

Annual Report

2004

CROATIAN NATIONAL BANK

**Monetary Policy
Instruments and
International
Reserves
Management**

2

2.1 Monetary Policy Instruments

Monetary policy tightening in 2004 was the result of several measures defined by the CNB decisions adopted in December 2003, some of which were amendments to the former decisions and some were completely new. The most significant changes were made with respect to the reserve requirement instrument in order to limit bank foreign borrowings and discourage domestic placement growth based on external sources. Within these measures, the percentage for allocating the foreign exchange component of reserve requirements calculated on the basis of foreign exchange funds of non-residents and foreign exchange funds received from legal persons in a special relationship with a bank was increased to 100%, while the minimum percentage of calculated reserve requirements that is allocated in accounts with the CNB was increased from 40% to 60%. From a maximum of 15 working days in a month, the number of days in which the Lombard loan could be used has been reduced to a maximum of 5 days in a month. The remuneration rate paid on the allocated foreign exchange component of reserve requirements has been changed as well. For the funds allocated in US dollars it equals 75% of the US Federal Funds Target Rate and for the funds allocated in euros it equals 75% of the ECB Minimum Bid Refinance Rate. In addition, the central bank adopted the decision on the discontinuance of foreign currency CNB bills and on the occasional issuance of kuna CNB bills.

In 2004, the key monetary policy instrument of the CNB was the newly-introduced marginal reserve requirement. The quantitative loan restriction in the form of a compulsory purchase of CNB bills was a temporary measure. To discourage further growth in foreign borrowing, the CNB has introduced the marginal reserve requirement as a permanent measure. This means that banks had to allocate 24% of their increase in foreign liabilities to a special account with the CNB. In October 2004, the RRR was cut from 19% to 18%, which released the funds the government needed to refinance its maturing external debt on the domestic market.

The banking system was mostly characterised by surplus liquidity in 2004. Due to adjustments to the new reserve requirement regulations, which came into effect in February 2004, there were occasional liquidity shortages at the beginning of the February and March maintenance periods, as evidenced by the negative balances of free reserves in these periods. Also, the beginnings of the July and August maintenance periods also saw brief shortages mostly due to the increased demand for the kuna over the summer months. For these reasons, banks occasionally used secondary liquidity sources of the central bank.

2.1.1 Relations with Banks

The total amount of funds from the primary issue that was extended to banks reached HRK 8.7bn in 2004, down 4.8% on 2003.

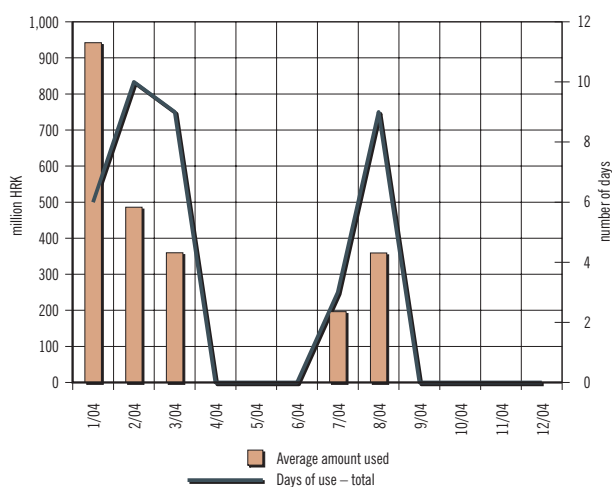
Table 2.1 Lombard Loans – Average Amount Used and Days of Use in 2004

Month	Lombard loan	
	Days of use	Average amount used in kuna
January	6	942,345,271
February	10	486,191,816
March	9	359,599,781
April	0	0
May	0	0
June	0	0
July	3	196,116,667
August	9	358,866,667
September	0	0
October	0	0
November	0	0
December	0	0

Source: CNB.

2.1

Lombard Loans – Average Amount Used and Days of Use



Source: CNB.

Lombard Loans

Banks and savings banks could use Lombard loans in the amount of up to 50% of the nominal value of purchased kuna CNB bills and T-bills, for a maximum of 5 working days in a month. The interest rate charged on this loan was 9.5%.

Lombard loans used by banks totalled HRK 7.9bn in 2004, which was 92.2% of the amount used in 2003. They were used for 36 days, i.e. 8 days less than in 2003. The average amount used was HRK 461.9m in 2004 and the relative average amount used amounted to 78.6% of that used in 2003. On several occasions, these loans were used to address temporary liquidity shortages of the system. This particularly refers to the first quarter of 2004 when banks had to adjust themselves to the new reserve requirement regulations and to mid-summer, the period of the seasonal increase in demand for the kuna.

Short-Term Liquidity Loans

In 2004, banks did not turn to the central bank as the lender of last resort, i.e. they did not use short-term liquidity loans. The interest rate on these loans remained the same, i.e. it equalled the interest on Lombard loans plus 0.5 percentage points for a loan utilisation period of up to 3 months and 1 percentage point for longer utilisation periods.

Repo Auctions

Contrary to the previous years when there was no need for repo loans, two such loans totalling HRK 787.7m were extended at end-2004.

Reserve Requirements

In 2004, the reserve requirement calculation rate was 19% and it was calculated on the base consisting of the kuna and foreign exchange components. The RRR was cut to 18% in October 2004. 42% of the calculated foreign exchange component was allocated in kuna and added to the calculated kuna RR. Minimum 60% of the calculated RR had to be deposited in the accounts with the CNB, whereas maximum 40% could be maintained by the average daily balances in the accounts of liquid claims. Introduced also was a 100% allocation of the foreign exchange

component of RR calculated on the basis of foreign exchange funds of non-residents and foreign exchange funds received from legal persons in a special relationship with a bank.

The kuna component of RR steadily grew throughout most of 2004, primarily owing to the increase in the calculation base, i.e. growth in kuna and f/c deposits with banks. The kuna component of the base ranged from HRK 47.5bn registered in the December 2003 calculation period to HRK 56.8bn registered in the November 2004 calculation period, growing by 19.6%. In the same period, the foreign exchange component of the base ranged from HRK 119.8bn to HRK 130.3bn, growing by 8.8%. The total kuna RR grew throughout most of 2004, except for rare oscillations that occurred mostly in November due to the RRR cut. The total RR in kuna went up from HRK 18.6bn in January to HRK 20.1bn in December, which was an increase of 8.1%. The share of the calculated foreign exchange component that was allocated in kuna grew by 14.0% from the January 2004 maintenance period to the December 2004 maintenance period. This was completely in line with the increase in the foreign exchange base, bearing in mind the fact that the percentage of that foreign exchange component remained unchanged over the year. Observing the kuna component alone, the ratio between the portion allocated in a special account with the CNB and the portion maintained in the settlement accounts grew throughout most of 2004 in favour of the allocated portion. The average percentage of allocation ranged between 69.18% and 73.45% in 2004 and was somewhat higher than that in 2003.

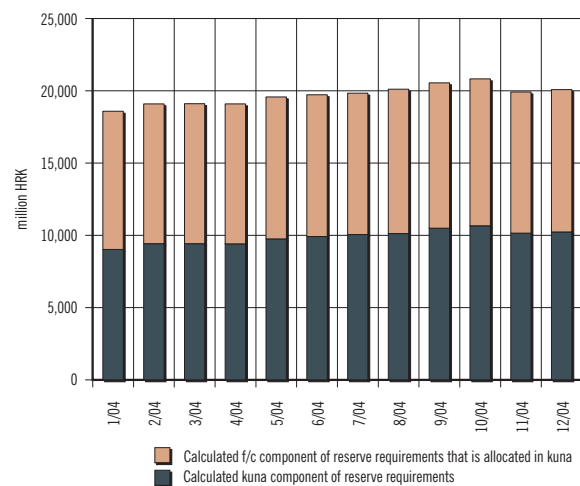
The foreign exchange component of RR was on an upward trend till November 2004, growing from HRK 13.2bn to HRK 14.0bn or by 6.1%. However, due to the RRR cut, the foreign exchange component of RR fell to HRK 13.6bn in December 2004, but recorded an increase of 3.0% compared with the beginning of the year.

In 2004, the CNB paid remuneration on the allocated kuna component of reserve requirements, including the calculated RR deposited in a special account with the CNB and the calculated RR deposited in the settlement accounts and bank vaults for the purpose of maintaining the average balance of RR. The remuneration rate paid on the kuna component remained unchanged during the observed period.

However, the remuneration rate on the allocated foreign exchange component of RR was changed; it was 75% of the US Federal Funds Target Rate for the funds allocated in US dollars and 75% of the ECB Minimum Bid Refinance Rate for the funds allocated in euros.

2.2

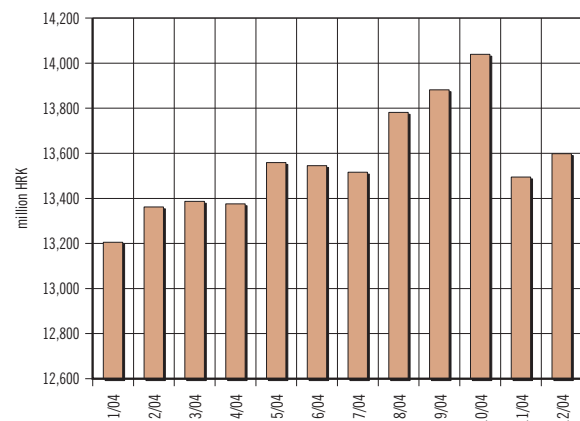
Total Kuna Component of Reserve Requirements
balance in maintenance periods



Source: CNB.

2.3

Total Foreign Exchange Component of Reserve Requirements
balance in maintenance periods



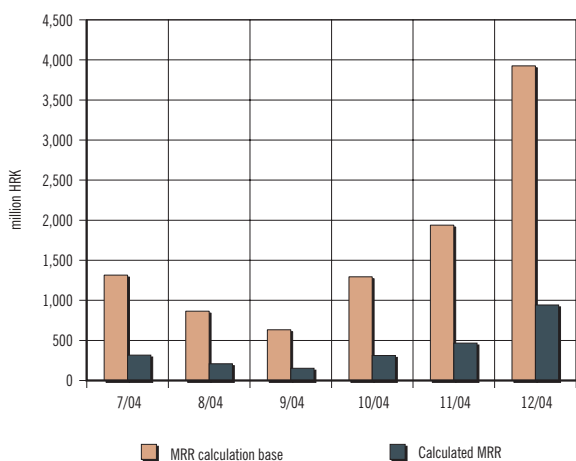
Source: CNB.

Marginal Reserve Requirement

The decision on the introduction of the marginal reserve requirement instrument was adopted in July 2004. This new measure of a permanent nature has been introduced to discourage further growth in external borrowing. The MRR calculation base was a positive difference between the average daily balance of sources of funds from non-residents and legal persons in a special relationship with a bank in a particular calculation period and the initial calculation period. The initial calculation period was from 1 to 30 June 2004. The banks applied the MRR rate of 24% on the increase in their foreign liabilities and allocated the entire calculated MRR amount in foreign exchange to a special account with the CNB.

2.4

Marginal Reserve Requirement
balance on calculation days



Source: CNB.

Due to strong growth in funds from non-residents, the MRR calculation base went up from HRK 1.32bn in July to HRK 3.93bn in December, which was three times higher than its initial amount. The calculated MRR amount increased accordingly, from HRK 315.81m in July to HRK 942.18m in December 2004.

To decelerate external debt growth by increasing the price of banks' foreign borrowing, the CNB raised the MRR rate from 24% to 30% in February 2005.

Croatian National Bank Bills in Kuna

The last 2003 subscriptions of CNB bills were recorded at the auction held on 10 September. Hence, the stock of purchased CNB bills fell to zero by end-2003 and only two auctions were held in 2004.

In April 2004, the CNB held two auctions of kuna CNB bills maturing in 35 days. These were the only auctions throughout 2004 and the amount of issued CNB bills totalled HRK 106.0m. The relative average stock of subscribed kuna CNB bills stood at HRK 98.2m in the observed period.

Weighted interest rates on kuna CNB bills attained at these two auctions were 2.50% and 2.51% respectively.

Compulsory Purchase of CNB Bills

The quantitative measure designed to curb loan expansion, which the CNB adopted on 15 January 2003 to limit growth in bank placements, was of a temporary nature and referred only to 2003. Banks that were required to subscribe CNB bills were those that showed loan growth above 16% (or 4% in a given quarter) in 2003, relative to the balance of loans registered on 31 December 2002. The last subscription of compulsory purchased CNB bills was made on 15 January 2004, in the amount of HRK 85.9m, and the last redemption of these bills was recorded on 15 April 2004.

Minimum Required Foreign Currency Claims

The Decision on the Minimum Required Amount of Foreign Currency Claims obligates banks to maintain a minimum of 35% of their foreign currency liabilities by foreign currency claims. Banks whose percentage of f/c liabilities as maintained by f/c claims fell short of that percentage as of the date of application of the Decision, were allowed to gradually adjust such percentages to reach the prescribed percentage, with the final adjustment date being 31 March 2004. This included banks whose percentage coverage was below 19% on 1 February 2003. However, the minimum required f/c liquidity was 35% for all banks as of 1 April 2004.

In 2004, the percentage coverage between f/c liabilities and f/c claims ranged from 36.52% on 31 January to 39.55% on 31 August 2004.

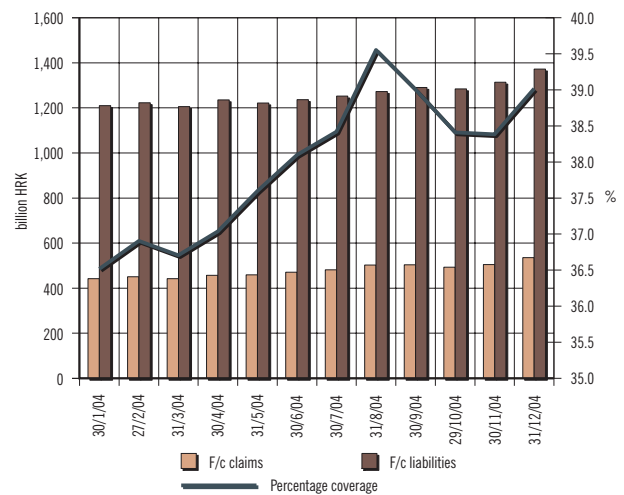
In February 2005, the rate of minimum required f/c claims was cut from 35% to 32% in order to release a portion of banks' f/c funds for further credit activities and thereby enable the government to obtain funds from domestic commercial banks and reduce its external debt.

Croatian National Bank Interest Rates and Remuneration

Temporary changes in the system's liquidity over the year and volatile movements in the money market interest rates were not reflected in the central bank's interest rates on loans and deposits. The average interest rates on 35-day CNB bills in kuna, which were recorded at the two auctions held in 2004, were 2.50% and 2.51% respectively. The remuneration rate on the kuna component of reserve requirements of 1.25% remained unchanged over the year. The CNB did not change its lending rates in 2004.

2.5

Foreign Currency Claims Maintained Relative to Foreign Currency Liabilities



Source: CNB.

2.2 International Reserves Management¹

The total international reserves of the CNB grew by USD 567.68m in 2004, up 6.9%. They stood at USD 8,191.06m² on the last day of 2003, whereas they were USD 8,758.74m on the last day of 2004.

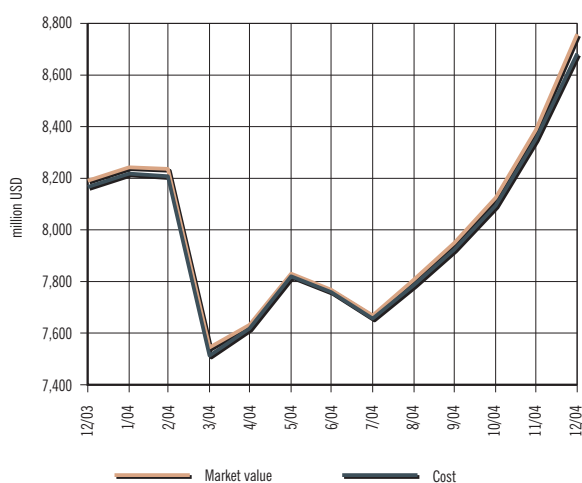
Table 2.2 International Reserves
end of period, in million USD

Year	Month	Total reserves	
		Market value	Cost
2003	December	8,191.06	8,165.80
2004	January	8,242.58	8,217.78
	February	8,236.82	8,208.15
	March	7,544.95	7,512.68
	April	7,632.27	7,617.73
	May	7,830.65	7,820.41
	June	7,768.69	7,759.60
	July	7,668.97	7,655.97
	August	7,807.62	7,787.00
	September	7,949.05	7,923.91
	October	8,124.78	8,094.38
	November	8,387.36	8,350.95
	December	8,758.74	8,722.84
Change Dec. 2004 – Dec. 2003		567.68	557.04

Source: CNB.

2.6

CNB International Reserves
end of period



Source: CNB.

The main factors contributing to the net increase in total international reserves in 2004, observed at cost, were:

- on the inflow side:
 - 1) f/c inflows to the MoF account with the CNB totalling USD 803m, which to a large extent derived from the April 2004 issuance of 10-year MoF bonds in the amount of EUR 500m (USD 673.68m).
 - 2) net increase in allocated foreign exchange reserve requirements amounting to USD 765m. This increase was the outcome of autonomous growth in the RR calculation base and the effect of the new decision on reserve requirements that increased the percentage of foreign exchange

1 International reserves management is analysed on the basis of amounts expressed in US dollars, whereas in the section on macroeconomic developments international reserves are analysed on the basis of amounts expressed in euros. This resulted in differences in the reported amounts and changes.
2 At market value.

reserves allocated to the accounts with the CNB, as well as the decision on the marginal reserve requirement.

- 3) purchases of f/c from banks at auctions amounting to USD 739m (or USD 696.95m at the exchange rate applicable on the intervention date).
- 4) net foreign exchange gains amounting to USD 502m, resulting from an 8.9% increase in the value of the euro against the US dollar. As international reserves are expressed in US dollars, any increase in the value of the euro against the US dollar results in the increase of the dollar value of international reserves. These gains were recorded due to the said 8.9% increase in the value of the euro against the US dollar in 2004 and a large share of the euro in international reserves. The value of one euro equalled USD 1.2498 on 31 December 2003 or USD 1.3609 on 31 December 2004.
- 5) income earned from (net) investment of CNB international reserves amounting to USD 145m. On the basis of net international reserves investment, i.e. interest income on invested deposits, reverse repo agreements and bonds, as well as other income, the total international reserves grew by USD 145.42m (at cost) in 2004. However, this amount refers only to instruments that came due or were sold in 2004 and does not include the price movements of instruments that were not sold or due.

□ on the outflow side:

- 1) f/c outflows from the MoF portfolio amounting to USD 1,065.04m for the settlement of its external obligations.
- 2) net repurchases of f/c CNB bills amounting to USD 849m. The last auction of f/c CNB bills was held on 30 December 2003, with the value date on 2 January 2004. F/c CNB bills subscribed by end-2003 came due by the beginning of March 2004.
- 3) net outflows upon maturity of repo agreements amounting to USD 483.27m;
- 4) sale of USD 44.91m (or USD 41.76m at the exchange rate applicable on the intervention date) to banks at regular auctions.

Table 2.3 Total CNB Turnover on the Foreign Exchange Market, 1 January – 31 December 2004
at the exchange rate applicable on the intervention date, in million

	Purchase (1)		Sale (2)		Net (1 – 2)	
	USD	HRK	USD	HRK	USD	HRK
Banks	696.95	4,069.34	41.76	254.10	655.19	3,815.24
Ministry of Finance	172.64	1,082.22	314.51	1,823.96	-141.87	-741.74
Total	869.59	5,151.56	356.27	2,078.06	513.32	3,073.50

Source: CNB.

In 2004, the CNB intervened in the market by buying from and selling foreign exchange to:

1. domestic banks and
2. MoF of the Republic of Croatia.

Foreign exchange purchases from banks intensified whereas foreign exchange sales substantially declined in 2004 in comparison with 2003. In its foreign exchange interventions in 2004, the CNB purchased USD 696.95m, which was USD 590m more than in 2003. The CNB intervened in the foreign exchange market by purchasing foreign exchange mostly due to the appreciation of the

kuna exchange rate. With regard to foreign exchange sales to commercial banks, the CNB was less active in 2004 than in 2003, both in terms of the number of interventions and in terms of the volume of foreign exchange sold. USD 41.76m was sold at a single selling auction in January 2004. Foreign exchange amounting to USD 379.58m net was sold to banks in 2003, whereas USD 655.19m net was purchased from banks in 2004.

In the reporting period, a total of USD 172.64m was purchased from the MoF, while USD 314.51m was sold, with the net trading result of USD 141.87m. The most important transactions with the MoF in 2004 were: (1) the purchase of EUR 145m arising from the April issuance of 10-year bonds, (2) the February sale of EUR 40.43m needed for interest payments on eurobonds, and (3) the November sale of JPY 25.5bn (USD 250m) for the repayment of Samurai bonds together with corresponding interest.

Investments of international reserves are analysed by the type of instrument, credit risk and currency structure. Changes in the investment structure in 2004 were mostly affected by the increase in allocated foreign exchange reserve requirements, net decrease in repo agreements and exchange rate differences arising from the euro strengthening against the US dollar.

The CNB invests international reserves in the following instruments:

- 1) debt securities with fixed and variable interest rates,
- 2) central bank instruments and instruments of international financial institutions,
- 3) repurchase agreements (repo and reverse repo agreements),
- 4) deposits of commercial banks with a long history of investment grading at least A+,
- 5) certificates of deposit from banks with a long history of investment grading at least A+, and
- 6) foreign cash.

According to the degree of credit risk, international reserves are divided into funds invested in government bonds, commercial banks, international financial institutions and central banks. Comparison of the end-2003 data and end-2004 data shows a downward trend in the share of international reserves invested in government bonds and international financial institutions and an upward trend in the share of reserves invested in commercial and central banks. On 31 December 2004, the largest share (52.93%) of international reserves was still accounted for by investments in government bonds, although they declined from USD 4,908.19m recorded on 31 December 2003 to USD 4,616.81m on 31 December 2004. These investments are exposed to the least credit risk as they comprise investments in government bonds of the US and EU member states. The share of total international reserves invested in non-collateralised placements with commercial banks, which includes f/c time deposits and certificates of deposit, went up from 35.10% on 31 December 2003 to 43.32% on 31 December 2004. In the same period, the share of investments in international financial institutions went down from 4.04% to 2.60%.

Exposure to credit risk is monitored with respect to the credit rating of countries in which international reserves are invested; the rating may range between AAA and AA-. The largest share (37.84%) was invested in banks rated AA- (according

to the Fitch credit rating agency), whereas 19.14% and 21.13% respectively was invested in banks with the highest rating of AAA and banks rated AA+. Banks with an AA rating accounted for 15.23% of the stated investments, whereas banks with an A+ rating, which is the lowest rating for banks in which the CNB international reserves may be invested, accounted for 6.66%. Relatively larger investments in lower rated banks resulted from a worldwide decline in ratings of commercial banks, which has been recorded in recent years. 57 out of 76 banks in which the CNB may invest its reserves are rated AA, AA– or A+.

The currency structure of international reserves actively managed by the CNB is adjusted to the currency structure of the external debt of the Republic of Croatia for the year ahead and to the currency structure of imports of goods and services in the previous year. The currency structure of the net international reserves is very stable, the euro accounts for over 75% of total reserves and USD accounts for most of the remaining share. Exchange rate fluctuations between individual foreign currencies and vis-à-vis the kuna result in the fluctuation of international reserves, both in US dollar and kuna terms. Due to a substantial weakening of the US dollar against both the euro and the kuna in 2003 and 2004, the kuna value of international reserves denominated in US dollars fell in 2004 and brought an operating deficit which, in accordance with the new international standards, was recognised in the Income Statement. The share of US dollars in total international reserves was 4.5 percentage points lower at end-2004 than at end-2003. The increase in the share of euros in the currency structure of total international reserves was affected by the change in the currency structure of international reserves actively managed by the CNB and the increase in allocations of foreign exchange reserve requirements in euros, which was due to the rise in the Fed benchmark rate above the ECB rate in December 2004.

Table 2.4 Currency Structure of Total International Reserves on 31 December 2004
at cost, in million USD and %

Currency	International reserves		Share	
	Total	O/w: RR, MoF and REPO	31 Dec. 2004	31 Dec. 2003
EUR	6,530.02	1,116.79	74.86	70.34
USD	2,191.91	797.47	25.13	29.65
XDR	0.86	–	0.01	0.01
Other currencies	0.05	0.01	0.00	0.00
Total	8,722.84	1,914.27	100.00	100.00

Source: CNB.

Realised income and yields on the euro and US dollar portfolios, actively managed by the CNB, in 2004 are shown in Table 2.5. The analysis excludes foreign cash, funds invested on the basis of subscribed f/c CNB bills, funds invested on the basis of allocated foreign exchange reserve requirements and MoF funds.³

³ Interest earned on funds from subscribed f/c CNB bills and from allocated foreign exchange reserve requirements is transferred to banks and is therefore excluded from this analysis. Interest earned on MoF funds is transferred to the said ministry and is also excluded from this analysis.

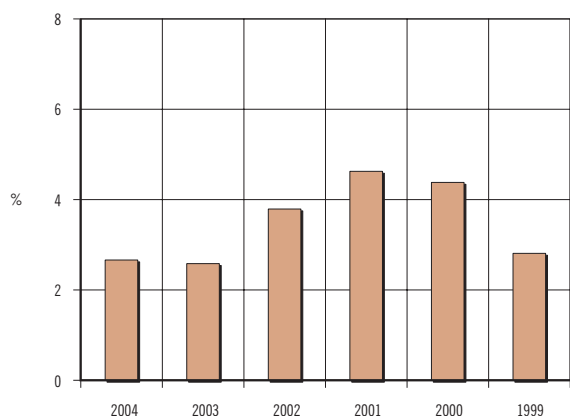
Table 2.5 Realised Income and Average Yields on the CNB Foreign Exchange Portfolios Actively Managed in 2004
at market value, in million EUR and USD and %

Portfolio	Realised income	Average amount invested	Annual yield rate					
			2004	2003	2002	2001	2000	1999
EUR	100.30	3,66.14	2.66	2.58	3.79	4.63	4.38	2.81
USD	16.54	1,303.59	1.27	1.40	2.38	4.72	6.56	5.02

Source: CNB.

2.7

Yields on the CNB Portfolios in EUR



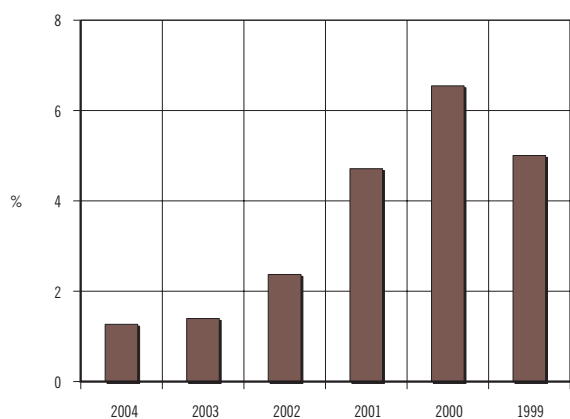
Source: CNB.

The average yields on the euro and US dollar portfolios actively managed in 2004 were 2.66% and 1.27% respectively. Such yields on the CNB foreign exchange portfolios reflect increasingly lower interest rates on US dollar and euro markets in recent years.

In 2004, the Fed raised its benchmark overnight rate on five occasions, increasing it by a total of 1.25% percentage points, i.e. from 1.00% to 2.25%. May 2000 was the last time when the Fed raised its interest rates before 2004. The ECB retained its benchmark repo rate at the level of 2.00% throughout 2004.

2.8

Yields on the CNB Portfolios in USD



Source: CNB.