted average of our main trading partners inflation and Hungarian inflation decreased at a faster pace than the rate of devaluation. This phenomena did not change even after the reduction of the rate of crawl in January this year.

The real effective exchange rate based on unit-labour costs<sup>2</sup> presents a different picture of the competitiveness of the Hungarian economy. The capital intensity of Hungarian manufacturing is growing at a faster pace than that of our main trading partners during the transition. Thus, the share of profit in income increases continuously. Consequently, it is worth mentioning that over the longer run a real depreciation is expected for the unit labour cost based real exchange rate. However, evolution of capital intensity and hence the equilibrium depreciation of the ULC-based real exchange rate can change year after year. Contrary to the CPI-based real exchange rate, the differential between the rate of crawl and relative unit labour cost was higher in 1998, but not significantly different (6%) than the average of 1996–97. Hence, nominal rigidities in wage formation reinforced the policy of cautious reduction in the rate of crawl.

According to the evolution of the ULC-based real exchange rate index adjusted for the within-band movements, competitiveness remained stable in the first quarter of 1999. However, it is worth mentioning that without the reduction in social security contributions the stability of competitiveness would have turned into a deterioration of competitiveness in manufacturing this year.

Real exchange rate of the forint based on unit labor costs in manufacturing (1994 = 100)

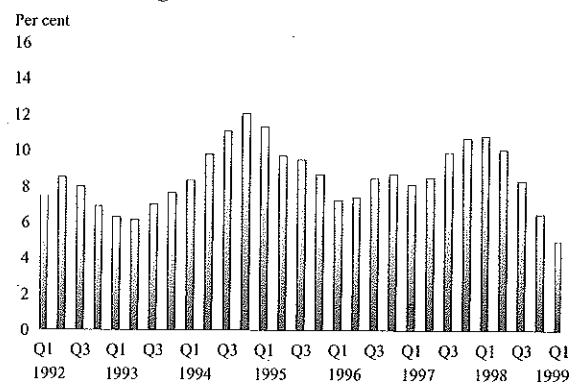


\* Calculated with value added in manufacturing.

<sup>2</sup> Unlike to our previous Report we do not analyse the evolution of the unit labour cost based real effective exchange rate calculated with gross output, because the two measures behaved very similarly in the latest period. The unit labour cost based real exchange rate calculated with value added in manufacturing is not as much biased when changes in vertical integration take place.

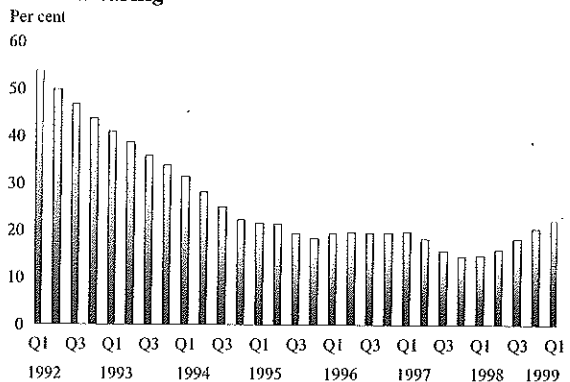


Share of firms with a shortage of capacities in the manufacturing\*



\* Seasonally adjusted data. Source of basic data is Kopint-Datorg.

Share of firms with a surplus of capacities in the manufacturing\*



\* Seasonally adjusted data. Source of basic data is Kopint-Datorg.

ties. Our data show that these tendencies continued in the first quarter of 1999 as well. Looking at short-term prospects, expectations of the firms have deteriorated compared to the same period in the previous years. This is supported by the observation that, compared to the last quarter, there was a drop in the number of firms indicating capacity limits as a constraint on their output accompanied by a sharp jump in the number of those mentioning insufficient demand (from 58% in January 1999 to 71% by April 1999).

### 3 Competitiveness

The real exchange rate of the forint was significantly affected by the fluctuation of the nominal exchange rate in the first quarter of 1999.

1. Although in March the forint depreciated to the central parity of the intervention band, in May the forint reached the stronger edge of the intervention band once again. Consequently, the forint appreciated within the intervention band on average in the first quarter of 1999.

2. In the beginning of 1999 the euro depreciated by more than 10% against the dollar. Due to the fact that the weight of the dollar in the currency basket is higher than in that of the weight in manufacturers trade, this led to an appreciation of the real effective exchange rate of the forint.

3. The depreciation of the forint following the Russian crisis last autumn was a temporary phenomena and the correction of this transitory real depreciation is expected to occur this year. The real exchange rate would return to its 2–3% annual real appreciation trend by the end of this year.

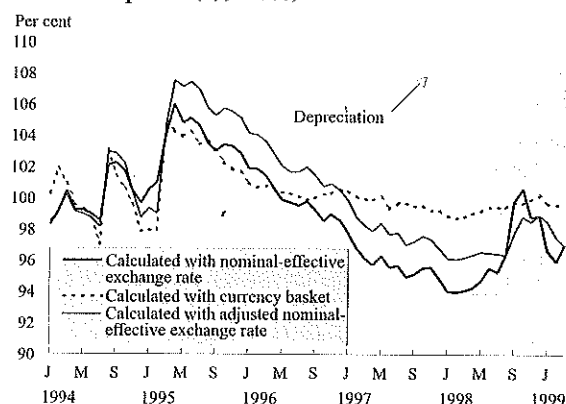
Because the movements of the real exchange rate were so strongly influenced by the cross-exchange and the within-the-band fluctuations, it is useful to analyse both the traditional real exchange rate indices and other two indices calculated with other methods:

- Since the fluctuations of the forint within the intervention band do not affect the competitiveness of manufacturers in the longer run, we have filtered out the effects of the movements of the forint within the intervention band and calculated the adjusted real effective exchange rate indices.
- Although the NBH and the government take into account the effect of cross-exchange rates when determining the rate of crawl and exchange rate policy, movements of cross exchange rates are not closely linked to monetary and exchange rate policy.<sup>1</sup> Thus, we have filtered out the effects of the fluctuations of the forint within the intervention band and the effects of the cross-exchange rate movements when calculating the third type of real exchange rate indices. These indices compare the relative inflation rates and the rate of crawl.

The real effective exchange rate of the forint based on consumer prices appreciated in January while a slight depreciation

<sup>1</sup> As of 1 January 2000 the currency basket will only contain euro. Hence, the effect of cross-exchange rate fluctuations will be diminished because this basket would be closer to the currency structure of the external trade of manufacturing.

Real effective exchange rate of the forint based on consumer prices (1994=100)



ences in the market position of different firms. On the whole, the profitability of the corporate sector at the aggregate level deteriorated only to a small extent.

Investment demand growth also slowed in the corporate sector. Investment in the overall economy grew by 6.4% compared to the first quarter of the previous year. The growth of corporate investment was only a few percentage points higher than this at most, which is a considerable deceleration compared to the corporate investment growth of more than 20% seen last year. Compared to the same period last year, investment activity stagnated in the manufacturing and tangible services sector which represented the engine of investment last year, and even declined relative to the peak investment period – the third quarter of last year. The future dynamics of investment activity are the most uncertain item in forecasting GDP growth and the external position. Investment demand is influenced by the fact that the ratio of investment expenses to GDP increased in 1998. Despite its improving profitability the corporate sector was only able to finance this high level of investment by further borrowing. The lower-than-expected growth of current revenues may cause solvency problems for certain firms. Declining capacity utilisation due to decreasing demand also points towards reduced investment activity. The drop in investment due to business cycle reasons may be partly offset by an increase in investment which is not sensitive to business cycle influences, e.g. in the telecommunication and energy industries.

**Household consumption** growth also declined relative to the second half of last year. Altogether household income increased by 3.5–4% in the first quarter of the year. In areas where the adjustment to the decline of inflation in the second half of 1998 was slower, real income grew faster (certain transfer income, wages in the public sector), while in the private sector the growth of (net) real income was lower. The growth of household consumption was slower than that of disposable income in the first quarter of the year, but was still a considerable 3.3% according to our estimates.

The main reason for consumption growth being slower than income growth is the expansion of household investment. Due to the introduction of VAT refund, household investment is expected to increase in 1999. The first signs of this were already seen in the first quarter of 1999: despite the bad weather at the beginning of the year, household investment grew by approximately 10%. Changes in income distribution might also have contributed to the decline in the propensity to consume. The introduction of the new family subsidy system led to a delay in the disbursement of the new subsidies, and some low-income earners were negatively affected by the change in the tax system. The reduction in the demand of households with liquidity constraints was also reflected by the fact that in the first three months of 1999, demand for consumer durables fell considerably. In the year as a whole, consumption is expected to grow at a similar rate to income.

The public sector increased its demand by 2% of GDP in the first quarter of 1999 compared to the same period of last year. This deterioration can be explained partly by temporary factors and partly by the reduction in inflation and consumption growth. The loss of revenues due to lower inflation, however, was partly offset by a reduction in government expenditure amounting to 0.4% of GDP. The fulfilment of the 4% deficit criterion stated in the budget would ensure a reduction in public sector demand for the rest of the year; thus, for the year as a whole, the public sector would have no surplus demand effect exceeding the macroeconomic program.

As a result of last year's spectacular investment activity, **domestic supply** increased substantially, and **capacities** expanded as well. At the same time, the growth of industrial production declined, hence the high capacity utilisation seen earlier in the manufacturing industry showed a decreasing tendency over the last two quarters. Business sector surveys indicate that the share of firms suffering from lack of capacity has also declined. The utilisation of potential workforce, however, increased as a delayed effect of last year's economic boom. Following the jump in employment at the beginning of 1999, the unemployment rate fell close to 7%. Although wage growth in the services sector excluding commerce, which produced wage inflation far exceeding average wage growth, declined (to 16.8%), the danger of bottlenecks in the supply of white-collar workers still remained. Wage growth was outstandingly high in the *public sector*

(21.7%). However, public sector wage growth will subside by the end of the year, since the current indicator is distorted by the fact that pay rises were carried out in different periods of 1998 and 1999.

Growth in domestic demand, which has been lagging behind GDP growth only to a small extent – mainly by the reduction in investment demand growth – contributed to the stabilisation of the external position. The **current account** deficit was similar to that in the first quarter of last year, and an improvement can be observed compared to the lowest point after the beginning of the Russian crisis. The external financing requirement was the result of private sector savings covering the increased financing requirement of the public sector, which was also supplemented by the temporary reduction in profit repatriation. Over the remainder of the year, savings in both the household and corporate sectors may decline. The increase in the private sector's financing requirement, however, may partly be offset by the decline in the public sector's financing requirement compared to its position in the first quarter of the year.

Apart from temporary effects, the financing requirement of the private sector as a whole is largely dependent on the rate of economic growth. As confirmed by the last two quarters, private sector expenditure adjusts quickly to changes in revenues, therefore a substantial rise in the financing requirement can be expected only in the event of a rapid improvement in the business cycle position, which raises investment and – through wage growth – consumption demand. Assuming constant expenditures, the position of the public sector experiences opposite changes: faster economic growth increases budget revenues and reduces the external financing requirement.

Over the first months of 1999, monetary policy was influenced by the stabilisation of international capital markets and the reduction in overheating characterising the economy in 1998. Along with the further decline in inflation, several dangers emerged, e.g. the jump in the prices of regulated services and the fast rise of oil prices, which may slow down the rate at which inflation is declining. Accordingly, in 1999 so far the National Bank has implemented a cautious interest policy allowing only a slower decline in interest rates than expected by market agents. The forint's rate of devaluation has been reduced in line with the decline in inflation.

The most important change in monetary conditions in 1999 is the expected change in the real exchange rate path. Reductions in the devaluation rate by the government and the NBH lagged behind the faster-than-expected decline of inflation. Thus, the continuous appreciation of the **real exchange rate** experienced over the last years became more moderate in the second quarter of 1998, and turned into depreciation in the middle of 1998. Following the stabilisation of capital markets in the second half of 1998, the government and the NBH have reduced the monthly rate of devaluation three times in 1999 by 0.1–0.1 percentage points in order to reduce inflation. As a result of these measures, by the end of the year the real exchange rate will approach its path of the previous years which was characterised by appreciation. The announced devaluation of the forint's exchange rate will be only 6.5% in 1999, as opposed to 10.5% in 1998.

Caution with the reduction of the devaluation rate can be justified by inflationary expectations failing to follow the faster-than-expected decline in inflation. Higher wage growth arising from higher inflationary expectations may lead to rising cost inflationary pressures and a further deterioration of the external position. Hence, the stickiness of inflationary expectations may have halted the disinflationary process. In order to prevent this, economic policy tried to be more active in influencing inflationary expectations than before: the simultaneous announcement of the two reductions in the rate of devaluation made it easier to predict the nominal path of the economy for a significantly longer period of time than previously was the case.

In a crawling exchange rate system, the forint interest rate level is determined by the sum of the announced devaluation rate, expected intraband changes in the exchange rate, foreign interest rates and by the required risk premium. Therefore, the real interest rate level is largely dependent on the real exchange rate path determined as the difference between the inflation difference and the depreciation of the forint. Last year's real depreciation led to outstandingly high do-

**A correction for the effect of deferred public sector 13<sup>th</sup> month payments**

Although we do not know exactly how widespread it was in the public sector at the end of last year to defer bonus payments to the first months of this year, in what follows we try to control for its effect on our wage inflation indices. The rationale behind this is that the *demand effect* of bonus payments does not necessarily occur at the time employees actually receive them but when they take it for granted that these bonuses will be paid out soon. That is, if public sector employees *expected* these bonus payments at the end of last year they might have incorporated them into their consumption (or saving, etc.) decisions – provided they had no tight liquidity constraints – even if those payments had not actually arrived before this January.

Technically, we are able to correct for this effect because of the peculiarity of public sector wage adjustments: wage levels usually change only one or two times a year, so even aggregate level quarterly data allows us to observe the average "basic" monthly pay. With this at hand we know how much the 13<sup>th</sup> month pay should have been, so we can calculate to what extent it could have been deferred from the end of last year to the first quarter of this year. Our computations show that deferring bonus payments was relevant for the public administration, social security, defence and education branches of the public sector. We have corrected wage growth indices in these branches only by assuming that the bonus payments were paid out in the fourth quarter of last year instead of this quarter. The resulting public sector and also national economy average wage growth indices of our *hypothetical* correction are shown in the table below.

Average wage growth indices when controlling for deferred 13 <sup>th</sup> month payments in two public sector branches	
	Per cent
Public administration, social security and defence	17.5
Education	13.4
Public sector total	15.7
National economy total	15.4

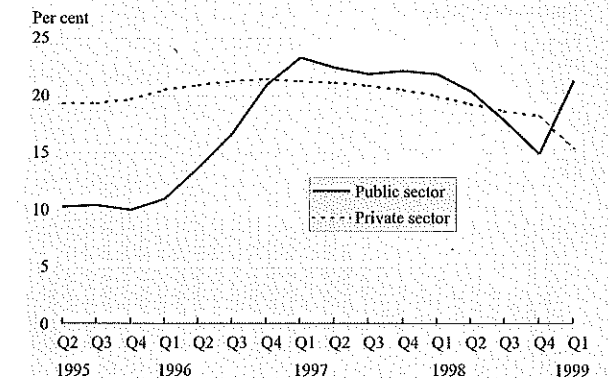
We see that correcting for deferred bonus payments lowers the 1999 first quarter average wage growth index to 15.4% from its uncorrected 16.8%. What is more important, instead of the extraordinary original figure of above 20% we have a better looking 15.7% average public sector wage growth index.

**2 Capacity utilisation**

Average capacity utilisation showed a declining trend in the first quarter of 1999, similar to last year. This is due to the interplay of many factors. Apart from an increase in capacity levels there has been a slowdown in production since the last two quarters of 1998, due to a decline in domestic and external demand. Presumably, there is still a gap between the capacity utilisation of domestic firms and those operating in customs-free zones due to the better export performance and opportunities of the latter group. (Note that these firms, apart from some, are not covered by the Kopint-Datorg survey used in this section.)

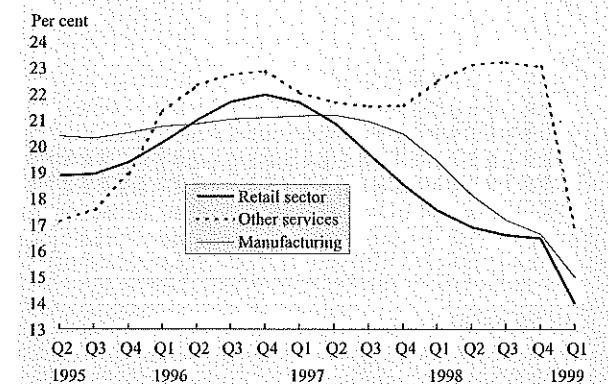
In 1998, while average capacity utilisation declined, there was a sharp drop in the share of firms facing a shortage of capacity and a slight rise in the share of those indicating surplus capaci-

**Wage inflation in the private and in the public sector\***



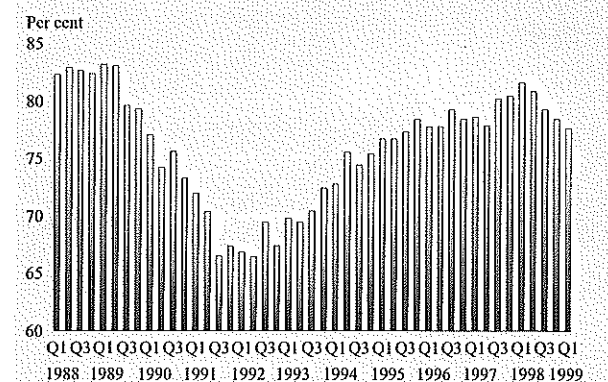
\* Seasonally adjusted data until 1998. Due to the CSO methodological changes, the 1999 indices have been simply attached to the end of the series. *Private sector* consists of the following branches: agriculture, fishing, forestry, mining, manufacturing, electricity, gas, heat and water supply, construction, retail sector, repair and maintenance services, accommodation services, catering, transportation, storage, post and telecommunications, financial activities and supplementary services, real estate transactions and business services. *Public service sectors* are public administration and social security, education, health and social care where the majority of employees are either public employees or civil servants.

**Wage inflation in the manufacturing, retail sector and the sector of other private services\***



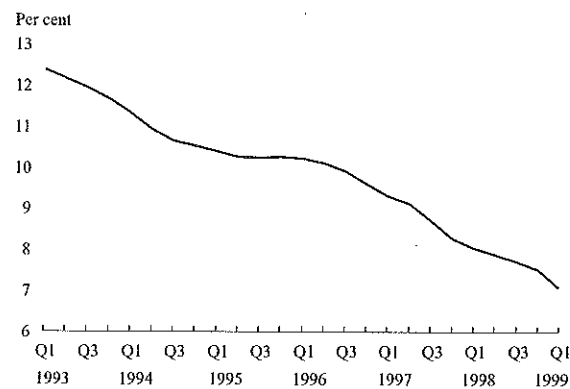
\* Seasonally adjusted data until 1998. Due to the CSO methodological changes, the 1999 indices have been simply attached to the end of the series. The "Other private services" sector consists of private services excluding retail and maintenance, i.e. the aggregate of accommodation services, catering; transportation, storage and telecommunications, financial activities, real estate and business services.

**Average capacity utilisation in manufacturing\***



\* Seasonally adjusted data. Source of basic data is Kopint-Datorg.

## Development of the unemployment rate\*



\* Seasonally adjusted series; unemployment according to the ILO definition in a comparable structure.

public administration, social security and defence sub-sector behind the overall decline in employment. This employment growth is mainly due to new hiring in the fields of public security, and law and order.

## 1.2 Unemployment

The CSO household survey shows a continuing decline in unemployment in the first quarter of 1999. The unemployment rate has decreased to 7.1%

As we discussed in the first Report on Inflation (November 1998), labour market bottlenecks may emerge when there is an insufficient labour pool in a growing economy. We, however, have no data for the first quarter of 1999 to distinguish groups within the unemployment stock that might form the so-called "effective" unemployment category. Our latest data (for the last quarter of 1998) show no change in the situation discussed in the first Report: the unemployment rates for the short-term unemployed or those with a higher education continue to fluctuate around the frictional level.

## 1.3 Earnings growth

According to the CSO institutional survey, average gross nominal wages increased by 16.8% year on year in the first quarter of 1999, implying average real wage growth of a 6.7%. This surprisingly high wage dynamic could partly be explained by very high public sector wage growth due to one-off factors distorting our year-on-year index upwards (see more on this in the box below). As expected, earnings growth in private sector industries followed the decline in the rate of inflation yielding average nominal wages indices in the range of 13–15%.

However, the methodological changes by the CSO in 1999 in reporting wage data have made analysing earnings developments very complicated. Among other changes, probably most significant change is that while last year we had wage data for enterprises with over *ten* employees, from January 1999 data are published for enterprises with over *five* employees. That is, though *earnings indices* are based on a consistent sample we have no comparable *wage level* data for this year. As a result, at the moment we are not able to seasonally adjust our wage level data, so we have to rely on the simple year-on-year indices (with composition effects still being controlled for in our wage inflation measure).

The wage inflation figures confirm our previous expectations: apart from the public sector the steady decline in the pace of nominal wage growth has continued. In the public sector, the extraordinary year-on-year wage index is a result of an upward bias due to longer-run payroll adjustments made in one step this year and also to bonus payments deferred from 1998 to this January.

As deferring bonus payments (especially 13<sup>th</sup> month pay) from December to the following January was more widespread last year than in 1997 – especially for public administration, social security and defence employees – this induces an upward bias in our year-on-year index (see box for a plausible correction).

## Development of wage inflation by industry\*

	1998				1999	
	Q1	Q2	Q3	Q4	Q1-04	Q1
Agriculture, fishing, forestry	16.8	16.6	16.4	16.1	16.5	14.5
Mining	23.6	10.6	5.1	5.9	11.3	13.6
Manufacturing	19.4	18.1	17.2	16.6	17.8	15.0
Electricity, gas, heat and water supply	20.8	19.9	18.7	17.7	19.3	15.6
Construction	18.9	16.8	15.1	14.1	16.2	13.7
Retail, maintenance of road vehicles, repairs	17.6	16.9	16.6	16.5	16.9	14.0
Accommodation services, catering	13.9	13.3	13.0	12.6	13.2	14.1
Transportation, storage and telecommunications	21.7	21.5	21.4	21.3	21.4	14.1
Financial activities and supplementary services	6.7	26.1	25.6	25.2	25.9	19.0
Real estate and business services	26.8	30.9	32.0	31.9	30.4	21.8
Public administration, social security and defence	17.9	17.8	18.0	18.2	18.0	23.2
Education	26.4	23.8	19.6	15.9	21.4	22.7
Health and social care	20.6	19.5	15.4	9.4	16.2	15.9
Other communal, social and personal services	16.6	16.5	15.7	14.3	15.8	11.7
National economy total	20.3	19.4	18.2	17.0	18.7	16.7

\* NBH calculation. For 1998 data refer to enterprises with over 10 employees, while the 1999 wage inflation indices refer to enterprises with over 5 employees. For 1998 indices are based on seasonally adjusted data, while for 1999 they are based on original data.

## Development of wage inflation in selected sectors of the economy in the first quarter of 1999

	Per cent
Total national economy	16.7
Private sector	15.2
Manufacturing	15.0
Retail and repairs	14.0
Other private services	16.8
Public sector	21.2

mestic real interest rate levels in the second half of the year. As a result of the modification of the exchange rate path this year, forint real interest rates decreased, and by the end of March real interest rates calculated from three-month Treasury bill yields declined to a level of 6%. At the same time, the risk premium required from forint investments stabilised at a higher level than before the Russian crisis, at around 500 basis points. Some of the reasons for this were the uncertainties related to the war in Kosovo and to the development of macroeconomic equilibrium.

Commercial bank lending rates have been following the decline in market interest rates only slowly. Bank interest rates followed the changes in market rates with a lag in earlier periods as well. At the same time, the spread between commercial bank lending and deposit rates has also increased, which may be related to the deterioration in the quality of commercial banks' loan portfolio.

Though there was substantial fluctuation in long-term interest rate expectations in money and capital markets, they did not change compared to the end of last year. Although market agents favourably changed their expectations regarding the future path of interest rates following the end of the Brazilian crisis, less optimistic perceptions of the macroeconomic equilibrium position of the Hungarian economy and the Kosovo conflict induced a rise even in long-term interest rates. In this period, there was increased uncertainty not only regarding future developments in the exchange rate of the forint but also in respect of the future path of interest rates as well.

An interesting phenomenon observed last year was that – while there was a significant fluctuation in money and capital market agents' demand for forint denominated assets – domestic real economy participants further increased the share of forint denominated assets in their portfolio. The growth of narrow and broad monetary aggregates exceeded nominal GDP growth. The real value of the narrow monetary aggregate, M1, exceeded its value in the first quarter of 1998 by 7%, while the real growth of the broader M3 aggregate was 8.1% for the same period.

The *undesired* growth of money demand may have an inflationary effect in the long run through higher household expenditures directly or indirectly through the worsening of the external position. Therefore, monetary policy is closely monitoring the growth of these aggregates. Our analysis so far shows that *desired* components have had a more dominant effect in the growth of money balances. The increase in the narrow monetary aggregate is justified by the lower opportunity cost of money holdings, due to the decline in inflation, thus households devote less energy to optimising their money holdings. Institutional changes have also contributed to this process, as the introduction of cash withdrawal fees has led to higher cash holdings. The growth in broader aggregates can also partly be attributed to a portfolio reallocation effect. Households have shifted away from non-bank investments because of the increased uncertainty of stock exchange yields and the higher real interest rate level of bank deposits. The demand for monetary aggregates was also increased by this portfolio reallocation.

Total corporate credit demand was not influenced significantly by the slowdown of economic growth and the higher real interest rate level of the last period. There was, however, a shift in the composition of credit. The share of foreign borrowing increased, which can be explained by the fact that a considerable part of the corporate sector is naturally hedged by its expected export revenues against the exchange rate risk of foreign exchange loans. The continuously high growth rate of the credit stock may be related to a potential rise in the demand for working capital loans by businesses facing financial problems due to the change in sales possibilities. At the same time, investment credit demand could decline. In this case, however, there should be a shift in credit demand towards shorter maturities. In reality, the shift in credit composition was exactly the opposite: long-term loans continued to expand dynamically, while growth in working capital loans declined. Thus, developments in corporate financing show no signs of a significant slowdown in investment demand.

## Main macroeconomic indicators

	1997				1998				1999
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	<i>Growth rate (at constant prices)</i>								
	<i>Change over the same period of the previous year (%)</i>								
GDP*	2.2	4.5	5.5	5.5	4.5	5.1	5.6	5.2	3.8
of this: domestic absorption	3.9	4.4	3.5	5.2	3.6	9.0	11.1	8.3	4.6
- final consumption	0.0	2.8	2.7	3.3	2.8	3.8	4.1	5.7	3.5
= household consumption	-0.8	2.4	2.2	2.7	2.8	4.1	4.4	6.1	3.3
- investment	22.0	9.8	5.6	8.7	6.7	26.1	30.5	13.0	8.6
= fixed investment	4.4	14.6	14.3	5.3	7.0	12.7	18.1	8.2	6.4
export (GDP)	19.0	24.5	28.8	27.5	29.0	17.6	12.5	9.5	10.7
import (GDP)	22.6	24.4	24.5	25.4	25.1	25.5	24.5	16.1	11.8
Real effective exchange rate index**									
On producer price basis	-8.2	-5.5	-4.6	-2.0	0.6	2.4	5.2	7.1	5.3
On unit labour cost basis (on value added basis)	-1.5	-2.0	-0.2	-0.4	2.3	6.1	9.2	9.0	6.0
On unit labour cost basis (on gross output basis)	1.3	2.1	4.3	3.2	5.5	7.7	10.3	10.8	7.5
Deficit					<i>as a % of GDP</i>				
Balance of the budget (cash flow basis)***	-5.3	-3.8	-6.0	-4.2	-7.8	-2.9	-4.0	-4.7	-11.9
Primary balance of the budget***	4.5	3.3	1.2	3.4	1.9	1.6	2.3	0.6	-1.5
					<i>in billion USD</i>				
Current account	-0.5	-0.3	0.1	-0.3	-0.4	-0.5	-0.4	-1.0	-0.6
Foreign direct investment (net)	0.5	0.3	0.3	0.6	0.3	0.5	0.2	0.4	0.3
Saving rate* (%)	8.4	9.1	10.7	12.6	8.8	11.6	11.7	10.2	9.4
Unemployment rate** (%)	9.3	9.1	8.7	8.3	8.0	7.9	7.7	7.5	7.1
Gross average income per capita***									
(same period of the previous year = 100%)	25.7	21.4	21.2	21.1	21.2	19.2	18.1	15.5	16.8
Net average income per capita in real terms**									
(same period of the previous year = 100%)	6.4	4.7	4.2	5.0	3.2	3.3	4.2	4.2	3.1

\* MNB estimates.  
 \*\* Positive figures indicate real depreciation; nominal exchange rate indices are calculated with market exchange rates from 1995; deflators refer to the manufacturing industry.  
 \*\*\* Estimated values, as there are no appropriate quarterly data for municipalities.  
 \*\*\*\* Net financial savings of households as a percentage of total household income. (Net financial savings do not include the sum of revaluations due to exchange rate changes and other factors.)  
 \*\*\*\*\* Based on the labour market survey of the Central Statistics Office, according to ILO standard, unemployed persons as a percentage of the active population, seasonally adjusted data.  
 \*\*\*\*\* Central Statistics Office data, average income of full-time employees in the public sector and at businesses employing more than 5 persons until 1998 and more than 10 persons from 1999. Therefore, the 1999 data can only be compared to earlier data to a limited extent.

## Main monetary indicators

	1996				1997				1998
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	<i>Change over the same period of the previous year (%)</i>								
Inflation (Consumer price index)	18.8	18.7	18.0	18.4	16.4	14.2	12.5	10.3	9.3
Producer price index	21.8	19.4	19.7	19.5	13.5	11.6	10.4	7.1	4.9
Devaluation rate of the forint's central parity	15.7	15.3	14.7	14.0	12.9	12.2	11.4	10.3	9.4
	<i>Real growth of monetary aggregates*</i>								
	<i>Change to the same period of the previous year (%)</i>								
M0	-0.2	0.3	0.9	-2.5	1.8	3.2	3.7	6.1	1.1
M1	1.7	0.4	1.3	3.8	6.7	9.1	8.0	6.9	7.1
M3	-0.2	-1.0	0.0	1.0	2.3	4.0	4.6	4.4	8.0
M4	6.8	6.4	7.1	7.0	9.3	9.1	9.1	9.0	9.8
	<i>Real growth of banking sector credit*</i>								
	<i>Change to the same period of the previous year (%)</i>								
Corporate sector foreign + domestic	5.5	7.4	9.5	6.7	8.2	8.5	9.1	13.3	17.9
Corporate sector domestic	19.2	24.1	23.1	17.0	14.2	15.1	15.2	9.7	11.3
Household	-23.8	-20.5	-14.7	-13.2	-11.4	-2.4	2.4	0.1	10.7
	<i>Interest rates (%)**</i>								
Reverse repo one month*	21.5	20.75	20.25	19.75	18.875	18.0	18.0	16.75	16.0
90-day Treasury bill	20.76	20.02	19.41	19.28	18.8	17.34	19.27	16.21	15.62
12-month Treasury bill	20.07	19.77	19.67	19.01	19.13	17.33	17.4	16.08	15.58
3-year Treasury bond	16.73	17.42	18.08	17.97	18.36	16.56	16.23	14.8	13.25
Budapest Stock Exchange Index (BUX)	5414	6795	7693	7999	8656	7806	4571	6308	5490
Interest rate premium (bsp)**	376	338	257	459	363	363	674	533	530
	<i>Conversion forint demand</i>								
Conversion USD million	471	799	1816	330	2448	929	-2307	-208	358
Net foreign borrowing of the banking sector*** USD million	-182	151	76	-115	452	-8	-632	-155	79
Net corporate borrowing of the corporate sector* USD million	-60	5	210	215	-56	87	128	431	-117

\* The maturity of the passive deposit facility was reduced from one month to 2 weeks from January 8, 1999.  
 \*\* Interest rate premium: Excess yield on 3-month T-bill investment over the devaluation rate and foreign interest rates. The actual devaluation rate was modified at the official announcement of the change in the rate.  
 \*\*\* Without privatisation revenues.  
 \*\*\*\* Including owner credit.

## IV. Supply side factors

## 1 The labour market

In a business cycle context, labour market developments, in particular changes in stock figures, act as *lagging indicators*. That is, they tend to follow cyclical developments in GDP or production. In the light of this it is not surprising that we see the favourable labour market developments of the last year accelerating in the first quarter of 1999. Over the first three months of 1999 the significant drop in unemployment was accompanied by a sharp rise in employment. These developments are reflected in the 1.2% year-on-year rise in the economic activity ratio as well.

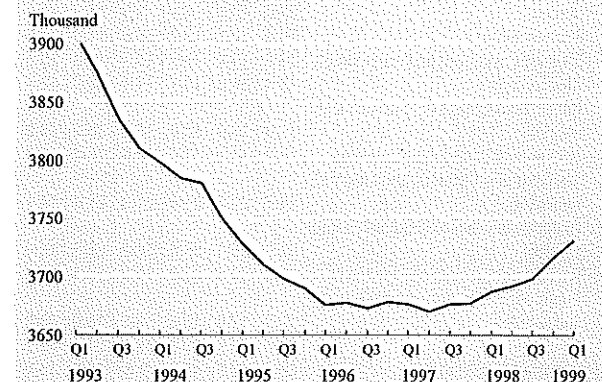
## 1.1 Employment

The CSO household survey data show a remarkable gain in employment in the first quarter of 1999. Due to the steady expansion of employment last year, employment has grown at an annual rate of 3.4%. Even the seasonally adjusted employment data series shows an extraordinary 2.6% rise in employment relative to the last quarter of 1998. Technically, this is due to the fact that in 1999 the seasonal drop in employment usually seen in the first quarter (usually in the range of 2-4%) did not take place. Thus the resulting extraordinary employment growth may partly be explained by the lagging nature of employment developments, but also as a one-off positive employment shock.

Due to the sharp rise in employment this quarter, *the employment ratio* (for those aged 15-74 years) has reached 48.5%, a figure not seen since 1994.

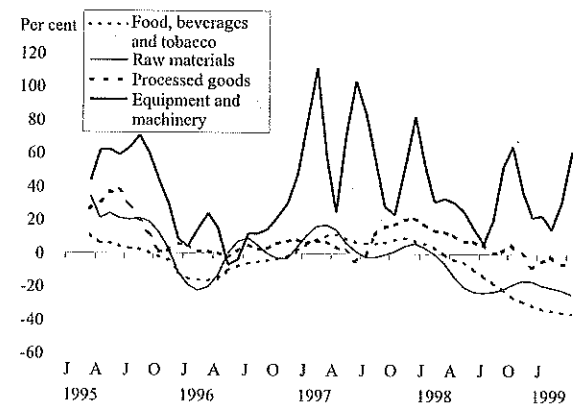
The CSO institutional labour market survey collects data for enterprises with over five employees and all public sector institutions. These data also show strong 2.2% year-on-year employment growth in the first quarter of 1999. Employment in the public sector is falling slightly, while employment in the private sector is growing strongly (3.5%). Looking at the developments in industrial employment, it is again *manufacturing* that shows the most significant employment growth (2.7%), dominated by rising employment in machine and basic metals manufacturing (above 6%). The 6.1% employment growth in the smaller *private services* sector is mainly a result of the extraordinary 12% employment growth in one of its largest sub-sectors, retail and repairs services, but there was a strong 6.1% employment growth in financial activities and supplementary services as well. In terms of *public sector* employment there is a steadily expanding

## Development of employment\*

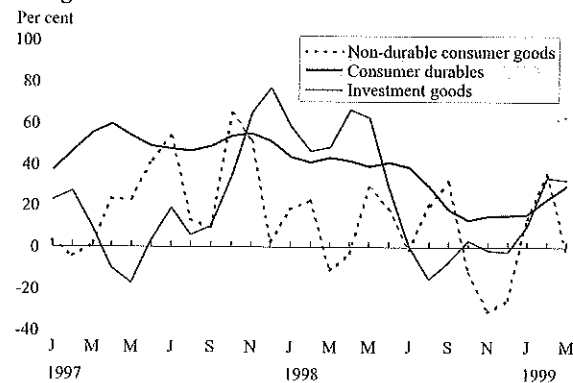


\* Seasonally adjusted series based on the CSO publication *Munkaerőpiaci jellemzők* (Labour market characteristics) in a comparable structure.

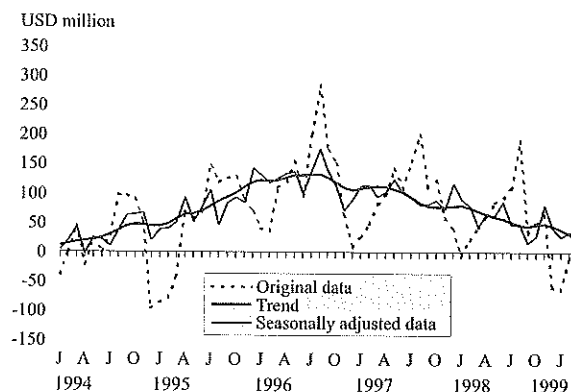
**Export of different product groups**  
(annualized monthly growth rates calculated from trends)



**Annualized trend growth rates in the different import categories**



**Services balance**



latter is not substantial, though expenses related to government services increased by nearly 50% compared to last year. Technical and cultural services produced the highest deficit within services, but revenues and expenses in this category were very similar to those of last year. As a result, the deterioration of the services balance, which started in 1996, continued in the first quarter of 1999.

## I. Development of inflation

The annual inflation rate was 8.9% in May 1999, which is 1.5 percentage points lower than the growth of prices in December 1998. The average inflation rate in the first quarter was 9.5%, i.e. there was a substantial reduction relative to the 11.3% recorded for the last quarter of 1998. 1999 was the first year after 1987 when single-digit inflation was achieved.

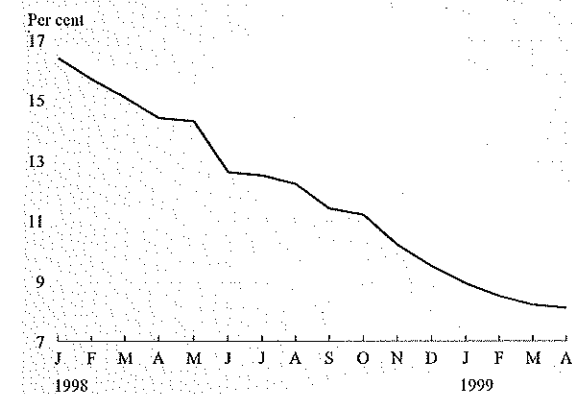
Over the first months of 1999, the inflation rate of Hungary's most important trading partners declined further. This also had a favourable impact on domestic prices due to the reduction in imported inflation. Domestic disinflation was further supported by the development of world prices for commodities and energy products over the first two months of the year. The increases in the price of food and fuel, which have significant weight in the consumer basket, were substantially lower than core inflation reflecting the trend of inflation. The rise in the price of crude oil starting in March affected domestic fuel prices. The change in commodity prices, however, had a similar influence on the inflation rate of Hungary's main trading partners as well. The convergence of the inflation rate to that of the euro region continued: at present the inflation rate in Hungary is 7.9 percentage points higher than inflation in the euro region (this discrepancy was still 9.5 percentage points in December 1998).

In line with the reduction in the inflation difference and taking into account macroeconomic indicators and money market developments, in agreement with the National Bank of Hungary, the government reduced the monthly rate of devaluation of the forint to 0.6% as of January 1, 1999 and further cuts of 0.1 percentage points were announced which will take effect on July 1 and October 1. The annual depreciation of the forint decreased to 7.9% in May, and the rate of depreciation will decline to 6.5% by the end of the year.

In the first quarter of 1999, the discrepancy between growth in domestic demand and GDP narrowed. The growth of demand for durables and investment goods experienced the most significant fall, thus, the change was reflected mainly in the slowdown of the deterioration in the external equilibrium. In the case of market services, which are not disciplined directly by the nominal exchange rate, a higher-than-average price increase (12%) was experienced. However, due to the new capacities introduced last year, the difference in the price increase of this product group and of tradable goods declined.

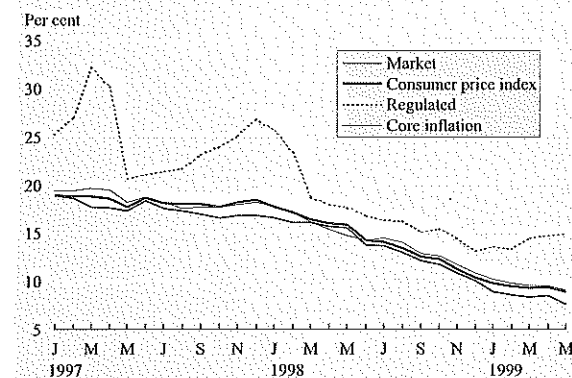
<sup>1</sup> The NBH has measured price increases by a new index since July. This index filters out the effect of changes in prices of seasonal produce (egg, potato, vegetables, fruit), solid and liquid fuel (coal, coke, firewood), as well as of petrol from the consumer price index. The core inflation index calculated this way covers 91% of the original consumer price index.

**Inflation difference compared to the euro region\***



\*The inflation rate of the euro region is measured by the harmonized consumer price index of this region published by Eurostat.

**Development of the regulated and market determined components of the consumer price index\***



\*Growth rate compared to the same month of the previous year, market determined prices: changes in the prices of industrial products and market services.

**Growth rate of prices compared to the same month of the previous year**

	Weight in the old consumer price index	Dec. 1997	Dec. 1998	May 1999
Consumer price index	100.0	18.4	10.3	8.9
Industrial products without food and fuel	30.4	14.2	11.3	10.5
Fuel	5.0	14.7	5.1	16.3
Market determined priced household fuel	1.7	14.7	6.4	9.4
Food	2.7	19.7	5.1	-1.0
Regulated prices	17.6	27.3	13.4	14.9
Services	22.6	17.9	13.9	12.0
Core inflation	91.2	18.2	10.8	9.0
Depreciation of the nominal effective exchange rate	-	11.2	13.9	8.2
Preannounced nominal devaluation rate of the forint	-	13.9	10.4	8.9

Growth rate of prices compared to the same month of the previous year according to the new classification introduced in 1999

	Per cent			
	Dec. 1998 in the old composition	Dec. 1998 in the new composition	May 1999 in the old composition	May 1999 in the new composition
Consumer price index	10.3		8.9	
Industrial products				
without food and fuel	11.3	10.9	10.6	10.4
Fuel	5.1	5.1	16.3	13.9
Market determined priced				
household fuel	-	6.4	-	9.8
Food	6.1	5.2	-0.6	-0.9
Regulated prices	13.0	13.4	14.8	14.9
Services	15.0	13.9	12.6	12.6
Core inflation	10.8	-	9.0	-

In addition to aggregate demand, the government directly influences consumer price inflation through regulated prices as well. Although the growth of regulated prices has continuously exceeded the rise of market-determined prices since 1995, it is a new phenomenon that the price increase of some regulated services (e.g. telecommunication, postal services, TV subscription), which comprise nearly 9% of the consumer basket, exceeded previous year's value. This resulted in a 0.9 percentage point higher inflation rate (the average price increase in the rest of the consumer basket was 8.5%). The growth rate of regulated fuel prices was average, despite the slump in world prices, because this rate includes the effects of price changes carried out last year.

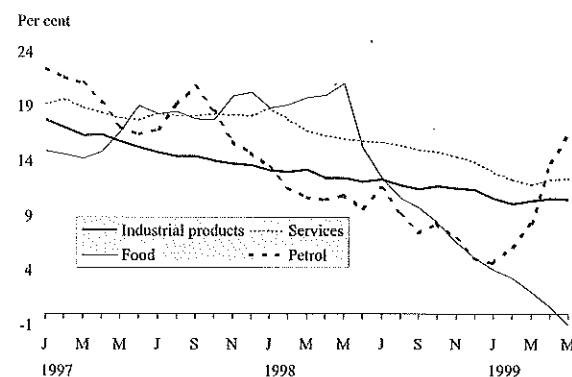
The table presented above differs from that in the previous Report in several regards. Using detailed data on the consumer price index, a new aggregation was introduced which, in our opinion, is more meaningful in economic terms and follows price tendencies more accurately.

- Components of the difference are as follows:
- The change in the weights is partly due to the fact that the Central Statistics Office introduces new weights at the beginning of each year in order to account for changes in consumer habits. Partly it is the consequence of the new classification we have introduced.
- In the consumer price statistics published by the Central Statistics Office food-related services are also listed in the food category (e.g. dining out, school meals, buffet goods, etc.). In the course of aggregation, these services were removed from the food category and placed in the category of market services (they account for 3.1% of the CPI).
- Energy sources can be found in three groups. Petrol as fuel for vehicles continues to be an independent item. Regulated household fuel is still part of products and services with regulated prices. There was a change in so far as a new category was created for market-determined priced household fuel indicating that even though it is a tradable product, it is not disciplined by the nominal exchange rate, but is influenced by the world price of energy and indirectly by domestic regulated energy products.
- The newspapers, magazines and books entries were removed from the industrial products category and placed in the services category, since these products are not exported, therefore their market status is closer to services than to industrial products exposed to international competition.

In order to better demonstrate the differences, the above table shows the former table updated with data from this year. The last column contains the values in the new composition with 1998 weights.

Cost inflationary pressures continued to be moderate, similar to previous years. This was partly the consequence of a significant decline in the world price of food and of no change or a moderate increase in various commodity prices. In the first four months of the year, gross income increased by 15.3% in the private sector. Wages increased to a smaller extent, as a result of in-

Development of non-regulated prices\*



\* Growth rate compared to the same month of the previous year.

tion – was gradually declining from the first quarter of 1998, foreshadowing the significant slowdown in economic growth in 1999. This, however, influenced domestic absorption only to a lesser extent. Private consumption in the euro region was characterised by an accelerating trend during the year along with a rise in the consumer confidence index. These developments are reflected in the retail trade and car registration figures of the euro region. The reduction in investment activity and export, however, had a negative impact on economic growth in the region. This deterioration led to the decline in import demand in the second half of 1998 despite favourable developments in domestic demand.

The growth rate of Hungarian exports to the euro region is still high, but the trend is decreasing. In the first quarter of 1999, seasonally adjusted Hungarian exports to the EU calculated in USD increased by 14.7% relative to the same period of last year (the rise of exports to developed economies was 16.2%).

Hungarian exports continued to be influenced by the 1998 Russian crisis and the resulting recession in CIS countries. The reduction of demand in most countries of the Central European region harmed the opportunities of Hungarian exporters as well. Although Hungarian exports to CIS countries did not substantially decline any further in the last six months, they dropped by 61.3% (in USD and seasonally adjusted) compared to the same period of the preceding year.

Differences in external demand by regions had an asymmetric effect on the product structure of exports as well. The import demand of the euro region consists primarily of consumer durables and investment goods.

Thus, the export of equipment and machinery increased dynamically, and the export of processed goods experienced only minor decline. At the same time, however, the export of raw materials, food, tobacco and beverages decreased significantly because of the reduction in the demand for intermediary products as a result of the Russian crisis and the slowdown of Western European economic growth.

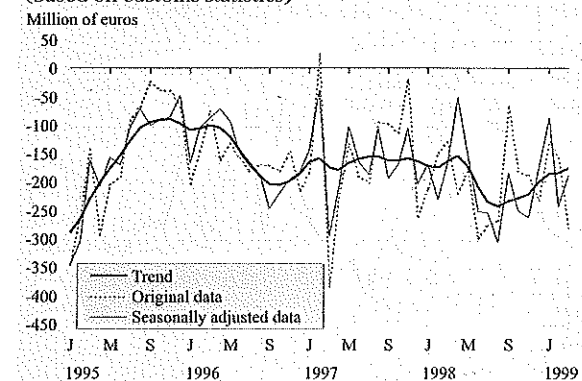
Following the slowdown in November–December 1998, the growth rate of imports increased again in 1999. This was partly the result of the import requirement of growing exports. In order to distinguish imports related to domestic absorption, imports have been broken down into product groups such as investment goods, consumer durables, non-durable goods and other imports.

As the chart of annualised growth rates shows, the acceleration of imports in the first quarter of 1999 can be mostly explained by the recent increase in demand for investment goods and durable consumption goods.

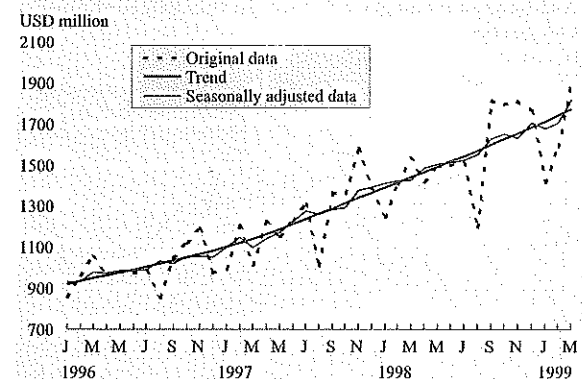
The balance of services continued the deterioration which started recently, despite the fact that the performance of the tourism industry was much better than expected in the first quarter of the year. However, compared to the same period of last year, expenses in construction services increased significantly, and there is a considerable drop in the revenues of transportation services because of the unusually high basis of last year.

The balance of these two items reduced the balance of services by nearly USD 100 million relative to the first quarter of 1998. The USD 50 million improvement in tourism was only able to offset the deterioration in the balance of other services. The

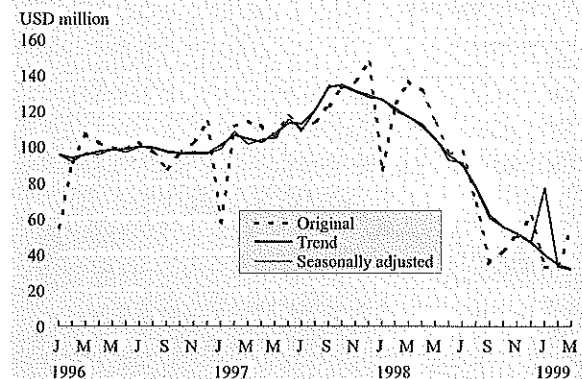
Trade deficit calculated in euro (based on customs statistics)



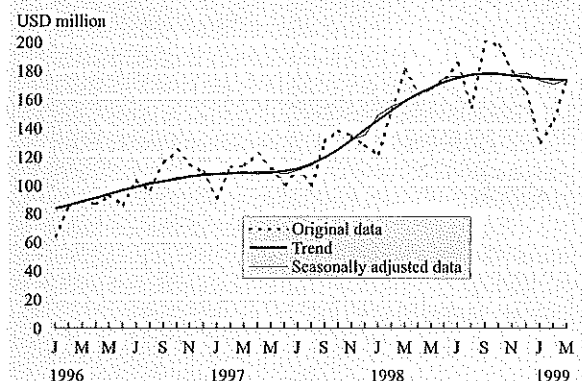
Hungarian exports to developed countries



Hungarian export to CIS countries



Hungarian export to CEFTA countries

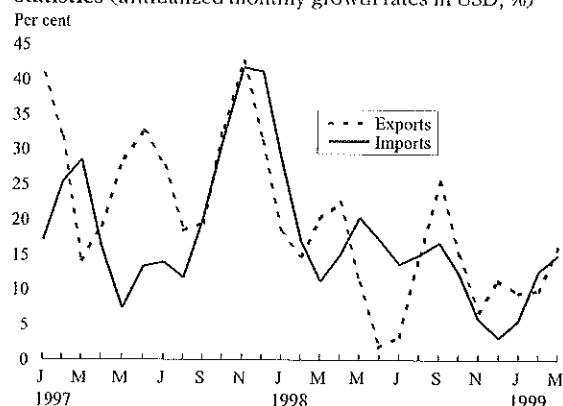


Main macroeconomic indicators of the euro region  
(change relative to the same period of the preceding year)

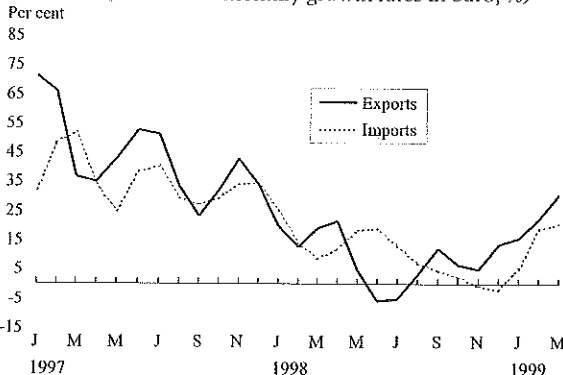
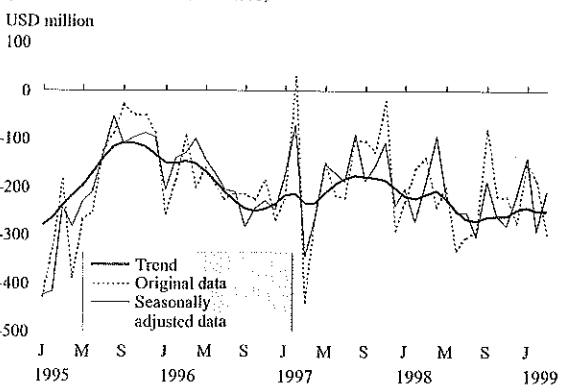
	Per cent									
	GDP	Domestic absorption	Private consumption	Public consumption	Gross fixed investment	Export	Import	New car registrations	Retail turnover	
1995	2.2	1.9	1.9	0.0	3.4	8.1	7.4	0.3	2.0	
1996	1.6	1.1	1.9	1.7	0.4	4.4	3.3	6.6	1.1	
1997	2.5	1.9	1.4	0.3	2.1	10.3	9.0	3.9	0.8	
1998	3.0	3.4	3.0	0.4	4.2	6.0	7.3	7.7	2.5	
1997 Q4	3.2	2.5	2.0	-0.7	2.8	11.6	10.2	11.2	2.1	
1998 Q1	3.8	3.9	2.8	0.3	5.7	11.0	11.8	12.7	2.6	
1998 Q2	3.0	3.2	2.5	0.6	3.2	7.7	8.6	3.3	1.7	
1998 Q3	2.9	3.4	3.4	0.2	4.3	4.2	5.7	7.4	2.8	
1998 Q4	2.4	3.1	3.4	0.6	3.5	1.8	3.7	7.5	2.8	

Source: European Central Bank, Monthly Bulletin, April 1999.

Trend of export and import based on customs statistics (annualized monthly growth rates in USD, %)



Trend of export and import based on customs statistics (annualized monthly growth rates in euro, %)

Trade deficit calculated in USD  
(based on customs statistics)

## Financing

The SNA-type financing of the general government (including ÁPV Rt.) was nearly Ft 270 billion in the first quarter of the year.

Only 8% of financing (Ft 22.4 billion) came from selling shares and other equities. Maturing forex-denominated liabilities and accumulated interest were more than covered by new issues. At the same time, forex assets declined by the equivalent of Ft 9 billion. Thus, the balance of foreign exchange financing (Ft 24.4 billion) covered another 9–10% of the financing requirement. Since consolidated, forint denominated assets hardly changed (Ft 6–7 billion increase), more than 80% of the financing requirement was financed by the rise in forint denominated public debt.

## 4 External demand

Two opposite tendencies in foreign trade emerged in the first quarter of 1999: (1) the growth of exports to developed economies was still dynamic though less so than in 1998; (2) exports to the CIS region, which were seriously affected by the Russian crisis, as well as to CEFTA countries, seemed to stabilise, though at a significantly lower level than before the crisis. Imports started to increase again at a higher rate at the beginning of 1999 after the low growth rate experienced at the end of the preceding year, but the growth rate did not reach the rate observed in early 1998 due to slower export growth and moderate domestic absorption.

In the first quarter of 1999, total customs statistics based exports amounted to USD 5,714 million, while total imports were USD 6,348 million. As a consequence, the trade deficit reached USD 634 million, which is USD 99 million higher than in the first quarter of 1998.<sup>11</sup>

In order to better understand short-term tendencies, the analysis here focuses on short-term indicators (month-on-month seasonally adjusted indices), as in our previous Report. The growth rate of the trend of exports calculated both in USD and in euro<sup>12</sup> exceeded the growth rate of imports over the first three months of 1999, and the slowdown of exports and imports at the end of last year proved to be temporary. The trend of the trade balance has showed signs of stabilisation since its lowest point in the autumn of 1998.

In 1998 the business cycle position was more favourable than expected in Hungary's main export market, the euro region (with Germany as the most important trading partner), which is of crucial importance as far as external demand is concerned. However, GDP growth – the main indicator of the business cycle position

<sup>11</sup> Figures for the first quarter of 1999 are preliminary, they may change in the course of the continuous processing of customs declarations.

<sup>12</sup> Taking the share of euro region countries in Hungary's foreign trade into account, the currency basket of the forint will be made up of 100% euro from January 2000. A logical consequence of this step will be to convert from the present dollar-based statistics to euro-based statistics. In order to make this conversion easier, our figures will be presented both in USD and in euro.

creasing employment and declining contribution on wages, while the costs of employment rose by 21% last year. Taking into account the development of corporate sales opportunities which was less favourable than expected and the considerable rise in oil prices, the danger of rising cost inflationary pressures exists, despite the reduction in wage cost growth.

## 1 Imported inflation

The significant decline of world prices in 1998 played a substantial role in the reduction of the inflation rate in Hungary's most important trading partners. Commodity prices other than oil continued to decrease as a result of slow growth of the world economy in the first quarter of 1999. The trend of declining prices is not expected to continue in the rest of the year. Following their lowest value in many years, oil prices stabilised at a higher level in the first quarter, as a result of the supply restriction agreement in March, as well as the improving prospects of the Asian crisis region. In the future, prices for commodities other than oil are expected to stabilise and a small rise in manufactured product prices is expected.

Consumer price inflation amounted to 0.8% at the end of 1998, rising to 1.1% by April 1999 in the euro region. Despite a further small increase mainly due to world price changes, consumer price inflation will remain in the 0–2% target zone of the European Central Bank, and is expected to rise to 1.5% by the end of the year. In economies characterised by slow growth (Germany and Italy) the risk of inflation exceeding 2% in the foreseeable future is low. In economies which are in a more advanced phase of the business cycle (Spain, Portugal, Ireland and the Netherlands), however, the growth of consumer prices already reached or exceeded the upper limit of the target zone by the end of the first quarter. No significant inflationary pressure was experienced in France despite the favourable economic expansion. By the end of March, there was no sign of renewed inflation in the American economy which continued to grow rapidly (4.1% growth in the first quarter). However, as a result of changes in external conditions and high production factor utilisation, inflationary pressures may arise later. The likelihood of this possibility is increased by the high level of the inflation rate in April and May. Continuing the trend of the second half of 1998, consumer prices continued to decline in the Japanese economy, which is still experiencing recession.

As a result of these developments, imported inflation also declined in the first quarter of 1999. The 4.3% rise in the import unit value index is considerably lower than both the change in the nominal effective exchange rate index and the rate of devaluation against the currency basket. The substantial decline of the import unit value index in the first quarter of 1999 can be explained by the low level of oil prices, as well as by cheap imports from Central Eastern Europe: the average price of import products from Central and Eastern European countries decreased by 7.2% in the first quarter. The price of imports from developed economies rose by 6.8%.

Contrary to developments in the import unit value index, the imported inflation indicator calculated from effective foreign

Changes in world prices in 1997–1999\*

	Per cent		
	1997	1998	1999 Q1
Food	-5.3	-13.7	-17.2
Oil	-28.1	-29.4	-4.7
Commodities without energy sources	-6.5	-13.7	-12.6

Source: IMF IFS.

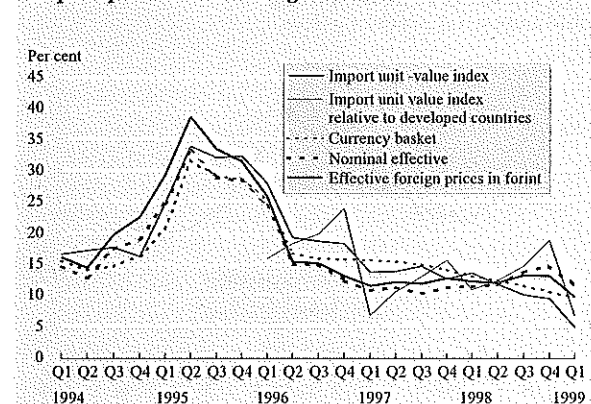
\* World prices in USD, end of the period changes.

International inflation rate figures, 1997–1999\*

	Per cent					
	1997		1998		1999 Q1	
	Producer price changes	Consumer price changes	Producer price changes	Consumer price changes	Producer price changes	Consumer price changes
United States	-0.6	1.8	-3.2	1.6	0.5	1.7
Japan	1.3	2.1	-2.0	0.6	-2.1	-0.1
Germany	1.0	1.9	-1.2	0.5	..	0.6
Czech Republic	5.7	10.0	2.2	6.8	0.8	2.5
Poland	11.5	13.2	5.8	8.6	..	6.2
Hungary	19.5	18.4	7.9	10.3	4.9	9.5
OECD total	2.7	4.3	0.7	2.0	0.1	1.8
EU-11	..	..	-2.5	0.8	-2.3	1.0
EU-15	1.4	2.1	-1.7	1.4	-1.8	1.1
G-7	0.3	1.9	-0.9	1.3	-0.7	1.1

Source: OECD Main Economic Indicators, 1999 May.  
\* At the end of the period.

Import price and exchange rate indices



prices<sup>2</sup> not reflecting the composition effects and the change in the country group structure, as well as from the nominal effective exchange rate continued to be similar to the nominal effective exchange rate index and the rate of devaluation against the currency basket. The forint value of effective foreign prices increased by 9.8% in the first quarter of 1999 relative to the first quarter of 1998 which exceeded the domestic inflation rate.

## 2 Components of the change in consumer prices

The preannounced, gradually declining devaluation of the nominal exchange rate – an intermediate target of monetary policy – plays an important role in forming expectations. It also ensures the convergence of domestic prices to the inflation rate of the trading partner countries. The disciplinary power of the exchange rate path is different for different product groups depending on the strength of foreign competition in the market of the given product.

The nominal exchange rate has a direct effect on the price of tradable goods which we call **industrial products** for the sake of simplicity. The disciplinary power of the exchange rate system is reflected by the fact that *the price of industrial products has followed the nominal exchange rate* over the last two years.

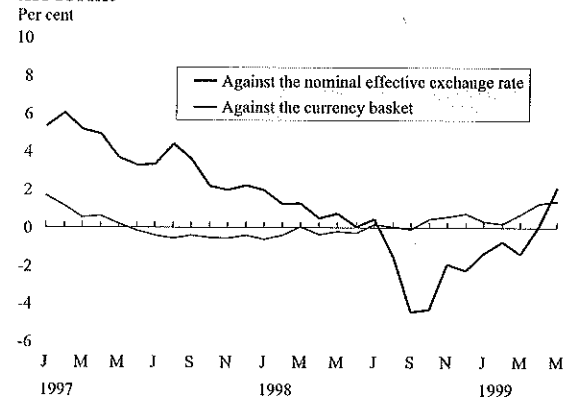
The reduction in the rate of inflation was 2 percentage points in this product group, thus somewhat exceeding the depreciation of the forint. The deviation from the exchange rate path was unusually high in April, which was the result of higher clothing prices. As the chart also shows, growth in clothing prices has continuously exceeded the average growth of other industrial product prices. This phenomenon can partly be explained by the difficulties of the measurement of quality change. Apart from that, the development of clothing prices was also influenced by the changing seasonality in this product group. This is shown by the volatility of annual price growth rates at the end of the time series which was not observable earlier. Thus, the trend of the price increase is sometimes overestimated and sometimes underestimated by the indicators: this factor led to an approximately 0.5 percentage points higher price growth rate in April.

The price of **petrol** increased significantly over the January–April period in contrast to the previous year. The tax valorisation in January and rising world prices in March and April were the main reasons for this. The world price of crude oil began to increase quickly from March, but did not yet reach its level of the previous year. By May, however, the price of both crude oil and petrol was 40% higher than at the beginning of the year. As the tax content in the consumer price of domestic petrol is high, the price of the raw material makes up only approximately 1/6 of the total price, therefore the change in the world price was followed by a 15-forint rise in the price of petrol.<sup>3</sup> Oil prices are expected to stabilise around 15 USD/barrel according to medium-term forecasts, however, strong volatility is possible in the short run.

<sup>2</sup> Effective foreign prices were determined by averaging foreign producer prices with the help of the weight system of the nominal effective exchange rate index.

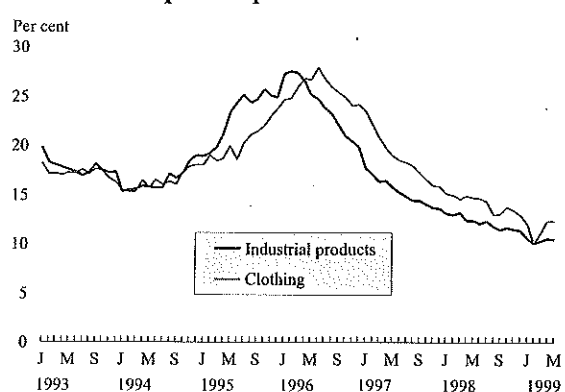
<sup>3</sup> From March to May 25.

Annual inflation of goods defined without food and fuel compared to the devaluation of the forint \*



\* Difference in the growth rate relative to the same month of the previous year.

The annual growth of clothing and industrial product prices



## 3 The fiscal stance

The demand effect of the public sector – as measured by the change in the (SNA) primary balance – increased by 0.7% of GDP in the first quarter of 1999 relative to the same period of the previous year.<sup>7</sup> The acceleration of public sector demand can partly be considered as temporary,<sup>8</sup> as there were revenues and expenses which changed the distribution of the budget deficit within months compared to last year. Among these factors were, for instance, the flood-related extra expenses, the guarantee redemption at the beginning of the year, the deferral of Russian debt redemption, the effect of agricultural subsidies from last year and the temporarily negative balance of central bank contribution to the budget,<sup>9</sup> which are not expected to reoccur during the rest of the year. Central budget deficit in the first quarter seemed more favourable because of the partly delayed subsidies to the Social Security Fund and the integration of extrabudgetary funds into the central budget at the beginning of the year. Naturally, these developments resulted in a less favourable financial position of these subsystems at the same time.

In addition to temporary effects, the budget was influenced by permanent factors as well, as the lower-than-expected economic growth, consumption and inflation resulted in lower tax revenues. In the year as a whole, these lower revenues were only partly offset by the freeze of expenses amounting to 0.4% of annual GDP, reducing total expenses approximately by the amount of the expected loss in revenues due to lower inflation. Net VAT revenues declined by 8% in real terms in the first quarter compared to the same period of last year. The real value of VAT refund increased much faster (by 9%) than domestic (0.6%) and import-related (3%) VAT revenues. Income tax revenues increased by more than expected (10% in real terms) partly because of real wage growth. The decline in social security contributions in real terms was predetermined by the fact that revenues have been lower since the beginning of the year due to the pension reform<sup>10</sup> and the reduction in the rate. This would have caused a nearly 11% real reduction in itself, but due to the growth of real wages and the improvement in the collection of social security contributions, the decline was only 1–2% in real terms.

<sup>7</sup> The primary balance was lower by 1.4% of GDP compared to the same period of the preceding year, but the rise in the deficit due to the pension reform does not influence public sector demand, thus, the change in the primary balance was corrected by this factor.

<sup>8</sup> There were revenues and expenses which significantly changed the distribution of the deficit within the months of the year compared to last year. For example, there was a guarantee redemption at the beginning of this year unlike last year, and more revenues were collected from government claims in the same period of last year than this year.

<sup>9</sup> Central bank profits are highly correlated with exchange rate movements within the intervention band. The depreciation of the forint within the band temporarily increases while its appreciation reduces the size of the central bank's profit. In the first quarter of the year, the forint appreciated compared to its position at the end of last year, this is the reason for the temporary negative payment. In the long run, however, payment surpluses and deficits due to exchange rate movements within the band offset each other.

<sup>10</sup> In 1998 a new multi-pillar pension system, including a fully-funded privately-managed second pillar was established. The government balance was deteriorated by the decrease in the contributions to the old pay-as-you-go system.

The budget deficit (GDP %)

	1997	1997	1998	1998*	1999
	Q1	fact	Q1	preliminary	Q1
<b>1 Balance of the central government</b>					
government excl. privatisation revenues	-6.5	-4.0	-9.0	-3.6	-10.8
2 Primary balance (without the NBH)	3.4	4.0	0.8	2.8	-0.2
3 Net interest expenditures	-10.5	-7.7	-10.3	-6.9	-10.3
4 NBH profits and losses	0.6	-0.3	0.5	0.4	-0.3
5 Extrabudgetary funds excl. privatization revenues	0.8	0.1	0.3	0.1	-1.0
6 Social Security balance excl. privatization revenues	-1.2	-0.6	-1.1	-0.9	-2.3
7 Local authorities excl. privatization revenues	1.7	-0.3	1.9	-0.3	2.2
<b>8 Balance of the general government excl. privatization revenues</b>	<b>-5.3</b>	<b>-4.8</b>	<b>-7.8</b>	<b>-4.7</b>	<b>-11.9</b>
9 Out of this: primary balance (without the NBH)	4.5	3.0	1.9	1.5	-1.5
<b>10 Balance of the general government in accrual approach</b>	<b>-4.6</b>	<b>-5.1</b>	<b>-5.3</b>	<b>-4.9</b>	<b>-10.0</b>
11 Correction for borrowings and debt assumption	-0.6	-0.6	-1.4	-0.6	0.3
12 Deficit of APV Rt	-0.8	-0.7	-0.7	-0.7	-0.3
<b>13 SWA financing requirement 13 = 10 + 11 + 12 line</b>	<b>-6.0</b>	<b>-6.4</b>	<b>-7.8</b>	<b>-6.2</b>	<b>-10.0</b>
<b>14 SNA primary balance 14 = 9 + 11 + 12 line</b>	<b>3.1</b>	<b>1.6</b>	<b>-0.1</b>	<b>0.2</b>	<b>-1.5</b>

\* The end 1998 figures do not include the Ft 132 billion transfer to Postabank and the Ft 50 billion transfer to APV Rt.

Change in certain expenditure items of the general government in real terms (compared to the same period of the preceding year)

	Per cent	
	1998 Q1	1999 Q1
Wage and contribution expenses	10.9	5.8
Purchase of goods and services	-8.0	10.0
Consumer price subsidies	4.0	11.2
Public consumption	3.4	7.7
Pensions (including disability pension)	4.8	6.0
Sick-pay	-5.2	-1.0
Social benefits (central budget)	-2.2	2.3
Social benefits (local govt.)	25.0	15.6
Household transfers	4.0	5.4
Investment (central budget)	-4.8	-10.0
Investment (local govt.)	27.0	1.0
Investment expenditure	9.1	-4.5

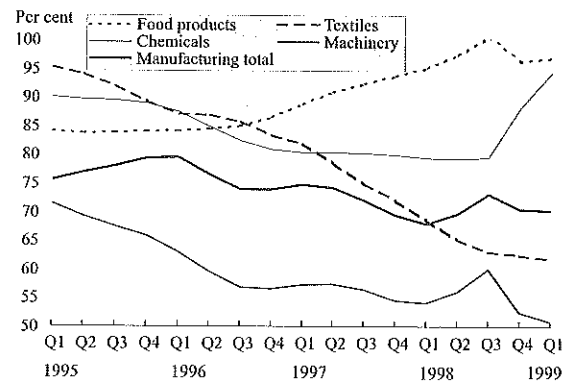
Changes in the financial assets and liabilities of general government

Assets and liabilities of the subsectors of general government	Ft billions					
	Stock			Of which		
	Dec. 31 1998	March 31 1999	Change January–March	Transaction	Revaluation	Other changes in volume
<i>Central government with extrabudgetary funds and APV Rt</i>						
<b>Financial assets</b>	<b>484.1</b>	<b>540.4</b>	<b>43.4</b>	<b>20.2</b>	<b>23.3</b>	<b>-0.2</b>
Forint	269.9	312.2	42.3	42.3	0.0	0.0
Foreign exchange	214.2	228.2	14.0	-9.2	23.3	-0.2
Shares, other equities			-12.9	-12.9	0.0	0.0
<b>Liabilities</b>	<b>6,451.5</b>	<b>6,788.4</b>	<b>336.9</b>	<b>272.3</b>	<b>64.6</b>	<b>0.0</b>
Forint	3,943.4	4,200.3	256.9	256.9	0.0	0.0
Foreign exchange	2,508.1	2,588.1	80.0	15.4	64.6	0.0
<b>Net financial assets</b>	<b>-5,967.3</b>	<b>-6,248.0</b>	<b>-293.5</b>	<b>-252.1</b>	<b>-41.3</b>	<b>-0.2</b>
<i>Social Security Funds</i>						
<b>Financial assets</b>	<b>35.6</b>	<b>30.7</b>	<b>-10.9</b>	<b>-10.9</b>	<b>0.0</b>	<b>0.0</b>
Forint	35.6	30.7	-4.9	-4.9	0.0	0.0
Foreign exchange	0.0	0.0	0.0	0.0	0.0	0.0
Shares, other equities			-6.0	-6.0	0.0	0.0
<b>Liabilities</b>	<b>101.8</b>	<b>147.4</b>	<b>45.6</b>	<b>45.6</b>	<b>0.0</b>	<b>0.0</b>
Forint	101.8	147.4	45.6	45.6	0.0	0.0
Foreign exchange	0.0	0.0	0.0	0.0	0.0	0.0
<b>Net financial assets</b>	<b>-66.2</b>	<b>-116.7</b>	<b>-56.5</b>	<b>-56.5</b>	<b>0.0</b>	<b>0.0</b>
<i>Local government</i>						
<b>Financial assets</b>	<b>268.2</b>	<b>278.0</b>	<b>6.3</b>	<b>6.3</b>	<b>0.0</b>	<b>0.0</b>
Forint	267.5	277.0	9.5	9.5	0.0	0.0
Foreign exchange	0.7	1.0	0.3	0.3	0.0	0.1
Shares, other equities			-3.5	-3.5	0.0	0.0
<b>Liabilities</b>	<b>168.2</b>	<b>134.6</b>	<b>-33.6</b>	<b>-33.2</b>	<b>-0.4</b>	<b>0.0</b>
Forint	141.1	107.9	-33.3	-33.3	0.0	0.0
Foreign exchange	27.1	26.7	-0.3	0.0	-0.4	0.0
<b>Net financial assets</b>	<b>100.0</b>	<b>143.4</b>	<b>39.8</b>	<b>39.5</b>	<b>0.4</b>	<b>0.0</b>
<i>General government, total</i>						
<b>Financial assets*</b>	<b>605.2</b>	<b>597.0</b>	<b>-30.6</b>	<b>-53.7</b>	<b>23.3</b>	<b>-0.2</b>
<b>Liabilities</b>	<b>6,624.0</b>	<b>6,804.0</b>	<b>280.0</b>	<b>215.8</b>	<b>64.2</b>	<b>0.0</b>
<b>Net financial assets*</b>	<b>-5,918.8</b>	<b>-6,207.0</b>	<b>-310.6</b>	<b>-269.5</b>	<b>-40.9</b>	<b>-0.2</b>

\* Without shares.



**Development of the ratio of output stock of inventories relative to sales\***



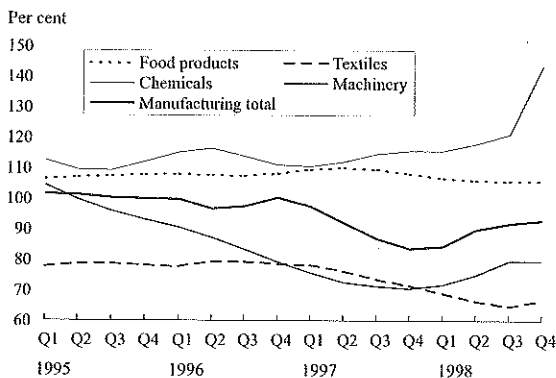
\*The ratio was arrived at by dividing the closing stock of inventories of the given quarter by the average of sales of those months, which make up that particular quarter. The data used for the calculations were seasonally adjusted.

ratios) to be a temporary, rather than a permanent phenomena. That is, there was an unintentional inventory build-up in some industries caused by a sales drop due to the Russian crisis, but in most cases production and sales have quickly adjusted to the new conditions, implying *stabilising inventory to sales ratios* by the end of last year. Though manufacturing-wide *output* inventory levels were rising only in line with sales, there was a slight rise in the *input* inventory to sales ratio, implying positive expectations about the sales prospects in manufacturing, and especially in machines.

Our first graph shows the contribution of the three largest manufacturing industries to the development of quarter-on-quarter inventory investment. It is clear that *machine manufacturing* dominates manufacturing-wide inventory investment developments. With the other industries supplementing machines inventory investment, nominal inventory investment dynamics reached 6% at the end of 1998.

At an industrial level one can observe two new developments in inventories. First, compared to our previous analysis the *textiles industry* has done remarkably well in terms of export sales performance. This explains an upward change in the declining trend both of its input and output inventory to sales ratio at the fourth quarter of 1998 – enterprises in the textiles industry expect the favourable sales tendencies to continue. Second, the *chemical industry* inventory to sales ratios show a sudden jump according to our latest data. This can be explained as an unintended inventory build-up due to weaker-than-expected sales performance both in terms of domestic and export sales. As the world-wide chemicals recession finally hit the Hungarian chemicals industry, already battered by the Russian crisis, Hungarian chemicals companies seem to be stuck with high inventory stocks. As far as the other manufacturing industries are concerned, there has been no significant change in their situation since our last *Report*.

**Development of the ratio of input stock of inventories relative to sales\***

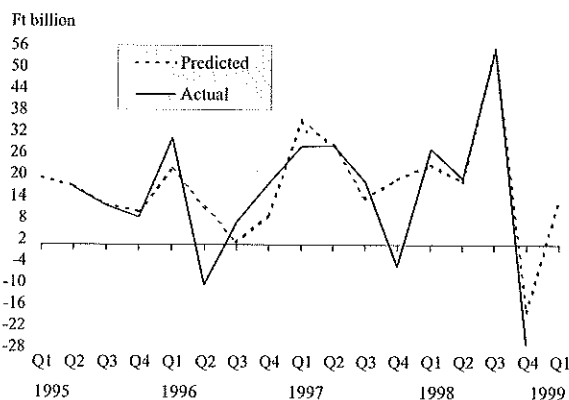


\*The ratio was arrived at by dividing the closing stock of inventories of the given quarter by the average of sales of those months, which make up that particular quarter. The data used for the calculations were seasonally adjusted.

**Forecasting output inventory investment**

Although inventory investment is one of the key business cycle indicators world-wide, the CSO publishes its inventory data with a considerable time lag (the most recently published data at the time of this *Report* refer to the fourth quarter of 1998). Thus it would be of great importance if we had at least preliminary information regarding the development of inventory investment in a more timely fashion. In manufacturing, we are able to use the difference between current *production* and *sales* figures (published more frequently) to make prediction about output inventory investment. That is, with current industrial production and sales data at hand we can compute the changes in output inventories. Examining how such a method would have performed historically we see that for the 1995–1998 period our preliminary measure closely tracked the development of the published output inventory investment. So, using current production and sales data we are able to forecast manufacturing output inventory changes (and also output inventory to sales ratios) with great precision. That is how in this *Report* we obtained our *output* inventory to sales figures for the first quarter of this year, while the *input* inventory data still refers to last year only.

**Actual and predicted manufacturing output inventory investment\***



\* Seasonally not adjusted, nominal inventory investment data. Actual data: published CSO inventory investment figures; predicted inventory investment: difference between production and sales.

The decline in inflation was primarily due to the development of **food prices** which account for 24% of the consumer basket. Prices for agricultural products declined by approximately 10% in a year, while the price change of processed food products was hardly more than one-third, 3%, of the December 1998 value.

Products and services with regulated prices have a large share, 17.7%, in the consumer basket. In this group, prices are not determined by supply and demand; other, mainly cost-related considerations are taken into account in determining the prices.

The growth rate of **regulated prices**, including household energy products and medicine, declined further to 10.4% compared to the end of last year (12.2%). Of this, the price increase for medicine was substantially higher, 13%, than the rate desired by the government, while energy prices grew at an average rate. The growth of regulated prices has exceeded the rate of devaluation at an increasing rate relative to the end of last year.

Price regulation in the energy sector led to a high correlation between the nominal exchange rate and energy prices. From this year on prices are reviewed on an annual basis instead of quarterly. Only electricity prices increased this January. Even this growth was differentiated, prices growing faster for households than for industrial consumers. This change leads to a better reflection of costs and causes lower cost increases in the production of other products. The rise in world energy prices was not reflected in domestic gas and electricity prices because of the price regulation methodology.

The import price determined last year was higher than the actual price, thus after the nose-dive in energy prices last year, there is enough „reserve“ in domestic energy prices to offset the extra costs caused by the current price increase. In the first quarter, the import price of energy products was still approximately 17% lower than its level a year before. The tariff reform planned for this year will result in a further differentiation of producer and consumer energy prices.

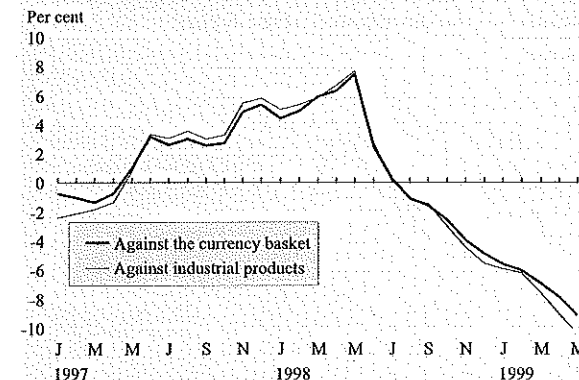
**Services with regulated prices** fall into two main categories. One includes municipal housing, services related to housing and mass transportation. These fees grew more slowly than last year, but were still 5–6 percentage points higher than average inflation. It is most likely that those costs are also built into prices which could be reduced by an appropriate increase in efficiency. The TV subscription fee remained unchanged over the last two years, but a significant rise of 20% occurred this January (the consumer price index does not include the monthly fee for cable television).

The control of price setting by firms with significant market share is the other important part of price regulation. The task of the regulatory agency in this respect is to prevent abuse of market power, encouraging these firms to operate efficiently. This goal, however, was not entirely achieved neither last year nor this year.

Higher price increases and efficiency together resulted in high profits, which were shared with the employees by substantially higher-than-average pay rises. In certain areas the increases in fees for services affecting households even exceeded last year's price increases.

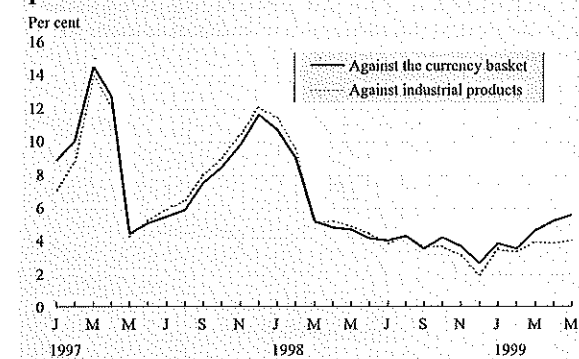
In 1999 services with regulated prices will be among the most significant contributors to inflation.

**Relative food price inflation\***



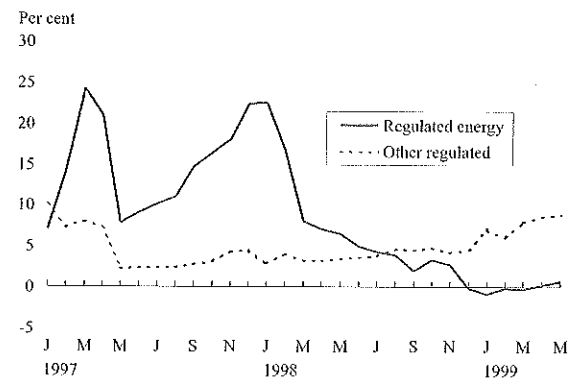
\* Difference in the growth rate relative to the same month of the previous year.

**Annual inflation of regulated products compared to the devaluation of the forint and to tradable industrial products\***



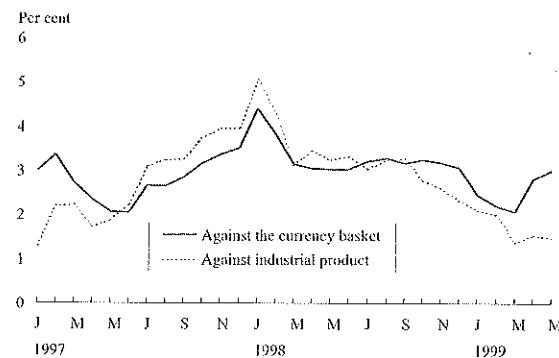
\* Difference in the growth rate relative to the same month of the previous year.

Annual growth rate of regulated energy prices, and prices of products and services under regulation relative to the devaluation of the forint\*



\*Difference in the growth rate relative to the same month of the previous year.

Annual inflation of market services compared to the devaluation of the forint and to tradable industrial products\*



\*Difference in the growth rate relative to the same month of the previous year.

The telecommunication tariff system operates based on the "price cap" principle according to which prices are allowed to rise by a maximum<sup>4</sup> of 10.5% in 1999. However, households are paying 26% more for telephone services this year than last year. This price increase is even higher than last year's rise of 22%.

For instance, the subscription fee was raised by 10%, but the 20 free impulse included in it was cancelled, thus the real increase in the fee was 36%. The call connection fee is a new component of telephone tariffs: it is charged where billing has been converted from impulse-based billing to minute-based billing.

This differentiation was allowed by the letter of law, and the price regulation authority accepted this change.

Non-tradable **market services** account for 20.9% of consumption. Due to differences in productivity, the difference in the inflation rate of industrial products and market services is expected to continue over the long run. It is favourable for the inflation process that the difference in the growth of prices for tradable products and market services declined relative to the previous year, amounting to approximately 2–3%.

## 2 Investment

### 2.1 Fixed capital formation

Compared to the same period of last year, the annual growth rate of fixed capital formation was 6.4% in the first quarter of 1999. This is a continuation of the slowdown of investment activity, which had already begun in the second half of 1998.

The volume of the corporate sector's investment activity was 3.7% higher than a year ago.<sup>5</sup> There was no significant expansion in the investment activity of the manufacturing sector and a range of service branches of the economy, even though they were considered the most dynamic sectors during the last couple of quarters. This phenomenon can be explained with the narrowing sale prospects on the markets of Central and Eastern Europe, and the unfavourable business cycle expectations of Western Europe. The decline in the demand for inputs of exporting firms had a weakening effect on the growth of aggregate demand as well. As a result of lower-than-expected sales growth the rate of unutilised capacities increased, which could indicate a long lasting decline in investment activity.

There was much faster expansion in the branches of construction, mining and energy (36.8%, 74.2% and 27.5%, respectively), but investment in these sectors is much less dependent on the state of the business cycle, unlike investment activity in manufacturing. After the significant setback of last year, we can see a weak improvement in the real estate sector, which can be explained by the dynamic growth of housing investments.

The growth of investment activity in the *public sector* reached 25% in the first quarter of 1999. The expansion was strong especially in the sectors of education, public administration, defence and social security. It must be mentioned though, that the investment activity of the public sector is not smooth during the year, so we cannot expect this kind of dynamics for the rest of 1999.

### 2.2 Inventories

The CSO industrial statistics data<sup>6</sup> allow us to analyse the development of manufacturing inventories (relative to sales) in detail. Since our last *Report on Inflation* (March 1999) we have seen only moderate changes in the development of inventories. In general, the path of manufacturing inventories closely tracks the development of machine manufacturing, which is the dominant manufacturing industry with a weight over 40% (see our first graph). In light of the new data for the *fourth* quarter of 1998 we now consider the inventory investment boom observed in the *third* quarter of 1998 (as well as the rise in the inventory to sales

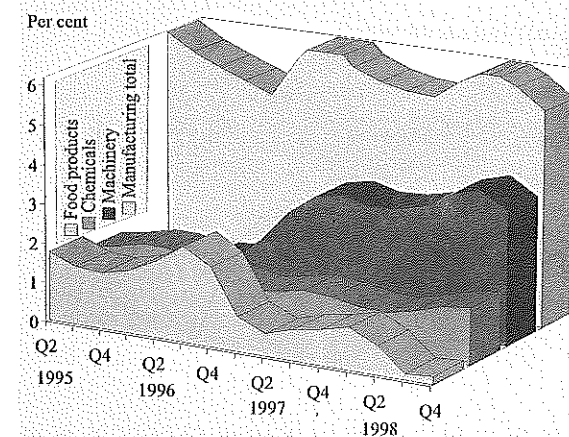
<sup>5</sup> The categorisation by investors was done by the use of CSO statistics, which contain investment statistics classified by sectors of the economy. We considered as public investments the following branches of the economy: public administration and defence; compulsory social security; education; health and social work; other community, social and personal service activities. All other sectors were categorised as private investment. Sometimes the investor and the provider of the financial means for the investment is not the same entity. As a consequence we considered some projects as private investments, which actually were financed by the government (e.g. highway construction).

<sup>6</sup> The data source for inventories in the CSO or NBH *GDP calculations* is different from this.

Investment by branches of the economy

Branches	Distribution at current prices 1998	Per cent	
		Volume indices 1998	Volume indices 1999 Q1
Agriculture, hunting and forestry, fishing	3.67	111.6	117.3
Mining	0.31	107.6	174.2
Manufacturing	26.00	123.2	100.9
Electricity, gas, steam and water supply	7.16	117.3	127.5
Construction	1.86	120.2	136.8
<i>Total production of material goods</i>	<i>38.98</i>	<i>120.6</i>	<i>107.8</i>
Wholesale and retail trade; repair services	7.11	123.0	110.6
Hotels and restaurants	0.99	113.7	87.7
Transport, storage and communications	18.85	109.7	96.9
Financial intermediation	3.37	147.7	99.7
Real estate, renting, business services and housing investment	18.01	88.0	100.5
<i>Total production of market services</i>	<i>48.33</i>	<i>103.7</i>	<i>100.3</i>
<i>Total production of goods and market services</i>	<i>87.32</i>	<i>110.6</i>	<i>103.7</i>
Public administration and defence; compulsory social security	3.58	101.9	133.3
Education	1.85	95.0	169.2
Health and social work	2.51	108.1	100.8
Other community, social and personal service activities	4.75	117.1	119.3
<i>Total production of public services</i>	<i>12.68</i>	<i>107.2</i>	<i>124.9</i>
<b>Total</b>	<b>100.00</b>	<b>110.2</b>	<b>106.4</b>

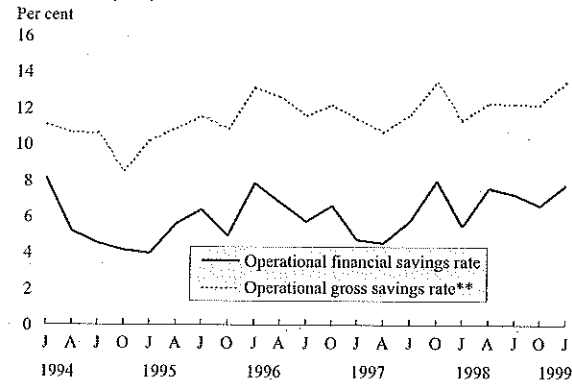
Nominal inventory investment in manufacturing total and in its three largest industries\* (quarter-on-quarter changes)



\* Output and input inventories together. These industries make up over 80% of all manufacturing inventory stocks. Our graphs show the inventory investment of the industries weighted by their share in total manufacturing inventories. The calculations were based on seasonally adjusted data.

<sup>4</sup> The law states that the maximum price increase is calculated by deducting the 2% efficiency requirement from the annual inflation rate of September of the previous year (this was 12.5% in 1998).

Changes in operational\* household savings as a percentage of the disposable income of households (seasonally adjusted data)



\* When calculating the operational savings rate, the compensation for inflation paid as part of interest income is deducted from both financial savings and disposable income.  
\*\* Gross savings = financial savings + households investments.

other hand, the growth of household consumption slowed relative to the fourth quarter of 1998.

As can be derived from the retail sales statistics published by the CSO, it was mainly the demand for *durable* goods which decreased during the first three months relative to the last quarter of 1998. However, on the heels of weak figures for January-February, March already showed a significant expansion. On the other hand, we did not register such an important decline in the demand for *non-durable* goods in 1999, but the rate of growth in the sales of these products was already moderate last year.

The weakening demand for *durables* can be explained by the significant increase in household investments. Furthermore, the changes in the distribution of income also plays an important role in the difference in intensity that was revealed in the demand for the two types of goods. As we already described in our last Report, the demand for durable goods depends largely on the income flow of liquidity-constrained households. According to our estimates, the income of the liquidity-constrained households grew at a lower-than-average rate, because of the delayed payments of child benefits and the occasional increase of tax burdens.

These households may have rather postponed their demand for *durables*, as the income elasticity of demand for these products is probably higher than it is for *non-durable* goods.<sup>4</sup>

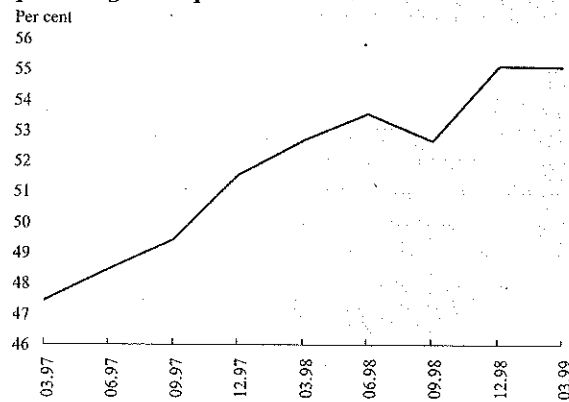
The lower-than-expected inflation may have strongly affected the saving behaviour of households. The decline in interest rates did not follow the rate of fall in prices, as a result of which several financial assets offered higher real interest rates. The strong increase in household investments coupled with a stable *financial savings rate* meant an over 1% increase in the *gross savings rate*.

As a consequence of the pension reform launched at the beginning of 1998, about 43 billion forints wealth was managed in private pension funds. Of this sum, 15 billion forints was new funds during the first quarter of 1999. The chart above considers these pension funds as part of household disposable income and financial savings, which results in higher savings rates. In order to be able to make a correct comparison with the savings rates of former years, one has to subtract these pension savings from both categories. After making these corrections, the increase of the financial savings rate in the first quarter is not as steep as is depicted above.

In the evolution of household financial wealth, events on the stock market play a significant role besides the flow of savings. During the first quarter of 1999, households lost about 36 billion forints due to the price movements on the stock exchange. Households sought to compensate for this loss by channelling their savings into less risky assets. Consequently, in spite of the events on the stock market, **the ratio of households' financial assets to the trend of disposable income remained constant relative to the last quarter of 1998.**

<sup>4</sup> However, since interest rates on loans decreased much less than those on financial claims of households, interest income on net financial savings in the first quarter was not higher than a year ago.

Changes in the financial wealth of households as a percentage of disposable income



## II. Monetary policy

### 1 Monetary conditions

Over the first months of 1999, the implementation of monetary policy was influenced by the stabilisation of international capital markets and the reduction in the overheating characterising the economy in 1998. The economy came closer to its previous export-led growth path prevailing prior to the Russian crisis. Nevertheless, the correction was partly the result of temporary factors and was not sufficient for achieving sustainable external equilibrium in the long run. Inflation continued to decline in the first quarter of 1999 as well, but several dangers emerged, e.g. the jump in the prices of regulated services and the rapid rise of oil prices which may slow down the rate of decline of inflation.

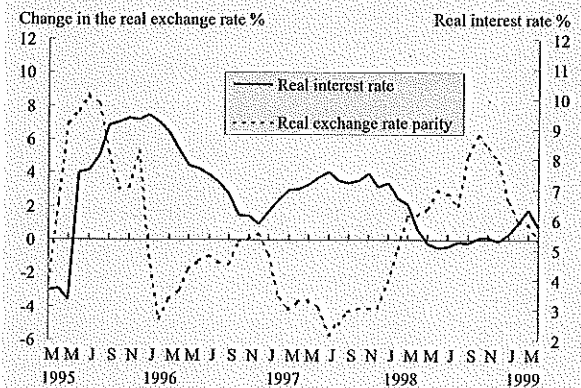
Prior to 1998, the government and the NBH determined the relationship of the inflation path and the devaluation rate in such a way that the real exchange rate of the forint appreciated on a consumer price basis. This appreciation was in line with the faster productivity growth of tradable sectors compared to Hungary's trading partners. Thus, the value-added-based real effective exchange rate index calculated using the unit labour cost, which better reflects the competitiveness of the manufacturing industry, depreciated. In 1998, reductions in the devaluation rate lagged behind the faster-than-expected decline of inflation, and the real exchange rate of the forint depreciated even in CPI terms to a small extent. However, when setting the exchange rate path for 1999, the government and the NBH intended to restore the earlier relationship between the inflation rate and the exchange rate path in order to reduce the negative effects on inflation. Consequently, the devaluation rate will be reduced three times in 1999.

The exchange rate decisions of the government and the NBH were supported by the stabilisation of international capital markets, which was reflected in the strengthening of the forint within the intervention band and in the development of the interest rate premium required on forint investments. The slower adjustment of inflationary expectations to the faster-than-expected decline of inflation, however, continued to pose a danger, which could have led to the further deterioration of external equilibrium due to high nominal wage growth and a halt in the disinflation process. In order to prevent this, economic policy attempted to be more active in influencing inflationary expectations than before: with the simultaneous announcement of the two reductions in the rate of devaluation, it made the nominal path of the economy easier to predict for a significantly longer period of time than before. As a result of these measures, the announced devaluation of

Changes in the rate of devaluation

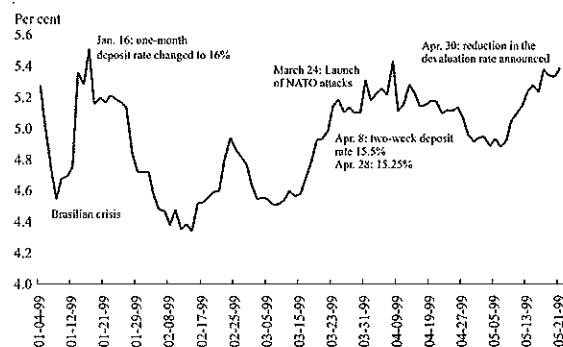
Monthly rate of devaluation (%)	Date of reduction in the devaluation rate	Date of announcement of the reduction in the devaluation rate	Annual devaluation rate corresponding to the monthly rates (%)
0.9	January 1, 1998	December 4, 1997	11.35
0.8	June 15, 1998	April 29, 1998	10.03
0.7	October 1, 1998	August 29, 1998	8.73
0.6	January 1, 1999	November 26, 1998	7.44
0.5	July 1, 1999	April 20, 1999	6.17
0.4	October 1, 1999	April 20, 1999	4.91

Changes in monetary conditions\*



\* The chart shows real interest rates calculated from three-month T-bill yields and forward-looking inflation. The real exchange rate indicating monetary conditions is not equivalent to indicators measuring competitiveness presented in other parts of the Report. It shows the ratio of three month ahead exchange rate changes to forward looking inflation.

**Interest premium on the 3-month Treasury bill**



the forint's exchange rate will be only 6.5% in 1999, as opposed to 10.5% in 1998.

Over the first five months of 1999, the interest rate premium required on forint investments stabilised permanently above its level prior to the Russian crisis, fluctuating between 480–530 basis points. The country specific risk premium of Hungary was only temporarily affected by the Brazilian crisis in January, then the premium temporarily fell below its level in December. The rise in the premium observed since March is partly the result of the war in Yugoslavia, but uncertainties concerning the macro-economic path, particularly economic equilibrium also played a part.

In a crawling exchange rate system, the level of domestic real interest rates is determined by the sum of expected changes in the real exchange rate, foreign interest rates and by the premium required for different kinds of risks. The high real interest rates prevailing in the autumn of 1998 have declined so far in 1999, which can primarily be attributed to the correction in the real exchange rate path of the forint. The decline in real interest rates was also supported by the interest rate cut of 25 basis points by the ECB in April. The risk premium decreased to its level following the Russian crisis, but there was no major change relative to the end of 1998. As a result of these factors, real interest rates calculated from three-month Treasury bill yields decreased to a level of 5.5–6%.

Changes in monetary conditions were in line with developments in real economic processes. On the aggregate level, the favourable profitability position of the corporate sector did not require the maintenance of the former, more depreciated real exchange rate. The deterioration in external equilibrium experienced in 1998 had no direct relation to competitiveness factors: it was the consequence of the deviation of domestic demand growth from potential GDP growth. Though foreign export possibilities and the profitability of certain sectors (food processing, metallurgy, chemical industry) worsened, these unfavourable developments are not related to the real exchange rate. Along with the rise in total external demand, the specific demand for the products of these sectors also decreased. The level of real exchange rates declined, but continues to be high, which is in line with the stabilisation process of external equilibrium.

**2 Interest rates and the exchange rate**

Over the first four months of the year, the interest rate and exchange rate policies of the NBH were aimed at strengthening the intraband position of the exchange rate and at setting an exchange rate path consistent with the inflation prognosis by reducing the devaluation rate several times.

Favourable inflation figures in January, as well as the relative immunity against contagion from the Brazilian crisis created a positive environment in the capital market, which made it possible for the central bank to announce a significant 75 basis points interest cut in line with the fall in yields as the Russian crisis subsided. Capital inflows exceeded the current account deficit in January, and as a result – aside from the Brazilian devaluation ep-

sia or the cease fire agreement in Kosovo. The improvement of foreign sale possibilities may increase GDP growth and the expected boom in investment demand may result in a faster expansion of domestic absorption.

**1 Household consumption**

The disposable income of households grew by 3.5–4% in the first quarter of 1999 compared to the same period of last year, which is about the same rate of increase as we experienced during the last quarter of 1998. The evolution of the various components of household disposable income was diverse, as the over 4% growth in wages and transfers was compensated by the weaker growth of incomes originating from ownership and ventures.

Due to the 3% increase in employment and the 6.5% growth in average real wages, the gross real wage bill rose by 9.5%. Household real income originating from enterprises probably increased at a lower rate due to the weak returns of agricultural ventures. Although we do not have enough information on this subject yet, the declining number of operating small enterprises strengthens our hypothesis of lower household earnings from this source. Due to the greater burden of social security contributions of employees (1%)<sup>1</sup> the net wage increase was smaller than the growth of gross wages. The newly-introduced family transfers were only paid out with a delay in the first quarter,<sup>2</sup> which also played a role in the widening gap between gross and net earnings. The real earnings of households from transfers grew by 4–5%. As a result of falling inflation the capital revenue of households was not much higher than a year ago, and yet a smaller part of capital income could have been considered as a compensation for inflation.

Compared to the same period last year the growth of household expenditure followed the development of income growth, so the seasonally adjusted operational financial savings rate was stabilised at about the same value as in the last quarter of 1998. The development of the consumption and investment components of household demand showed a different rate of growth during the first quarter. The volume of household investment expenditures grew by 6.2%, although housing investments were about 10% higher than a year ago. This phenomenon was not surprising as many housing projects were delayed from last year due to VAT refund promises. The winter was colder during the first quarter of 1999 than last year, which did not provide a favourable environment for construction. The high number of newly-authorized construction permits indicate a significant increase in household investments for the rest of the year.<sup>3</sup> On the

<sup>1</sup> The social security burden of employers was diminished by a greater amount than the increasing obligation of employees, so the ratio of total social security contributions relative to wage costs became smaller.

<sup>2</sup> Eligibility for the newly-introduced family aids had to be proved before March 31, after which the payments of child benefits and family transfers for January and February became possible. This delay in the payments of transfers can be observed in the revenues from Personal Income Tax as well.

<sup>3</sup> According to the figures of CSO, the number of authorized permits for construction increased by 50%. The number of dwellings built by households grew by 7% and the area of these dwellings was higher in general as well.

**Annual growth rates of GDP and its components\***  
(same period of last year = 100)

	1998**		1998				1999 Q1
	new	old	Q1	Q2	Q3	Q4	
	methodology						
Total consumption	4.0	4.0	2.8	3.8	4.1	5.7	3.5
Household consumption	4.3	4.3	2.8	4.1	4.4	6.1	3.3
Public consumption	2.6	2.6	3.2	1.9	2.2	3.0	4.5
Gross capital formation	16.1	18.7	6.7	26.1	30.5	13.0	8.6
Fixed capital formation	11.4	11.4	7.0	12.7	18.1	8.2	6.4
Total domestic absorption	7.4	8.1	3.6	9.0	11.1	8.3	4.6
Exports	16.0	16.0	29.0	17.6	12.5	9.5	10.7
Imports	22.2	22.2	25.1	25.5	24.5	16.1	11.8
Domestic absorption + net exports	4.3	5.1	4.5	5.1	5.6	5.2	3.8
Statistical error in percentage of GDP	1.1	-	-	-	-	-	-
GDP	5.1	5.1	4.5	5.1	5.6	5.2	3.8

\* The GDP calculations used in the report are NBH estimates, which may differ from the data officially published by the CSO. Quarterly GDP calculations have been prepared in Hungary for only a short period of time. Therefore they involve a great deal of uncertainty and the methodology applied is continuously developing. Quarterly data from the CSO are available relatively late, hence the NBH uses its own estimates for the time being, which are consistent with the analyses of the NBH regarding the income positions of individual income holders.

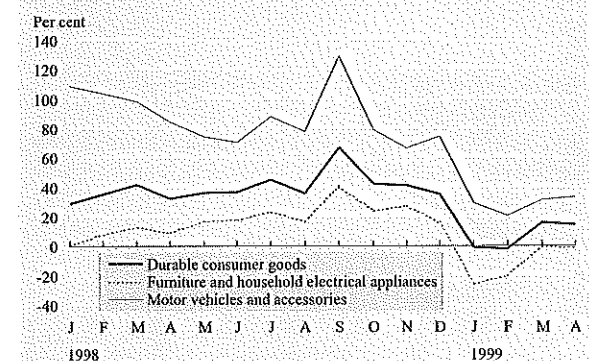
\*\* As of 1997, the CSO included an error line in its publication of the use side of GDP, which represents the deviation of GDP determined by the production of economic sectors from the estimate of GDP by categories of use. Formerly this error was included in the line of inventories, so it was a part of gross capital formation and of domestic absorption. However, according to the new methodology the statistical error is taken into account outside of both domestic absorption and foreign trade balance. The ratio of statistical error to GDP calculated at current prices was 1.1% in 1998, which figure was computed by the use of NBH estimates based on information available from the CSO. The quarterly figures were calculated according to the old methodology, so the statistical error is included in the line of gross capital formation.

**Annual growth rates of quarterly household income, consumption and investment** (changes compared to the preceding year)

	1997				1998				1999
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Household Income*	97.8	100.5	101.6	103.3	101.9	105.2	104.1	103.2	103.6
Household consumption	99.2	102.4	102.3	102.7	102.8	104.1	104.4	106.1	103.3
Household investment	101.4	98.8	98.8	99.8	91.2	84.3	76.8	98.5	106.2

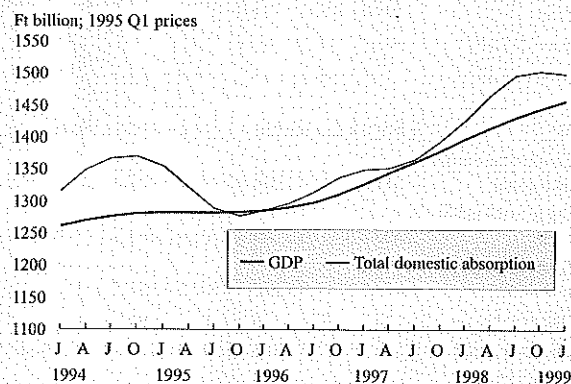
\*When calculating the volume indices of household income, the savings paid into the private pension funds as a result of the pension reform were not considered as part of household disposable income.

**The growth rate of durables and its components**



### III. Components of aggregate demand

**Development of real GDP and real domestic absorption** (seasonally adjusted data)



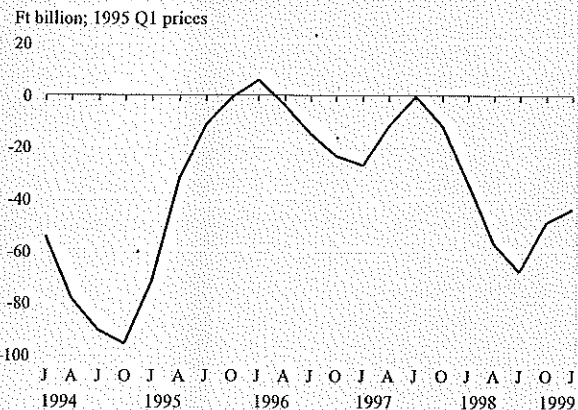
According to our estimates the Hungarian economy grew by 3.8% in the first quarter of 1999 as compared to the same period of 1998. The decline in the rate of growth was already visible in the last quarter of 1998, and this trend continued to be significant over the first three months of this year. Although the rate of growth diminished for both exports (10.7%) and domestic absorption (4.6%), the rate of expansion of the latter still surpassed that of GDP. On the other hand, by examining seasonally adjusted data and comparing domestic absorption to the fast-growing third quarter of 1998 instead of to the same period of last year, we would rather see stagnation of domestic absorption than expansion. The same conclusion is reached after the analysis of net exports from national accounts. The external position of Hungary after the first quarter in 1999 is the same as it was one year ago. Considering that from the second quarter of last year the ratio of net exports to GDP weakened significantly, the developments of the first three months of 1999 indicate the stabilisation of the country's external position.

The dynamics of foreign demand was markedly different according to the various export regions and sectors of the economy. Hungary's exports to Russia and CEFTA countries decreased, while they continued to increase to the developed countries. The decline in the rate of growth of the euro region was disadvantageous mainly for those exporters who did not establish strategic relations with foreign partners. All in all, foreign demand was still the strongest component of aggregate demand with a growth of 10.7%.

The worse-than-expected foreign sales possibilities weakened the domestic demand of the private sector as well. Firms cut both their current and investment expenditures, which is shown in the decline in the rate of growth in industrial sales and in the demand for imports. The rate of increase of nominal wages was also lower than a year ago, and the real disposal income of households was 3.6% higher relative to the same period of last year, which is about the same rate of expansion as was experienced during the second half of 1998. The expansion of household consumption (3.3%) was somewhat slower than the rate of increase of disposable income.

The development of GDP and its components was significantly affected by temporary shocks in the first quarter, therefore neither the economic growth nor the country's external position can be reliably forecasted based on the economic indicators of the first three months alone. In the following, we attempt to identify those shocks, which makes difficult analysing the state of the economy. Furthermore, we may experience a favourable turn in the business cycle as a result of the financial stabilisation of Rus-

**Development of net exports\*** (seasonally adjusted data)



\* Derived from the national accounts.

isode which lasted for a few days – the forint was mainly at the stronger edge of the intervention band over the first weeks of the year, and the central bank intervened at the strong edge of the band. Foreign direct investment and stock purchases were the main components of capital inflow, and there was portfolio investment into long-term government securities as well. At the same time, in the case of short-term interest rate sensitive capital, the outflow continued, which was mainly induced by the closing of long forward forint positions built up earlier.

Following the cut in the leading interest rates on January 8, further interest rate cuts were expected, which was also indicated by the substantial fall of yields in the government securities market. These expectations, however, were not fulfilled. Market yields signalled that before the publication of the end-of-1998 balance of payments figures, capital market agents did not ascribe special importance to the deterioration in the external position, though this was indicated by economic developments long before. The interest rate policy of the central bank was also justified by the continuing lack of short-term interest rate sensitive capital inflow. There was some intervention, but significant capital inflow was observed only for investment into long-term government securities. These investors try to achieve capital gains from the convergence of Hungarian long-term interest rates to the level of EU interest rates, and the size of this type of capital inflow depends much more on the schedule of the primary issue of these securities than on the short-term forint premium.

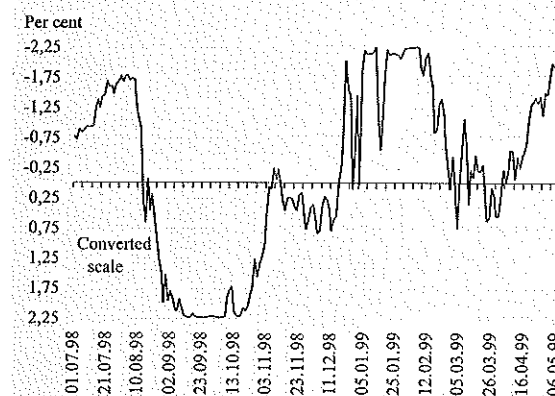
In the framework of the modernisation of monetary policy instruments as well as harmonisation with the instruments of the European Central Bank, the maturity of the one-month deposit facility – the main instrument of monetary policy – was reduced to two weeks as of March 1. The two-week deposit facility was introduced at the interest rate of the original one-month facility, which meant a small, 6 basis points effective increase in the yield due to date conventions. This, however, had no observable effect either on the forint or the government securities market.

From the second half of March, the forint was gradually strengthening within the intervention band and was permanently fluctuating near the strong edge of the band by the beginning of May, when minor intervention was carried out. Macroeconomic figures published in the meantime revealed that the overheating of the economy had reduced, and the external position had not deteriorated further because of the slowdown of economic growth. This made the cut in the rate of devaluation from July 1 and October 1 possible.

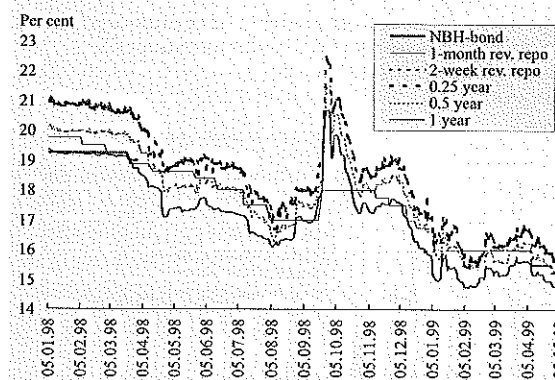
In April, the National Bank of Hungary reduced its leading interest rates in two steps in line with the expected exchange rate path and the decline in domestic demand. The first 50 basis points cut on April 8 coincided with the 25 basis points cut of the European Central Bank, thus, it had only a minor effect on the interest rate premium of the forint. The first cut was followed by another cut of 25 basis points on April 28. Market yields followed the interest rate decisions of the central bank.

In the first quarter of 1999, changes in the total open position and futures position of commercial banks were a significant component of the demand for forint. As described in detail in our previous Report, in the second half of 1998 the exchange rate was already substantially influenced by the closing of long forint

**Intraband position of the forint**



**Short-term yields: estimated zero-coupon yields at 3-month, 6-month and 12-month maturities**



**Components of the demand for forint**

	1997		1998				1999			
	1997	1998	Jan.	Feb.	March	Q1	1999	1999	1999	1999
A) Conversion	877.6	191.6	28.7	49.4	0.0	78.1				
a) Foreign exchange purchases of the NBH in the interbank market	642.0	154.2	28.7	49.4	0.0	78.1				
b) Purchases of the NBH from the budget	235.6	37.4	0.0	0.0	0.0	0.0				
Sources of conversion (I.+...+VIII)	877.6	191.6	28.7	49.4	0.0	78.1				
I. Current account corrected for the net foreign interest payments of the NBH (1+2)	-40.8	-383.5	-30.2	-12.2	-66.2	-108.6				
1 Current account	-177.9	-495.5	-37.8	-14.3	-83.8	-135.9				
2 Net foreign interest payments of the NBH	137.0	112.0	7.6	2.1	17.6	27.3				
II. Foreign direct investment	308.8	311.8	40.6	11.6	9.7	61.9				
III. Conversion due to commercial banks*	-5.9	-72.9	-11.0	23.2	-29.2	-17.0				
IV. Effect of derivatives**	160.6	-206.4	-72.4	-20.6	41.4	-51.5				
V. Conversion of domestic foreign exchange deposits	10.0	8.3	-6.6	5.1	6.9	5.4				
VI. Net portfolio investments (1+2)	334.9	421.2	75.2	50.5	30.7	156.4				
1 Government securities	22.7	176.3	36.0	1.9	-22.5	138.8				
2 Equities	312.2	244.9	39.2	48.6	53.1	17.6				
VII. Corporate foreign exchange borrowing	87.8	72.4	28.7	-11.9	18.2	34.9				
(1+2) = (a+b)	37.1	52.8	13.4	9.9	3.2	26.5				
1 Domestic	50.7	19.7	15.3	-21.9	14.9	8.3				
a) Maturity up to one year	-12.5	-55.1	6.4	-29.4	10.5	-12.6				
b) Maturity over one year	100.3	127.6	22.3	17.5	7.7	47.5				
2 Foreign*	22.1	40.6	4.4	3.8	-11.4	-3.2				
VIII. Capital transfers										

\* Conversion due to the change in the total open position of commercial banks, which is equal to that part of the balance sheet open position of commercial banks that is not hedged by derivative contracts.  
\*\* Conversion effect of the change in derivative contracts. The negative sign in case of these two items indicates the closing of long forint positions built up earlier.

positions built up earlier. Then, however, the closing of these positions resulted in the weakening of the exchange rate in the band. The contraction of derivative markets continued at the beginning of 1999; this time, however, the forint was at the strong edge of the band.

Prior to the Russian crisis, commercial banks financed the arbitrage activity provided by the higher yield of forint denominated financial assets (government securities, reverse repo, bank loans) in their balance sheet by foreign exchange borrowing, and the long forint balance sheet positions were hedged by buying FX futures.

This arbitrage opportunity ended due to the contraction of supply in derivative markets following the events in August. Commercial banks closed their open FX balance sheet positions as fast as they could: their stock at the end of September was half of that at the end of August, and it reduced further until the end of the accounting period. Due to the rise in perceived exchange rate risk, banks wanted to close the formerly unhedged long forint positions as well. In the futures market there was no supply of opposite positions either.

These transactions – banks selling FX futures and speculators opening long FX positions against the forint – have substantially higher costs. Due to the interest rate premium, short positions are already profitable for the speculator if the intraband position of the forint remains unchanged, that is these contracts can be concluded at neutral expectations as well. Moreover, brokerage firms toughened the deposit and margin requirements for derivative contracts based on the experiences of the Russian crisis.

As the FX futures market contracted, commercial banks facing short supply were forced to close their balance sheet FX positions.

Although they continued to be in long position in the OTC derivative market, in this market the counterparty is usually another bank, thus, the banking system as a whole can only increase its open position with off-balance sheet OTC transactions to a very limited extent.

This means that if the total open position falls below the desired level based on interest rate premium and exchange rate expectations, the correction can be carried out only by on-balance sheet, spot transactions.

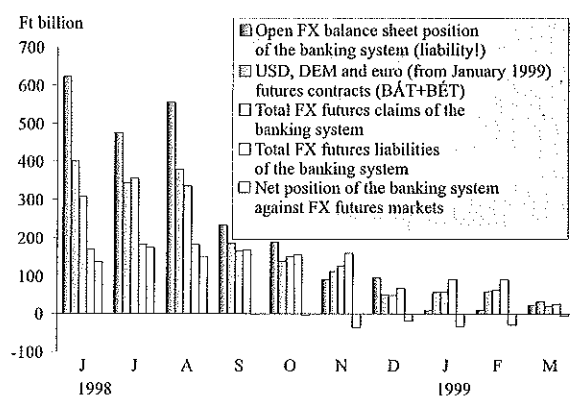
This led to the situation that while commercial banks were closing their long FX positions in the derivative market, they were selling foreign exchange in the spot market due to the increase in those components of the capital inflow that are independent of banks (FDI, corporate borrowing, portfolio investment).

This led to the appreciation of the forint. This process does not allow us to derive conclusions concerning the exchange rate expectations of commercial banks.

The intraband fluctuation of the exchange rate and changes in conversion demand for forint had no effect on the monetary base. Over the first three months of 1999, the monetary base increased by 18.6% relative to the same period last year, thus exceeding the rate of inflation.

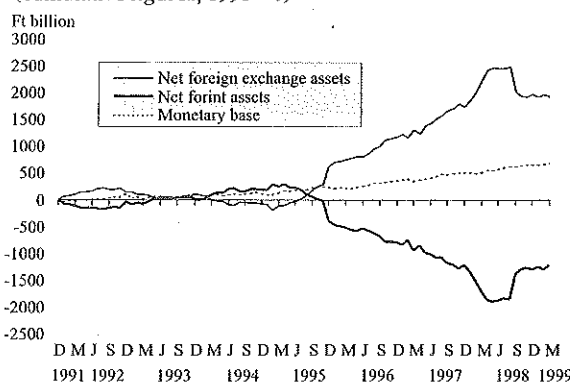
This growth rate was the result of a 21.6% rise in cash in circulation as well as the 14.1% growth in the mandatory reserves of credit institutions.

**Open FX balance sheet position of commercial banks, FX futures contracts and off-balance sheet FX derivative contracts of banks** (June 1998 – March 1999, stocks at the end of the month, in Ft billion)\*



\* For the sake of easier presentation, these figures are displayed as positive values despite the fact the open FX balance sheet position was negative (that is it represented liabilities) in every month with no exception. The second columns show the value of open contracts in basket currencies (USD, DEM and euro since January) which include the activity of banks in the stock exchanges. The stock of open contracts is displayed single counted, thus, in certain periods gross claims of the banking system exceed the stock of open contracts. The last three columns show the banking system's futures claims, liabilities and their difference (the net futures position).

**Components of the monetary base\***  
(cumulative figures, 1991 = 0)



following the Russian crisis. These effects were no longer observable in the first quarter of 1999, with total corporate borrowing following the trend of the period before the crisis. In the composition of borrowing, a shift towards direct foreign borrowing can be seen. This can be explained by the fact that the consistently high interest premium has raised the relative price of forint loans, and a considerable portion of the corporate sector is naturally hedged against the exchange rate risk of foreign exchange loans by its expected export revenues.

The change in the banking system's foreign position is the balance of the net external position of commercial banks and the NBH. In January, commercial banks were still reducing their open positions, which contributed to the decline of net foreign liabilities. Since January the open position of commercial banks has increased somewhat, though it has not reached last year's level even in magnitude.

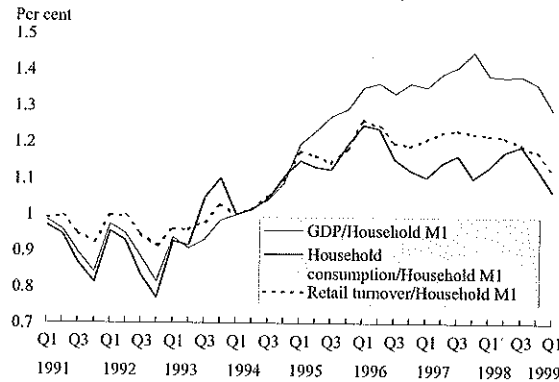
The change in the NBH's foreign position was determined by rising foreign exchange reserves due to net foreign borrowing by the government and by conversion foreign exchange purchases exceeding the central bank's interest payments. The amount received for bond issues is converted by the NBH to forint, and the forint account of the Treasury held at the central bank is credited with this.<sup>3</sup> This means that as a result of foreign bond issues the net foreign position of the NBH – and thus that of the banking system – improves by the amount of the rise in foreign exchange reserves. At the same time the foreign exchange position of the government worsens, while its forint position improves. Naturally, the opposite is true for loan repayment.

**Growth rate of money demand and credit stock components**

	1998					1999	
	Jan. 1	March 31	June 30	Sept. 30	Dec. 31	March 31	Apr. 30
Cash	562.6	551.7	587.7	640.8	666.6	667.1	679.2
Household deposits	2,166.4	2,205.6	2,261.0	2,388.3	2,597.9	2,704.7	2,715.8
– forint	1,643.6	1,668.8	1,700.9	1,787.7	1,982.3	2,074.3	2,096.9
– foreign exchange	522.8	536.8	560.1	600.6	615.6	630.4	618.9
Corporate deposits	962.9	881.8	943.1	945.9	1,032.1	971.6	947.6
– forint	729.6	654.8	709.2	713.9	802.8	743.5	728.4
– foreign exchange	233.3	227.0	233.9	232.0	229.3	228.1	219.1
Deposits of local authorities and non-profit organizations	207.5	210.1	190.7	212.3	229.4	211.5	197.3
Other deposits	69.7	48.1	65.0	53.1	71.2	57.4	63.7
Bonds and CDs	37.3	35.5	32.9	31.8	28.9	31.5	31.7
<b>M3</b>	<b>4,006.4</b>	<b>3,932.8</b>	<b>4,080.4</b>	<b>4,272.0</b>	<b>4,626.1</b>	<b>4,643.8</b>	<b>4,635.3</b>
Credit to the household sector	311.9	302.2	324.8	341.1	355.2	367.3	375.3
Credit to the public sector	3,493.8	3,454.6	3,386.1	3,701.0	3,894.9	3,758.5	3,545.4
Credit to the corporate sector	1,706.6	1,756.0	1,880.2	1,993.1	1,983.7	2,044.8	2,066.5
Other credit	66.2	63.6	73.2	92.8	94.5	111.2	96.0
<b>Domestic credit</b>	<b>5,578.5</b>	<b>5,576.4</b>	<b>5,664.3</b>	<b>6,128.0</b>	<b>6,328.3</b>	<b>6,281.8</b>	<b>6,083.2</b>
Other domestic assets, net	444.9	636.7	651.0	781.8	700.7	792.6	578.9
<b>Foreign net</b>	<b>-1,127.2</b>	<b>-1,006.9</b>	<b>-932.9</b>	<b>-1,074.2</b>	<b>-1,001.5</b>	<b>-845.4</b>	<b>-869.0</b>

<sup>3</sup> With the exception of the case when the amount received is used immediately to repay a due foreign exchange liability.

Changes in the velocity of household transactional money balances (first half of 1994 = 100)



rates paid on less liquid assets reduced the costs of liquid assets holding. In addition to this, services attached to household demand deposits as well as to current accounts – mainly the bankcard services – were expanded significantly.

Apart from the above portfolio reallocations, transactional money demand also increased. This suggests that mainly the so-called transactional components (cash, household demand deposits) of the monetary aggregates rose. The increase in liquid money holdings is not surprising in an economic environment characterised by slowing inflation and declining opportunity costs for money holding. In a more predictable economic environment, economic agents devote less time to continuous liquidity management, as the cost of surplus liquidity holding is smaller. This is reflected by the slowdown in the velocity of money.

However, there may be other, structural reasons behind the increase in liquid asset holding. Over recent years, the real income of those people for whom the broadly defined costs of financial services are still high increased, thus, they might hold even their savings in liquid assets. It is worth noting in this regard that the wages and salaries of public sector employees have been transferred to bank accounts since last year, and fees are imposed on cash withdrawals from current accounts.

Hence the rise in transactional money balances is not necessarily equivalent to an increase in future consumption. Nor can any direct conclusions be drawn regarding the rise of future aggregate demand based on the extraordinary growth of demand deposits and current accounts, as transfers and bankcard purchases are not yet widespread enough.

### 6 Credit demand

As far as the assets of the NBH and commercial banks are concerned, there was a shift in the first quarter of the year in the composition of loans extended by the domestic banking system. The decline in the stock of domestic credit can mostly be attributed to the deterioration of the banking system's net position against the government. This can be explained by the fact that there was a substantial capital inflow into government bonds over the first two months of the year, and the banking system reduced its government securities holdings, as a result of the increasing foreign demand. The reduction in the NBH's claims on the government also played a role in the position change, though to a lesser extent.

Household credit continued to grow dynamically following the trend observed since the second half of last year, but its share in credit growth is still very small due to the low basis.

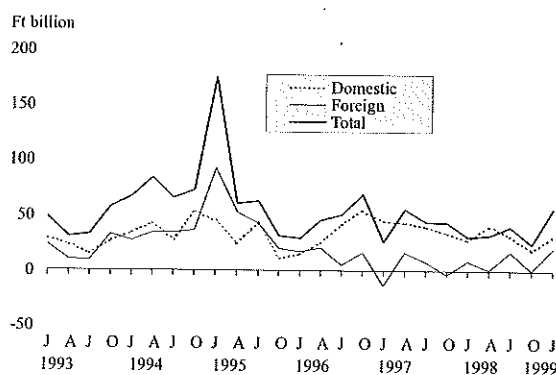
Last year's trend in corporate credit extension seems to be continuing. The apparent break in domestic forint credit extension in the last quarter of 1998 is partly the consequence of the accounting of the Postabank consolidation.<sup>2</sup> Even after the correction for the Postabank effect there was a fall in the last quarter of 1998, which is likely related to the temporary liquidity shortage

<sup>2</sup> Reorg Rt. is regarded as part of the corporate sector, thus, loans transferred to the balance sheet of Reorg Rt. cause a decline in the stock of corporate credit.

Composition of money demand and the loan portfolio

	Per cent					
	1998					1999
	Jan. 1	March 31	June 30	Sept. 30	Dec. 31	March 31
Cash	113.0	110.4	114.8	118.4	118.5	120.9
Household deposits	125.2	157.6	154.4	153.6	150.5	121.8
– forint	132.9	180.8	173.6	170.9	165.7	123.3
– foreign exchange	110.1	113.1	115.6	119.0	117.8	117.4
Corporate deposits	128.0	130.6	125.9	117.0	108.2	109.8
– forint	132.0	138.4	129.9	122.6	111.7	113.0
– foreign exchange	117.0	112.4	115.1	102.5	97.6	100.5
Deposits of local authorities and non-profit organizations	123.6	99.3	93.9	95.3	101.1	111.1
Other deposits	129.2	102.5	105.3	99.3	102.2	111.8
Bonds and CDs	97.6	73.5	69.8	68.4	59.5	88.8
<b>M3</b>	<b>120.2</b>	<b>119.1</b>	<b>118.8</b>	<b>117.7</b>	<b>115.1</b>	<b>118.1</b>
Credit to the household sector	102.5	107.9	116.3	120.2	117.5	121.5
Credit to the public sector	95.8	100.8	100.4	108.4	107.4	108.5
Credit to the corporate sector	138.5	132.9	131.5	129.6	121.0	121.7
Other credit	429.4	423.8	200.6	245.5	180.7	209.4
<b>Domestic credit</b>	<b>107.0</b>	<b>110.3</b>	<b>110.8</b>	<b>116.1</b>	<b>112.9</b>	<b>114.3</b>

Seasonally adjusted corporate borrowing from domestic and foreign banks at constant prices



\* At 1992 prices, deflated by CPI.

### 3 The yield curve, interest rate and inflation expectations

The implied forward curve, which reflects expectations of future interest rates,<sup>1</sup> has changed a great deal over during the first five months of 1999, but by the end of May its shape and level were almost the same as at the beginning of the year. The movements of the implied forward curve during these five months were induced mainly by changes in the currency risk premium of the forint and expectations of the central bank's future interest rate and exchange rate policies, while changes in inflation expectations contributed to changes in implied forwards only to a lesser extent. In the following section we try to analyse the main driving forces behind yield changes in chronological order.

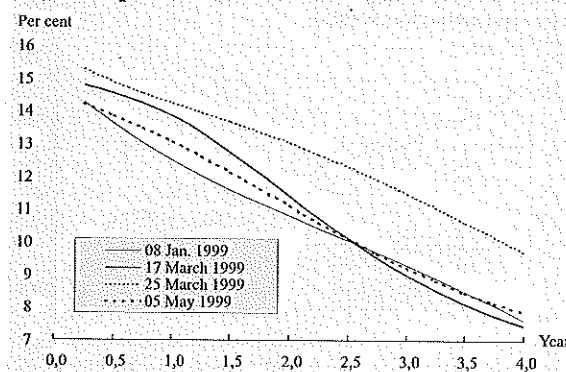
The announcement of the December – lower-than-expected – CPI inflation data on January 11, which were lower than expected, data on January 11 was not followed by a decrease in long bond yields in a similar fashion as in December. However, the assessment of this is rather difficult, since the Brazilian crisis was in full swing became full-fledged during these days. The forint was not able to avoid this new wave of emerging market confidence crisis; the depreciation risk premium increased, the currency weakened within the band and yields increased significantly.

The impact of the Brazilian crisis on the Hungarian debt market lasted only for only a week: by January 22, implied forward rates were back up to at their pre-crisis levels. Beginning in with mid-February, a number of market analysts had published reports on the Hungarian economy emphasising some worrying trends. In particular, they focused on the higher-than-expected 1998 current account deficit and the adverse figures of the January budget deficit. As a result, yields on all maturities started to increase. The implied forward curve shifted up by 100 basis points by the beginning of March.

As a result of the preparations and the start of NATO's air strikes against Yugoslavia both the risk premium of the forint and the uncertainty regarding the future course of short interest rates increased temporarily. Yields on all maturities had increased, though in the case of longer rates, the increase was more significant: 1-year implied forwards starting in 2 and 3 years time increased by almost 200 basis points between March 16 and 25. By the beginning of April, market uncertainty caused by the eruption of the war had declined and the implied forwards starting in 2 and 3 years time decreased by approximately 100 basis points. It is worth noting that the upward shift of the yield curve caused by the Kosovo crisis was not accompanied by a decline in the Forint-denominated T-bond holdings of foreign investors. The fact that domestic investors were not willing to buy T-bonds from foreigners at the higher yields after the yield curve shift, suggests

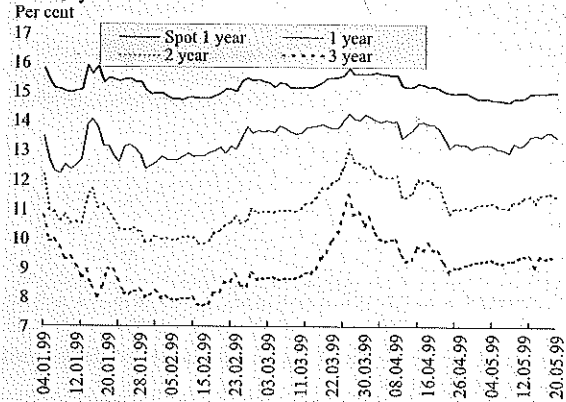
<sup>1</sup> The implied forward rates derived from the zero-coupon yield curve not necessarily coincide with the market's expected future interest rates (only if the so-called Expectations Hypothesis holds). However, less restrictive assumptions are enough to establish a relationship between changes in implied forward rates and changes in expected future interest rates. For more details on the derivation and interpretation of implied forward rates and NBH's practice of estimating the zero-coupon yield curve see: "Zero-coupon yield curve estimation from a central bank perspective", NBH Working Papers 1998/2.

1-year implied forward curves\*

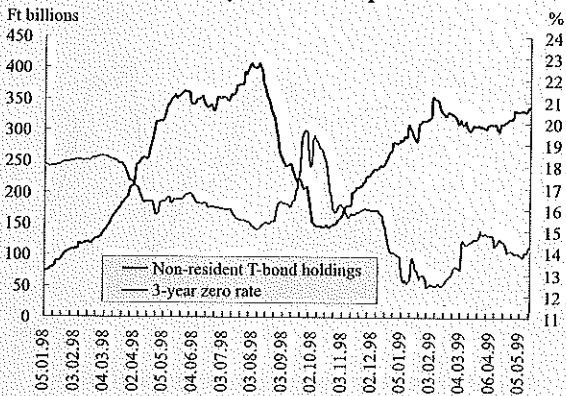


\* The short-term yields are calculated by compound interest.

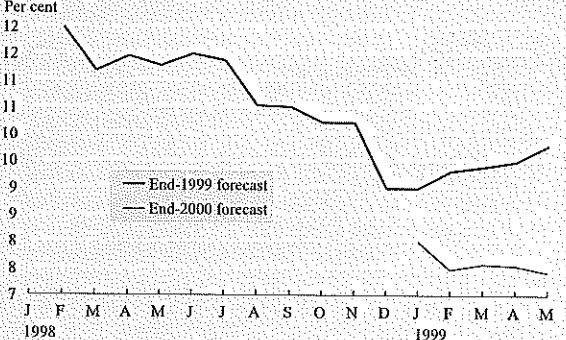
1-year spot rate and 1-year implied forwards in 1, 2 and 3 years time



Registered T-bond holdings of non-residents (left scale) and the 3-year zero-coupon rate

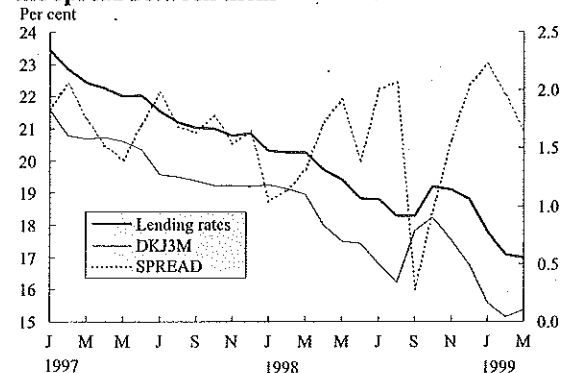


Analysts' average forecast for the end-1999 and end-2000 y-o-y CPI inflation\*

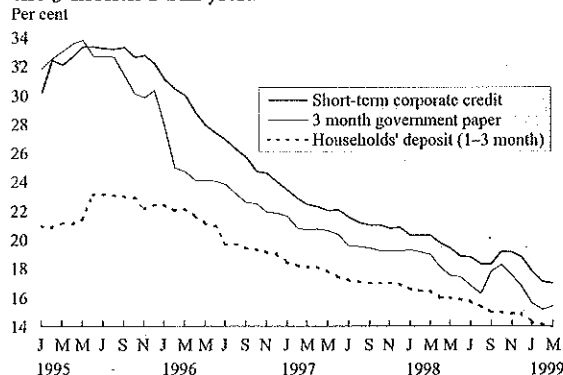


\* Source: Reuter's poll of forecasters. Consensus forecast: trimmed mean of forecasts, dropping the highest and lowest forecasts when calculating the mean.

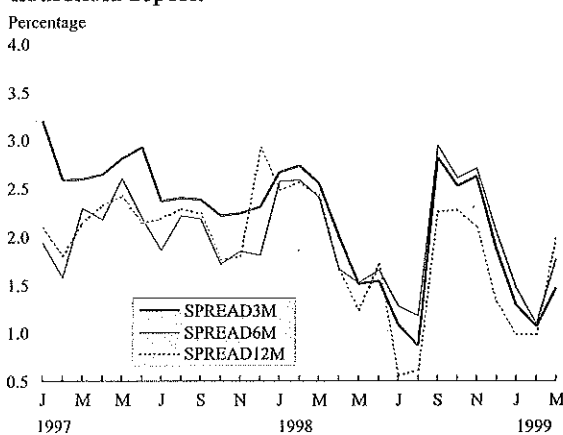
**Short-term lending rates, 3-month T-bill yields and the spread between them**



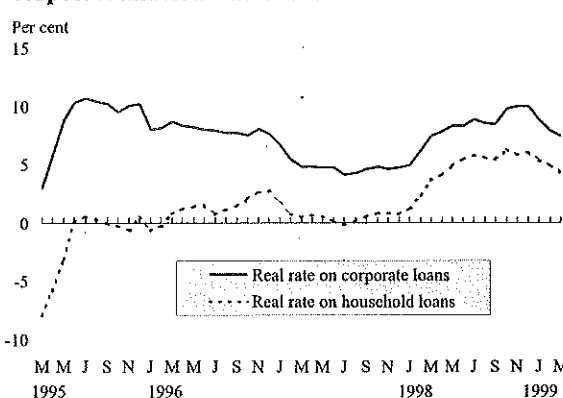
**Corporate credit rates, household deposit rates and the 3-month T-bill yield**



**Spreads between yields on government securities and household deposit**



**3-month ex post real interest rates on short-term corporate and household loans\***



\* Both corporate and household loans are deflated by the CPI, because of unreliable PPI data.

that not only the uncertainty of the future exchange rate but that of the future course of the short rate had increased as well.

The NBH cut the interest rate on its main instrument (the 2-week reverse repo had replaced the 1-month instrument in this role as of since March 1) by 50 basis points on April 8, after 3 months of unchanged repo rates. This monetary policy step was taken as a surprise by the market; yields decreased by roughly the same extent as the rate cut on every horizon.

On April 14, long zero-coupon yields increased significantly, as a result of which implied forwards were back at their levels preceding the central bank's rate cut. The major cause of this abrupt yield jump was the announcement of the March CPI inflation figures on April 13. Inflation in March was had been lower than in February but it was still above market expectations. As a result, market participants had adjusted their long-term inflation expectations and long yields increased.

The next event significantly influencing the yield curve was the announcement of the cuts in the rate of crawl on April 20. As opposed to previous practice, this time the NBH and the government announced two consecutive 0.1% cuts in the rate of monthly devaluation, the first due on July 1, and the next on October 1, 1999. One-year implied forwards starting at 2-3 years time dropped by 50-70 basis points in a couple of days following the announcement. Since the future path of monthly depreciation and that of short-term interest rates are connected through uncovered interest rate parity, the market reaction suggests that market participants adjusted their expectations of the longer-term path of the crawl downwards, i.e. they expect a stronger forint on longer (2-3-year) horizons than before the announcement. The expectation of a stronger forint did not appear in market analysts' forecasts of end-1999 inflation (on average, these were revised upwardly revised in May), but their consensus forecast on a slightly longer horizon, i.e. that of the end-2000 year-on-year CPI inflation decreased by 12 basis points, from 7.55 to 7.43 percent.

The next repo rate cut by the NBH on April 28, shortly after the announcement of the crawl rate cut, did not take the market by surprise. Market participants were anticipated such measures after the significant decrease in the crawl. Although short rates decreased slightly, expectations of short rates over on a longer run were not influenced by this monetary policy step, which was reflected by unchanged implied forwards in 2-3 years time.

#### 4 Commercial bank rates

Following an unusually low value in September 1998, by January 1999 the spread between short-term corporate credit rates and T-bill yields had increased to a level well above the average spread of the last two years. The reason for this was that commercial banks were very cautious in following either the September increase in market rates due to the Russian crisis or their quick decline after the peak of the crisis. They changed their credit rates to a smaller extent and with some lag compared to market rate movements in this period. In February and March

market rates decreased more slowly (in March they slightly increased), as a result of which the spread shrank, reaching its average level in the last two years by March.

When pricing household time deposits, commercial banks did not seem to take into account either the steady decrease in market rates over in March-August 1998 or the abrupt increase in these rates induced by the Russian crisis in September. Regardless of these movements in market rates, they seemed to follow the trend 2 percent per annum decreased in deposit rates which had prevailed since mid-1996. As a result, the spread between household deposit rates and short market rates exhibited huge swings during 1998. Following an extremely low level in February 1999, the spread had increased in March after an increase in market rates, but it has not reached the 250 basis point level, which was characteristic of 1997.

Due to the changes in market rates and the spreads charged by commercial banks, the real interest rates on loans to both households and corporate clients had decreased from the very high levels prevailing after the Russian crisis. However, the current levels are still approximately 300 basis points higher than those that could be observed in 1997, before the Asian crisis.

#### 5 Monetary aggregates

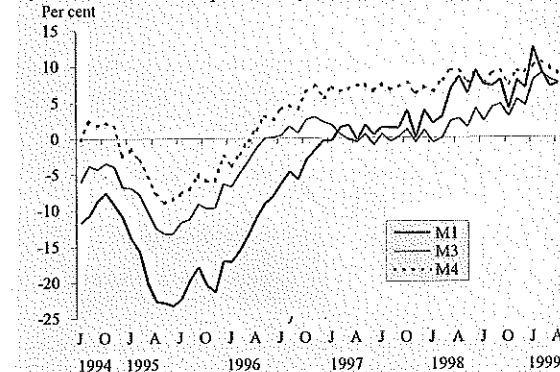
The growth of monetary aggregates has continuously exceeded the inflation rate and the growth rate of nominal GDP since April 1998. As the unintended increase of money balances may cause inflationary pressures, the central bank monitors the growth of these aggregates with special attention. Our analysis, however, shows that changes in monetary aggregates in the recent periods can be explained by factors changing the money demand.

Monetary assets are held by economic agents partly for transaction purposes and partly as a store of wealth. The separation of these two purposes is basically impossible in practice, though only transactional money demand plays a part in future inflationary developments. In Hungary factors influencing the composition of the wealth portfolio played a more dominant role in the fast growth of monetary aggregates, though transactional money demand increased as well.

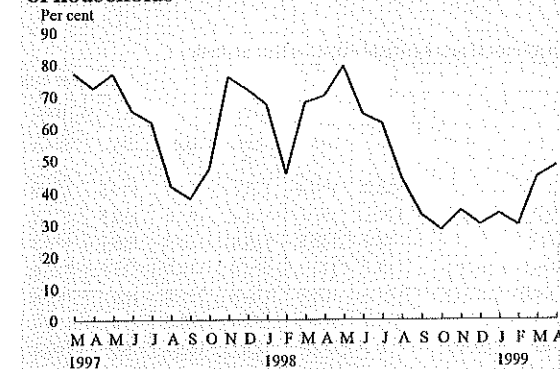
Since 1993 the share of non-bank assets offering higher yields than commercial bank deposit rates has continuously increased within financial wealth. The 1998 autumn crisis and the increase in capital market uncertainty in general, however, launched a reallocation process towards bank assets, which was further strengthened by the fact that the expected yields of bank and non-bank investment came closer to each other because of higher real interest rates. This change in the composition of wealth is reflected by the decline in the growth rate differences of the M4 (including the stock of non-monetary government securities as well) and M3 monetary aggregates. Household investment in mutual funds and shares also decreased.

There is another reallocation process observable within bank assets, namely, the share of liquid monetary assets - demand deposits belonging to the narrow monetary aggregate - increased at the expense of time deposits. The decline of inflation and interest

**Real growth of monetary aggregates**  
(same month of the previous year = 100)

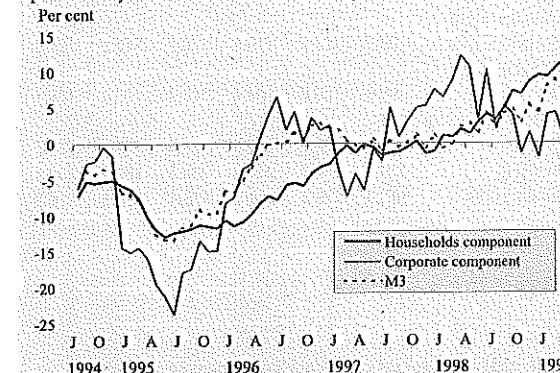


**Share of non-bank savings in the net financial savings of households\***



\* The concepts of financial wealth and financial savings are still often confused in the Hungarian economic terminology. The first concept is a stock category, while the second one is a flow category. The chart above depicts developments in the latter category, as the composition of bank and non-bank assets of financial wealth may change significantly without a change in the savings behavior mainly due to potential substantial revaluations in the value of non-bank assets.

**Household and corporate components of the M3 monetary aggregate** (real growth, same month of the previous year = 100)



**Household M1 and its components**  
(real growth, same month of the previous year = 100)

