3 THE CORPORATE AND HOUSEHOLD SECTORS

3.1 NON-FINANCIAL CORPORATIONS

The development of the corporate sector is important for financial stability, most notably because non-financial corporations are the most important debtor of banks. Unlike in previous years, when loans to non-financial corporations tended to decline, non-financial corporations have since mid-2004 been contributing to the relatively fast annual rate of growth of lending to the private sector, accounting for around 38% of the growth rate of total lending (for details on the growth rate of loans by sector, see section 4.4.2 *Loans and Credit Risk*). The financial situation of non-financial corporations is also important for households' balance sheets. Non-financial corporations are major employers and contribute to payments of wages to the household sector, thereby influencing its main source of income.

3.1.1 Large Enterprises (100 Employees or More)[35]

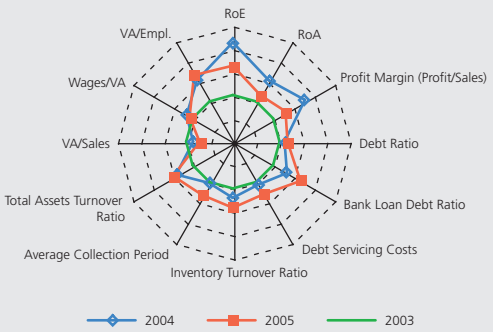
The situation in the sector of large enterprises is important primarily because such enterprises often determine the development of the whole corporate sector. Large enterprises are leaders in innovation. Many smaller enterprises are dependent on them either directly (as subcontractors) or indirectly (e.g. providing services in a region in which a large enterprise operates).

In 2005, GDP growth picked up further and the main turnover characteristics of the corporate sector improved (industrial production, exports, value added). However, the financial ratios of large non-financial corporations worsened from the very high levels of 2004. Year-on-year deteriorations were seen mainly for all profitability ratios. Return on equity declined to 12.7%, return on assets slipped to 12.9% and return on turnover fell to 5.9%.[36] The decline in profitability ratios was due to the aforementioned increases in turnover indicators and equity rather than a decline in the absolute profitability of the sector (which fell by just 0.3%). The 2005 profitability level was, with the exception of 2004, the best since 1997.[37]

The sector of large non-financial corporations saw a partial improvement in its debt ratio[38], which declined from 46.9% to 46.4%. In parallel with the decline in total debt, there was a decrease in debt to the banking sector (from 12.6% to 11.8%). In both cases, the decline in debt reflected an increase in assets (or equity), with the external funds of enterprises with 100 employees or more growing, albeit relatively slowly. A decline in interest rates also led to lower debt servicing costs.

Chart III. 1

Key financial indicators for non-financial corporations
(2003=100; index > 100 – improvement; index < 100 – deterioration)



Source: CZSO, CNB calculation

35 The breakdown into large, small and medium-sized enterprises is based primarily on the number of employees. Enterprises are usually divided into "micro-enterprises" with 1-9 employees, "small enterprises" with 10-99 employees, "medium-sized enterprises" with 100-249 employees, and "large enterprises" with more than 250 employees (see Act No. 47/2002 on the support of small and medium-sized enterprises). In this Report, the term "large enterprises" refers to enterprises with 100 employees or more, mainly because current and relatively detailed data are available for this category. The CZSO also regularly publishes data for enterprises with 20-99 employees. However, these data are far less detailed. Some sections of this Report will refer to this category. Data for enterprises with 1-19 employees, as well as a detailed breakdown of financial indicators by size of enterprise, are published by the CZSO only once a year with a relatively long lag (the latest available data are for 2003).

36 Return on Equity (RoE) = Earnings before Taxation/Equity
Return on Assets (RoA) = (Earnings before Taxation+Depreciation+Interest Expenses)/Total Assets
Profit to Sales Ratio (or Profit Margin) = Earnings before Taxation/(Sales of Goods + Sales of Own Production)

37 The comparison of growth in the absolute levels of the financial indicators is somewhat limited by a change in the set of monitored enterprises. In all, 108 enterprises were added to the set in 2005, which constitutes 2.5% of the number in 2004.

38 The interpretation of the debt ratio is rather unclear. On the one hand, growing debt strengthens leverage. If the interest rate remains unchanged, an increase in debt leads to a higher return on equity at any given absolute level of profit. On the other hand, a rise in debt generates risk for creditors of non-financial corporations (in particular banks). The chart and the text look at the issue more from the creditors' viewpoint, so an improvement in the debt ratio means a decline in debt. However, the first approach is applied in the analysis of annual changes in RoE.

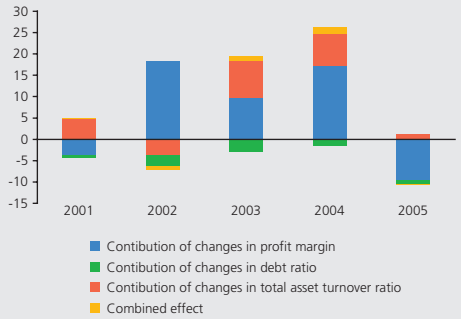
The assets turnover ratio improved as well (the inventory turnover ratio declined from 43 to 41.2 days, the average collection period fell from 99.5 to 94 days, and the assets turnover ratio decreased from 314.9 to 311.4 days). This mainly reflects the aforementioned rise in sales of enterprises.

An analysis of the annual change in return on equity[39] reveals that in 2005 the decline in RoE was largely due to enterprises' reduced ability to generate profits from their increasing sales volumes. The positive contribution of a lower assets turnover ratio continued into 2005. This contribution was, however, smaller than in recent years (around 15% compared to 2003 and 2004). This may suggest a termination or slowdown in the positive contributions of asset restructuring to RoE growth, which was mainly recorded for foreign owned corporations. The declining indebtedness of non-financial corporations with 100 employees or more decreased the RoE in 2005. The total contribution to the decrease in RoE was, however, smaller than in recent years.

A closer look at the breakdown of profitability by the main NACE[40] industrial categories reveals that there is some convergence of profitability between the individual categories underlying the decline in RoE. Profitability declined relatively more in industries with a higher absolute level of profitability in 2004, while industries with lower profitability recorded a rise or a more moderate decline. The "double-peak" character of this distribution is gradually disappearing, with profitability being more evenly distributed across the NACE categories.

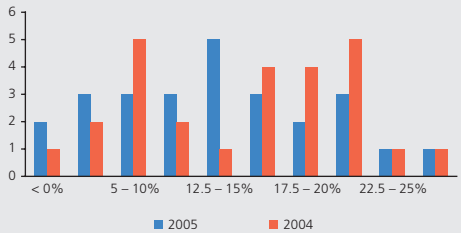
This trend is due to the increasing profitability of non-financial public corporations. Although the profitability of private foreign controlled non-financial corporations recorded the largest decline, it remained the highest. The profitability of national private non-financial corporations also showed a decline, falling below the profitability of non-financial public corporations at the end of the year. This may signal the beginning of problems in this sector caused by the appreciation of the exchange rate at the end of 2005.[41] Compared to public corporations, private non-financial corporations are also subject to significantly higher competitive pressures, making it difficult for them to increase their prices when costs rise, which necessarily affects their profitability.[42] The decline in RoE is also being dampened by an increase in the share of the relatively most profitable foreign-controlled corporations at the expense of public corporations. This is associated, among other things, with the continuing privatisation of state property.[43]

CHART III. 2
Contributions to year-on-year change in return on equity
(p.p.)



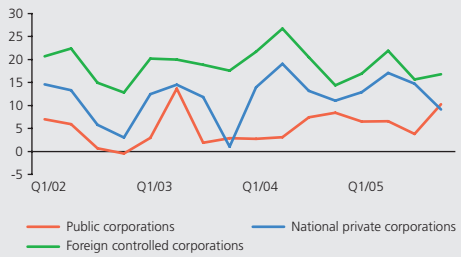
Source: CZSO

CHART III. 3
Change in RoE distribution for large enterprises
(≥ 100 employees)



Source: CZSO

CHART III. 4
Profitability (RoE) by main sectors
(%)



Source: CZSO

39 The following relationship holds:

$$RoE = \frac{Profit}{Equity} = \frac{Profit}{Sales} \cdot \frac{Sales}{Assets} \cdot \frac{Assets}{Equity} = \frac{Profit}{margin} \cdot \frac{360}{Assets\ turnover\ ratio} \cdot \frac{1}{1 - Debt\ ratio}$$

The percentage change in the RoE can be thus approximated by the percentage change in the profit to sales ratio, the percentage change in the inverse of the assets turnover ratio and the percentage change in the inverse of the ratio of equity to assets. This approximation is not entirely accurate, with the "combined effect" in the chart reflecting the error of this estimate.

40 NACE denotes the Industrial Classification of Economic Activities. A description of this classification is available on the CZSO website http://www.czso.cz/csu/klasifik.nsf/i/odvetvova_klasifikace_ekonomickych_cinnosti_(okec)

41 An appreciation of the exchange rate can be expected to have the strongest impact on private domestic non-financial corporations. Public domestic corporations have a relatively low share of exports in sales, being thus relatively little sensitive to the exchange rate. Private foreign-controlled corporations have greater opportunities to diversify exchange rate risk within the group. The impacts of the exchange rate appreciation have yet to pass through into the financial results of the corporate sector and they cannot be expected to show up fully before 2006.

42 Enterprises from the public non-financial corporations sector are more often active in sectors with a higher degree of concentration (e.g. electricity generation). The monopolistic or oligopolistic character of such sectors enables them to increase prices more easily.

43 In particular, the privatisation of the Unipetrol holding company and Czech Telecom in 2005.

Tab. III. 1

Contributions to change in RoE between 2005 and 2004
(p. p.)

		Change in RoE in p.p.	Share in equity (weight)	Contrib. to total change	Share of contrib. in category
Industries with negative contribution	Transport, storage and communication	-1.90%	19.16%	-0.36%	21.95%
	Trade, repairs	-3.69%	6.66%	-0.25%	14.80%
	Manufacture of basic metals and fabricated metal products	-3.14%	5.40%	-0.17%	10.21%
	Manufacture of rubber and plastic products	-7.01%	2.37%	-0.17%	10.02%
	Manufacture of electrical and optical equipment	-3.82%	3.69%	-0.14%	8.50%
	Manufacture of transport equipment	-1.84%	5.82%	-0.11%	6.47%
	Others with negative contribution	-1.38%	33.66%	-0.47%	28.05%
	Total with negative contribution	-2.16%	76.75%	-1.66%	100.00%
Industries with positive contribution	Mining and quarrying of energy producing materials	9.60%	3.77%	0.36%	64.86%
	Manufacture and repair of machinery and equipment	1.69%	2.82%	0.05%	8.51%
	Manufacture of food products, beverages and tobacco	0.96%	4.59%	0.04%	7.90%
	Real estate, renting and business activities	2.02%	1.92%	0.04%	6.95%
	Others with positive contribution	0.65%	10.17%	0.07%	11.78%
	Total with positive contribution	2.40%	23.25%	0.56%	100.00%
Corporations with 100 empl. or more, total.*		-1.11%	100.00%	-1.11%	

Note: * Owing to rounding errors the change in total RoE in p.p. is not exactly equal to the sum of the contributions.

Source: **CZSO, CNB calculation**

An analysis of profitability across the NACE categories identifies other reasons for the worsening profitability in 2005. Table III.1 shows that the general worsening of profitability was moderated by improved profitability in mining and quarrying of energy producing materials. This would seem to be due to the increase in oil prices last year and the related rise in prices of substitutes. On the other hand, the high oil prices negatively affected economic performance in the transport, storage and communication category. Its contribution to total profitability was exactly the opposite of that of mining and quarrying of energy producing materials. The high prices of oil and energy seemed to have negatively effected other sectors, for example wholesale and retail trade, repair of motor vehicles and personal and household goods (transport costs), manufacture of basic metals and fabricated metal products (high energy intensity of production) and manufacture of rubber and plastic products (where oil is one of the main production inputs).

A large contribution to the decline in aggregate profitability in manufacture of transport equipment and manufacture of electrical and optical equipment is due to the significant share of exports in sales (74.9% and 80.2% respectively in 2004). These sectors were affected by the appreciation of the exchange rate at the end of 2005. The key industry manufacture of transport equipment continued to record above-average profits in 2005, despite some decline (RoE 16.7%).

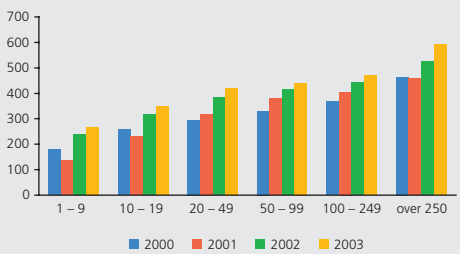
The relatively favourable trend in manufacture of food, tobacco products and beverages seems to be due to the positive impact of EU accession and the lifting of some barriers to trade in this area. The trend in real estate, renting and business activities is associated with growth in housing construction and related developer services and with the relatively stable property prices (see section 3.3 *Property Prices*).

3.1.2 Small and Medium-Sized Enterprises (1–99 Employees)

The discussion on the corporate sector is mostly based on analyses of large enterprises. However, as regards the number of non-financial corporations, the small and medium-sized enterprise (SME) sector is definitely more important (with SMEs accounting for 99.6% of the total). The SME sector contributes significantly to value added (46.4% of total value added in 2003), employment (48.1%), investment (41.0%) and total output (49.1%). Therefore, the SME sector is undoubtedly important for any evaluation of financial stability.

Chart III. 5

Value added per employee by size of enterprise
(CZK thousands per year; classification by number of employees)



Source: **CZSO**

The SME sector is specific. In particular, "micro-enterprises" involve a larger proportion of small businesses, which often combine pure business activities with activities of the entrepreneur as a consumer or household. Micro-enterprises often employ family members of the entrepreneur, meaning that, for example, data on wages paid can be distorted. Unlike large enterprises, SMEs have a significantly lower share of foreign-controlled corporations. Such enterprises can be expected to be more dependent on the domestic financial sector for the financing of their activities. At the same time, their access to capital markets is limited when obtaining funding sources. Thus, financing comes largely from the domestic banking sector or from their own resources.

The data available for all types of enterprises[44] (indicators relating to value added and employment) clearly demonstrate a trend of improvement in most financial indicators over time across the size categories of enterprises. As regards value added per employee, there is an apparent link with enterprise size: larger enterprises have a much greater ability to generate value added per employee.[45]

44 In contrast to large enterprises, there is relatively little information on financial indicators for the SME sector. Moreover, it is available with quite a long time lag (more than two years). Detailed information on financial indicators for the SME sector is hampered mainly by the more limited accounts kept by such enterprises.

45 This is due, among other things, to the fact that this indicator was calculated using the average number of employees. Using the average registered number of employees (which is lower, as it also counts the length of employees' working hours) does not imply a significant increase in value added per employee for most enterprise sizes. The exception is the smallest enterprises with 1-9 employees, whose value added per employee calculated in this way is about 2.8 times higher than under the original definition, making it the highest of all the categories.

In smaller enterprises, the lower level of value added per employee is offset by lower personnel costs. Therefore, the differences between the enterprise size categories are significantly smaller for the ratio of personnel costs and value added. The best results are recorded for the category of enterprises with 1–9 employees. As regards the remaining categories, the larger the enterprise, the better the indicator.

According to the Central Register of Credits, the loan growth in 2005 was due mainly to loans to SMEs with 10–99 employees.[46] Lending to large enterprises was flat or falling, while micro-enterprises (1–9 employees) saw relatively low growth. The tendency of faster growth in lending to smaller enterprises may suggest a gradual elimination of their liquidity restrictions[47], associated with their lower indebtedness as measured by the ratio of bank loans to sales. The low growth in loans to micro-enterprises is linked with the lower quality of such loans.[48]

The rate of new defaults[49] on loans to enterprises broken down by number of employees indicates that the degree of risk of SMEs is significantly higher than that of large enterprises with more than 250 employees. While the 12-month default rate is 0.1% for large enterprises, it is around 1% for SMEs. An interesting category is that of micro-enterprises, i.e. companies with up to 9 employees. The 12-month default rate was around 5% in this segment at the end of 2003. In early 2004, it saw a considerable decline and fast convergence to the level recorded by SMEs.

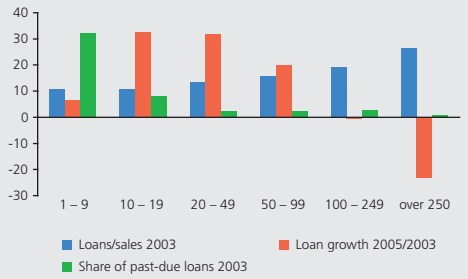
Overall, the current increase in lending to SMEs seems to be natural, being associated with their improving financial indicators. It does not seem to be creating problems for financial stability for the time being.[50]

3.1.3 Number of Non-financial Corporations

The financial soundness of corporations has improved in recent years, as indicated by the decline in the default rate on the loan portfolio of commercial banks. The improved condition of Czech corporations is also evidenced by a downward trend in the number of bankruptcy petitions filed.[51] The number of bankruptcy petitions filed declined by almost 14% year on year in 2005. Although the ratio of newly filed bankruptcy petitions to the total number of business is different in individual

CHART III. 6

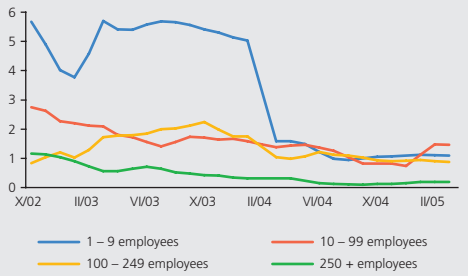
Loan growth and its determinants by size of enterprise
(%; classification by number of employees)



Source: CZSO, CNB (CRC), CNB calculation

CHART III. 7

12-month default rate of corporations by number of employees
(%)



Source: CNB

46 Data on loans from the standard bank reporting framework for the purposes of the CNB do not contain information about the structure of loans by size of the enterprise. Moreover, SMEs are recorded partly under "Non-financial corporations" and partly under "Households-trades". The only source of information about loans to SMEs is data from the Central Register of Credits (CRC) operated by the CNB (a detailed description of the CRC is provided in section 4.4.2 *Loans and Credit Risk*). Data from the CRC are not necessarily fully comparable with the data on loans from the standard bank reporting framework for the CNB and can be thus deemed illustrative only.

47 Liquidity restrictions can be associated with the existence of information asymmetry and the related problem of adverse selection. A bank does not know a borrower's real financial situation when providing a loan, unlike the borrower itself. Setting stricter lending criteria leads to higher risk borrowers participating. Liquidity restrictions can also be associated with moral hazard, i.e. a situation where a bank cannot prevent the borrower from behaving in a way leading to a rise in credit risk after the loan has been granted.

48 This category has seen some improvement, too. The share of past-due principal and interest declined from 32.3% at the end of 2003 to 20.7% at the end of 2005. These data are not fully comparable with the data on classified loans referred to in section 4, as they come from a different source. Moreover banks can classify loans which are not yet past due.

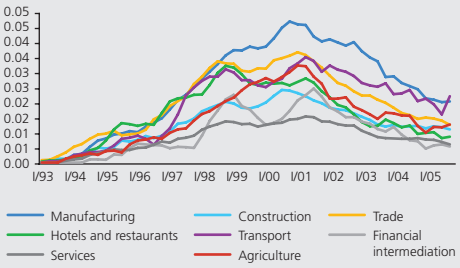
49 The 12-month default rate was calculated as the volume of loans 30-89 days past due relative to the average total amount outstanding on loan accounts in a 12-month period after the observation period. This variable can thus be observed only until March 2005 (12 months before the end of the available time series).

50 Given the limited availability of data on SMEs, it is necessary to emphasise that the statement is based on the interpretation of the currently available data. However, the absence of the latest information on the financial indicators of these enterprises still poses a problem, as their current financial situation can be derived only indirectly from aggregate data or data on large enterprises.

51 Although a filed bankruptcy petition does not necessarily mean adjudication of bankruptcy, these variables seem to show a close relationship.

CHART III. 8

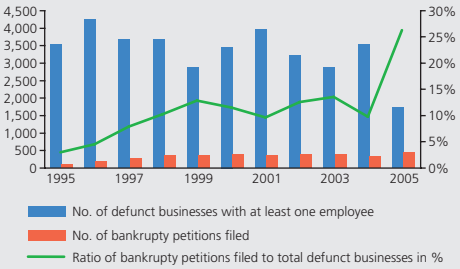
Industry risk measured by ratio of number of bankruptcy petitions filed to total number of businesses in industry
(%; quarterly data)



Source: CZSO, Ministry of Justice of the Czech Republic

CHART III. 9

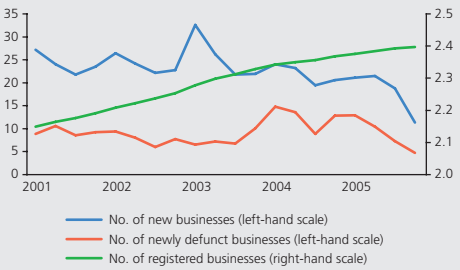
Defunct businesses and bankruptcies
(annual data)



Source: CZSO

CHART III. 10

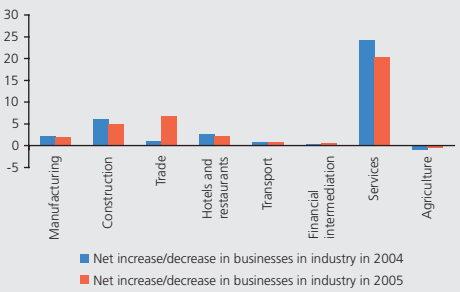
Numbers of new, defunct and registered businesses
(quarterly data; new and defunct in thousands; total number registered in millions)



Source: CZSO

CHART III. 11

Net increases/decreases in businesses by industry
(annual data; thousands of businesses)



Source: CZSO

sectors, the evolution of risk of sectors is strongly correlated. All industries have been showing a downward trend since the second half of 2001. The most problematic seem to be manufacturing and transport, and the least problematic services and financial intermediation. Trade and hotel and restaurant services, which were recording high values at the end of the 1990s, now lie between these two poles. Construction and agriculture are sectors which have long been showing an average degree of risk in the economy.

Trade accounts for the largest share in the total number of bankruptcy petitions filed (31% of all petitions for bankruptcy in 2005), followed by manufacturing (24%) and – some way behind – services (16%). Bankruptcies are not dominant in exits from the sector. In 2005, however, this indicator reached 26% for businesses with at least one employee.[52]

A long-term upward trend in the number of registered businesses has been visible since the beginning of the 1990s. This is related to the transformation from a centrally planned to a market economy. The growth has been slowing in recent years. Almost 2.4 million companies and sole traders were registered in the business register at the end of 2005 (1.2% more than in 2004, when an increase of 1.7% was recorded). The largest growth is being recorded for services businesses, while the rate of growth in the number of agriculture businesses is declining.

Risks arising from the non-financial corporations sector

Although the overall situation in the corporate sector has long been improving, some risks to financial stability can be identified. An analysis of financial indicators by NACE category indicated sensitivity to oil prices. If oil prices continue growing or remain at their current high levels in the longer term, the corporate sector's financial ratios will further deteriorate and credit risk will increase. Or, non-financial corporations will be forced to increase their prices or reduce wages, thus shifting the financial pressures to the household sector. An excessive appreciation of the exchange rate, which mainly influences the ability of corporations to generate profits from exports, could cause a similar effect.

The strengthening in the financing of SMEs is a positive manifestation of the gradual elimination of liquidity restrictions in this sector. An excessive credit expansion in this sector could, however, strengthen credit risk, owing to the generally worse financial results of this category of enterprises, a greater tendency to exit the industry and to a shortage of detailed current data on this sub-sector.

In contrast to the positive effects of foreign investment on manufacture of transport equipment[53] in the present or the near future, there may be an increase in sensitivity of corporations' financial results to external demand in the longer term. Rising concentration of production into some industries may increase the sensitivity of economic results to any problems in individual large corporations. There is also a rather longer-term possibility of transfer of such production to countries with lower real wages.[54]

3.2 HOUSEHOLDS

The household sector is important for financial stability for a number of reasons. Households are, behind non-financial corporations, the second most important debtor of the financial sector. They borrow significantly not only from banks (a detailed analysis of bank lending is provided in section 4.4.2 *Loans and Credit Risk*),

52 A bankruptcy petition was filed for a mere 3.6% of all defunct businesses in the economy in 2005.

53 In particular, manufacture of cars and related production.

54 These effects are also discussed in section 2.2 *The Domestic Macroeconomic Environment*.

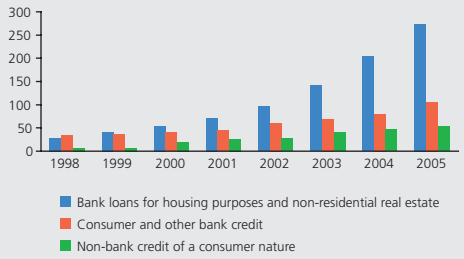
but also from non-bank financial intermediaries.[55] Household debt is the fastest growing item within bank loans. Households account for around 60% of the annual growth in lending to the private sector. They are also the most significant contributor to the financial sector on the deposits side. Their decisions on the allocation of savings can significantly affect the liquidity of the banking sector in particular and the development of new financial products.

Besides these direct effects, which are directly reflected in the assets and liabilities of the financial sector, there are a number of indirect effects. These stem from the numerous endogenous links between the household sector, the financial sector and the non-financial corporations sector. For example, a sizeable and unexpected increase in interest rates would, in addition to the direct effect on the ability of households to repay loans, be reflected in reduced disposable income and, subsequently, in lower consumer demand and in the GDP growth rate. This would, in turn, affect the credit risk of the non-financial corporations sector. Similarly, an increase in wages has a positive effect on the credit risk of the household sector on the one hand, but on the other hand has a negative impact on the corporate sector. An increase in prices usually acts in the opposite way.

Despite the growth in household debt, accumulation of household loans does not exceed accumulation of financial assets.[56] The net asset position of households is thus continuing to improve in absolute terms.[57] The main contributor to the formation of financial assets is the item currency and deposits (accounting for around 50%). In connection with the development of insurance (for details see section 4.5 *Insurance Companies*), the contribution of insurance technical reserves is growing, with a share of about one-third. The contribution of securities and equity is relatively low (around 11.9%), despite an increase related mainly to rising prices of shares and bonds (see section 2.3 *Developments on the Financial Markets*). Nevertheless, the sensitivity of households' balance sheets to prices of securities is gradually increasing. Another counterpart of household debt besides accumulation of financial assets is change in non-financial assets, or gross fixed capital formation of households. Such investment usually takes the form of investment in housing construction.[58] Households' balance sheets also depend significantly on property prices, and this sensitivity is increasing over time due to frequent debt financing of household investment (property prices are analysed in section 3.3 *Property Prices*).

Although the bank deposits of households exceed their loans more than 2.5 times, households' ties to the financial sector are having a negative impact on their disposable income. The total volume of interest paid by households (interest on loans) exceeded the volume of interest received (interest on deposits) around 2.4 times at the end of 2005. The difference between interest paid and received in 2005 had a negative contribution to gross disposable income of 1.2 percentage point. The share of interest received in disposable income is essentially flat. As regards the ratio of interest paid to disposable income, the effect of increasing indebtedness is starting to prevail over the effect of the decline in nominal interest

CHART III. 12
Bank and non-bank credit to households
(CZK billions)

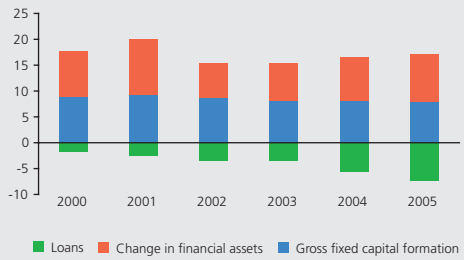


Source: CNB, ČLFA

CHART III. 13
Share of non-bank credit in household credit
(%)

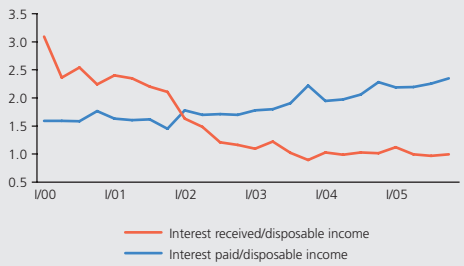
Source: CNB, ČLFA

CHART III. 14
National accounts items for the household sector
(flow per year as % of disposable income)



Source: CZSO

CHART III. 15
Shares of interest received and paid in disposable income
(%)



Source: CZSO, CNB calculation

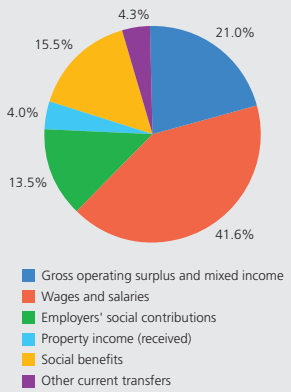
55 Non-bank providers of consumer credit gained market share particularly in 2000 and 2001. They still account for around one-third of loans of a consumer nature. Their market share in total loans is declining owing to the high growth in loans for house purchase, which are usually not offered by these institutions.

56 The ratio of newly received loans to newly purchased financial assets was 80% in 2005. The ratio of newly received loans to newly purchased financial assets plus gross capital formation in the household sector reached 42.9%. In 2000, these ratios were 20.8% and 10.3% respectively.

57 However, their percentage growth is higher than growth in deposits, owing to the low base for loans. The ratio of financial assets to financial liabilities is therefore declining.

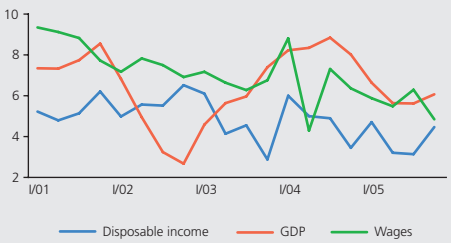
58 Households accounted for 15.7% of total gross fixed capital formation in 2005. The average share for 2000-2005 is 17.2%. Investment by households is less pro-cyclical than other investment, so the decline in share in 2005 is due rather to the favourable cyclical situation (growth in investment by other sectors).

Chart III. 16
Structure of households' current income by source
(2005)



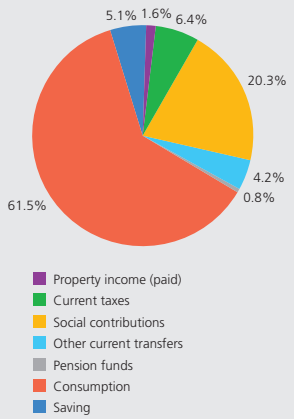
Source: CZSO

Chart III. 17
Income indicators
(year-on-year change in %; in nominal terms)



Source: CZSO

Chart III. 18
Structure of households' current income by use (expenditure)
(%; 2005)



Source: CZSO

rates, and the ratio of interest paid to disposable income is increasing. The risk of changes in interest rates may thus impact on the household sector more strongly than in the past. The sensitivity of household consumption to interest rates can also be expected to increase.

The ability of households to repay their obligations depends mainly – apart from the volume of their assets – on their future income. Wages paid to employees clearly dominate households' sources of current income. Gross operating surplus and mixed income[59] and social benefits also have high shares. Total household income is thus linked primarily with wages and employment. Average wage growth has lagged slightly behind GDP growth in the last two years. The difference between the growth rates of the economy and disposable income has been even more pronounced. Households are not fully participating in GDP growth.[60] Should this continue, or should the gap between disposable income growth and GDP growth widen further, credit risk might increase in some parts of the household sector. A decline in employment poses a potential risk in this context.[61] Other things being equal this would reduce total wages paid per capita.

A potential shock to households' incomes would not necessarily worsen their ability to repay loans. The need to repay a loan can force households to restrict their expenditure owing to a fear of enforcement of collateral in the case of a house purchase loan and the related loss of the roof over their heads, or to a fear of execution (see the box *Enforcement of Claims against Corporations and Households – Bankruptcies and Executions*).

More than a quarter of households' expenditure is associated with tax payments or social contributions, which households cannot influence very much. Around two-thirds of expenditure is available to households in the form of disposable income for consumer spending.[62] Such expenditure can be influenced by households to some extent. If there is a rise in prices of essential goods with low price elasticity, total consumer spending may grow. At a given level of income that would result in a decline in savings. In this respect, there is a risk if food prices increase. Households' balance sheets may also be negatively affected by rent deregulation and the related increase in housing costs.[63] Growth in oil prices and the related increase in energy prices may also imply pressures on households' nominal expenditure.

Information on the distribution of debt across various categories of households is important for evaluating financial stability. The national accounts data do not contain such information, so it is necessary to use family budget statistics.[64] These statistics contain *inter alia* data on new deposits and savings withdrawn for the given year as well as data on newly received loans and repayments of such loans, including links with non-banking financial institutions.

59 Gross operating surplus and mixed income are a result of the economic activity of small entrepreneurs. They reflect the profit of such entrepreneurs as well as their hypothetical wages.

60 Disposable income, which is at households' disposal for consumption and savings, differs from GDP *inter alia* in the income deficit (part of the balance of payments statistics). The slower disposable income growth compared to GDP growth is due to the relatively high income deficit.

61 At the end of 2005, some disproportion was recorded between employment, which was rising relatively sharply (a year-on-year rise of 2% in 2005 Q4), and the unemployment rate, which was falling only very slightly. One possible explanation is higher employment of non-residents. This helps explain the difference between GDP growth and disposable income growth. Wages of non-residents are excluded from disposable income.

62 The remaining income is used in the form of gross savings.

63 This, of course, applies only to households that live in dwellings with regulated rents. Households that live in dwellings with unregulated rents may profit from rent deregulation.

64 The family budget statistics are compiled by the CZSO with the aid of a survey containing information on 3,000 households. The data contain flows for the year. They are not fully comparable with the financial accounts data or the banking statistics data, which cover the household sector as a whole.

The breakdown of households by their net money income per person shows that in the last five years the most deposits were accumulated by households with higher incomes. This category also borrowed most compared to their income.[65] On the other hand, low-income households have recently been borrowing to a larger extent. The relatively high share of newly received loans in their money income does not pose too great a risk for financial institutions.[66] However, relatively high repayments on loans from previous years are negatively affecting the ability of some households to finance other expenditure and generate new savings.

This can be seen, for instance, in the category of households with minimal income, two children and one economically active person. Such households' ratio of loan repayments to annual money income is more than 6%, with the excess of savings withdrawn over deposits amounting to 8.9%. The category which currently borrows the most (that is, newly received loans minus loan repayments are the highest for them in relation to gross money income) is households with one child and one economically active parent. These are probably mostly young families.

In addition to relatively lower savings, higher dependency on social benefits is another risk factor for households with lower incomes. These may be affected in the medium term by the potential implementation of public finance reforms. On the other hand, a positive aspect from the financial stability point of view is that social benefits are the most important for households with below-average income, not for those with the lowest income, which borrow relatively little (in particular, households of old-age pensioners). A relatively high share of "essential" expenditure[67] in total expenditure is also relevant for households with below-average income. This may somewhat restrict their ability to respond to potential negative trends by reducing consumption.

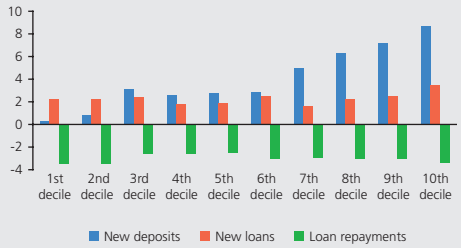
Box 3: Enforcement of Claims against Corporations and Households – Bankruptcies and Executions

Besides the persisting upward trend in debt of the sector "Households – individuals"[68], the volume of loans to corporations has also been rising since the second half of 2003. At the end of 2005, bank loans to the "Households – individuals" sector amounted to CZK 380 billion. Most of them were loans for house purchase (CZK 266 billion), while consumer credit amounted to CZK 95 billion. Total bank loans to individuals increased by 34% in 2005 compared to 2004. In addition to bank loans, the volume of non-bank loans is on the rise. Consumer credit provided by non-banks amounted to more than CZK 43 billion in 2005. Leasing companies are also contributing to the indebtedness of households and corporations. Their claims from leasing transactions stood at CZK 202 billion at the end of 2005. Bank loans to corporations totalled CZK 525 billion at the end of 2005.

Despite the upturn in lending to corporations, the number of bankruptcy petitions filed is not rising. This may indicate improving financial soundness of corporations or improved risk management in banks. Long bankruptcy proceedings and creditors' efforts to deal with corporate insolvency more efficiently, which would ensure higher recoverability of claims, may also be playing a role.

CHART III. 19

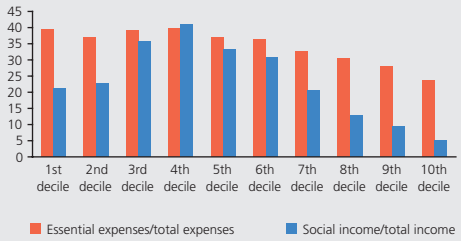
New household deposits and loans by income categories in the family accounts
(share in gross money income in %; for 2000 – 2004)



Source: CZSO

CHART III. 20

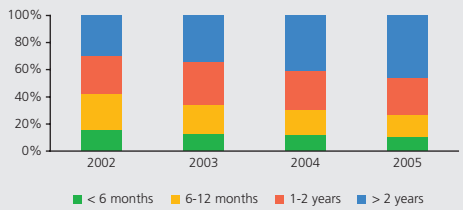
Income and expenses by income categories in the family accounts
(%; 2004)



Source: CZSO

CHART III. 1 BOX

Numbers of lawsuits caused by bankruptcy or composition by time taken to settle lawsuit
(days)



Source: Ministry of Justice of the Czech Republic

65 The category of the three deciles with the highest income accounted for 54.1% of total new loans received.

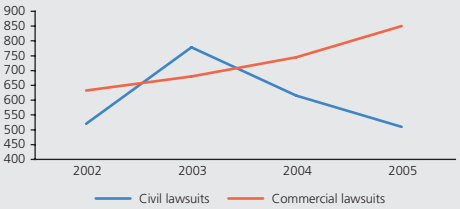
66 The category of the three deciles with the lowest income accounted for 17.6% of total new loans received.

67 Essential expenditure was calculated as the sum of expenditure on food and non-alcoholic beverages, housing and health.

68 Within the banking statistics, the "Households" statistical category comprises the subcategories "Households - trades" and "Households - individuals". These two subcategories are very heterogeneous.

CHART III. 2 BOX

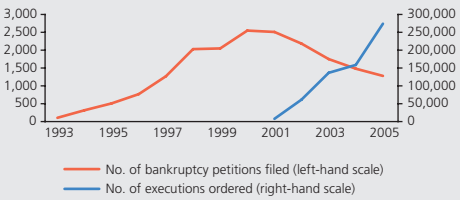
Average duration of lawsuits relating to bankruptcy or composition
(number of days)



Source: Ministry of Justice of the Czech Republic

CHART III. 3 BOX

Bankruptcies and executions
(annual data)



Source: Ministry of Justice of the Czech Republic, Chamber of Executors of the Czech Republic

The proportion of lawsuits caused by bankruptcy or composition lasting more than two years is rising. Such cases accounted for 46% of the total number of all such lawsuits in 2005, compared to 41% in 2004 and just 34% in 2003. While the average length of civil lawsuits relating to bankruptcy and composition has reduced in the last two years, the length of commercial lawsuits has increased.

If a corporation or household is not able or willing to pay its debts on time and in full, a default event occurs. Two main debt collection mechanisms are then employed – execution or bankruptcy. Composition, or compulsory composition, where debtors settle at least a minimal amount of their obligations as required by law, is theoretically possible but seldom used in practice. Unlike bankruptcy, composition is not associated with the dissolution of a legal entity.

Bankruptcy is a collective process in which creditors try to satisfy their claims to the greatest extent possible. Generally, bankruptcy can be declared on both legal entities and natural persons.[69] However, this method is virtually never applied to natural persons, as the legislation in force was primarily intended for legal entities. This should change with the enactment of new insolvency legislation with effect from 1 July 2007. In addition to the possibility of reorganisation, this contains the principle of discharge of debt, giving a debtor (natural person) the option of exemption from the payment of claims covered by the discharge of debt insofar as they were not settled in the discharge proceedings.[70]

The number of adjudicated bankruptcies shows that this mechanism started to be used increasingly during the economic slowdown at the end of the 1990s.[71] From 2002 onwards, a gradual decline can be seen in the number of bankruptcy petitions filed, which might reflect improved financial soundness of the corporate sector.

Where a debtor is in default with only one creditor, the process of satisfying the claims of the creditor can be simplified by means of execution proceedings. This is generally more efficient and shorter. However, if a creditor files a petition for execution proceedings in respect of a defaulting debtor and it later turns out that such debtor has liabilities to other creditors who subsequently file a petition for bankruptcy in respect of such debtor, the execution proceedings will be discontinued. Otherwise, one creditor would enjoy undue preference over the others.

Execution proceedings relate mostly to households, which often overestimate what they can afford and borrow more money than they are later able to repay. In particular, there are more and more cases of small debts of up to CZK 10,000. These are often unpaid fines imposed by the police and public transport operators, payments for electricity, rents, telephone bills, health insurance, etc. Three-quarters of all debts recovered in executions are claims of up to CZK 10,000. Their average collection rate is around 50%. One-fifth of cases are sums ranging from CZK 100,000 to CZK 1 million, with a recoverability of around 30% of the amount due. Only 5%–10% of sums of more than CZK 1 million are recovered successfully. Executions mainly relate to unsecured loans, with consumer credit dominating for households. Consumer loans often amount to several tens of thousands of koruna – i.e. amounts which are recovered the most successfully in executions.

69 In addition to the loss of property, anyone who has been adjudicated bankrupt must use all their future income to meet creditors' claims up to the amount due.

70 For more on the legislative aspects of insolvency law, see the article *The Impact of Insolvency Law on Financial Stability* in the thematic part of this Report.

71 The number of bankruptcies adjudicated in the Czech Republic is very low by international comparison. For example, the number per one million citizens was about four times higher in Germany than in the Czech Republic in 2005.

The most frequent methods of debt recovery by executors in 2005 included attachment of property and deductions of amounts due directly from debtors' bank accounts. As not every debtor has a bank account, executors obtained money from funds on building society accounts,[72] from pension funds or by attaching social benefits.

When opening execution proceedings, the executor first obtains the necessary information about the person in question (the addresses of the debtor and his employer, bank account numbers, etc.). By law the executor has access to the information sources of state institutions, such as the central register of citizens, and health insurance companies' data on their clients. Banks also have the duty to co-operate in execution proceedings. Moreover, executors may contact the employer and attach the debtor's future income in favour of debt repayment.

It is practically impossible to avoid repayment of debt in respect of smaller amounts due, which can be recovered quite easily from the sale of assets of the household. If a household has no financial assets, executors enter the dwelling under a court order and seize property found. If this property is not sufficient to cover the amount due, executors attach the debtor's future income. Execution proceedings are very quick and efficient and can have a very harsh impact on households.

The number of executions is rising fast. There were around 155,000 cases in 2004 and more than 270,000 in 2005, representing an annual increase in adjudicated executions of 74%. Moreover, the length of execution proceedings is getting shorter. In this case, debtors have no reason to invoke procedural obstructions in the form of appeals or postponements, as it only increases their final costs in the form of interest on the amount due and the executor's fee. The Chamber of Executors is preparing a central register of executions, which will be available for a charge on the Internet from September 2006. This register should help creditors avoid selling goods under hire purchase or lending money to people who have already been subject to execution. The register may thus ultimately reduce the credit risk faced by financial intermediaries.

Banks cover default risk by means of high interest rates on unsecured loans. Therefore, if a household is not able to repay consumer credit, banks often sell off this claim to third parties, thereby removing the bad loan from their balance sheets. The loans are purchased by specialised companies engaged in subsequent recovery of such loans, which is not subject to any regulation. Such companies also often recover the uncollectible claims of non-banking financial intermediaries (such as hire purchase). In such cases, there is no execution or adjudication of bankruptcy. The claim is recovered out of court instead. Although there are no statistics on the number of claims so recovered or on the methods used, it is reasonable to assume that the impacts of such methods on households may be even harsher than execution proceedings in court.

72 Where the execution covers funds saved on building society accounts, the unfavourable impact of the execution on debtors is intensified by the fact that they lose the entire previously credited state support and interest on such support.

3.3 PROPERTY PRICES

The Residential Property Market

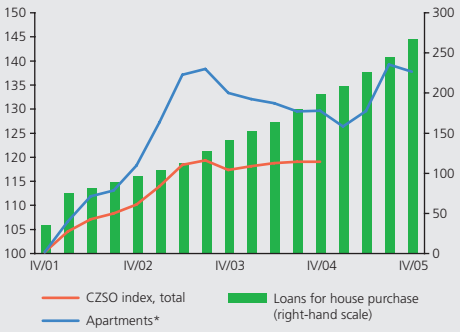
The high growth in loans for house purchase is increasing the sensitivity of households' balance sheets to property prices. The risk of a bubble on the property market is often discussed, given the low interest rates over the last year, possible speculative purchases before the Czech Republic's accession to the EU and the growth in demand for property financed on debt. Expectations of higher prices of dwellings in response to an expected rise in VAT on housing-related construction work from 5% to 19% scheduled for the beginning of 2008, may also be contributing to the creation of a bubble.[73] Any bursting of this bubble would affect both households (through a decline in the value of their non-financial assets) and financial institutions providing loans for house purchase (through a decline in collateral value). A sudden decline in property prices might also be directly reflected in financial institutions' balance sheets via their investments in real estate or real estate investment funds. There also exists an indirect channel via lending to construction companies and, in particular, via ownership or lending links with property development companies, most of which combine construction activities with speculation on the property market.

Property transfer prices[74] show that prices of most types of property are flat or even falling slightly on the back of a relatively sharp rise in 1999–2003.[75] An exception is the building plot price index, which continued rising in 2004, although it remains lower in absolute terms compared to other types of property. The main reason for this is its low dynamics up to the end of 1990s. The recent rise in building plot prices can be thus interpreted as catch-up with other property prices linked with the residential property construction cycle.

Other property price indices are showing similar trends. In the past, apartment blocks and flats recorded above-average increases in prices. This path is essentially the same for different types of property in different regions. The only exceptions are the categories "Apartment blocks in Prague" and "Building plots in the Prague-West/ Prague-East region", which are rising about twice as fast, and the category "Building plots in Prague", which rose by around 20% less than the overall index in 1998–2004.[76] Relatively stable property prices in 2005 are also indicated by supply prices of flats in Prague, which suggest a very slight increase in prices or a stagnation at roughly the end-2003 level.

CHART III. 21

Property prices – transfer prices according to tax returns
(absolute index; 2001 Q4=100; loans in CZK billions)

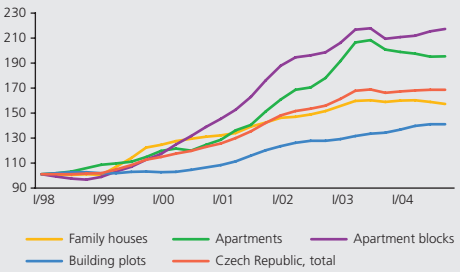


Pozn.: *For apartments calculated for 2005 using IRI figures.

Source: CZSO, CNB, Institute for Regional Information (IRI)

CHART III. 22

Property prices – transfer prices according to tax returns
(absolute index; 1998 Q1 = 100)



Source: CZSO, CNB calculation

73 The effect of the higher VAT rate on construction work will, however, be limited by the expected application of exemptions for the construction of "social dwellings" (until 2015) and for building work related to the reconstruction and repair of dwellings (until 2010), to which the reduced 5% rate should continue to apply. The definition of social housing is fairly loose, covering the construction of flats of up to 90 square metres and houses of up to 150 square metres.

74 The text differentiates between the following types of property prices: **property transfer prices**, based on Ministry of Finance statistics from property transfer tax returns and published by the CZSO. These prices are the closest to actual **market prices** in terms of methodology. There are also **property supply prices**, which indicate property sale supply prices in estate agencies and are published by the Institute for Regional Information. Supply prices should be higher than transfer prices. The last category is **property purchase prices** (provided by the CZSO), which broadly indicate the cost of building new property.

75 Average annual growth in the property transfer price index was 10.5% in the Czech Republic in 1999-2003. By contrast, residential property prices in the euro area increased by 6.1% on average in 1999-2004. In 2004, the property transfer price index increased by just 1.4% year on year in the Czech Republic, while the euro area saw property price growth of 7.4% (the strongest increases being recorded for Spain, France and Ireland – see the ECB's Financial Stability Report, December 2005). In the Central European region, property prices showed an increase of 5% in Hungary in 2004 (although they declined by 3.4% in 2005 – see Report on Financial Stability, March 2006, Magyar Nemzeti Bank). Poland expects an increase in property prices of around 5%-15% compared to mid-2003 (see Financial Stability Report, First Half of 2005, National Bank of Poland).

76 The relatively high growth in prices of apartment blocks in Prague is probably due to the lower share of older properties in such transfers. New apartment blocks are usually more luxurious and expensive than the existing housing stock. The increase in building plot prices in the Prague-West/ Prague-East region is related to the construction boom in these regions, which are within easy reach of Prague, and to the previous relatively low prices. On the other hand, the slower growth in building plot prices in Prague probably reflects the price growth in the pre-1998 period.

A comparison of supply prices across regions reveals an apparent price convergence trend. In 2001–2005, prices in regions with lower absolute prices rose faster on average than in regions with high prices. This link is somewhat weakened by prices in Prague, which – despite being relatively high – maintained their comparatively high growth rate. This is due to the nature of the capital city as the main administrative centre and centre of tourism in the Czech Republic, with the lowest unemployment rate etc. On the other hand, after the exclusion of Prague, and owing to the observed negative relationship between the level and growth of property prices, the price growth would lag somewhat behind in the regions with the lowest prices (Ústí nad Labem, Ostrava). This can be explained, for example, by the high unemployment in these regions. Overall, the trend towards price convergence across the regions can be viewed positively from the financial stability point of view. A more balanced price level across the regions reduces the probability of lenders making the wrong decision, reduces the risk of moral hazard and so forth.

In order to evaluate the possible existence of a property price bubble, we need to analyse the relationship between property prices, market rents and yields on other assets or the interest rate.[77] Risks to financial stability exist mainly in the case of speculative property purchases. The divergence between rents and property prices, particularly in the past two years, may pose some risk. Property supply prices in Prague increased by 3.3% between the end of 2003 and 2005, while rents fell by 6.1%. The gap between rents and property supply prices is widening in other regions, too. The "rent return"[78] in Prague has thus declined by around one percentage point, which might indicate a possible correction in property prices, especially if interest rates increase sharply.

The divergence between supply prices of flats and market rents can be well explained by movements in long-term interest rates, which have been declining since mid-2004. The difference between the "rent return" and long-term interest rates has even increased slightly since mid-2004. Moreover, there is apparently lower volatility in the "rent return" compared to long-term interest rates. In the context of the said link between price and rents, some risks stemming from the market distortion brought about by rent regulation still remain. The ratios of market to regulated rents range from around 5.5 for Karlovy Vary to 2.3 for Ostrava. In addition to an increase in regulated rents, fast rent deregulation might foster a decline in market rents. Such a decline would affect investors with a stronger speculative motive and might result in downward pressure on prices of apartments.

In addition to demand effects, supply effects might gradually start to emerge on the property market. The numbers of housing completions and starts and flats under construction are at their highest levels since the first half of the 1990s, when the previous extensive construction of prefabricated "panel" buildings was nearing completion. The ratio of all flats completed since the end of 2001 to the total housing stock this year[79] is still relatively low (3.1%). Housing construction is mainly concentrated in Prague and the Central Bohemia Region, which account for 38.5% of housing completions and 43.8% of housing starts in 2005. The share of housing starts in the number of permanent dwellings is about 2.5 times higher in these regions than in the rest of the Czech Republic.

CHART III. 23

Apartment price vs apartment price growth, 2001 – 2005

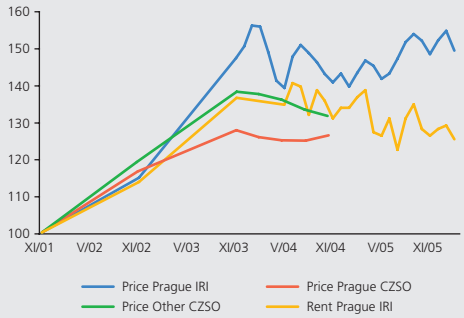
(supply prices; by regional capital; city abbreviations given in list of abbreviations)

Source: **Institute for Regional Information, CNB**

CHART III. 24

Apartment prices and rents (supply prices and transfer prices)

(November 2001=100)

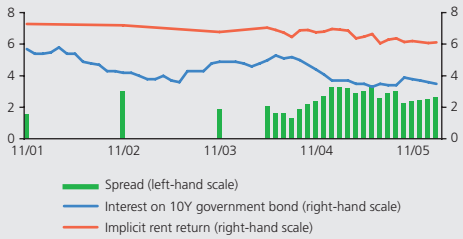


Source: **CZSO, Institute for Regional Information**

CHART III. 25

Implicit rent return vs interest rates

(left-hand scale in p.p.; right-hand scale in %)

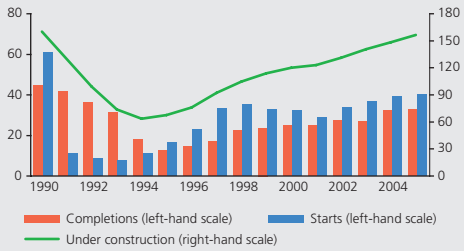


Source: **CNB, Institute for Regional Information**

CHART III. 26

Apartment construction

(numbers of starts, completions and apartments under construction in given year in thousands)



Source: **CZSO**

77 A more detailed methodological discussion was given in the box *Property Price Determinants* in the 2004 Financial Stability Report.

78 Rent return = Market monthly rent/Supply price of flat*12.
This yield does not take into account wear and tear and other costs relating to ownership of the property (repairs, charges for some services etc.) or the "credit risk" associated with the tenant's potential failure to pay. Therefore, this yield should always be higher than yields on more liquid other assets, which are not burdened with such costs or risks (bonds, for example).

79 The last census of people, houses and flats was conducted in 2001. As of that date, the housing stock consisted of 4,366,293 flats, 12.3% of which were not permanently inhabited.