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# MACRO PRUDENTIAL *analysis*

CROATIAN NATIONAL BANK

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# MACROPRUDENTIAL ANALYSIS

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# MACROPRUDENTIAL ANALYSIS

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# 1 Introduction[1]

The third issue of *Macroprudential Analysis* discusses the developments of macroprudential indicators for the Croatian economy in 2005 in accordance with the statistical data available until the end of the first quarter 2006.

In the second half of 2005, basic macroprudential indicators continued the positive developments that were started in the first half of the year. Despite the fact that Croatia's inflation rate exceeded the annual average in the euro area it may still be considered low. Real economic growth picked up, totalling 4.3%, with the greatest contribution coming from developments seen in the first half of the year. Personal consumption was once again the main growth generator, with gross capital formation also playing an important role. Positive developments were also observed in connection with the movements of consolidated central government deficit as a share of GDP, on cash basis, which continued reducing. In the same period, some macroprudential indicators deteriorated, relating primarily to the increase in annual deficit at the balance of payments current account and the mild increase in the share of external debt in GDP. Renewed acceleration of bank lending also contributed to the continuance of speedy growth of household debt. However, although household loans dominated in the loan increase, 2005 was marked by the strong growth of placements to non-financial enterprises. Continued strong growth of the activities of leasing companies, accompanied by still favourable conditions for external borrowing in 2005, contributed to the increase in the debt of non-financial enterprises. Public sector debt indicators grew slower than over the previous year. They are even expected to decline over the coming period due to the announced fiscal consolidation and budget deficit reduction.

External debt to gross national income totalled 85.2% at the end of 2005, up 3.1 percentage points compared with the end of 2004. This indicates that strong external debt growth was finally brought to a halt. According to the World Bank criteria, this level of external debt places Croatia among the severely indebted countries. However, under the same criteria, external debt as a percentage of exports and foreign income, totalling 167%, is much below the level of 220% that would indicate potential external liquidity problems.

Public sector debt, not including government guarantees, continued growing, totalling HRK 108.6bn at the end of December, or 47.4% of GDP. Although, public sector debt burden increased only mildly, continuing to be far below the upper limit under the EU criterion, it is larger than the debt burden of other countries in the region,

1 Definitions and guidelines for macroprudential analysis on which this analysis is grounded, date from May 2003 when the IMF published *Financial Soundness Indicators – Background Paper.* Currently in progress is the long-term statistical project of harmonising the methodological framework of this analysis with the most recent guidelines presented in the IMF's *Compilation Guide on Financial Soundness Indicators* of August 2004. The analysed indicators for 2005 have been calculated in accordance with the data available as per 31 March 2006.

where it is either stagnating or decreasing as a result of the successful consolidation of government finances. In contrast to the previous years, the entire increase of the public sector debt in 2005 was made up by borrowing in the domestic financial market. This contributed to the decrease in the external component of public debt, that is, to the improvement of the otherwise unfavourable currency structure of the public debt, with the ratio of domestic and external component of public debt to nominal GDP ending the year at 24.7% and 22.7% respectively.

The estimated value of the total debt of non-financial enterprises rose to 52.5% of GDP until the end of 2005, growing at the highest ever annual growth rate of 18%. By European standards, this is still a relatively low debt level. Debt to banks continued to dominate the total debt structure of non-financial enterprises, accounting for 56%, with financing from abroad and debt to leasing companies playing an ever more important role, the latter growing by a high 70.5% in 2005 year-on-year. Improved financing conditions contributed to a much slower growth of the debt service burden than the growth of the total corporate debt, resulting in a further reduction of the interest service burden to 5.2% of total corporate revenues. The most important risks to non-financial enterprises are related to the expected increase in long-term interest rates on the world market and the less likely scenario of the weakening domestic currency. This is because the share of long-term bank loans with a variable interest rate amounted to slightly less than 86% of total loans at the end of 2005, while the share of those denominated in foreign currency increased to 87.9%.

Household debt continued growing both in absolute and relative terms, reaching 35.9% of GDP at the end of 2005. Liabilities to banks continued accounting for slightly less than 96% of household debt, while debt to leasing companies also gained in importance. Household debt to banks remained well above the level registered in other EU membership candidates and the new EU Member States. Despite the strong growth of total debt over a long period of time, due to increasingly more favourable conditions for financing consumption, aggregate household debt service indicators still give no reason for concern. The estimated total debt service burden is expected to amount to some 6.8% of the gross disposable income, up from the 6.0% in 2004 but still half of the figure recorded in the EMU Member States where this indicator has not gone below 10% since 2000. By the end of 2005, the share of long-term bank loans to households denominated in foreign currency went up to a high 88% and the share of those with a variable interest rate to 86%, leading to large exposure of households to currency and interest rate risk.

The increase in non-financial private sector debt has so far not affected the indicators of its credit risk in the portfolio of commercial banks. Total specific provisions to total assets ratio stood at 2.5% at the end of 2005, reducing from 2.8% at the end of 2004. The greatest contribution to this decrease came from the improved banks' estimate of the credit risk of private enterprises and households. However, the relative level of overdue bank claims increased abruptly in 2005 to 21.6% of total bank assets, up four percentage points on the previous year. As a consequence, overdue bank claims to total specific provisions ratio arising from placements to other enterprises increased, while as regards household loans this ratio significantly decreased compared with the previous year.

Continued loan growth and better credit risk rating were not sufficient to continue the years-long trend of rising profitability of Croatia's banks. Following its all-time high of 1.68% in 2004, the annual pre-tax return on average assets mildly reduced in 2005, ending the year at 1.67%. This may be attributed primarily to the slower growth of average assets. At the same time, following its best result of 16.1% also in 2004 the return on average equity reduced to 15.6% in the past year. The greatest contribution to this reduction, the first since 2001, came from the large increase in average equity of the banking sector, spurred by the decline in the price of banks' self-financing as compared to other sources of funds.

As over the previous year, faster growth of risk-weighted assets over the growth of regulatory capital continued the years-long downward trend of the aggregated capital adequacy ratio, which went down from 15.3% in 2004 to 13.4% u 2005. Tier 1 capital to risk-weighted assets also reduced from 13.1% to 11.8%, while total capital to total assets ratio went up by 0.4 percentage points. The continuance of the declining trend of banks' aggregate capital adequacy ratio could be understood as the continuance of the trend of falling estimates of the risk from banks' unexpected operating losses. This could mean that banks expect further improvements in their macroeconomic and institutional environment or simply that the trend of banks' equity base rationalisation, aimed at increasing the profitability of their equity, continued.

Reasons for optimism of Croatia's banks as regards legal security of their operations in the financial market should be sought in the harmonisation of Croatia's financial system regulations with EU legislation, which intensified in 2005. Several new acts were passed in 2005 and some were amended, while projects expected to contribute to the transparency of Croatia's financial system were continued. The comprehensive new Civil Obligations Act was adopted early in the year, regulating contractual and default interest. The new Investment Funds Act and the new Insurance Act were also adopted in 2005, aiming at adapting regulations to the latest developments in investment funds and insurance markets. The new Accounting Act and the new Audit Act were marked by a series of technical amendments required by experts in the field as well as by harmonisation with *acquis communautaire*. Of the new laws adopted, special attention should be given to the Act on Croatian Financial Services Supervisory Agency, which formally united supervisory institutions of the non-banking financial sector. Thus, the Croatian Financial Services Supervisory Agency (HANFA) started operating early in 2006, while at the same time the Croatian Securities Commission, Agency for Supervision of Pension Funds and Insurance and the Directorate for the Supervision of Insurance Companies ceased to exist.

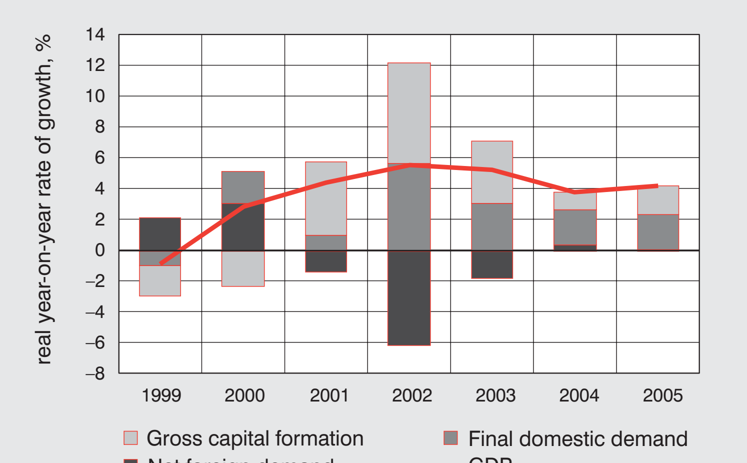
In addition to the adoption of several new laws, changes to the institutional framework of Croatia's financial sector were brought about by the amendments to the existing acts, with amendments to the Execution Act, the Act on Housing Savings and Government Incentive to Housing Savings and the Foreign Exchange Act entering into force. Croatian Registry of Credit Obligations (CROC) is also expected to start operating sometime in 2006, however it should be stressed that its implementation has fallen behind the planned schedule. The movable property registry has not been established yet, but arrangements regarding its implementation are currently under discussion. The land registry and cadastral reform project has proceeded as planed, however, due to its complex nature it is carried out in four steps, of which only the first one has been fully completed.

# 2 Macroeconomic Developments

Positive developments in connection with the basic aggregate economic and financial indicators that were observed in the first half of the year continued throughout the second half of 2005. Economic growth further accelerated, the inflation rate, despite increasing, remained low and external debt growth slowed down as a result of government borrowing in the domestic market and the CNB monetary policy measures. However, widening of the current account deficit indicates further deterioration in foreign trade imbalance. As yet, this has not led to the weakening of the domestic currency, which remains stable. To the contrary, unusual seasonal appreciation pressure from the second half of 2005 became even more prominent at the beginning of 2006. Such kuna exchange rate movements indicate that despite continued growth of foreign trade imbalance, financial markets are optimistic as to the growth of Croatia's economy and its overall development on the road to full membership in the EU, especially following the opening of pre-accession negotiations early in October 2005.

In the second half of the year, real economic growth did not maintain the high level of growth from the first half of the year. However, it accelerated compared with the previous year, raising the GDP growth rate from 3.8% in 2004 to 4.3% for the entire 2005, according to the quarterly GDP calculation. The major growth generator was once again personal consumption, which, considering a somewhat slower growth of wages, increased primarily under the influence of the rise in consumer loans. Gross capital formation also made a great contribution, thanks to the rise in private investments. Investments in construction played the most prominent role, while government capital expenditures played a lesser role due to the completion of the road construction investment cycle. In contrast to the first half of the year, when net foreign demand made a negative contribution to economic growth, by the end of the year high tourism revenues in the third quarter and economic recovery of Croatia's main trading partners in the fourth quarter resulted in net foreign demand making a positive contribution to the country's economy. Data collected thus far indicates that strong economic growth continued through the first months of 2006.

**Figure 1** Economic Growth



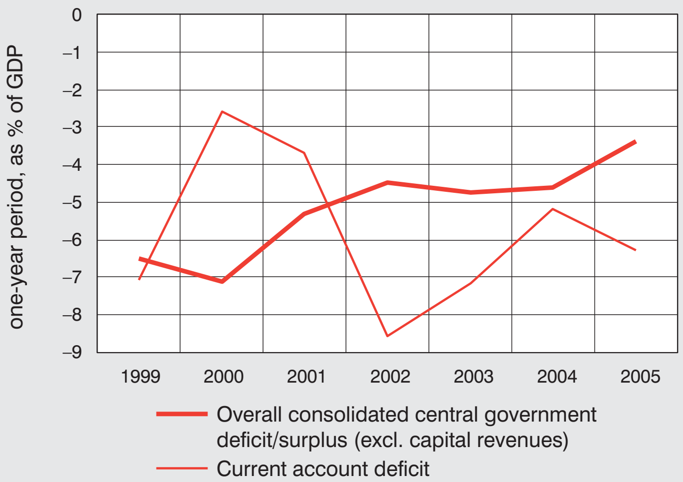
Source: CBS.

Due to its level, but even more so due to its structure, economic growth in 2005 again failed to contribute to the improvement of Croatia's foreign trade imbalance. To the contrary, the annual current account deficit rose to 6.3% in 2005, from 5.1% in 2004. The increase resulted from the decline in the annual growth rate of goods exports compared with the previous year paired with the parallel increase in the growth of goods imports. An even wider balance of payments deficit was prevented by much better tourism revenues, which grew by a strong 11.9% in 2005 year-on-year.

On the other hand, fiscal policy efforts during 2005, led to the greatest improvement of government finance indicators in the past three years. Consolidated general government deficit, on modified accrual basis, reached 4.1% of GDP in 2005, 0.8 percentage points less than in 2004 and 2.1 percentage points less than in 2003. General government deficit, on cash basis, reached 3.7% of GDP compared with 5% the year before. Consolidated central government deficit also continued declining, ending the year at 3.4% of GDP on cash basis. However, analysts estimate that a more substantial narrowing of the budget deficit in 2006 will not be possible due to strong public spending, so despite better tax revenues fiscal deficit could exceed the planned 3.3% of GDP, according to their projections. Additional negative effect is expected from the repayment of debt to pensioners as it might increase consumption and speed up the growth of exports. Further, the increase in interest rates abroad which is expected throughout 2006 may negatively affect the government's interest expenditures and thus its total expenditures.

Inflation continued its upward trend started in 2004. The year-on-year rate of change in the consumer price index in December 2005 totalled 3.6%, its five-year high, rising significantly on the 2.7% in 2004. Regardless, this year's inflation rate may still be considered low, although higher than the average annual inflation rate of 2.3% in the euro area. In 2004, the two rates were equal. One of the main reasons for

Figure 2 Government Finance and External Imbalance

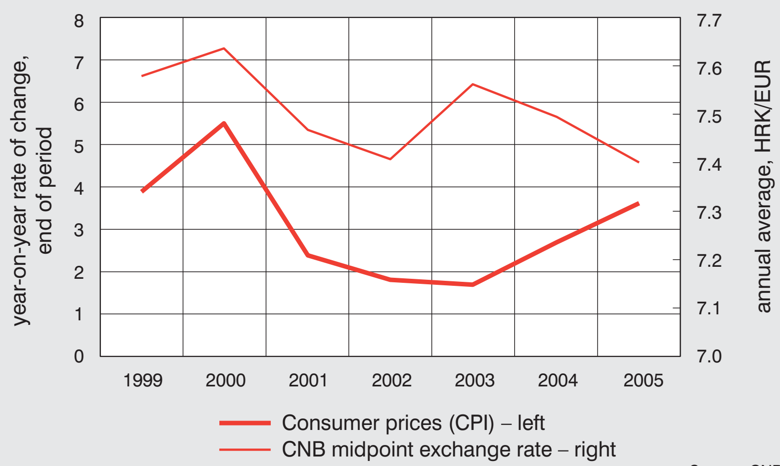



Sources: CNB and MoF.

inflation growth is to be found in the rising price of crude oil in the world market, which resulted in the growth of import prices as well as domestic prices. This rise was affected also by unfavourable movement of the prices of foodstuffs and the increase in administratively regulated prices. However, core inflation, which excludes these two price categories, also increased to 3% compared with 1.9% in 2004. A more substantial inflation increase was halted thanks to the strengthening of the domestic currency against the euro, in nominal terms, slower growth of wages, rise in competitiveness in retail sale and the general increase in labour productivity. Further rise of inflationary pressures is not expected in 2006.

In 2005, price stability continued to be based on maintaining the relative stability of the exchange rate of the kuna against the euro, which is the main nominal anchor for inflation expectations in the country and which affects the stability of import prices

Figure 3 Prices and Exchange Rate

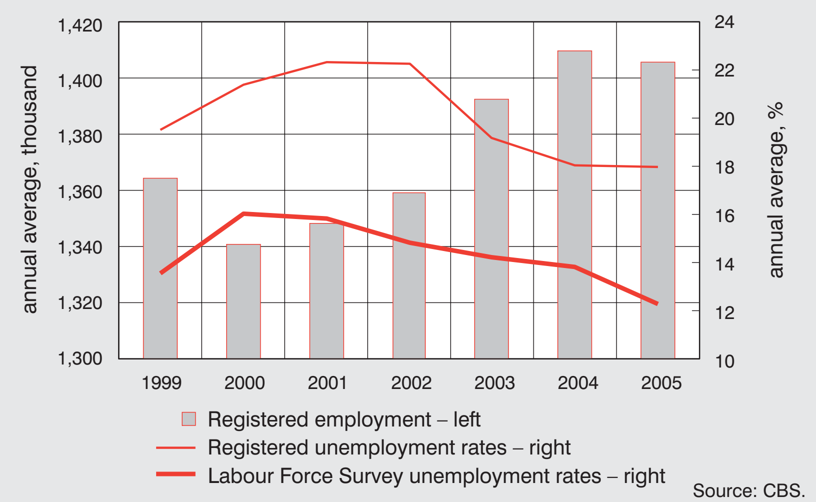



Source: CNB.

from the euro area. The average annual kuna/euro exchange rate appreciated from 7.50 HRK/EUR in 2004 to 7.40 HRK/EUR in 2005. Since the average annual exchange rate has been maintained within a band of 7.4 to 7.6 kuna for one euro in the past seven years it may be said that the exchange rate of the kuna remained stable. However, due to the absence of the usual depreciation pressures at the end of 2005 and increasingly stronger appreciation pressures on the exchange rate of the kuna against the euro in 2006, the exchange rate might exceed this range in 2006. This may be attributed to great demand for kuna, spurred primarily by intensified borrowing of the government in the domestic market but also more frequent issues of kuna securities by domestic companies.

Despite the strong economic growth, registered unemployment rate reduced only mildly, from 18.1% at the end of 2004 to 18.0% at the end of 2005, with registered employment unfortunately declining as well. Nevertheless, positive developments were registered by the Labour Force Survey unemployment rate, which reduced from 13.8% at the end of 2004 to 12.3% at the end of 2005, its lowest level since 1998.

**Figure 4** Employment and Unemployment Rates

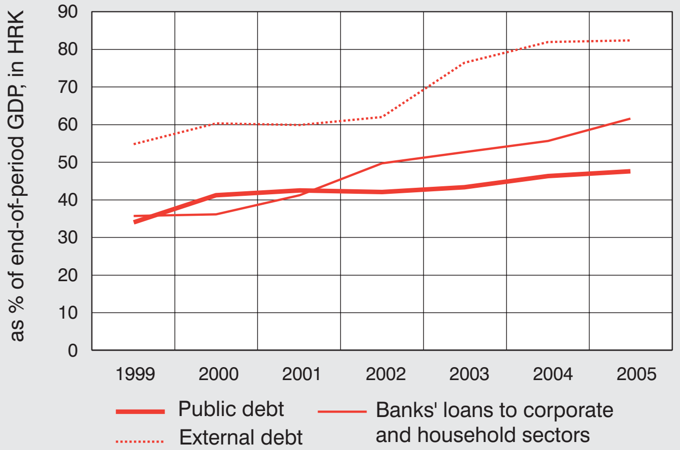



Source: CBS.

Economic growth, based on consumption and private investments, was to the greatest extent supported by continued strong banking sector lending. Banks' corporate and household loans went up to 61.4% of GDP until the end of 2005 compared with 55.7% of GDP they reached at the end of 2004. Although household loans continued dominating in the increase, by growing 20.3% on the previous year, 2005 was dominated by strong growth of placements to the corporate sector. The growth rate of bank loans to the corporate sector went up from 8.0% in 2004 to 16.3% in 2005.

Since domestic deposits grew by 10.1% in 2005, bank lending of this intensity could not be financed by the insufficient domestic sources of funds. As a result, foreign liabilities of banks went up by 9.7% in 2005, contributing to the rise of external debt to GDP ratio to 82.3%, up 0.2 percentage points on the end of 2004.

Figure 5 Main Financial Indicators




Source: CNB.

Monetary policy measures aimed at halting private sector external debt growth as a share of GDP at the current level in 2005 have not been proven as sufficiently effective as yet. It has become more and more clear that external debt can be reduced only by harmonised monetary and fiscal policy measures. Although external debt growth could perhaps be curbed by even stricter monetary policy measures, this would negatively affect economic growth.

# 3 International Environment

Despite the rise in the prices of energy and raw materials and adverse weather conditions, strong growth of the world's economy continued in the second half of 2005. The United States of America remained the main growth generator among the industrial countries, with growth being spurred by the continued recovery of the Japanese economy as well as economies of EU Member States. As in the first half of the year, economic growth in Central and East European countries, averaging above 5%, was much higher than that in the EMU Member States. Strong growth continued also in the emerging markets, particularly those of China and India where the rate of growth exceeded 8% and Russia where it exceeded 6%. It is particularly the demand from these countries that had the greatest influence on the increase in price of raw materials, which marked the second half of 2005 and contributed to the rise in inflationary expectations in the EMU and the majority of other countries. In accordance with estimates by international financial institutions, global economic growth may be given additional strong impetus in 2006 if economic growth of emerging markets exceeds expectations and financial surpluses of companies from developed countries are directed at new investments or growth of wages and dividends. The European Commission forecasted global economic growth of 4.6% in 2006 and 4.3% in 2007 in real terms.

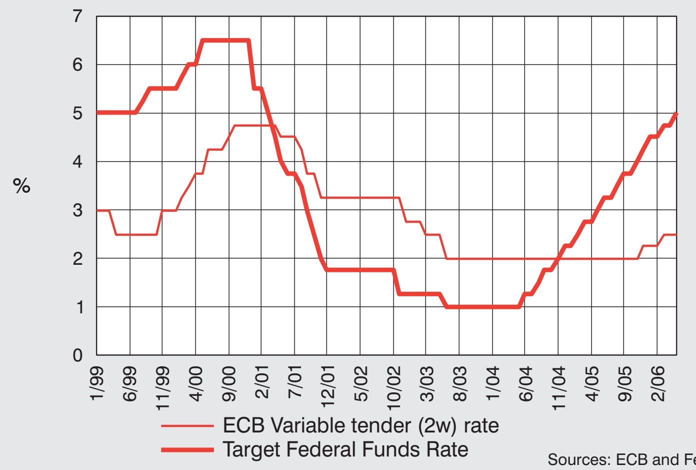
**Table 1** Real Economic Growth in Selected Countries

| | 2003 | 2004 | 2005 | 2006[a] | 2007[a] |
|---|---|---|---|---|---|
| China | 10.0 | 10.1 | 9.9 | 9.5 | 9.0 |
| Russian Federation | 7.3 | 7.2 | 6.4 | 6.0 | 5.8 |
| Central and Eastern Europe | 4.7 | 6.5 | 5.3 | 5.2 | 4.8 |
| USA | 2.7 | 4.2 | 3.5 | 3.4 | 3.3 |
| Japan | 1.8 | 2.3 | 2.7 | 2.8 | 2.1 |
| EU | 1.3 | 2.5 | 1.8 | 2.4 | 2.3 |
| EMU | 0.7 | 2.1 | 1.3 | 2.0 | 1.9 |

[a] Forecast. Source: IMF, World Economic Outlook Database, April 2006.

In the EMU countries, the second half of the year was marked by a low economic growth rate as well as a rise in indicators pointing towards a recovery in the economy of the region and speculations on the possible rise in the key interest rate of the European Central Bank due to the increase in inflationary pressures created primarily by the rise in the prices of oil. In line with expectations, ECB started gradually tightening its monetary policy, raising its key interest rate by 25 basis points in December from its historical low of 2% to 2.25%. This was the first change in the key interest rate since June 2003 and the first increase since October 2000. According to analysts' forecasts it is expected to stand somewhere between 3% and 3.5% at the end of 2006. The annual inflation rate totalled 2.2% in December 2005, which was less than over the previous months, however, still not in line with ECB's target of an annual inflation rate of less than 2%. It is expected to remain at above 2% in the first half of 2006, declining to the target level in the second half of the year. Improvement in economic and business confidence indicators for the EMU at the end of 2005 indicated the strengthening of economic activity and confirmed expectations of continued economic recovery that started in the second half of 2005. This prompted the ECB to raise the key interest rate once again in March 2006, to 2.5%. The yields of European bonds also reacted to positive economic growth expectations for 2006. They were

**Figure 6** Key European and American Interest Rates




Sources: ECB and Fed.

higher at the end of the year than at the end of the fist half of the year, continuing their growth also in 2006.

After having appreciated against the European currency over several consecutive months, from March until July 2005, the US dollar weakened at the beginning of August. However, its decline was not significant due to good indicators for the US economy. The insecurity surrounding the results of the German September election caused further appreciation of the dollar against the euro. One of the reasons for the dollar gaining against the euro was also the rising difference between the Fed's and the ECB's key interest rates. However, due to the expectation that the Fed reached or neared its neutral interest rate, since its sixteenth successive increase in May 2006 raised it to the level of 5% and the parallel increase in the ECB's key interest rate from 2% to 2.5% combined with speculations about the imminent new increase of 25 basis points, in May 2006 the dollar declined to its lowest level in the past year. Further downward pressures on the dollar are expected in the remainder of 2006. These expectations are sustained by the continually high current account deficit in the US balance of payments, which raises the issue of its long-term sustainability. The US balance of payments deficit could not be improved even by China's announcement in July 2005 that it would stop pegging the exchange rate of the Yuan to the American dollar, allowing its national currency to appreciate against the American currency. The Yuan appreciated by only 2.1%, which did not satisfy the US, which continued putting pressure on China because the undervalued Yuan is considered one of important causes for the high American trade deficit.

Despite the rise in short-term interest rates in the US, conditions for financing in the world's financial market remained very favourable in 2005 thanks to the unusually low risk premium and large corporate sector savings in developed countries. However, corporate savings are expected to increase with time due to increase in investments, which may lead to the rise in long-term interest rates in the coming period.

Rising prices of crude oil continue to pose the greatest risk for the expected high growth rates of the world's economy. After having risen to its then-highest level of some USD 60 per barrel in the second half of 2005, the price of crude oil stagnated and even mildly reduced under the influence of OPEC's announcement that it would increase its daily output. However, instability in the Middle East, with continued conflicts in Iraq and Iran, the fourth largest oil exporter and the second country by the volume of its oil reserves, threatening to continue its nuclear programme and stop oil deliveries, raised the price of oil to the level of as much as USD 70 per barrel in August. The following period was marked by adverse weather conditions in the US and damages to oil refineries in the Mexican Gulf as well as the announcement by the International Energy Agency that it will make available to the market 60 million barrel from its strategic reserves. As a result, the price of crude oil continued moving around some USD 70 per barrel. This increased the importance of other oil exporting countries, in addition to those that are OPEC members, such as Russia, countries of the Caspian Sea region, Canada and Brazil. The last quarter of 2005 again saw a decline and temporary stabilisation in the price of oil which lasted until early 2006 when problems arose in connection with the gas deliveries from Russia and oil deliveries from the largest African oil exporter, Nigeria, which again caused oil price fluctuations. Combined with Iran's continued downward pressure on OPEC's output, political situation in Bolivia and Venezuela in April 2006 pushed the price of oil to its all-time high of USD 75.35 per barrel. This affected retail prices of oil products in Croatia as well as many other countries making it only a matter of time when this will be reflected in other consumer prices as well.

In addition to the price of oil, factors that could negatively affect further growth of the world's economy are stricter financing conditions resulting from the rise of key interest rates in the US and the EMU and the threat of the possible collapse of the swollen prices in the world's large real estate markets. The influence of the rising global imbalance, with the US record high balance of payments deficit on one side and growing surplus in oil exporting countries, some industrial countries, Japan, China and some other growing Asian markets on the other, should not be ignored. A threat to further positive developments in many growing markets are wide balance of payments deficits, especially in Europe, as well as speedy growth of loans. As a result, international financial institutions recommend to these countries, including Croatia, to make changes in their fiscal policies and curb lending activities.

**Table 2** Global Outlook for Key Economic Indicators

| IMF outlook for 2006 | GDP, real year-on-year rate of change | Inflation, year-on-year rate | General government account, as % of GDP | Current account, as % of GDP |
|---|---|---|---|---|
| World | 4.9 | 3.8 | | |
| Major advanced countries | 2.8 | 2.3 | –3.9 | –2.5 |
| EU | 2.4 | 2.1 | –2.6 | –0.7 |
| EMU | 2.0 | 2.1 | –2.3 | –0.2 |
| Emerging markets | 6.9 | 5.4 | | 4.1 |
| Central and Eastern Europe | 5.2 | 4.1 | | –5.5 |

Source: IMF, World Economic Outlook Database, April 2006.

# 4 External Debt

Croatia's external debt totalled EUR 25.54bn at the end of 2005, up EUR 2.76bn or 12.1% on the end of 2004. External debt to GDP ratio grew by 2.3 percentage points in 2005, totalling 82.5% at the end of the year. External debt to GNI ratio[2] went up by 3.1 percentage points, ending the year at 85.2%. This placed Croatia into a group of severely indebted countries,[3] according to the World Bank criteria. However, external debt as percentage of exports of goods and services, which stood at 167.0% at the end of 2005, was much below the level of 220% that would indicate potential external liquidity problems. This relatively favourable indicator of external debt as a percentage of exports of goods and services may be accounted for primarily by high revenues from services rendered in tourism, which are also expected to grow over the coming medium-term period. However, it should be taken into account that this type of revenues is most susceptible to adverse external factors (armed clashes, terrorism, adverse weather conditions, etc.). In order to present a complete picture of external debt, it should be noted that Croatia's and World Bank's statistics of external debt do not include the balance of short-term trade credits with maturity of up to six months, which were estimated at EUR 3.2bn at the end of 2005. Their inclusion raises external debt to 92.9% of GDP, 96.0% of GNI and 188.1% of exports of goods and services.

**Table 3** Selected Indicators of Republic of Croatia External Debt and External Liquidity

| **Debt stock indicators** | 31/12/2001 | 31/12/2002 | 31/12/2003 | 31/12/2004 | 31/12/2005 |
|---|---|---|---|---|---|
| External debt as % of GDP | 60.7 | 61.5 | 75.5 | 80.2 | 82.5 |
| External debt as % of GNI | 62.4 | 63.0 | 78.7 | 82.1 | 85.2 |
| External debt as % of exports (goods and services) | 124.6 | 135.3 | 150.8 | 160.0 | 167.0 |
| Gross international reserves as % of external debt | 39.6 | 37.5 | 33.1 | 28.3 | 29.1 |
| Gross international reserves in terms of months of imports (goods and services) | 5.3 | 4.9 | 5.2 | 4.8 | 5.1 |
| **Debt flow indicators** | | | | | |
| Principal and interest payment as % of exports (goods and services)[a] | 26.2 | 27.4 | 20.1 | 21.3 | 23.7 |
| Interest payment as % of exports (goods and services)[a] | 6.2 | 5.7 | 4.6 | 4.6 | 5.0 |

[a] Includes principal payments on long-term debt net of principal payments on trade credits and direct investments, as well as total interest payments net of interest payments on direct investments.
Source: CNB.

2 Gross national income (GNI) is calculated as the sum of the gross domestic product and balance at the factor income account of the balance of payments.

3 According to the World Bank classification, severely indebted countries are characterised by present value of external debt service to GNI exceeding 80% and/or by present value of debt service to revenues from exports of goods and services exceeding 220%.

External debt service burden measured by the ratio of debt repayment to goods and services exports, on the rise since 2003, totalled 23.7% at the end of 2005, indicating that Croatia set aside slightly less than a quarter of its total export revenues to repay its external debt: principal and interest. The acceptable upper level for this ratio is considered to be 30%[4], which, for the time being, excludes Croatia from the group of countries whose external debt burden is relatively high. Nevertheless, simplified calculations indicate that if Croatia's external debt and GDP continued growing at average rates in the period from 1999 to 2005[5] at a weighted interest rate of 4%, external debt interest repayment costs could already in 2010 exceed the annual GDP growth. However, the increase in GDP growth rate combined with the parallel reduction in external debt growth rate in 2005, make the picture of future developments appear more favourable. In conclusion, this calculation indicates that it is of key importance in the medium-term to continue with economic policy that is aimed at stimulating stronger economic growth than realised over the past several years, making sure that it outpaces total external debt of the country.[6]

In contrast to 2004, when the greatest rise in the debt of domestic sectors, both in absolute and relative terms, was registered by the banking sector, in 2005 this was the case with other domestic sectors[7], whose external debt grew by EUR 1.35bn (23.2%), making up almost 50% of the total external debt growth of all domestic sectors in 2005. This should be attributed to activities of banks, which in striving to avoid the CNB's measures aimed at curbing their external borrowing transferred some of their operations to either directly or indirectly connected non-banking enterprises as well as instructed their other clients to borrow directly from their owners abroad. In the same period, the government's share in total external debt declined from 31.8% to 27.6% in consequence of an active government strategy which encompasses gradual reduction of the budget deficit and its increased financing in the domestic capital market. However, in circumstances of limited domestic savings, the replacement of the government's foreign liabilities by domestic liabilities resulted in the aforementioned growth of foreign liabilities of other domestic sectors, primarily banks, from whom the government borrowed in the domestic capital market, while banks financed their loans to the government partly from foreign sources.

The greatest risk for Croatia's timely servicing of its external debt in 2006 will arise from the announced growth of interest rates in the EMU, since banks' external liabilities are mostly contracted at a variable interest rate based on the EURIBOR. The market expects ECB's major interest rate to grow towards the level of 3% until the

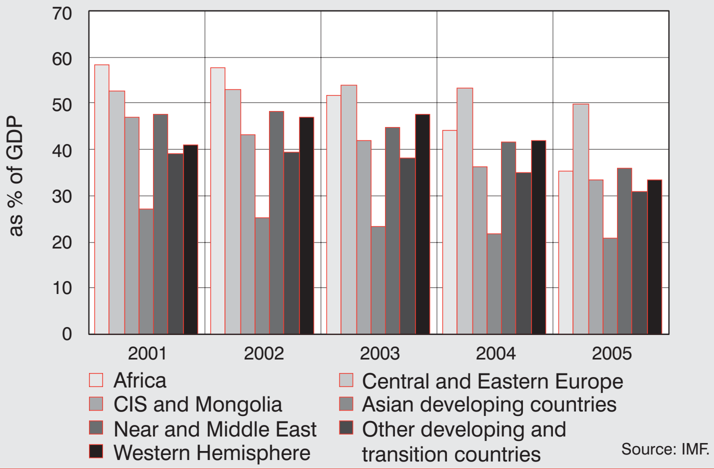
4 Babić, M. and A. Babić: *Međunarodna ekonomija*, 2003, pp. 471.

5 In the period from 1999 to 2005 Croatia's average annual external debt growth totalled 15.7%, while GDP grew by 7.0% in nominal terms. Both indicators have been derived from values in euros.

6 Analysis of the External Debt of the Republic of Croatia, Croatian National Bank, April 2006.

7 Other domestic sectors include: other banking institutions, non-banking financial institutions, public enterprises, mixed enterprises, other enterprises, non-profit organisations, craftsmen and traders as well as households.

**Figure 7** External Debt Across the World

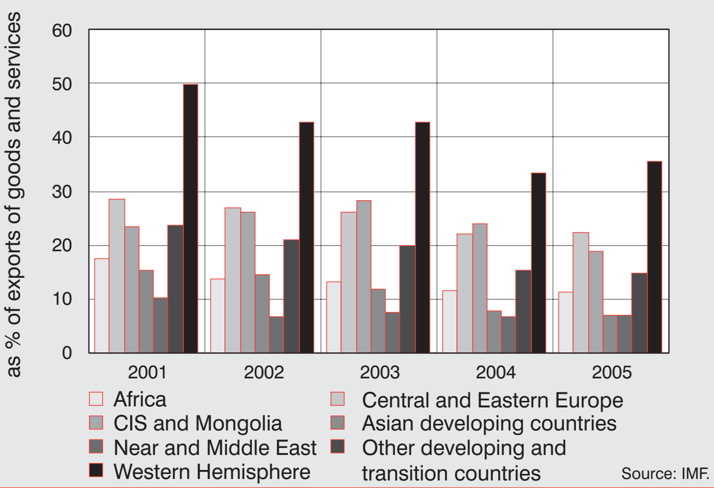



Source: IMF.

end of 2006 with possible further increase of the risk premium on the debt of countries like Croatia if the increase in American and European interest rates further reduces the appetite of global investors for such investments. Although at the moment the kuna is not expected to appreciate in 2006, if the expected change in investor appetite, which was visible already at the end of 2005, occurs and Croatia continues increasing its external debt at the pace observed over the past several years, reversals in the exchange rate movements that would negatively affect the existing debt service burden are possible.

By external debt to GDP ratio in international comparison Croatia stands well above the average for Central and Eastern European countries, which, according to this criterion, make up the most indebted region in the world, followed by African countries and countries of the Near and the Middle East. All of these regions have seen a noticeable downward trend in the average external debt to GDP ratio over the past few

**Figure 8** External Debt Burden Across the World




Source: IMF.

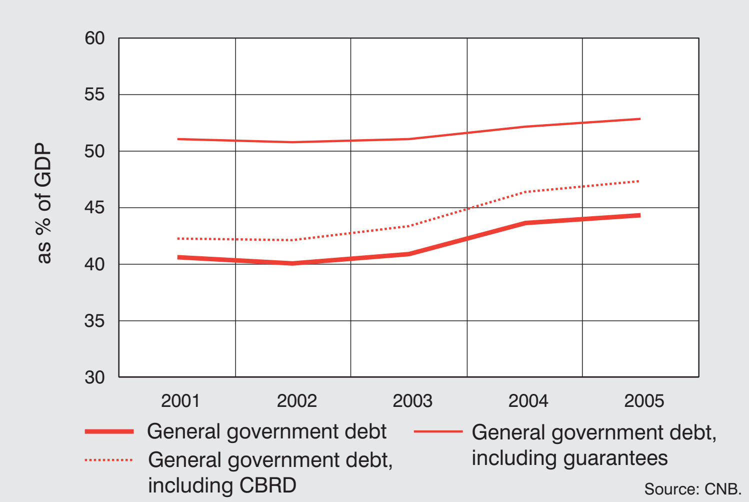
years, while in Croatia it increased substantially during the period. On the other hand, by the share of debt repayment in goods and service exports, which reflects the external debt service burden, Croatia does not stand out from the average for Central and Eastern European countries. This indicator reached the highest level for a group of countries from the Western Hemisphere, comprising mostly Latin American countries, which traditionally have the greatest difficulties in servicing their external debt.

# 5 Public Debt

Public debt to GDP ratio stands stable below the Maastricht criterion of 60%. In accordance with this criterion public debt includes only general government debt without issued government guarantees. General government debt to nominal GDP ratio totalled 44.3% in 2005, rising by 0.6 percentage points (HRK 8.4bn) on the end of 2004, reflecting a slowdown in the growth of this indicator in 2005 compared with the previous year. The coming period is expected to see a reduction in the relative public sector debt, primarily as a result of continued fiscal consolidation and reduced budget deficit. General government debt to GDP in comparable CEE countries reflected the greatest share of general government debt in GDP in Hungary (60.2%), Poland (52.3%) and Slovakia (36.8%).

Nevertheless, public sector debt (general government debt inclusive of CBRD debt and exclusive of non-exercised government guarantees) continued growing, totalling HRK 108.6bn at the end of December 2005, i.e. 47.4% of GDP in nominal terms. Total public debt (total general government debt and CBRD debt, inclusive of HRK 12.4bn of issued government guarantees),[8] totalled HRK 120.9bn or 52.8% of GDP in nominal terms at the end of 2005.

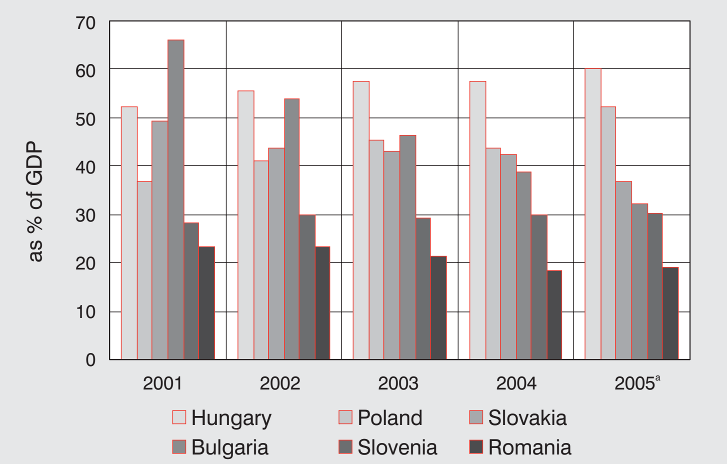
**Figure 9** Public Sector Debt




Source: CNB.

8 This definition of public debt is provided by the Budget Act (Official Gazette 96/2003).

**Figure 10** Consolidated General Government Debt in Central and Eastern European Countries

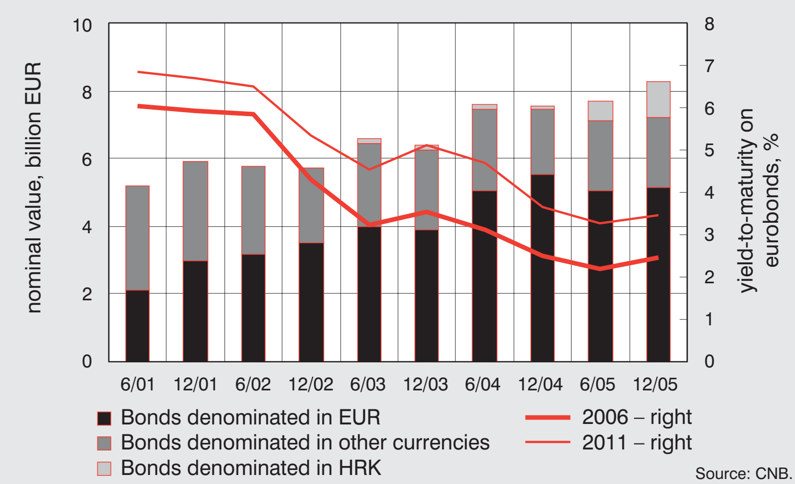



[a] Forecast.

Sources: Eurostat and IMF.

In contrast to the previous years, total public debt increase (general government and CBRD debt, exclusive of non-exercised government guarantees) in 2005 was accounted for by borrowing in the domestic financial market. As a result, the domestic component of the debt rose by HRK 13.5bn in 2005 compared with 2004, ending the year at 24.7% of GDP in nominal terms. In the same period, the foreign component of the debt declined by HRK 3.7bn, with its share in GDP totalling 22.7% in nominal terms.

**Figure 11** Republic of Croatia Bonds and Eurobond Yields




Source: CNB.

Despite the substantial decrease, the still high ratio of external debt to total public debt makes Croatia sensitive to external refinancing risk. A recent illustration of this risk is the rise in yields on Croatian eurobonds in the second half of 2005. Interest rate risk is present also in connection with liabilities with a variable interest rate. In order to achieve stability in servicing the public debt, the public debt management strategy in 2006[9] envisages fiscal discipline and a rise in the share of debt with a fixed interest rate in total debt.

In addition to the refinancing risk, as a result of its high external debt to total debt ratio (47.9%), the country continues to be exposed to substantial currency risk, accentuated by the indexation of a large share of domestic debt to the euro, although the share of the debt denominated in foreign currency in total domestic debt reduced at the turn of the year. The share of the nominal value of government and municipal bonds denominated in foreign currency in the total amount of bonds issued in the domestic market totalled 72% at the end of 2005, noticeable 22 percentage points less than at the end of 2004. However, the exposure of the public sector to currency risk at this level additionally stimulates the monetary authorities to maintain a stable exchange rate of the domestic currency to the euro in nominal terms.

Aiming at reducing its exposure to currency risk, the government issued a 10-year bond worth HRK 3.5bn in 2005 (the nominal value of this bond totalled HRK 5.5bn since the second tranche worth HRK 2bn was issued in February 2006). This issue is also very important in terms of making the kuna yield curve longer because it is the first ever-issued 10-year bond denominated in kuna. It is also important in the context of Croatia's alignment with the fourth Maastricht criterion relating to the stability of long-term interest rates on 10-year government bonds or comparable instruments. The funds obtained by this issued were to the greatest extent earmarked for the repayment of the DAB bond issued in 2000 that became due in December.

# 6 Non-Financial Enterprises[10]

The relative debt burden of the non-financial enterprises sector continued growing in 2005, at faster pace than over the previous years, raising the estimated value of their total debt to 52.5% of GDP. The annual growth rate of the debt of non-financial enterprises peaked at its all-time high of 18% in 2005. Debt to banks continued to dominate the debt structure of non-financial enterprises, although its share mildly declined in 2005 in favour of external debt and particularly debt to leasing companies, which grew at an extremely high rate of 70.5% year-on-year. Such speedy growth of the debt of non-financial enterprises to the non-banking sector affected the structure of their debt, with their debt to banks falling below 56% of total debt of non-banking enterprises compared with 63.5% it amounted to in 2002. The increase

9 A Guide through the 2006 Budget, MoF, December 2005, pp. 22-24.

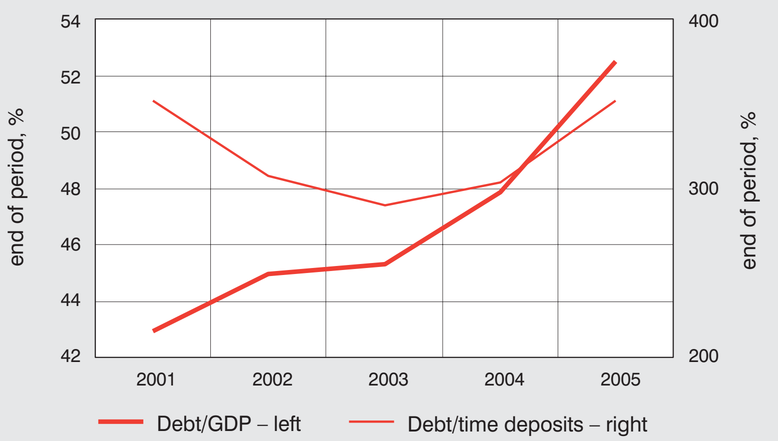
10 The Croatian Bureau of Statistics does not prepare the consolidated balance sheet of the non-financial enterprise sector, and the central bank does not prepare a financial survey, but only a monetary survey. Hence, financial assets and liabilities of the non-financial enterprise sector can be only roughly estimated on the basis of the monetary survey and unconsolidated balance sheets of financial institutions. An additional source for estimating assets, liabilities, receipts and outlays of the non-financial enterprise sector are unconsolidated financial reports of entrepreneurs, which are collected by the FINA.

in the share of financing outside banks and improvement in the terms and conditions of financing at banks also affected the debt repayment structure of non-financial enterprises. As a result, the interest burden grew much slower than the debt burden, at highly volatile one-digit rates, which resulted in substantial reduction of the share of paid interest in the total average debt to banks, to 5.2% in 2005 compared with 7.1% in 2001.

As a benchmark value that indicates the low level of debt of the non-financial enterprise sector in Croatia compared with the levels in developed economies one may use the indicator for EMU countries, which has been oscillating around some 62% of GDP for several years, with loans to this sector growing at rates between 5% and 10% a year, depending on maturity. If such trend in the EMU continues and debt of Croatia's non-financial enterprise sector and its nominal GDP continue growing at rates observed in 2005, the EMU's non-financial enterprise sector debt to GDP ratio will be exceeded in two years. Movements in the ratio of their total debt to time deposits at banks already indicate a possible reduction the liquidity of non-financial enterprises. This ratio rose to above 350% reaching the level observed at the end of 2001 when indicators of the financial indicators for this sector were considerably more unfavourable than at present.

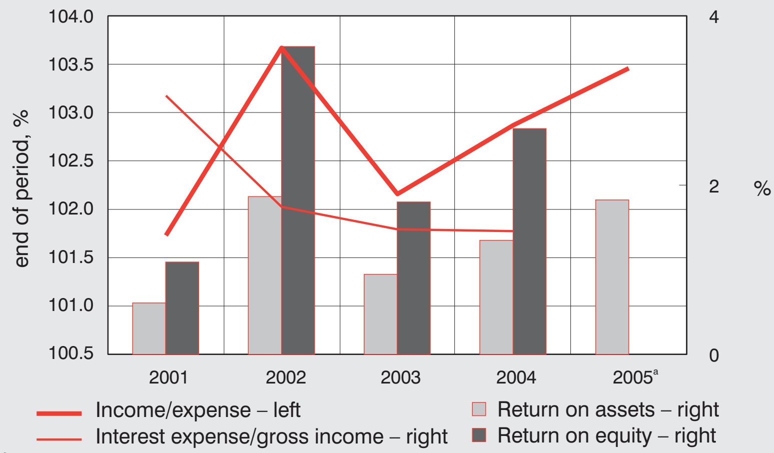
The growth in the total debt of non-financial enterprise sector did not cause their financial performance indicators to deteriorate, but rather they continued improving. An estimate based on the data for the first nine months of 2005, projects the return on their assets (ROA) for 2005 at 1.83%, which represents a sizeable increase compared with 2003 and 2004 when this indicator totalled 0.94% and 1.35% respectively. There is also the (pre-tax) income to expenses ratio, which has been stable at above 100% for some time. Based on the data for the first nine months of 2005, this indicator could end the year at 103.5%, close to its all-time high of 103.7% in 2002.

**Figure 12** Non-Financial Enterprises' Debt




Sources: CNB, MoF and CNB calculations.

**Figure 13** Enterprises' Debt Burden and Profitability



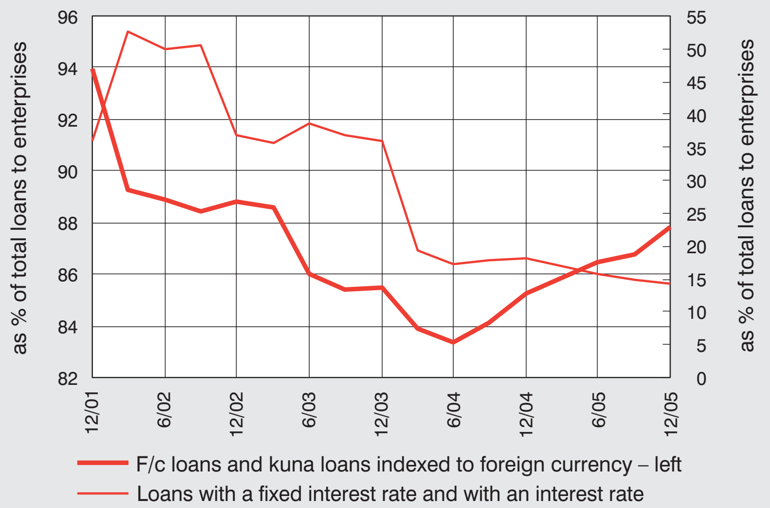

ª Estimate.

Sources: FINA and CNB calculations.

Risks that threaten non-financial enterprises again mildly increased in 2005, with the most important risks being the expected growth of global long-term interest rates and the less likely, but more dangerous risk, of the weakening of the domestic currency. The share of long-term corporate loans whose interest rates may vary within a year continued rising, ending the year slightly below 86% of total long-term bank loans. The share of corporate loans denominated in f/c, inclusive of kuna loans indexed to f/c, rose from 85.2% to 87.9% over the past year. However, the current downward trend of the exchange rate in fact suits the majority of enterprises since their f/c expenses are larger than their f/c revenues, while it negatively affects a smaller number of export-oriented enterprises. If this trend continues, this could have negative macroeconomic consequences. On the other hand, sudden or sizable weakening of the kuna over a prolonged period, would negatively affect the debt service burden of the majority of non-financial enterprises.

In the circumstances where more than 90% of bank loans are indexed to f/c it is difficult to precisely quantify the currency risk that Croatian enterprises are exposed to due to the lack of sufficiently detailed statistical data. This risk is primarily caused by the currency imbalance of income and expenses at most enterprises, which in case of a more substantial change in the foreign exchange rate may negatively influence their liquidity. However, the weakening of the domestic currency would weaken the balance sheet of the majority of enterprises, thus negatively affecting their creditworthiness and consequently the terms and conditions of further financing. It is currently impossible to make an estimate of the influence of a more substantial exchange rate disruption on domestic demand and on the creation of a chain of illiquidity among enterprises, starting from those most exposed to currency risk, which would additionally contribute to the reduction of corporate income.

**Figure 14** Currency and Interest Rate Risk of Enterprises




Source: CNB calculations.

# 7 Households[11]

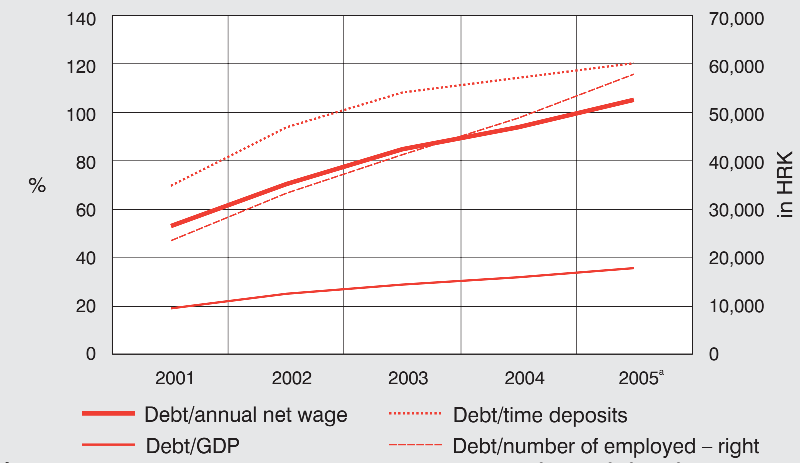
Total household debt continued growing in 2005, in both absolute and relative terms. The estimated household debt to GDP ratio went up from 32.1% at the end of 2004 to 35.9% at the end of 2005, with slightly less than 96% of the debt arising from obligations to banks. The ratio of household debt to the estimated annual net wage bill exceeded 100% for the first time, ending the year at some 105.3%. The average debt per employed person continued to grow steadily from some HRK 49 thousand at the end of 2004 to some HRK 58 thousand at the end of 2005. The ratio of household debt to time deposits at commercial banks, which exceeded 100% for the first time in 2003, grew to 120.5% in 2005.

Such movements of household debt burden indicators are a result of the continued strong growth in the supply of cheaper loans, mostly offered by commercial banks, which started in 2002. After having grown at a strong pace in 2002, the annual growth rate of household debt started reducing, totalling 20.3% in 2005, slightly over the 19.2% observed in 2004, but still substantially below the growth rate of other EU membership candidates and the majority of the new EU Member States.

Although the increase in household debt indicators calls for alert in connection with banks' financial stability and soundness, at the end of 2005 household debt,

11 The Central Bureau of Statistics (CBS) does not prepare the consolidated balance sheet of the household sector, and the central bank does not prepare a financial survey, but only a monetary survey. Hence, financial assets and liabilities of the household sector can be only roughly estimated on the basis of the monetary survey and unconsolidated balance sheets of financial institutions. Non-financial assets of the household sector are unknown. The main source for estimating receipts and outlays of that sector is the Survey on Household Consumption, which the CBS carries out once a year.

Figure 15 Household Debt



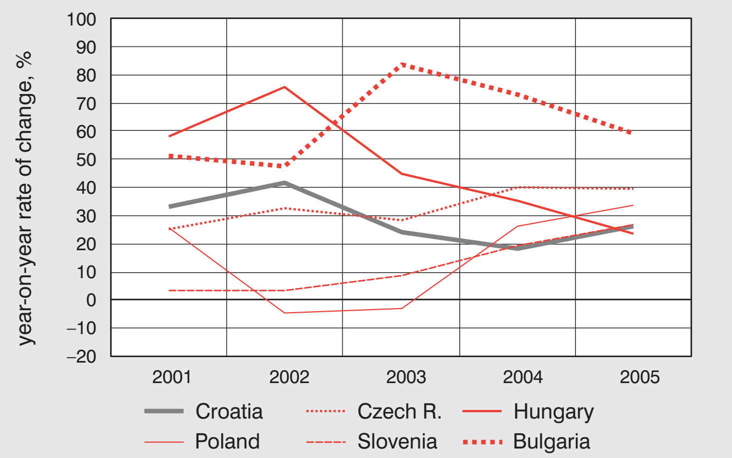

[a] Estimate.

Sources: CBS and CNB calculations.

expressed in euro, totalled 34.8% of GDP, which is still far below the level of 57% of GDP in the EMU countries. While Croatia's household debt is substantially smaller than the household debt of old EU Member Sates, the comparison with new Member States gives different results. At the end of 2005, the share of bank claims on households in those countries did not surpass 18% of GDP, which is still nearly half as much as in Croatia.

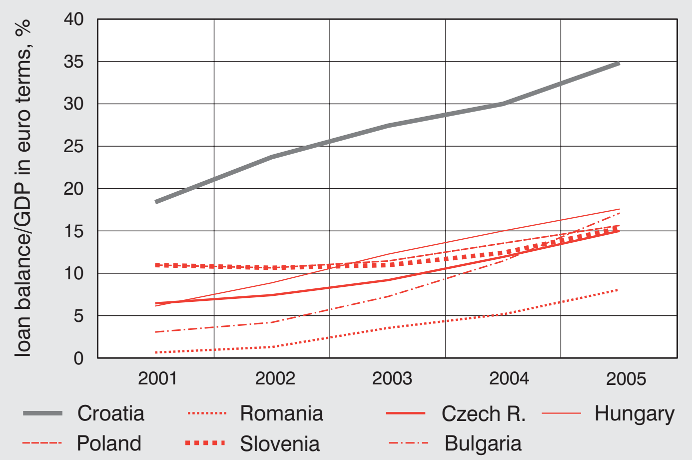
Aggregate debt service indicators also do not give reason for concern. Total debt service burden to gross disposable income ratio in 2005, which was estimated on the basis of the movements of long-term household loans on one side and GDP movements, the number of inhabitants and the net wage bill on the other, is expected to amount to 6.8%, rising compared with the 6.0% in 2004 and the 3.6% observed in

Figure 16 Bank Claims on Households in Central and Eastern Europe




Sources: CNB, CEE countries and CNB calculations.

Figure 17 Bank Claims on Households in Central and Eastern Europe

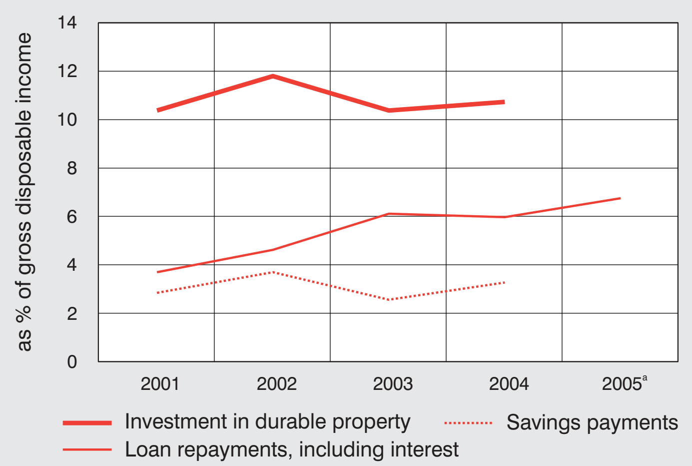



Sources: CNB, CEE countries and CNB calculations.

2000. This is roughly twice less than in EMU countries, where this indicator exceeded 10% already in 2000 and according to estimates totalled slightly below 12% at the end of 2004. Relatively slower growth of the household debt service indicators as compared to the total debt burden of this sector may be attributed to the reduction of commercial banks' interest rates on long-term loans from some 12% at the end of 2000 to some 7% at the end of 2005. In addition, the alleviation of the debt service burden was affected by greater supply of loans with increasingly longer terms to maturity over the past four years. On the other hand, the household debt service burden in EMU countries did not change much over the past decade.

Over the past year the share of loans indexed to foreign currency in the total gross value of long-term loans from commercial banks mildly increased to some 88% at the

Figure 18 Use of Household Funds

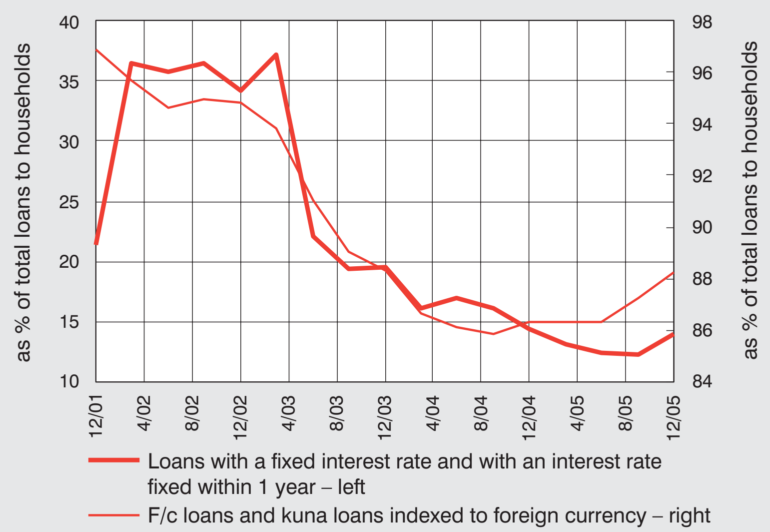



[a] Estimate.

Sources: CBS and CNB calculations.

end of 2005. Although this ratio reduced substantially compared to the end of 2001, when it exceeded 97%, it remained high due to specific traits of the Croatian economy. Such a structure of credit commitments directly exposes households to a high level of currency risk. The large exposure of households to interest rate risk, viewed from the aspect of the share of loans with remaining maturity longer than one year in total household loans, where the contracted interest rate cannot be altered within a period shorter than one year, did not change much in the past year because the said indicator stood at roughly the same level of only 14%.

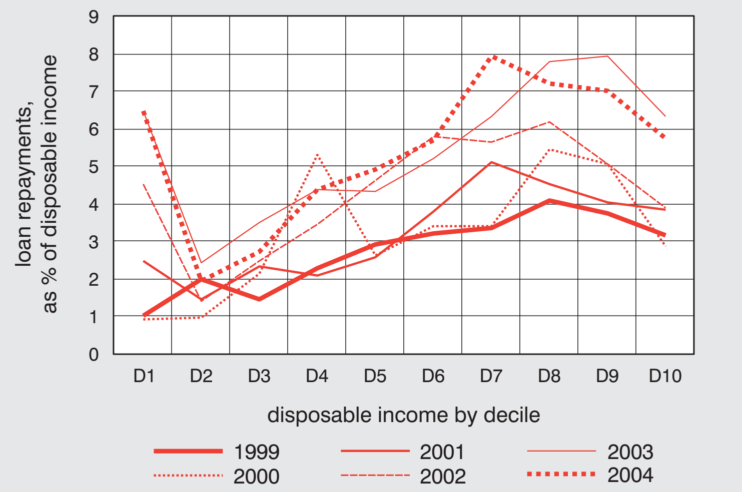
**Figure 19** Currency and Interest Rate Risk of Households




Sources: CNB and CNB calculations.

The real level of currency risk Croatian households are exposed to, with the described currency structure of their bank loans, cannot be accurately calculated. However, it may be established with certainty that young, educated persons in dependent employment are at greatest risk since they represent the most creditworthy segment of the population but also the one with the least assets. Data provided by the Croatian Bureau of Statistics confirm this assumption. It shows that loan distribution is concentrated to households with the greatest disposable income. Household debt burden is most prominent between the seventh and ninth decile of households depending on the size of disposable income, which includes some 41% of the total disposable income of households, according to the data for 2004. As of 2002 there is also a high level of debt burden in the first decile of households according to the disposable income, but still less than the debt burden between the seventh and the ninth decile, which observed sizeable growth in 2003 and 2004. Sizeable debt by the poorest section of the population should not pose a problem for the banking sector because the total amount of loans granted to this poorest section of the population is seven times smaller than the amount of the total loans approved to the seventh decile

Figure 20 Household Debt Burden by Disposable Income

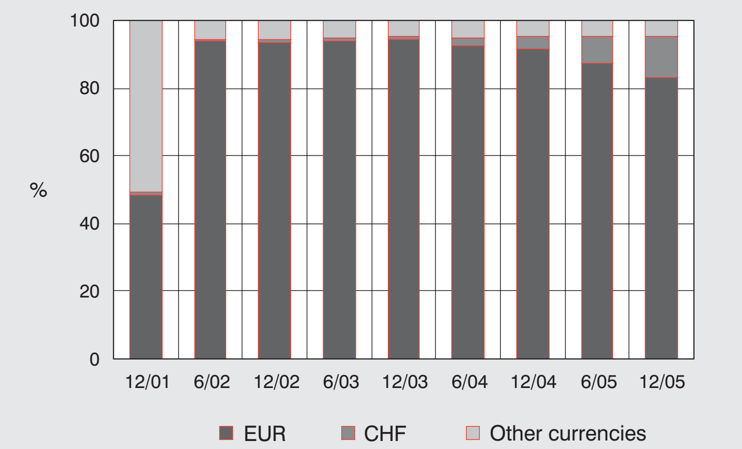



Sources: CBS and CNB calculations.

of households by disposable income.[12] Therefore, it primarily reflects low (registered) income, and not high debt of this segment of the population.

The exposure of the household sector to currency risk was additionally increased by the rise of household loans in Swiss francs or indexed to Swiss francs. This is because the kuna/Swiss franc exchange rate fluctuates more than the kuna/euro exchange rate since domestic monetary policy concerning the exchange rate is oriented towards achieving the most stable kuna/euro exchange rate. At the same time, the share of loans denominated in Swiss francs in total f/c loans and loans indexed to f/c

Figure 21 Currency Structure of Loans Indexed to F/c and F/c Loans to Non-Financial Sector




Source: CNB.

12 Kraft, E.: Household Lending in Croatia: A Comparative Perspective, 12th Dubrovnik Economic Conference, 2006, in preparation, pp. 8.

that are extended to the domestic non-financial sector[13] totalled 1.1% at the end of 2003, 4.0% at the end of 2004, rising to 12.4% at the end of 2005.

# 8 Financial Intermediation

The share of assets of non-banking financial intermediaries in total assets of the Croatian financial sector continued growing in 2005. The greatest contribution to this growth came from the rise in the share of investment and pension funds, with the share of the dominant banking sector accounting for less than 80% of total assets for the first time. Leasing companies took the second place with a share of 6.2%, while insurance companies whose share had been declining since 1999 held the third place, accounting for a share of 5.1%. The assets of leasing companies grew at much slower rate in 2005 compared with 2004 which also saw a slowdown in the rate of growth. Thus, at the end of 2005 the assets of leasing companies that are included in the CNB monetary statistics totalled HRK 20.2bn, which is 22.3% more than at the end of 2004. In the leasing portfolio structure by type of leased goods, personal vehicle leasing (operating leases) and real estate leasing (financial leases) are still predominant. In addition, the assets of leasing companies remained, almost entirely,

**Table 4** Relative Importance of Financial Intermediaries, shares in total financial intermediaries' assets, end of period, in %

| | 12/1999 | 12/2000 | 12/2001 | 12/2002 | 12/2003 | 12/2004 | 12/2005 |
|---|---|---|---|---|---|---|---|
| 1. Banks, consolidated gross assets | 87.7 | 87.0 | 87.5 | 85.0 | 83.3 | 81.4 | 78.6 |
| 2. Open-end investment funds, net assets | 0.02 | 0.2 | 0.9 | 1.4 | 1.4 | 1.8 | 2.8 |
| 3. Closed-end investment funds, net assets[a,b] | 2.6 | 3.0 | 2.3 | 1.6 | 0.4 | 0.4 | 1.2 |
| 4. Insurance companies | 7.2 | 6.8 | 5.9 | 5.7 | 5.4 | 5.2 | 5.1 |
| 5. Housing savings banks, consolidated gross assets | 0.1 | 0.4 | 0.8 | 1.1 | 1.5 | 1.8 | 1.8 |
| 6. Mandatory pension funds, net assets | | | | 1.1 | 2.0 | 2.9 | 3.6 |
| 7. Voluntary pension funds, net assets | | | | | 0.0 | 0.0 | 0.1 |
| 8. Savings and loan associations[c] | 1.1 | 0.9 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 |
| 9. Leasing companies[c] | 1.3 | 1.7 | 2.0 | 3.6 | 5.4 | 6.0 | 6.2 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Memo items: | | | | | | | |
| [a] O/w: PIFs | 2.0 | 0.2 | | | | | |
| [b] O/w: War Veterans' Fund | | | | | | | 0.6 |
| [c] Preliminary data | | | | | | | |

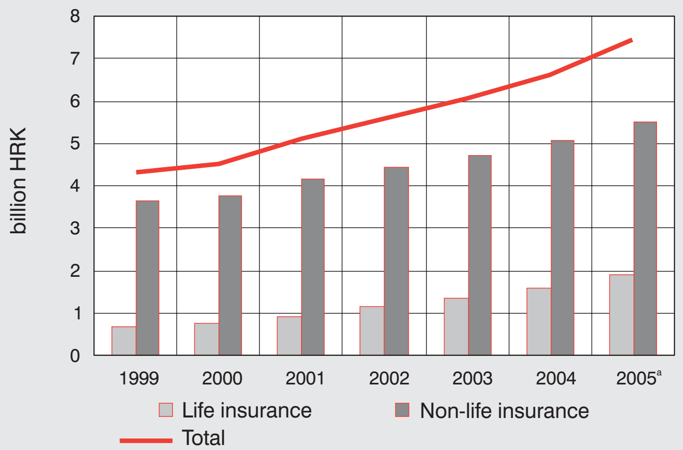
Sources: CNB, HANFA and MoF.

13 Due to the lack of data on the currency structure of household loans indexed to foreign currency and f/c loans data for the total domestic non-financial sector are used as a reference value.

denominated in foreign currency, while financial leasing accounted for 35% of total leased assets at the end of 2005.

The share of assets of insurance companies in total assets of financial intermediaries continued reducing but at a slower rate, with their share totalling 5.1% at the end of 2005, slightly below the 2004 result. According to the preliminary data, gross insurance premiums collected in 2005 went up by 12.2%. The life insurance segment continued growing at rates much larger than non-life insurance. Thus, gross life-insurance premiums collected went up by 22.3% in 2005 and non-life insurance premiums by 9.1%. However, non-life insurance remains to be the dominant type of insurance, accounting for 74.2% of all premiums collected.

**Figure 22** Calculated Gross Insurance Premium




a Preliminary data.

Source: DINADOS.

Assets of mandatory pension funds also continued growing with their relative importance in total assets of domestic financial institutions rising from 2.9% at the end of 2004 to 3.6% at the end of 2005. According to the data of the Croatian Financial Services Supervisory Agency (HANFA), total assets of mandatory pension funds stood at HRK 12.0bn at the end of 2005, up 48.3% year-on-year. The lion's share (82.6%) was invested in debt securities, of which 72.3% (HRK 9.9bn) in bonds issued by the Republic of Croatia. The share of debt securities in the balance sheets of pension funds reduced from 86.3% to 82.6%, while the share of equity securities and foreign debt securities went up from 8.2% to 10.6%.[14] The average nominal yield of mandatory pension funds in 2005 was 7.0%.

14 The investment structure of mandatory pension funds is prescribed by legal provisions, which set the amount and types of domestic and foreign securities in which mandatory pension funds may invest. At least 50% of mandatory pension funds' assets has to be invested in long-term bonds and other long-term debt securities issued by the Republic of Croatia and the CNB, whereas investments into shares of joint stock companies and stakes in do-

Despite the high growth rate of their assets of as much as 135%, voluntary pension funds continued to be the smallest financial intermediaries in the Croatian market. At the end of 2005, their net assets totalled HRK 227.8m, with debt securities accounting for 74.4% and equity securities, whose share increased, accounting for 14.6%. The yields of six voluntary pension funds ranged from 7.1% to 11.1%. Although the share of their assets in total financial sector assets is negligible, it is noteworthy that eight closed-end voluntary pension funds operate in Croatia, of which four were established in 2004 and four in 2005. Their net assets totalled HRK 21.5m at the end of 2005.

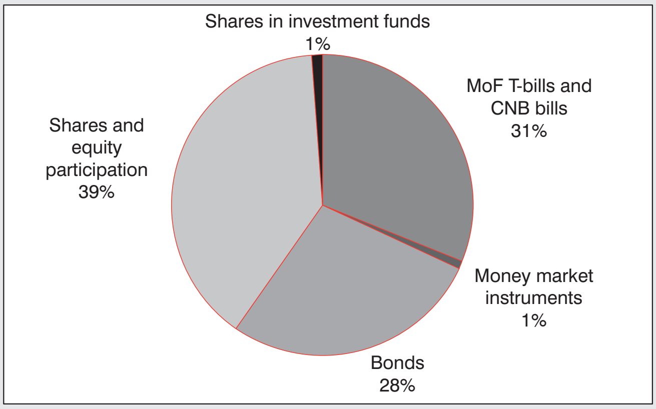
The share of open-end investment funds in total financial sector assets went up sizeably in 2005, from 1.8% to 2.8%. The value of total investments by open-end investment funds in 2005 went up by as much as 76.4%, totalling HRK 7.1bn, of which money market funds accounted for the largest share (HRK 3.3bn or 45.7% of total investment). At the end of 2005, 49 open-end investment funds were operating in Croatia, 12 more than at the end of 2004 and 17 more than at the end of 2003. According to their statutes, 14 were money market funds, 13 were registered as bond funds, 13 as equity funds and 9 as mixed investment funds. In accordance with its statutes Croatian War Veterans' Fund is an open-end equity fund, however, from the point of view of the financial sector it is in fact a closed-end equity fund, which means that it is opened only for a certain segment of the population. At the end of 2005, its investments totalled almost HRK 2bn, almost three times more than all other open-end equity funds put together.

The dominance of money funds among Croatia's investment funds illustrates increasingly better liquidity management by legal persons, which by investing their excess liquidity in money market funds realised greater yields than they would have realised from bank deposits. However, as a result of positive trends in Croatia's capital market, investments of households in open-end investment funds, especially mixed and equity funds increased in 2005. Consequently, the shares of these types of investment funds in total assets of all open-end investment funds doubled in 2005.

Savings and loan associations (S&Ls) are still the most numerous but financially weakest group of financial intermediaries in the Croatian financial market (with the exception of voluntary pension funds). According to the preliminary data of the MoF, which is responsible for supervision of these institutions, available only on year-on-year basis, total assets of S&Ls stood at HRK 1.7bn or some 0.5% of total assets of financial intermediaries, which is only slightly more than at the end of 2004. Their number also increased only slightly during the period from 111 to 116. The

mestic closed-end investment funds are allowed up to the amount of 30% of the fund's assets, provided that the said shares are officially quoted on the stock exchange (currently only four shares fulfil this requirement: Pliva, Podravka, Croatia osiguranje and Varteks). Mandatory pension funds may invest up to 15% of their assets in foreign securities.

**Figure 23** Securities Portfolio Structure of Open-End Investment Funds as at 31 December 2005

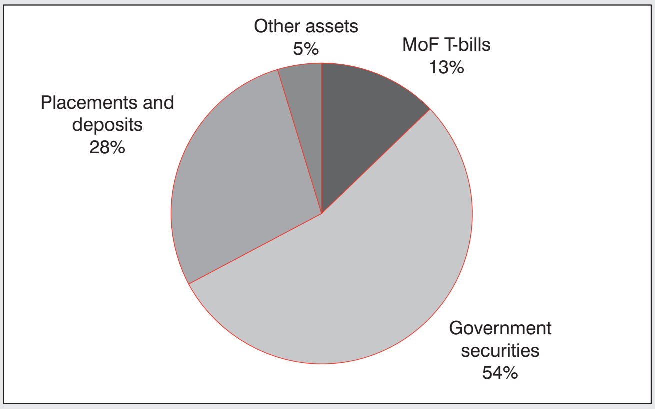



Source: CNB.

destiny of this group of financial intermediaries will soon be determined by the harmonisation of Croatia's legislation with EU legislation. Following full harmonisation, a small share of these intermediaries is likely to be recapitalised and become credit institutions under the EU criteria. However, due to exceptionally high capital requirements proscribed for credit institutions compared with the current capital of S&Ls the said adjustment will pose a great challenge.

Relative importance of housing savings banks did not change in 2005, totalling 1.8% of total assets of financial intermediaries. However, by the size of their assets, each of the four housing savings banks surpassed a large number of smaller commercial banks. Although the share of trading and investment portfolio in the balance sheet of housing savings banks had been decreasing for several years, their assets were predominantly held in securities, which accounted for 55% of total assets of housing

**Figure 24** Housing Savings Banks' Asset Structure as at 31 December 2005

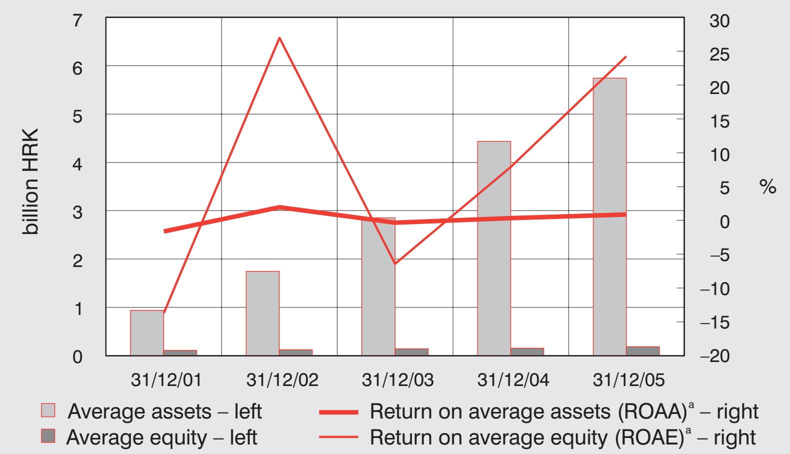



Source: CNB.

savings banks at the end of 2005. Debt securities of government units accounted for almost the entire investment and trading portfolio of housing savings banks, while the share of other debt securities was negligible. As a result of the growth in investments in government securities, the structure of total placements and contingent liabilities of housing savings banks at the end of 2005 was made up exclusively by placements bearing the least risk. The main source of funds of housing savings banks were time deposits, which accounted for 93.2% of their liabilities.

In 2005, loans by housing savings banks to financial institutions and other clients went up by 17.7% compared with the end of 2004, while the usage of loans taken out on the basis of housing savings went up by 54.1%. The share of household loans in total assets of housing savings banks totalled 9.4% at the end of 2005. As a result of good operations and the 272.6% rise in aggregate current year profits, all housing savings banks reported profits. The capital of housing savings banks went up by 42.2% and so did the relative indicators of their profitability.

**Figure 25** Assets, Capital and Profitability of Housing Savings Banks




[a]ROAA is calculated from pre-tax profit and ROAE is calculated from after-tax profit. Source: CNB.

# 9 Capital Market

Croatia's capital market in 2005 was marked by the growth in turnover volume, in the number of trading transactions and the value of stock market indices, to the greatest extent as a result of the rise in liquidity of institutional investors, especially pension funds. Their assets increased by HRK 3.9bn or 48.3% in 2005, of which investments in shares and bonds in the domestic market accounted for HRK 2.5bn. As regards shares, an important contribution to the rise in their turnover and market capitalisation came from the purchase of domestic shares by two Scandinavian funds at the beginning of the year. However, banking sector assets continued to exceed Croatia's capital market measured by the market capitalisation of shares by several times. The fact that there was only one share issue by public offering in 2005 as well as only two such issues of corporate bonds additionally accentuates the still negligible role of the capital market in financing the economy.

**Table 5** Public Offers of Equities and Corporate Bonds

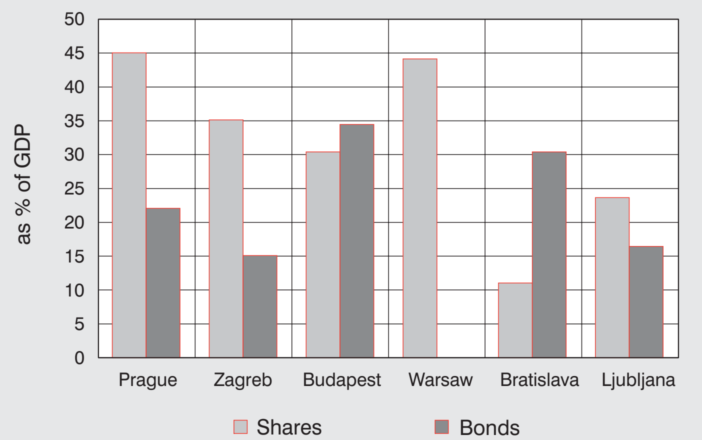
| | Number of share issues | Total value of share issues (million HRK) | Number of corporate bond issues[a] | Total value of corporate bond issues[a] (million HRK) |
|---|---|---|---|---|
| 2001 | 1 | 13.0 | – | – |
| 2002 | 1 | 11.8 | 2 | 215.8 |
| 2003 | 1 | 1.2 | 1 | 150.0 |
| 2004 | 2 | 11.0 | 4 | 2,637.5 |
| 2005 | 1 | 9.5 | 2 | 180.7 |

[a] Does not include corporate bond issues guaranteed by the government.
Sources: CROSEC and ZSE.

Corporate bonds maintained their small share in total turnover and market capitalisation of bonds in the domestic market in 2005. Market capitalisation of bonds to GDP ratio at the Zagreb Stock Exchange continued to be among the lowest of all major Stock Exchanges of Central European countries. Nevertheless, the bond turnover to GDP ratio was higher only at the Bratislava Stock Exchange which confirms that the market is ready to absorb new bond issues. This is sure to happen with the foreseeable rise in assets of institutional investors in Croatia's capital market.

Market capitalisation on the ZSE rose in 2005, ending the year at 35.2% of GDP, up 6.2 percentage points on 2004. According to this indicator, the Zagreb Stock Exchange is behind the Prague and Warsaw Stock Exchange but ahead of the Budapest,

**Figure 26** Market Capitalisation at end-2005



Sources: National stock exchanges.

Ljubljana and Bratislava Stock Exchange. In contrast, the liquidity of Croatian shares remains among the lowest in the region. The average daily share turnover on the ZSE in December totalled only 2.0% of GDP. During the same period the average daily share turnover on the VSE totalled 23.7% of GDP, on the Budapest Stock Exchange 27.4% of GDP and on the Prague Stock Exchange 51.1% of GDP.

Compared with the end of last year, the value of the ZSE index rose by 27.6%. In the same period only Prague Stock Exchange index (42.7%), Budapest Stock Exchange index (40.1%) and Warsaw Stock Exchange index (33.7%) grew more.

**Table 6** Yields of Selected Stock Exchange Indices, in %

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| Bratislava – SAX | 15.90 | 26.90 | 83.89 | 26.54 |
| Budapest – BUX | 0.94 | 30.31 | 57.17 | 40.98 |
| Ljubljana – SBI20 | 55.24 | 17.71 | 24.87 | –5.69 |
| Prague – PX50 | 16.75 | 43.06 | 56.58 | 42.73 |
| Warsaw – WIG | 3.19 | 44.92 | 27.94 | 33.66 |
| Zagreb – CROBEX | 13.33 | 1.07 | 32.05 | 27.64 |

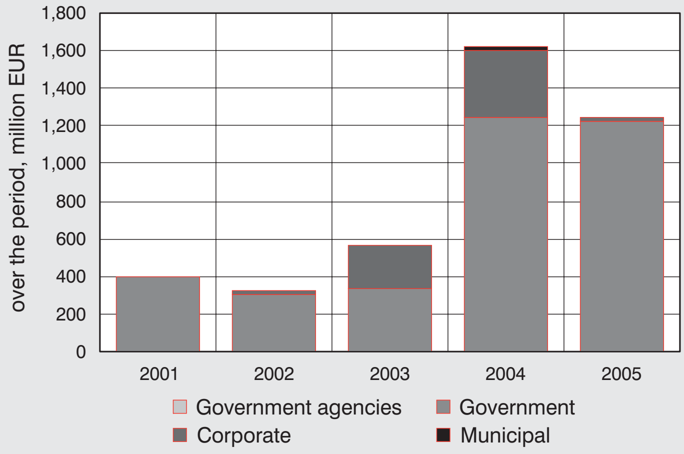
Sources: National stock exchanges.

The Croatian bond market continued to be dominated by government bonds, aided by the government's plan to limit its foreign borrowing in 2005. Accordingly, the Republic of Croatia issued no bonds in foreign markets in 2005 but issued three new bonds (two kuna and one euro) worth EUR 1.23bn in nominal terms. The bond issued in December 2005 is especially important in that it is the first ever issued 10-year kuna bond having an important bearing on the lenghtening of the kuna yield curve and Croatia's alignment with the fourth Maastricht criterion. Two corporate bonds worth EUR 25m in nominal terms were issued in the domestic capital market in 2005. Twenty bond issues (nine government bonds, one CBRD bond, two municipal bonds and eight corporate bonds) were quoted in the domestic debt securities market which is slightly more than in 2004 when 17 bonds were quoted. Market capitalisation of bonds on the Zagreb Stock Exchange at the end of 2005 totalled HRK 34.4bn (EUR 4.7bn), that is 15.0% of the GDP for 2005. Market capitalisation of the eight corporate bonds accounted for HRK 4.5bn (EUR 608m) of this figure, which is only 2% of GDP for 2005.

The spread between Croatian eurobonds and benchmark German bonds fluctuated in 2005, influenced by news on the start of Croatia's accession to EU and election results in Germany. However, shortly after the official start of Croatia's accession negotiations, the spreads of Croatian eurobonds of all observed maturities stabilised at a low level of some 40 basis points. At the end of the year, the spread of Croatian eurobond with maturity in 2011, totalled 36 basis points which placed Croatia ahead of Romania and Bulgaria.

The expected movements in the capital market of Croatia and other transitional countries in 2006 are under the influence of the already started rise in interest rates

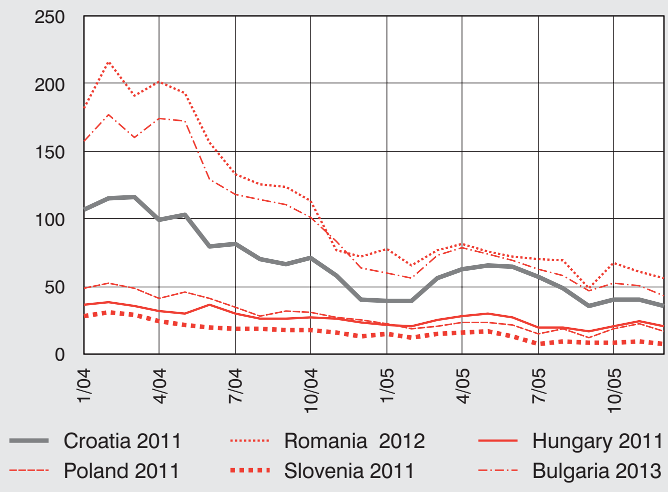
**Figure 27** Bonds Issued in the Domestic Market




Source: ZSE.

on developed financial markets which may lead to the reduction of investor appetite for investments in this region. The increase in the spread between Croatian bonds and similar bonds of comparable transitional countries and the benchmark German bond in the beginning of 2006 corroborates this claim.

**Figure 28** Yield Spread between Selected Countries' Bonds Denominated in EUR and the Benchmark German Bond

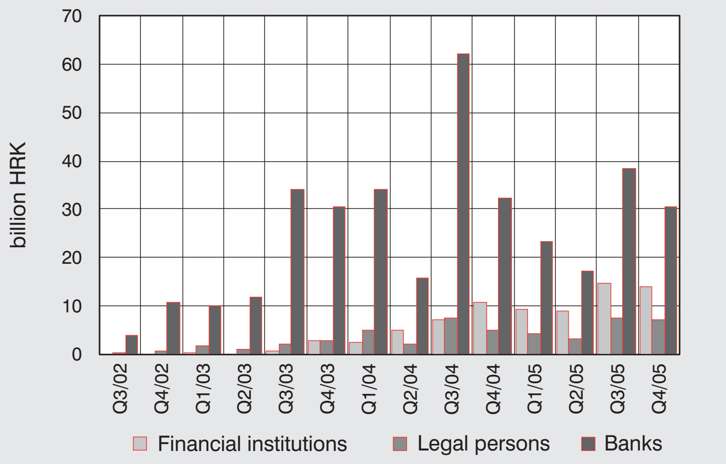



Source: Bloomberg.

# 10 Money Market

As a result of the ample banking sector liquidity, overnight turnover on the OTC money market among all market participants declined in 2005. The share of bank trading with non-banking financial institutions and non-financial enterprises reflected a rising trend following a short period of slowdown in the first half of the year. However, the volume of interbank trading remained noticeably larger than trading with other money market participants, both on OTC money market and the entire money market.

**Figure 29** Overnight Turnover in Interbank Trading on OTC Money Market

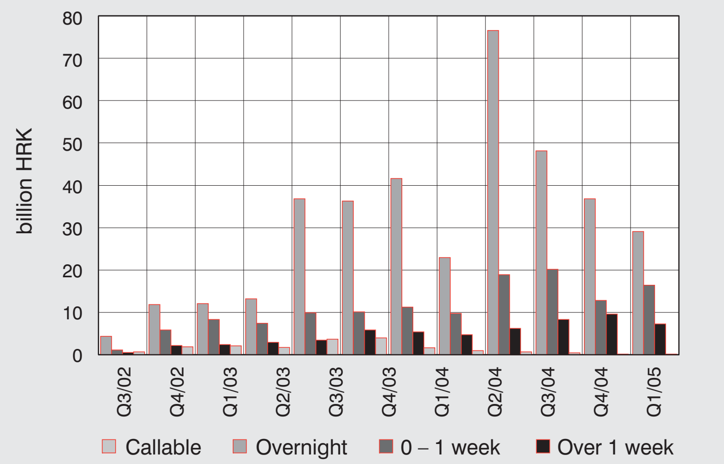



Source: CNB.

As a form of money trading, direct domestic market lending again by far surpassed securities repo trading. Overnight loans continued to dominate the maturity structure of loans on the money market, although their share in total loans reduced parallel with the decline of total turnover in the money market. This was a consequence of better bank liquidity compared with 2004, which made the liquid participants in the money market more prone to lending for longer periods of time. These loans were dominated by loans with maturity in up to one week whose share in total money market loans increased. Money trading for periods over one week was only sporadic, occurring within periods of high interest rates as a consequence of successful maximisation of short-term profits of the most liquid money market participants.

The CNB started carrying out reverse repo operations in April 2005, aimed at establishing the benchmark interest rate in demand deposit trading in order to limit the volatility of money market interest rates that was caused by frequent changes in the liquidity of the banking system. However, it has been shown that the introduction of reverse repo operations alone can not reduce the volatility of money market interest

Figure 30 Money Market Turnover by Maturity

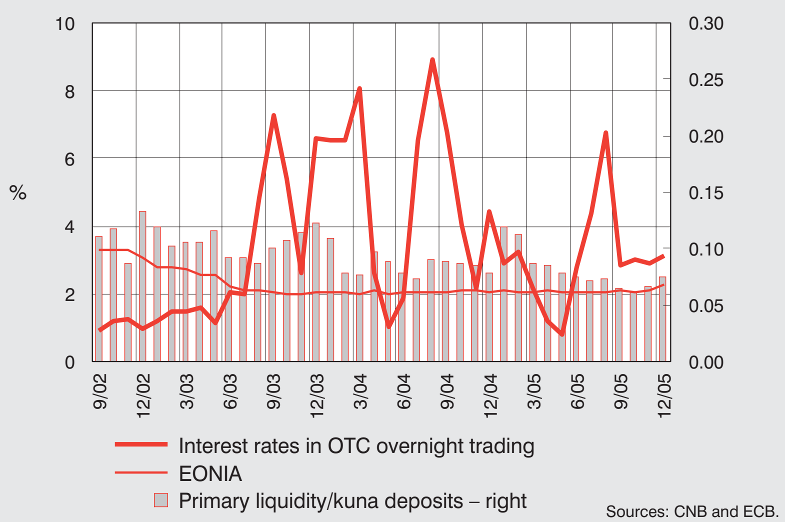


Source: CNB.

rates. As a result, the CNB introduced additional measures in November 2005, aimed at removing the negative effect of the process of allocating and maintaining banks' reserve requirements on the volatility of money market interest rates. The first data following these changes have indicated that it is realistic to expect a more prominent reduction in the volatility of money market interest rates in 2006 as well as strengthening of the role of the interest rate on CNB reverse repo auctions as the benchmark short-term interest rate on the Croatian money market.

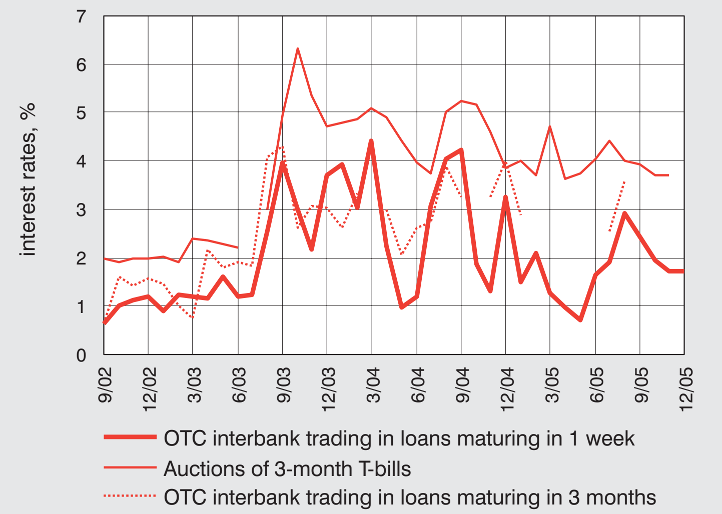
As a consequence of ample liquidity in the money market, the stock of subscribed MoF T-bills of all maturities greatly increased, reaching the level of HRK 11.72bn at the end of the year. Great demand for these easily marketable risk-free securities in the domestic market led to a substantial fall in their yields which contributed to

Figure 31 Overnight Interest Rates and Liquidity of Banks



Sources: CNB and ECB.

**Figure 32** Risk and Liquidity Premium on the Money Market

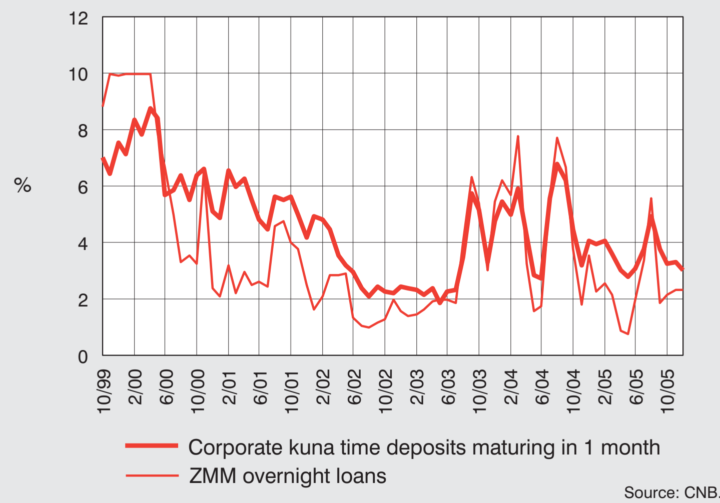



Sources: CNB and MoF.

cheaper short-term financing of the government. Benchmark short-term interest rates on MoF T-bills with maturity of three months stabilised at some 4%, with minor monthly oscillations. However, interest rates at MoF T-bill auctions, remained higher than the comparable money market interest rates for similar maturities which is probably only a reflection of the illiquidity of the money market in the segment of trading for periods over one week.

Good liquidity in the money market in 2005 contributed to the continuation of the gradual but uninterrupted reduction of commercial banks' lending rates on short-term loans. On the other hand, deposit rates on short-term time deposits continued their mild rising trend in 2005 because such deposits are cheaper sources of

**Figure 33** Interest Rates on Overnight Loans and Short-Term Corporate Deposits




Source: CNB.

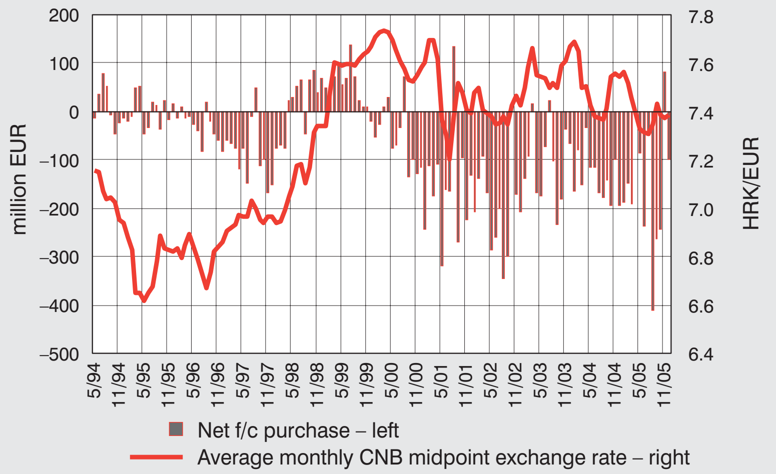
funding than foreign liabilities, which are made more expensive by the currently active monetary policy measures. Deposit rates on kuna time deposits continued to follow the movements of money market interest rates. Liquid companies used this for occasionally earning short-term profits by placing their excess liquidity at a higher-than-usual rate of return.

# 11 Foreign Exchange Market

Movements of the nominal kuna/euro exchange rate in 2005 were marked by constant appreciation pressures. This can be explainded by the increased foreign exchange supply due to banks' continued financing of their lending activities by constant narrowing of their net foreign assets, by the appreciation expectations of market participants raised by the start of accession negotiations with the EU, the increased interest of foreign investors in investing in Croatian securities as well as by good inflow of foreign exchange from the export of goods and especially services and foreign remittances. For the purpose of alleviating appreciation pressures the Croatian National Bank held nine foreign exchange auctions in 2005, purchasing EUR 570.8m. Compared with 2004, when the average exchange rate was 0.8% higher, this was a net rise of EUR 200.6m. The midpoint exchange rate ranged from HRK/EUR 7.29 to HRK/EUR 7.66 in 2005. The difference between the highest and the lowest exchange rate roughly equalled the one in 2004, when the midpoint exchange rate ranged between HRK/EUR 7.34 to HRK/EUR 7.72. However, the upward trend of the kuna against the euro, in nominal terms, has now become evident and after eliminating seasonal influences may be said to have started at the end of 2003.

The volume of trade in the foreign exchange market has been on the rise for several years. In the same period, the ratio of total import of goods and services to total spot

**Figure 34** Commercial Banks' Net F/c Purchase and CNB Midpoint Exchange Rate

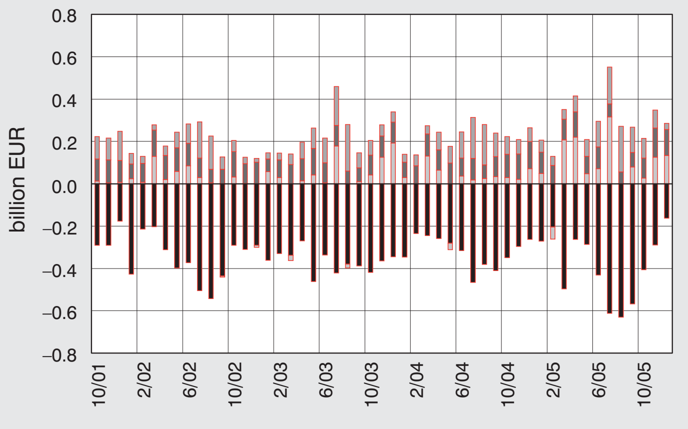



Source: CNB.

transactions has been decreasing, although 2005 saw a slowdown in the downward trend followed by this indicator, which totalled 33.5% compared with 33.8% in 2004. This could mean that trading is more and more generated by foreign demand for kuna and less and less by domestic demand for foreign currency. Further, there are indications that seasonal influences and large transactions by the strongest market participants have a short-term influence on the exchange rate, which means that despite the rise in the volume of trade foreign exchange market continues to be poorly liquid. This can be substantiated by the difference between the sale and purchase exchange rate, which has been stable for legal persons ever since the beginning of 2003, after having slightly reduced in 2002. In the past several years domestic legal persons regularly participated in the foreign exchange market as net buyers, while other sectors (natural persons and foreign banks) almost always participated as net sellers. This trend continued in 2005.

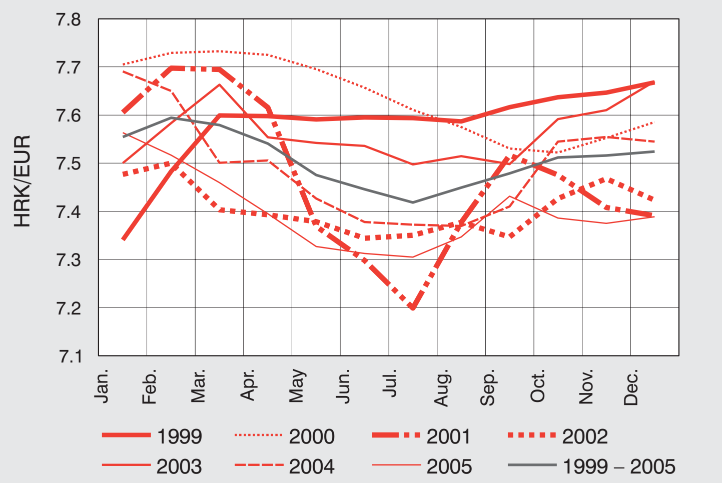
The foreign exchange market continues to be unsophisticated (being dominated by spot transactions), although 2004 saw the development of the foreign exchange swap market which continued through 2005, with the volume of its trading growing up to 29% of the total amount of foreign currency trading over the past year. This rise in foreign exchange swap transactions may be directly attributed to the increase in the interest shown by foreign investors for kuna securities in the domestic capital market. Credits for more intensive usage of foreign exchange swap transactions in operations of commercial banks in Croatia may indirectly be given also to the CNB, i.e. the marginal reserve requirement. Following its introduction, foreign exchange swap transactions remained the only instrument by which banks can raise euros without having to meet the marginal reserve requirement. In contrast to foreign exchange swap transactions, trading in foreign exchange forward agreements (forward transactions) is still fairly undeveloped, although the volume of trading in this instrument doubled in 2005, totalling some 4% of total foreign exchange trading.

**Figure 35** Banks' Monthly Spot Net F/c Purchase



Source: CNB.

Figure 36 Seasonality of Average Monthly CNB Midpoint Exchange Rate

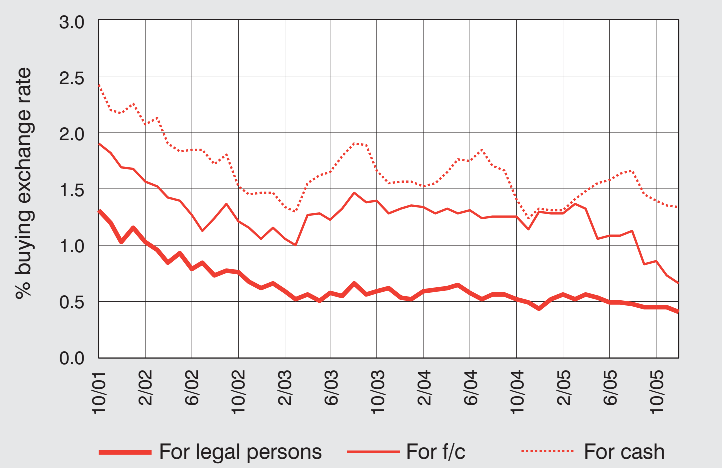



Source: CNB.

The rise in turnover on the foreign exchange market brought about a substantial narrowing of the spread in foreign exchange trading during 2002. They have been relative stable ever since in the economically most important segment – trading with legal persons. The difference between the selling and the buying exchange rate (spread) in trading with legal persons mildly reduced in 2005, totalling some 0.5% of the buying exchange rate. At the same time, in trading with natural persons it narrowed sizably to below 1%. As regards trading for cash, there are seasonal fluctuations, however, the spread mildly reduced to below 1.5% in that segment as well.

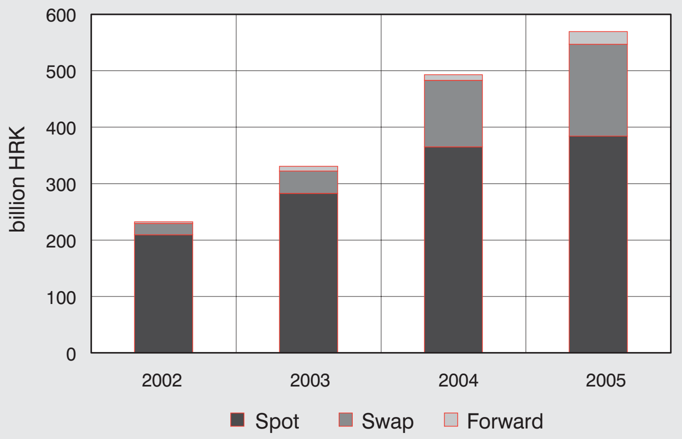
The Croatian foreign exchange market has continued to develop in a favourable macroeconomic environment. As a result, the nominal exchange rate of the kuna against the euro has still not recorded large unexpected fluctuations neither in the daily nor in the long-term horizons. The index of exchange market pressure is far

Figure 37 Difference between Average Monthly Selling and Buying Exchange Rate




Soruce: CNB.

**Figure 38** F/c Turnover by Type of Transaction




Source: CNB.

from disturbing values ever since it briefly increased in summer 2001 when the central bank easily repelled an attempt of a speculative attack. The upward trend in total turnover is expected to positively contribute to further strengthening of market liquidity. And finally, a noticeable rise of the still underdeveloped segment of forward trading should continue in the future while demand for this type of instrument should be generated primarily by exporters who are not happy with the current trend of the domestic currency strengthening against the euro.

# 12 Institutional Framework

The majority of changes in the institutional framework in 2005 are related to the harmonisation of Croatia's financial system legislation with *acquis communautaire*. The new and comprehensive Civil Obligations Act, covering the segment of contractual and default interest was adopted early in the year. Among other things, this act defines the highest permitted contractual rate in relation to the CNB discount rate. The provisions of this Act governing the highest permitted contractual interest rate will be applied as of 2008. The CNB will thus have to activate this monetary policy instrument by that time, even if it does not start implementing the monetary policy through the interest rate channel. In addition, amendments to the Execution Act also entered into force in the beginning of August, introducing the possibility for debtors to allow attachment of their entire regular income in case of default and not only the attachment of one third of regular income as was the case thus far. This may lead to cases of moral hazard, where indebted citizens may be willing to consent to the attachment of their entire income in case of default in order to obtain a new loan.

The regulatory framework for foreign exchange operations also experienced substantial changes. Prior to the expiry of the four year term stipulated in the Stabilisation and Association Agreement, the CNB issued a decision lifting many restrictions in connection with foreign exchange operations in March 2005. Restrictions obliging non-residents to open a custody account with a bank and sign a statement guaranteeing that they would not alienate or pledge the acquired security, except to another non-resident, within a period of one year from acquisition, was repealed. The provision banning investments of non-residents in short-term securities with remaining maturity up to six months was also repealed. This also goes for the provision under which non-residents were not allowed to purchase stakes, i.e. shares in domestic investment funds of which, according to funds' statutes, more than a half may be CNB bills and MoF T-bills. It is noteworthy, that even before they were repealed these provisions did not cover countries that had signed agreements on the support and mutual protection of investments with Croatia, which included the majority of EU Member States. However, the Croatian National Bank retained the right to introduce temporary measures aimed at restricting capital movements, in case of a major disruption in foreign payments or the foreign exchange market. As for the manner and the conditions under which residents may invest in foreign securities and stakes in foreign investment funds, the most important change relates to repealing of restrictions as regards the countries where securities and stakes in investment funds may be purchased. It is no longer required that they be issued by an OECD member, an international financial institution or that the issuers have specified credit ratings awarded by international rating agencies.

In addition, amendments to the Foreign Exchange Act were adopted in November, regulating the operations of authorised exchange offices, a segment of Croatia's foreign exchange market whose legal framework suffered many changes over the years. As a result of these amendments issuing and revoking authorisations to conduct exchange transactions is placed within the scope of the CNB's responsibility. In addition, both the documents required to obtain the authorisation and the conditions under which the CNB may revoke such authorisation are regulated in detail. However, regardless of the fact that authorisation of exchange offices was placed under the responsibility of the CNB, their supervision is still under the responsibility of the Foreign Exchange Inspectorate.

Amendments to the Act on Housing Savings and Government Incentive to Housing Savings were adopted late in July, reducing the amount of government incentive from HRK 1250 to HRK 750 per year, that is, reducing the government premium from 25% to 15% of savings in the account. The changes were applied retroactively for 2005, covering all savers. Despite the substantial reduction and disapproval by the experts in the field, the fact remains that government incentive to housing savings in Croatia is still the highest in Europe. An additional novelty is also the possibility of the so-called direct financing, meaning that housing savings banks are able to grant housing savings loans straight away, i.e. that savers are no longer required to save for at least two years prior to acquiring the right to apply for a loan. Under the current Act housing savings banks are not envisaged to invest their funds in housing construction.

The Croatian Financial Services Supervisory Agency (HANFA) was established by a Government decision in the middle of October, uniting the Croatian Securities Commission, Agency for Supervision of Pension Funds and Insurance and the Directorate for the Supervision of Insurance Companies under one roof. The Act on Croatian Financial Services Supervisory Agency, which formally united supervisory institutions of the non-banking financial sector, was adopted late in November 2005. It is being applied as of the beginning of 2006, while the institutions whose legal successor is HANFA ceased to exist. There are indications that in the future HANFA could also be responsible for bank supervision. In this way, the entire financial market would have a single regulator, responsible for the tasks that are currently preformed by the Croatian National Bank, HANFA and the Ministry of Finance. In the short-term, the priority is to ensure supervision over leasing companies, which are currently unsupervised as well as transfer the supervision over savings and loan associations, still within the responsibility of the Ministry of Finance, to one of the supervisory institutions of the financial system (CNB or HANFA). HANFA should initially be financed from the budget, with the financial institutions it supervises participating in the financing burden later on.

The Act governing the operations of leasing companies has not been adopted yet, but its adoption is expected in the course of 2006. At the time, there is much discussion on whether the Leasing Act should encompass all leasing transactions or only those that include the possibility of subsequent purchase of the leased assets, the so-called financial leases. In the future HANFA should also take over supervision over factoring transactions. Considering indications of a possible sudden rise in factoring transactions, as was once the case with leasing operations, this financial instrument should not be left unregulated. Enterprises started using bank factoring and forfaiting services more intensively in 2002, with their greatest rise being observed in 2005. Since this segment of the business is developing, some banks plan on separating their factoring operations by establishing independent subsidiaries. It is thought that this form of banking services could grow very popular in the future, especially with illiquid companies which could raise cash quickly by selling their receivables. In addition, purchasing a package of factoring services (including financing, payment insurance and receivables management) would make foreign operations easier for non-financial enterprises.

The new Investment Funds Act, applied as from the beginning of 2006, was adopted late in 2005. This Act for the first time regulates the establishment and operation of private equity funds and venture capital funds, i.e. funds that have until recently operated practically outside the scope of funds operations. Membership in private equity funds is limited to strictly defined investors, which means that the investment strategy can also be adjusted to their needs. Venture capital funds are oriented primarily towards investments in development and restructuring of enterprises, assuming that the fund management company has substantial influence on the enterprise in which it invests, which also means acquiring a substantial ownership share, and that is normally not a characteristic of investment funds. This Act also regulates in more detail the rules for operations of foreign investment funds in the Croatian market.

The new Insurance Act was also adopted late in December 2005. It regulates in great detail all segments of insurance companies' operations, including detailed rules on their liquidity management. In addition, it regulates the acceptable forms of insurance technical reserves as well as principles, forms and restrictions in relation with the investment of assets held as technical reserves. In connection with the insurance segment, it is expected that the compulsory motor insurance market will be liberalised. However, since this is a complex area, a short transitional period is not to be expected. It is noteworthy, that the regulator intends to take on the issue of unfair competition in relation to the sale of this type of insurance, such as charging lower-than-profitable premiums. In the insurance segment the end of the year was marked by the strengthening of regulatory measures, which was evident primarily in revoking the licence of the chairman of the management board of the oldest private health insurance company on the Croatian market. Only a few months later, HANFA revoked its authorisation due to irrational operations and inability to meet its due obligations. The new Accounting Act and the new Audit Act that differ from their earlier versions in a series of technical changes were also adopted in December 2005 by emergency procedure due to several reasons. First of all, it was necessary to harmonise these two acts with *acquis communautaire*. In addition, the regulators strove to enable companies to carry out their reporting and audits for the business 2005 in line with the new Acts, which enabled them to apply International Accounting Standards and International Financial Reporting Standards. Further, experts in the field had numerous objections to the Accounting Act, while failure to publish amendments to the International Accounting Standards in the Official Gazette (which officially makes them part of the National Accounting Standards) with time increased the difference between Croatian accounting practices and those applied in Europe. A Financial Reporting Standards Committee was established pursuant to the Accounting Act, aimed at helping to adjust Croatia's regulations with EU financial reporting regulations and ensure their credible interpretation.

Of the important projects whose realisation has been delayed there is the Croatian Registry of Credit Obligations, expected to become operational in July 2006. The CROC obtained its authorisation from the CNB in January 2005 and was registered as a company providing business services. Regardless of the fact that activities related to the establishment of the CROC have been going on for tree years, Croatia belongs to the group of transitional countries which have made great progress in creation of this registry. Inclusion of the data on debtors of non-banking creditors in the registry and finding a compromise between the registry's functionality and personal data protection will certainly provide the next challenge. In the meantime, until the CROC becomes operational, banks will continue to exchange (only negative) information on their debtors on an informal basis.

Two projects that are in their developmental phase and are also expected to make an indirect, but substantial, contribution to the transparency of Croatia's financial system are the land registry and cadastral reform and establishment of a movable property registry. The project of land registry and cadastral reform is aimed at creating an efficient system of land registry management which should contribute to the development of an efficient real estate market. The period required to complete the project in the entire country is fifteen years. The benefits of this project for the financial system will largely be seen in the removal of hurdles for an efficient mortgage system. The project consists of four components: development of the land registry system, development of the cadastral system, co-operation among institutions and informatisation, as well as project management, training and monitoring of its implementation. Due to the complexity of the project different components are implemented at the same time, with only the first component being fully completed, so the so-called e-cadastre became operational in November 2005. Movable property registry which is also expected to make a significant contribution to the efficiency of the mortgage system is in the preparatory phase. In addition to the transparency of lending based on pledged movable property, this registry would enable entrepreneurs who do not hold real property but hold valuable movable property to obtain bank loans for performance of their business activities.

# 13 Banking Sector[15]

In 2005, the Croatian banking system achieved slightly weaker, although still solid, profitability with a substantial rise in the capital base and further reduction of the estimated credit risk. In the same period, its asset grew further despite the tightening of the monetary policy. As a result, the growth of the aggregate balance sheet totalled 14% in 2005, while credit growth reached as much as 21%. These developments were to the greatest extent affected by the growth in the loan portfolio to the public sector (40%) and the growth in household loans (21%). As the 11% deposit growth was not sufficient to finance such balance sheet growth, it was primarily enabled by further bank borrowing, primarily from financial institutions (64% rise). In 2005, short-term debt to financial institutions more than doubled.

Banking sector consolidation continued in 2005, with the number of banks additionally declining. As a result, 34 banks were operating in the Croatian banking market at the end of 2005, that is, 3 less than at the end of 2004. After the disappearance of three small banks from the market (one through regular winding-up proceedings, two by being merged with other banks) the total number of small banks (with the

15 All indicators have been calculated on the basis of banks' unconsolidated data. For indicators having the item assets or capital in the denominator, the average assets or average capital in the past year has been used; or half of the amount at the beginning of the period and half of the amount at the end of the period. Data does not include banks in winding-up proceedings. Due to the said specific traits of the methodology used, some of the indicators may differ from the values of similar indicators in other CNB publications.

**Table 7** Main Data on Commercial Banks in the Republic of Croatia, in million HRK and %

| | Balance | | | | | Change 31/12/05 / 31/12/04 | |
|---|---|---|---|---|---|---|---|
| | 31/12/01 | 31/12/02 | 31/12/03 | 31/12/04 | 31/12/05 | Amount | Percent |
| Number of banks | 43 | 46 | 41 | 37 | 34 | –3 | –8 |
| Total assets | 148,455 | 174,139 | 204,043 | 229,305 | 260,594 | 31,289 | 14 |
| Money assets, deposits, MoF T-bills and CNB bills | 55,885 | 51,651 | 67,010 | 71,823 | 73,063 | 1,240 | 2 |
| Securities portfolio | 17,441 | 21,094 | 18,241 | 24,036 | 26,312 | 2,276 | 9 |
| Loan portfolio | 65,898 | 92,293 | 110,052 | 125,202 | 151,958 | 26,756 | 21 |
| Other assets | 9,231 | 9,102 | 8,740 | 8,244 | 9,261 | 1,017 | 12 |
| Liabilities and capital | 148,455 | 174,139 | 204,043 | 229,305 | 260,594 | 31,289 | 14 |
| Short-term liabilities | 44,113 | 52,893 | 57,174 | 59,642 | 70,913 | 11,271 | 19 |
| Long-term liabilities | 80,185 | 95,181 | 118,809 | 139,001 | 154,250 | 15,249 | 11 |
| Subord. and hybr. instr. and other liabilities | 10,439 | 9,557 | 9,977 | 10,980 | 11,864 | 884 | 8 |
| Capital | 13,717 | 16,509 | 18,083 | 19,681 | 23,566 | 3,884 | 20 |

Source: CNB.

share in total banking sector assets of below 1%) at the end of 2005 was 24. There were four medium-sized banks (with the share in total banking sector assets between 1% and 5%) and six large banks (with the share in total banking sector assets of over 5%). Shareholders from Hungary took over one bank, so the year 2005 ended with 21 domestic banks and 13 foreign-owned banks in the Croatian banking market. As a result of ongoing banking sector consolidation, the total number of banks is expected to further decline.

Croatia's banking sector continues to be characterised by high concentration of assets and liabilities in the few largest banks. This has not been changed by years-long attempts of strong medium-sized banks to join the group. The share of the two largest banks in total banking sector assets stood at 43.6% which was only slightly less than at the end of 2004. In the same period, the share of the four largest banks also increased mildly, ending the year at 66.3%. Total assets of only three banks reduced over the past year. At the end of 2005, large banks thus managed 82.0% and foreign owned-banks 91.3% of total banking sector assets, making the movements of aggregated financial indicators for the banking sector as a whole similar to those of these two bank categories.

Changes in the dynamics of bank balance sheet items in 2005 were affected also by the changes in banking regulations, which were amended several times, while the provisions on the monitoring of currency induced credit risk will not show their effect until the coming period. Bank operations were also influenced by the implementation of two new monetary policy instruments directed at maintaining banking system liquidity: the CNB regular reverse repo auctions and overnight deposits with the CNB.

In 2005 financial reports, bank asset quality was reported in line with the amended and revised International Accounting Standards (IAS) and International Financial

Reporting Standards (IFRS). As of 30 June 2005, banks changed the way of reporting financial assets, relating primarily to the classification of securities. As a result, securities portfolios and portfolios of other financial instruments bought on issue directly from the issuer are no longer reported separately, while existing balances have been entered in other financial assets categories.

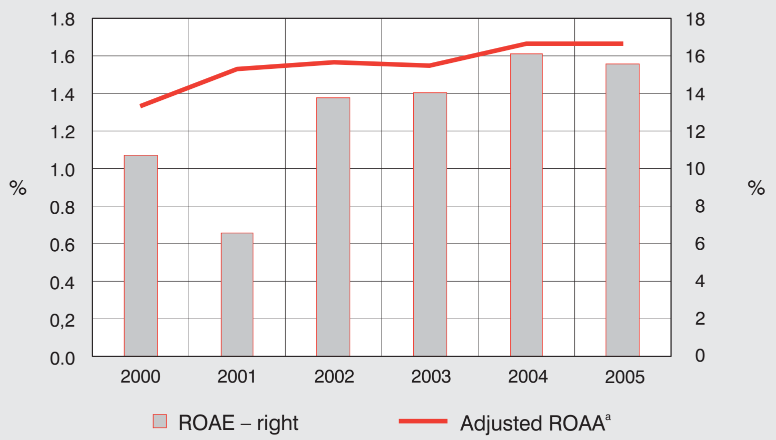
In 2005, banks' minimum required coverage of foreign currency liabilities by foreign currency claims was reduced from 35% to 32%. The marginal reserve requirement was first increased from 24% to 30% in February, then to 40% in May and finally to 55% in December, to be applied as from the beginning of 2006. The Decision on Reserve Requirements was also amended three times. For the first time in March, when the percentage for allocating the kuna component of the reserve requirement was raised from 60% to 70%, than in May when the percentage of the calculated foreign exchange reserve requirement which is included in the calculated kuna reserve requirement and allocated in kuna was increased from 42% to 50% and finally in December when the reserve requirement rate was lowered from 18% to 17%. Most of these CNB decisions undoubtedly created additional operating expenses for banks because they raised the share of their more secure and thus less profitable assets.

The asset side of the aggregated balance sheet of Croatia's banks reflects the greatest rise, in nominal terms, by its largest item, loans to other clients, which went up by 21.5%, raising their share in total assets to 56.8%. The item money assets and deposits with the CNB grew by 23%, largely thanks to the 24% rise in deposits with the CNB, which was a direct consequence of the CNB tightening its measures aimed at curbing foreign borrowing by banks. The greatest relative growth of 95.7% was seen in the item MoF T-bills, as a result of the increased demand of banks for assets that can be pledged and are suitable for participation in the CNB open market operations.

Since total bank deposits went up at a slower rate than total liabilities, the share of this, normally the largest, item in the liabilities of banks, declined to 65.9% at the end of 2005. Total received loans increased to 25.6% of total banking sector liabilities in 2005, with loans received from financial institutions rising the most (63.6%). Loans received from majority foreign-owners also registered a great rise (45.9%). The growth of liabilities arising from short-term loans from financial institutions (the CNB) of 106.3% is directly linked to transactions within the framework of the CNB reverse repo auctions.

Banking sector capital went up by 19.7% in 2005, with the greatest contribution to its growth, both in absolute and relative terms, coming from the growth of capital reserves, which went up by 36.6%. The 13.9% rise in share capital had a slightly smaller influence due to the transformation of subordinate and hybrid instruments into ordinary shares and the increase in the amount of paid-in ordinary shares. Considering the CNB's restrictive policy which made foreign sources of finance more expensive in 2005, this increase partly reflects that banks are intentionally turning to self-financing.

Figure 39 ROAA and ROAE of Banks



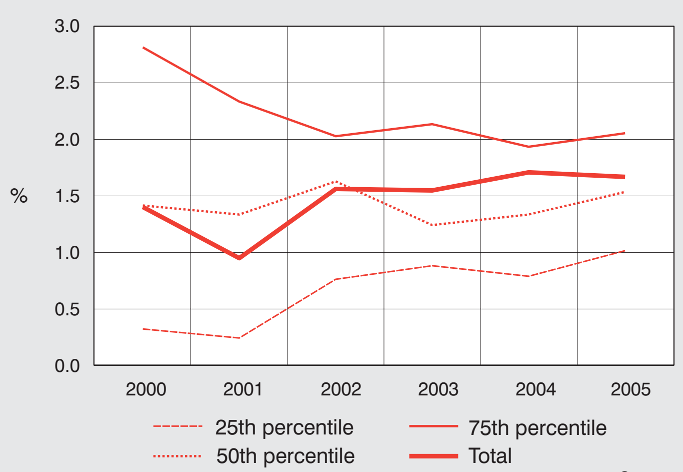

[a] Adjusted ROAA is pre-tax and pre-extraordinary items.

Source: CNB.

The years-long upward trend in the return on average assets (ROAA) reversed in 2005, with ROAA declining mildly on the previous year to 1.67%. The reason for this is above all the slower growth of profits over the growth of average assets. The return on average equity (ROAE) reduced from 16.1% in 2004 to 15.6% in 2005. This reduction, the first since 2001, was primarily affected by the large increase in the average equity of the banking sector.

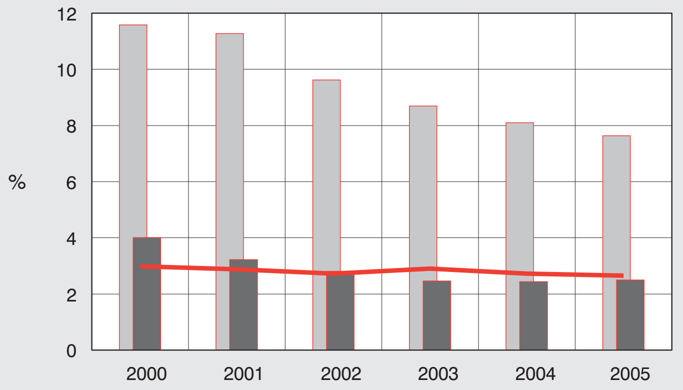
Empirical distribution of profitability indicators by banks shows that large banks boasted more stable profitability indicators in the period from 2000 to 2005, with the ROAA for large banks moving more or less the same as the ROAA indicator for the entire banking sector, while, as usual, ROAE of large banks was larger than the ROAE for the banking sector as a whole. This is because large banks, relatively speaking, have smaller equity than small banks, due to traditionally smaller fluctuation of their unexpected losses. The second observation that is connected with the distribution of profitability indicators by banks, showing how profitability was

Figure 40 ROAA by Banks, end of period




Source: CNB.

**Figure 41** Interest Income on Loans and Interest Expenses on Deposits

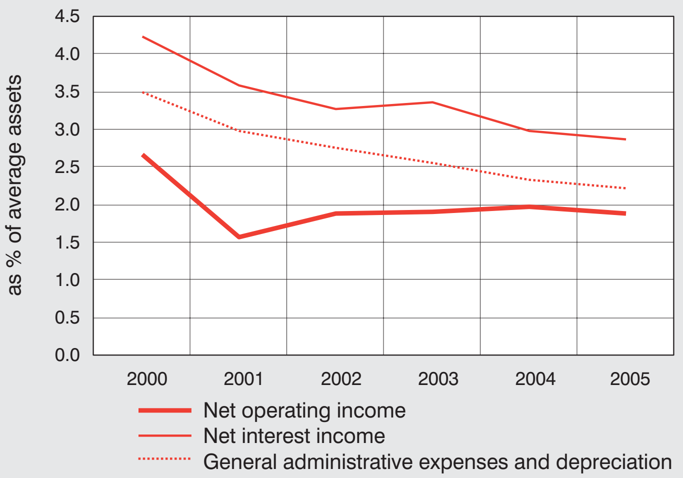



Source: CNB.

affected by banking sector consolidation, is that the interquartile range between ROAA indicators declined from the high 2.5 percentage points in 2000 to only 1 percentage point in 2005.

As a conclusion, in the absolute amount Croatia's banks realised the highest ever pre-tax profits in 2005, in nominal terms. However, profits after tax went down, which negatively affected the profitability indicators. In addition, as many as 13 banks reported lower profits in 2005 than at the end of 2004, but only one small bank reported losses. As a result of accelerated growth of placements, net interest income grew by 9.3%. Since the share of interest income in the average interest-bearing assets did not change much and the share of expenses in interest-bearing liabilities did not change at all, there is the impression that the income statement did not suffer significant changes. However, in order to maintain the desired level of profitability banks had to neutralise the negative circumstances they faced in 2005.

**Figure 42** Banks' Efficiency Ratios




Source: CNB.

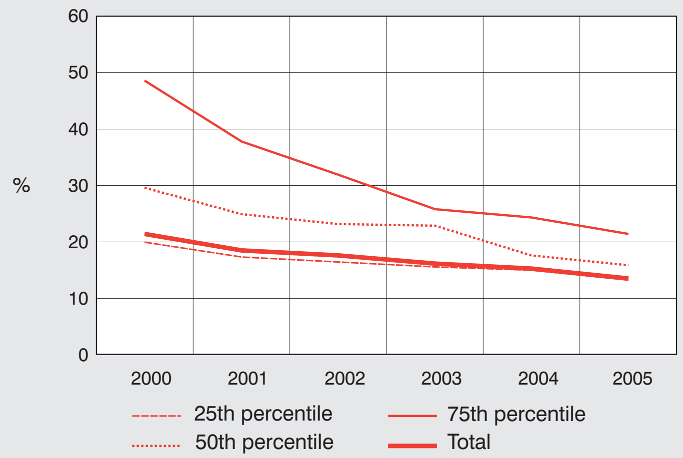
Above all, one should stress the negative trend observed in other non-interest income which declined by 6.2% in 2005. More specifically, one of the elements of business results which experienced the greatest reduction was net other non-interest income (fell by 16.5%), while the item that caused this reduction was the accounting loss from the translation of the balance sheet positions indexed to foreign currency to the agreed exchange rate. In addition, total operating expenses grew at an accelerated pace (7.6%), with the interest spread further reducing. Banks responded to the situation by increasing their net income from fees and commissions by 7.9%. In addition, expenses on loss provisions fell by 20.6% which should indicate a considerable increase in the quality of placements.

As a result of these changes, the share of net income from regular operations in average assets reduced from 2.0% at the end of 2004 to 1.9% at the end of 2005. At the same time, the ratio of net interest income to average bank assets reduced from 3.0% to 2.9%. The share of general administrative expenses and depreciation in average assets declined from 2.3% in 2004 to 2.2% in 2005. All this in the end resulted in stagnation, that is, mild reduction in the profitability of the banking sector, depending on the indicator under review.

In contrast to the profitability indicators, the aggregate capital adequacy ratio has been declining for years, decreasing again in 2005 from 15.3% to 13.4%. The reason for this decline, as over the previous years, was faster growth of risk-weighted assets over the growth of regulatory capital. It is noteworthy that large banks, which have lower adequacy ratios than medium-sized and small banks, made the greatest contribution to this trend. The capital adequacy ratio of large banks has been continually declining ever since 2002, and in the past three years it went down by 3.1 percentage points. At the end of 2005, only one bank reported capital adequacy ratio below the statutory limit and it is currently under special CNB supervision.

Relatively smaller expenses on credit risk provisions helped banks maintain

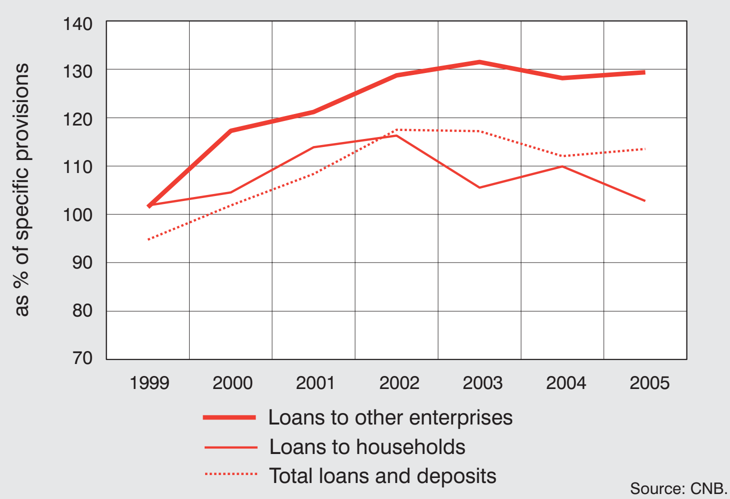
**Figure 43** Capital Adequacy Ratio by Banks, end of period




Source: CNB.

satisfactory profitability levels in 2005. Total specific provisions to total assets ratio stood at 2.5% at the end of 2005, down from 2.8% at the end of 2004. Improvement in banks' estimates of the quality of their loans to other enterprises (not public enterprises) and households made the greatest contribution to the decline in credit risk in 2005. However, it is noteworthy that Croatia's banks have a record of underestimating the credit risk in relation to their long-term placements during periods of economic growth. This may be substantiated by the fact that total overdue bank claims grew considerably in 2005, from 17.6% to 21.6% of total bank assets. The greatest rise was observed in the first half of the year. Overdue claims on households declined, while overdue claims on other enterprises increased. Although of smaller relative importance, loans to public enterprises and non-residents also contributed to the rise of total overdue claims.

**Figure 44** Overdue Bank Claims on Loans and Deposits, end of period

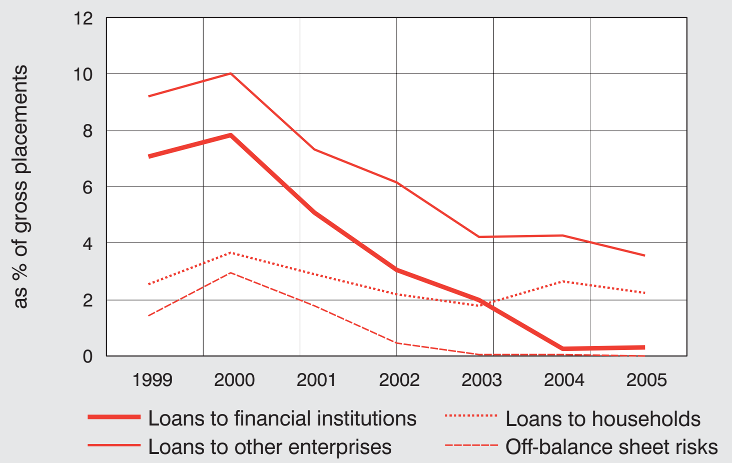



Source: CNB.

However, despite the rise of overdue claims, the reported quality of bank placements went up in 2005, which may be seen in the reduction in the share of placements belonging to risk category B and C in total placements, which amounted to 4.0% at the end of 2005. This goes primarily for the decline in fully irrecoverable placements (risk category C) from 1.8% to 1.5%. The share of fully recoverable placements (risk category A) went up from 95.4% to 96.0%. However, this apparent improvement in the quality of placements of Croatia's banks should be taken with a grain of salt due to still fast loan growth. As the newly approved loans grow more mature, their estimated quality is sure to be revised. In addition, as a result of the above-mentioned regulatory changes there were also some methodologically motivated changes in the classification of bank assets in 2005, which reduced the expenses on placement value adjustment for identified losses and raised the expenses on placement value adjustment for unidentified losses.

Credit risk stress test for the banking system, conducted for internal purposes by the central bank, which was carried out on the basis of the end-2005 data, showed that

**Figure 45** Total Specific Provisions to Total Assets Ratio, end of period



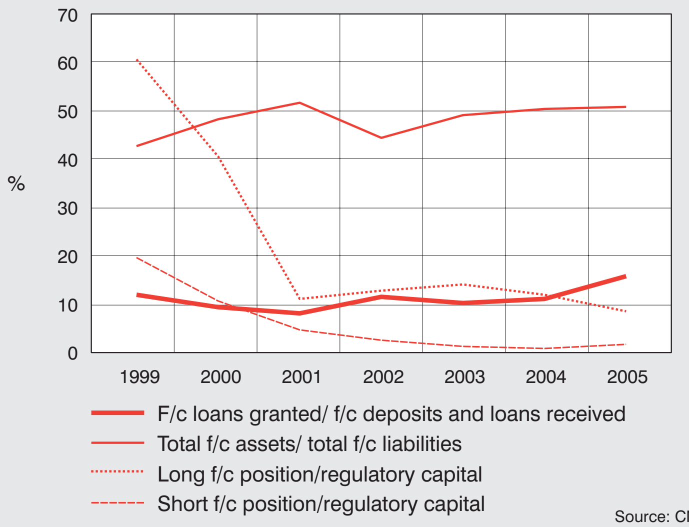
Source: CNB.

Croatia's banking sector was capable of absorbing considerable losses in case of asset deterioration, i.e. in case of a negative shock in the macroeconomic environment. This analysis now traditionally shows that the group of small banks is less vulnerable to deterioration of general credit risk.

Banks' exposure to direct currency risk is limited by CNB regulations so that the total open foreign exchange position of a bank (which is either the total short foreign exchange position or the total long foreign exchange position, whichever is larger) may not exceed 20% of the bank's regulatory capital. Banks have no difficulty in meeting this requirement, although it is prescribed on daily level, which places it among the stricter CNB measures. At the end of 2005, the ratio of banks' aggregate short positions to the sum of their regulatory capitals was roughly double its size at the end of 2004, however, amounting to still relatively low 1.7%. As regards long positions, this ratio amounted to some 8.4% which is a substantial reduction compared to the 12.1% at the end of 2004. According to the banking system stress test conducted at the end of 2005, the direct influence of the changes in the nominal exchange rate of the kuna on the capital adequacy of Croatia's banks is almost neutral (if changes to the exchange rate of individual currencies are ignored). On the other hand, indirect currency risk, which cannot be easily measured, poses a far greater danger for the banking sector because the majority of their clients' liabilities are denominated in foreign currency while their income is predominantly in kuna.

Risks inherent to international operations could become increasingly important for Croatia's banking sector in the future. Since data needed to precisely estimate the potential effects of these risks on the business results of Croatian banks are still not being collected, it is not possible to quantify them at present. The most important risk is the one connected with continued bank borrowing from their majority foreign owners in the course of 2005.

**Figure 46** Main Indicators of Banking Sector's Currency Risk Exposure, end of period

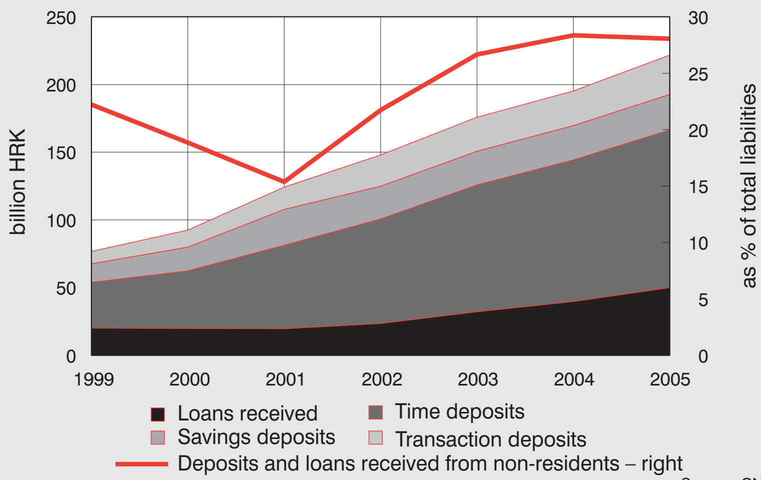



Source: CNB.

On the other hand, "classic" international credit risk is relatively negligible since the ratio of loans to non-residents to total loans of domestic banks has been standing at below 0.5% for several years (0.34% at the end of 2005). However, the importance of international market risk and the related counterparty credit risk as well as the sovereign risk had been growing for several years prior to 2005. The share of foreign securities in the total value of active securities portfolios held by domestic banks more than doubled in 2004 (as a result of investments in foreign debt securities). Nevertheless, in 2005 this share stood at more or less the same level of 37.9%.

As for liquidity risk, i.e. the estimated general level of banking system liquidity and its short-run perspective, it is noteworthy that 2005 was marked by ample banking system liquidity. This is especially true of the first half of the year when the central bank

**Figure 47** Structure of Bank Liabilities by Instrument, end of period




Source: CNB.

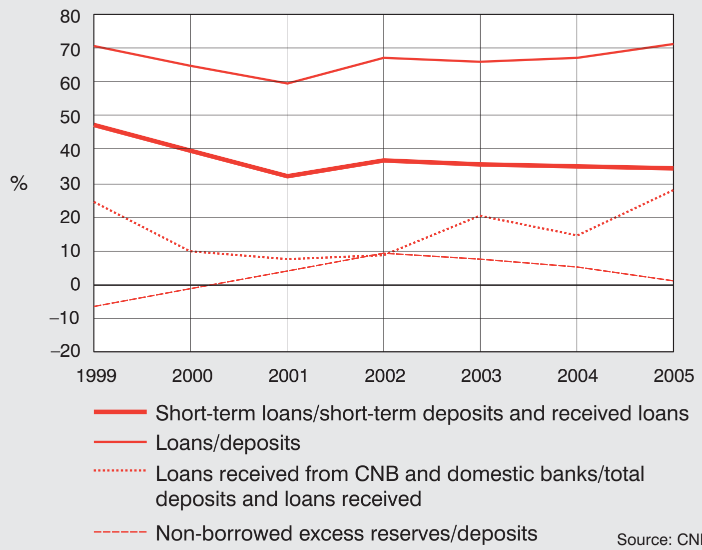
was intensively purchasing foreign currency from commercial banks. In addition, commercial banks started actively participating in central bank's reverse repo auctions in the middle of the year, which became very popular with the start of the tourist season when the demand for kuna increased. However, already in September the period of high primary liquidity set in, lasting until the end of the year, which reduced banks' interest in the CNB reverse repo auctions.

Loan-to-deposit ratio, including forfaiting and factoring went up in 2005, from 80.8% to 88.7%, while the short-term loan to short-term deposit ratio reduced minimally from 35.0% to 34.3%. On the liability side, banks received the lion's share of loans from financial institutions. However, due to CNB measures aimed at curbing foreign borrowing, the share of loans from non-residents reduced despite the growth in nominal terms. This may be seen as a reduction in indirect bank borrowing and their orientation towards direct borrowing from their majority owners. The excess liquidity to deposit ratio continued decreasing, averaging 1.1% in 2005.

The banking system stress test indicates high liquidity of Croatia's banking sector. According to this test, Croatia's banks are resilient to potential one-off deposit outflows and only two out of ten would require considerable additional funding in the in case of large deposit outflow.

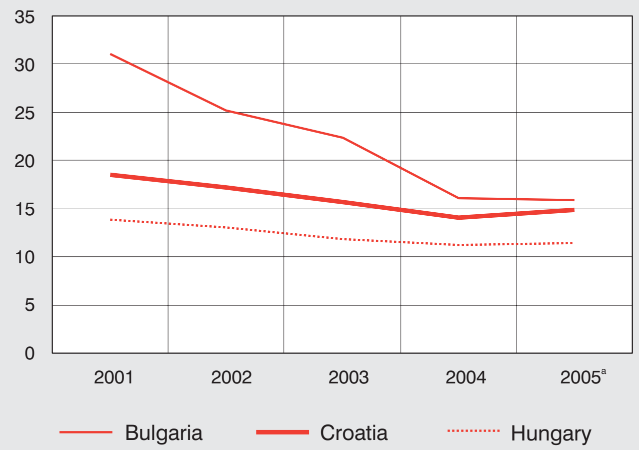
International comparison confirmed good profitability and capitalisation of the Croatian banking sector. According to IMF data, Hungary and Croatia are the only CEE countries whose capital adequacy increased in the first three quarters of 2005. However, CNB data show that by the end of the year this rate reduced in Croatia, so it may be said that it moved in line with the CEE average. According to preliminary ECB calculations for the fifty largest banks of the euro area, the weighted average capital adequacy ratio went up from 8.6% to 11.7% in the first half of 2005 year-on-year.

**Figure 48** Main Liquidity Indicators of the Banking Sector, end of period



Source: CNB.

Figure 49 Capital Adequacy Ratio in Selected CEE Countries



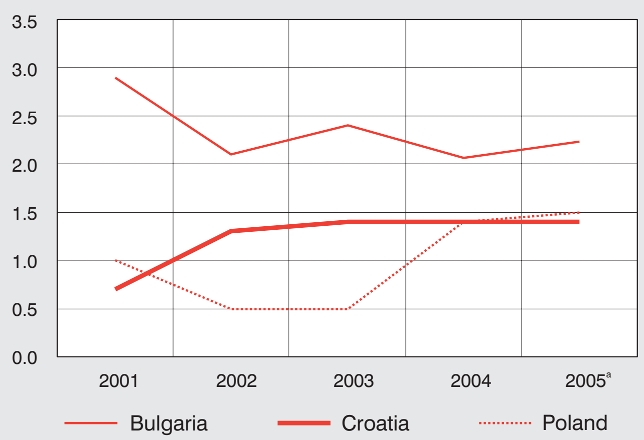

[a] Data for Bulgaria and Croatia ralate to September, while data for Hungary relate to June.

Source: IMF.

Asset profitability of Croatia's banking sector is similar to that of other countries. Since more developed financial systems are marked by declining returns on banking sector assets it may be said that also according to this indicator Croatia neared the countries that joined the EU in 2005. The highest return on banking sector assets in 2005 among CEE countries was observed in Romania, totalling 2.7%. In general, more developed banking sectors show lower rates of return on assets. This may be linked to rising competition in the market as well as lower credit risk. Thus, according to ECB results, available for 2004, the average return on assets in the euro area moved around 0.45%.

According to IMF data, return on equity of Croatia's banking sector totalled 16.5% at end-September 2005, slightly below the average for CEE countries, whose bank-

Figure 50 Return on Assets in Selected CEE Countries

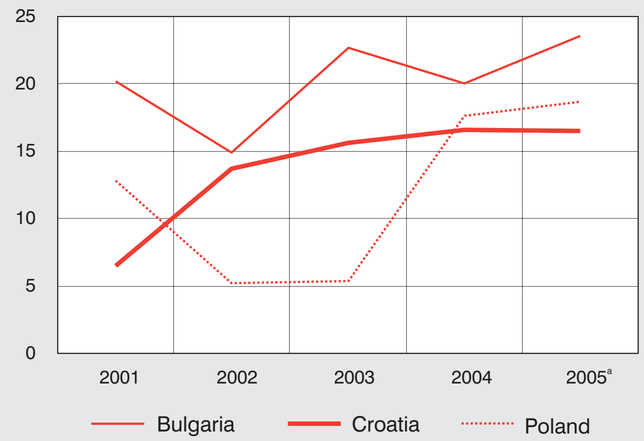



[a] Data for Bulgaria and Croatia relate to September, while data for Poland relate to June 2005.

Source: IMF.

ing sectors generally have higher returns on average equity than more developed economies. According to an ECB survey of large banks in the euro area, the annual return on average equity in 2005 went up from 16.5% to 19.7%.

**Figure 51** Return on Equity in Selected CEE Countries




[a] Data for Bulgaria and Croatia relate to September, while data for Poland relate to June 2005.

Source: IMF.

## **Table A** Selected Indicators of Banking Sector Operations[16] (in %, unless otherwise noted)

| Indicator | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| Number of banks | 43 | 46 | 41 | 37 | 34 |
| Assets (in million HRK) | 148,455 | 174,139 | 204,043 | 229,305 | 260,594 |
| Return on average assets (ROAA)[a] | 0.9 | 1.6 | 1.6 | 1.7 | 1.7 |
| Return on average equity (ROAE)[b] | 6.6 | 13.7 | 14.1 | 16.1 | 15.6 |
| Adjusted ROAA[c] | 1.5 | 1.6 | 1.5 | 1.7 | 1.7 |
| Indicator of net operating income[d] | 1.6 | 1.9 | 1.9 | 2 | 1.9 |
| Indicator of net interest income[e] | 3.6 | 3.3 | 3.4 | 3 | 2.9 |
| Indicator of general administrative expenses and depreciation[f] | 3 | 2.7 | 2.6 | 2.3 | 2.2 |
| Ratio of interest income from loans to average loans | 11.3 | 9.6 | 8.7 | 8.1 | 7.6 |
| Ratio of interest expense on deposits to average deposits | 3.2 | 2.8 | 2.5 | 2.4 | 2.5 |
| Ratio of difference between interest income from loans and interest expense on deposits to average assets | 2.9 | 2.7 | 2.9 | 2.7 | 2.7 |
| Share of impairment loss in total loans to financial institutions | 5.1 | 3.1 | 2.1 | 0.4 | 0.2 |
| Share of impairment loss in total loans to household loans | 4.1 | 3.4 | 3.4 | 3.3 | 2.8 |
| Share of impairment loss in total loans to other enterprises | 16.1 | 11.6 | 9 | 7.7 | 6.3 |
| Share of specific provisions in total off-balance sheet risk | 2.7 | 0.8 | 0.4 | 0.4 | 0.2 |
| Ratio of f/c loans granted to f/c deposits received and loans | 8.3 | 11.3 | 10.2 | 11.2 | 15.6 |
| Total f/c assets to total f/c liabilities ratio | 51.8 | 44.5 | 49.3 | 50.5 | 50.7 |
| Long f/c position to regulatory capital ratio | 11.3 | 12.8 | 13.9 | 12.1 | 8.4 |
| Short f/c position to regulatory capital ratio | 4.8 | 2.7 | 1.4 | 0.8 | 1.7 |
| Ratio of overdue claims to specific provisions for loans to other enterprises | 121.2 | 128.7 | 131.5 | 128.2 | 129.4 |
| Ratio of overdue claims to specific provisions for household loans | 113.9 | 116.3 | 105.6 | 109.9 | 102.7 |
| Ratio of overdue claims to specific provisions for loans and deposits | 108.4 | 117.5 | 117.2 | 112.1 | 113.6 |
| Share of deposits and loans from non-residents in total liabilities | 15.4 | 21.8 | 26.7 | 28.4 | 28.1 |
| Capital adequacy ratio | 18.5 | 17.4 | 16.5 | 15.3 | 13.4 |
| Total capital to total assets ratio | 9.2 | 9.5 | 8.9 | 8.6 | 9 |
| Tier 1 to risk exposures ratio | 16.9 | 15.2 | 14.1 | 13.1 | 11.8 |
| Ratio of short-term loans extended to short-term deposits and loans received | 32.2 | 37 | 35.5 | 35 | 34.3 |
| Loan to deposit ratio | 58.0 | 65.7 | 65.0 | 65.3 | 69.6 |
| Share of loans from the CNB and domestic banks in total loans and deposits received | 7.6 | 8.7 | 20.2 | 14.3 | 27.3 |

a Percentage share of pre-tax profit in average assets.
b Percentage share of after-tax profit in average equity.
c Pre-tax profit does not include extraordinary income and extraordinary expenses.
d Percentage share of net operating income before loss provisions in average assets.
e Percentage share of net interest income in average assets.
f Percentage share of general administrative expenses and depreciation in average assets.

16 According to unconsolidated preliminary Bank Statistical Reports as at 31 December 2005 and unconsolidated revised Bank Statistical Reports for previous period, excluding banks subject to winding-up proceedings, available on 8 March 2006. All indicators are calculated on the basis of aggregate unconsolidated banking sector data on a net basis (values of asset items are reduced by corresponding specific provisions). For indicators that are calculated on the basis of the average amount of a certain item, averages are calculated as the arithmetic mean of the balance at the beginning and the balance at the end of the period for which the indicator is calculated.

## Table B Selected Debt Indicators of Non-Financial Sectors[17] (in %)

| Indicator | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| Household debt | | | | | |
| – as % of GDP | 19.0 | 24.7 | 28.9 | 32.1 | 35.9 |
| – as % of gross disposable income[a] | 37.0 | 49.3 | 63.6 | 70.7 | 79.0 |
| – as % of household bank deposits | 43.4 | 60.8 | 71.0 | 77.2 | 82.8 |
| – year-on-year rate of change | 29.7 | 42.5 | 27.9 | 19.2 | 20.3 |
| Debt of non-financial enterprises | | | | | |
| – as % of GDP | 42.9 | 45.0 | 45.3 | 47.9 | 52.5 |
| – as % of corporate bank deposits | 352.0 | 306.9 | 290.0 | 303.5 | 351.4 |
| – year-on-year rate of change | 8.5 | 14.6 | 10.4 | 13.3 | 18.0 |
| TOTAL – non-financial private sector | | | | | |
| – as % of GDP | 61.9 | 69.7 | 74.2 | 80.0 | 88.4 |
| – year-on-year rate of change | 14.2 | 23.2 | 16.6 | 15.6 | 18.9 |
| General government debt[b] | | | | | |
| – as % of GDP | 41.7 | 42.1 | 43.4 | 46.4 | 47.4 |
| – year-on-year rate of change | 11.6 | 10.6 | 12.7 | 14.7 | 10.0 |
| – interest paid as % of GDP | 1.9 | 2.0 | 2.0 | 2.0 | 2.2 |
| TOTAL – non-financial sector | | | | | |
| – as % of GDP | 103.6 | 111.8 | 117.6 | 126.4 | 135.8 |
| – year-on-year rate of change | 13.2 | 18.1 | 15.2 | 15.3 | 15.6 |
| Implicit interest payments[c] | | | | | |
| – households, as % of gross disposable income | 3.9 | 4.5 | 5.7 | 6.1 | 6.3 |
| – non-financial enterprises, as % of GDP | 3.4 | 3.1 | 3.0 | 2.8 | 3.0 |

a Household gross disposable income is estimated on the basis of data from two CBS publications: the Survey on Household Consumption and the Statistical Yearbook of the Republic of Croatia. Household data except for 2001, were estimated on the basis of data on population migration.

b According to an internally consistent broadest coverage of the general government, including the CBRD debt and excluding non-exercised government guarantees. All deviations from this indicator calculated on the basis of official CNB or MoF statistics may be attributed to discrepancies in the general government coverage.

c Estimate based on existing data on interest paid to banks.

17 Expert estimate based on data of the CNB, CBS, FINA, DINADOS, HAGENA, CROSEC and MoF, available on 31 March 2006. Possible are subsequent revisions of data related to the regular revisions of external debt statistics. Debt data do not include the debt to issuers of non-bank cards – indicators may be revised up if sectoral data on claims of card issuers become available. Debt sectorisation according to non-bank financial institutions is estimated on the basis of incomplete data – value of indicators for some sectors may be revised up with a parallel adequate decrease for other sectors if sectoral data on claims of non-financial institutions become available. Debt data include neither the sector's internal debt nor mutual debts of non-financial sectors.

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## Abbreviations

| | |
|---|---|
| bn | – billion |
| CAR | – capital adequacy ratio |
| CBRD | – Croatian Bank for Reconstruction and Development |
| CBS | – Central Bureau of Statistics |
| CCE | – Croatian Chamber of Economy |
| CNB | – Croatian National Bank |
| CPI | – consumer price index |
| CRCC | – Croatian Registry of Credit Obligations |
| CROSEC | – Croatian Securities and Exchange Commission |
| DAB | – State Agency for Deposit Insurance and Bank Rehabilitation |
| DEM | – German mark |
| DINADOS | – Directorate for the Supervision of Insurance Companies |
| EBRD | – European Bank for Reconstruction and Development |
| ECB | – European Central Bank |
| EMU | – Economic and Monetary Union |
| EONIA | – Euro Overnight Index Average |
| EU | – European Union |
| EUR | – euro |
| Fed | – Federal Reserve System |
| f/c | – foreign currency |
| FINA | – Financial Agency |
| GDP | – gross domestic product |
| GVA | – gross value added |
| HAGENA | – Agency for Supervision of Pension Funds and Insurance |
| HRK | – Croatian kuna |
| hybr. | – hybrid |
| IAS | – International Accounting Standards |
| IBRD | – International Bank for Reconstruction and Development |
| IMF | – International Monetary Fund |
| instr. | – instruments |
| m | – million |
| MoF | – Ministry of Finance |
| OTC | – over-the-counter market |
| R. | – Republic |
| ROA | – return on assets |
| ROAA | – return on average assets |
| ROAE | – return on average equity |
| ROE | – return on equity |
| SAA | – Stabilisation and Association Agreement |
| S&Ls | – savings and loan associations |
| subord. | – subordinated |

| | |
|---|---|
| USD | – US dollar |
| ZMM | – Zagreb Money Market |
| ZSE | – Zagreb Stock Exchange |

## Symbols

| | |
|---|---|
| – | – no entry |
| .... | – data not available |
| 0 | – value is less than 0.5 of the unit of measure being used |
| ø | – average |
| a, b, c,... | – indicates a note beneath the table and figure |
| * | – corrected data |
| ( ) | – incomplete or insufficiently verified data |

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