

3 Macroeconomic Scenario

The macroeconomic scenario was conceived as a realistic and conservative with an effort to balance out the positive and negative risks of economic development.

3.1 The World Economy and Technical Assumptions

The world economy³

The state of the external environment of the Czech economy can be summarised as follows:

- The state of the world economy is favourable at this time. The Asian economies, especially China and India, have contributed significantly to global dynamics. Growth in the USA has slightly declined.
- Growth in economic output has accelerated in the EU as well and has reached its highest values since 2000 (2.9% in the EU-25 for Q2 2006). Household consumption and gross fixed capital formation have contributed the most. The enlargement process has a positive impact on the EU as an economic whole. New member states are growing faster than the older members. Free movement of goods and capital with the new member states, more opportunities for cooperation and increased labour force mobility in the enlarged EU have shown to be pro-growth factors.
- The global business cycle is not restricted, even by high commodity prices. USD crude oil prices reached the highest nominal level in history; the average for Q3 2006 was USD 70.1 per barrel of Brent oil.

GDP growth in the EU-25 should be driven in particular by net export and investments during the upcoming period 2007 to 2009. Additional EU enlargement will be a positive stimulus.

A new multi-year EU financial framework up to 2013 will come into effect starting in 2007. For the new member states, this means a significant rise in resources from structural funds and the Cohesion Fund.

We assume that the peak oil price has already been reached, and in 2007, there will be a decline below USD 60/barrel. However, the overall decline will not be substantial due to high demand in developing Asian economies.

³ For technical reasons, it was not possible to use the “common assumptions on the external environment” in preparing the CP. The Spring EC Forecast published in May 2005 was already outdated and the assumptions of the Autumn Forecast were not yet known at the time of preparing the macroeconomic scenario (September 2005). Therefore, the CP was supplemented by a sensitivity analysis of certain macro-indicators based on the exogenous variables in Section 5.

Table 3.1: Assumptions on the external environment

		Year 2005	Year 2006	Year 2007	Year 2008	Year 2009
USD/EUR exchange rate	<i>(annual average)</i>	1,24	1,25	1,26	1,26	1,26
EU-25 GDP	<i>(real GDP growth, y/y, in %)</i>	1,7	2,7	2,2	2,3	2,4
Germany GDP	<i>(real GDP growth, y/y, in %)</i>	0,9	2,2	1,4	1,8	2,2
Oil prices	<i>(Brent, USD/barrel)</i>	54,4	67,5	59,8	55,0	52,0

Source: Eurostat, IMF, calculations of the Ministry of Finance

Any unpredictable event with global impact further escalating the geopolitical climate and the instability of world commodities and financial markets could be a potential risk to this favourable scenario. Another risk, which causes exchange rate uncertainty, is the expanding current account deficit in the USA.

As for the impact on the Czech economy, the growing dynamics of GDP indicate that the advantages associated with joining the EU common market and with improving the institutional environment have paid off. The favourable effect of the external environment, including declining oil prices, should help to promote positive macroeconomic development in the Czech Republic in the future.

Technical assumptions

The assumptions on short-term interest rates were chosen to be consistent with meeting the CNB's inflation target.

In the exchange rate area, the scenario is based on the assumption of a continued long-term trend towards real exchange rate appreciation, which continues with practically no interruption throughout the transition process alongside real convergence. From 1999 to 2005, the real exchange rate vis-à-vis the euro (deflated by the GDP deflator) appreciated on average by about 6% per year. From 2006 to 2009, we expect average real appreciation of around 4% per year, which during low inflation, would tend to cause nominal appreciation of the CZK/EUR exchange rate.

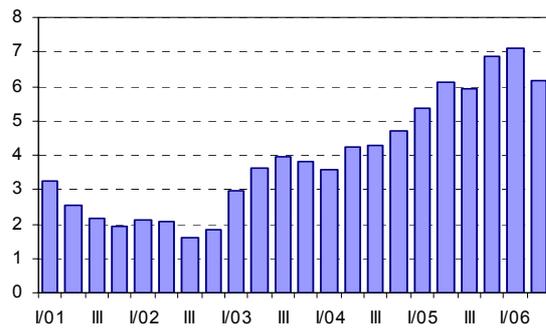
3.2 Current Macroeconomic Development⁴

For the sixth quarter in a row, year-on-year growth of the Czech economy has exceeded 5%, reaching 6.6% in the first half of 2006. In 2005, net export's contribution to GDP growth was at 4 percentage points, which is not only a record level for the Czech Republic, but also an exceptional achievement in comparison with other countries. Domestic demand's contribution will be more perceptible in 2006, particularly investments.

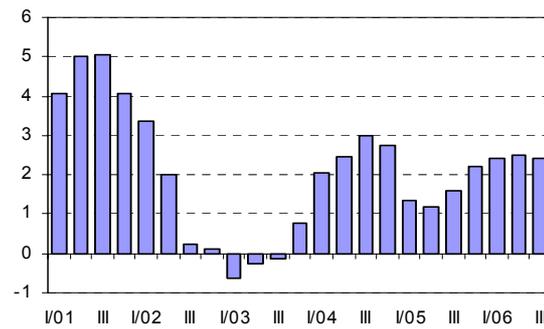
⁴ Based on the available data as of 15 October 2006

Chart 3.1: Real GDP

y-o-y growth in %

**Chart 3.2: Inflation rate (HICP)**

y-o-y growth in %

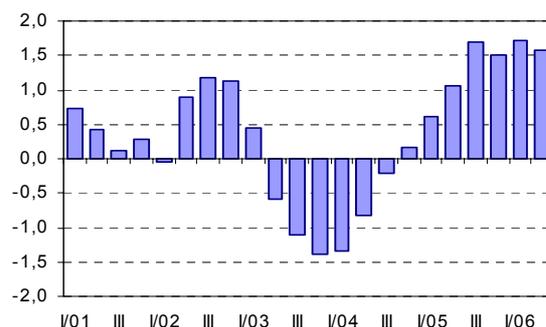


Source: Czech Statistical Office

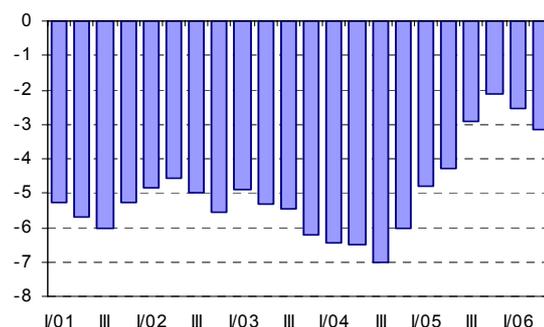
In 2005, the low-inflationary environment in the Czech Republic was reflected in an average annual inflation rate of 1.6% (based on the HICP). The slight acceleration in inflation for 2006 was prompted by administrative measures and especially energy and food prices. In September 2006, the HICP reached 2.2% year-on-year. The effects of the record world prices for raw materials are partially offset by the strengthening CZK exchange rate. The highly competitive environment on the consumer market also plays a significant role.

Chart 3.3: Employment (according to LFS)

y-o-y growth in %

**Chart 3.4: Current account/GDP**

in %



Source: Czech Statistical Office, Czech National Bank
LFS = Labour Force Survey

Moreover, labour market development is positive. Employment, according to the Labour Force Survey, has increased since Q4 2004. In Q2 2006, employment growth reached 1.6%, while the most significant increase was registered in the manufacturing industry. The dynamic growth of labour productivity continued. Since reaching its peak in Q1 2004 (8.7%), the unemployment rate has continually declined to 7.1% in Q2 2006. The main cause of this decline is cyclical development. The improvements in the structural characteristics of the labour market are apparently only limited in nature.

The external balance has been improving since Q3 2004. In Q2 2006, the current account deficit reached 3.1% of GDP. The main factor behind this development is the improvement in the trade balance as a result of the free movement of goods within the EU and export-oriented investments. Despite the adverse effect of high prices for oil and metals on world markets, the trade balance registered a surplus of 1.2% of GDP in Q2 2006.

3.3 The Medium-Term Scenario

Potential GDP and the position within the economic cycle

The dynamisation of economic growth is structural as well as cyclical in nature. According to our estimate based on the Cobb-Douglas production function⁵, the growth rate of potential GDP has significantly accelerated since 2000 and is currently around 5% according to our calculations.

The main factor behind this is accelerated growth of the trend components of total factor productivity. In addition, the negative output gap had closed in mid-2005, and economic output is now ca 1% above potential GDP.

Chart 3.5: Output gap

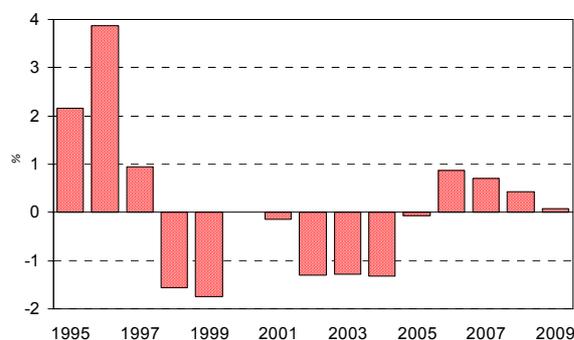
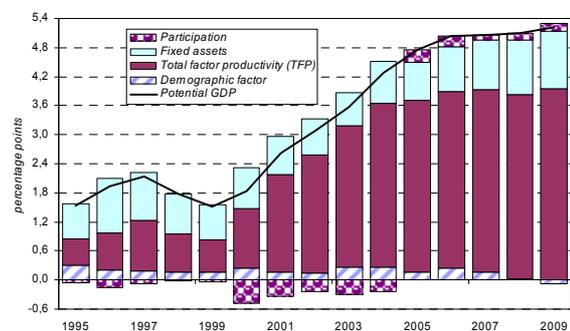


Chart 3.6: Potential GDP growth



Source: Calculations of the Ministry of Finance

We do not believe that it is possible to maintain such acceleration of potential GDP growth during the CP horizon. Therefore, the programme's scenario is based on the assumption that the rate of potential growth will only slightly increase and reach 5.2% in 2009 due to higher total factor productivity. Productivity growth should in particular be generated from an improvement in the institutional parameters of the economy and the quality of the business environment as well as from introducing new technology associated with an inflow of foreign direct investment. The ongoing integration into the EU economic structures continues to be a long-term growth factor.

The contributions of fixed assets stocks and the labour force have remained stable. The declining benefit of demographic development will be offset by a rising participation rate.

Structural policy measures could help to accelerate the growth rate of potential GDP above the projected dynamics. However, there is also a perceptible risk of development in the opposite direction relating to possible complications on the commodities markets or on the markets of our trade partners. A significant risk is posed by public finances.

We assume that macroeconomic policies will be set in such a way that economic performance at the end of the period in 2009 will be near the level of potential GDP.

⁵ Calculations of potential GDP and the output gap are currently made using the national methodology described in the 2002 Pre-Accession Economic Programme. The main distinction from the European Commission's method, important for interpreting the results, is the use of the clause "zero sum of output gaps over time".

GDP and the demand side

Real GDP growth will be in a range of 4.8% in the period up to 2009. Domestic demand should contribute to growth of around four percentage points. The contribution from the foreign trade balance should remain positive.

The growth trajectory of potential GDP implies that the process of economic convergence with the neighbouring advanced EU countries will continue. The Czech Republic's economic level (GDP per capita in purchasing power parity) in comparison with the EU-25 will increase by about eight percentage points against 2005 to ca 82% in 2009.

Chart 3.7: Decomposition of GDP growth

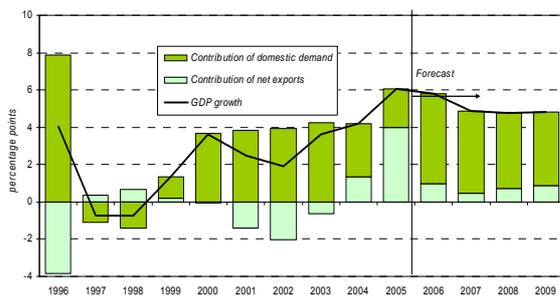
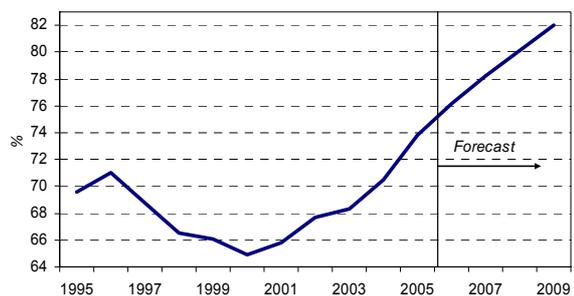


Chart 3.8: GDP in parity per capita (EU-25 = 100)



Source: Czech Statistical Office – quarterly national accounts, Eurostat, calculations of the Ministry of Finance

Household consumption growth (including non-profit organisations) has fallen behind the growth rate for economic performance. Low interest rates support the propensity of households to invest in private housing, which in turn draws on a part of their disposable income. Growth in the stock of mortgages increases the debt burden of households and reduces the growth rate of expenditures on final consumption. During the upcoming years, household consumption expenditures should accelerate, though remaining below the rate of GDP growth.

Government consumption should be flat or even slightly decrease in the future. Government institutions are expected to behave economically from the standpoint of employment in the government sector as well as in purchasing goods and services.

Table 3.2: Economic growth (CZK billion, increase in %)

	ESA code	Year 2005 level ¹⁾	Year 2005 y-o-y	Year 2006 y-o-y	Year 2007 y-o-y	Year 2008 y-o-y	Year 2009 y-o-y
1. Real GDP	B1*g	2950	6,1	6,0	4,9	4,8	4,8
2. Nominal GDP	B1*g	2978	7,1	7,5	7,6	7,8	7,9
Components of real GDP							
3. Private consumption expenditure	P3	1442	2,3	3,9	4,2	4,1	4,1
4. Government consumption expenditure	P3	628	0,7	-1,0	0,5	-0,3	-0,3
5. Gross fixed capital formation	P51	756	3,6	6,5	7,8	7,9	8,0
6. Changes in inventories and net acquisition of valuable a % of GDP ²⁾	P52+P53	30	1,0	2,4	2,5	2,4	2,3
7. Exports of goods and services	P6	2184	10,6	12,7	10,6	10,3	10,4
8. Imports of goods and services	P7	2089	4,9	11,4	10,2	9,6	9,7
Contribution to GDP growth							
9. Final domestic demand			2,3	3,3	4,2	4,0	4,0
10. Change in inventories and net acquisition of valuable	P52+P53		-0,2	1,6	0,3	0,1	0,0
11. External balance of goods and services	B11		4,0	1,1	0,5	0,7	0,9

Note: 2005 levels are given in last year's prices.

The share of the change in inventories to GDP is in current prices.

Source: Czech Statistical Office – quarterly national accounts, calculations of the Ministry of Finance

Following a certain slowdown in investment activities in 2005, the dynamics should be renewed and exceed the rate of GDP growth primarily due to the continued inflow of foreign direct investment, which reflects the Czech economy's high attractiveness for foreign investors. The new capacity is expected to be primarily export oriented. In addition, an increase in the investment activity of domestic companies can be expected thanks to adopted measures and an anticipated high drawdown of resources from the structural funds in support of small and medium-size enterprises.

In 2007 and especially in 2008, the contributions from structural funds and the Cohesion Fund should significantly increase as a part of the new Financial Perspective 2007–2013. Together with co-financing from public budgets, they will be mainly channelled into infrastructure investments.

The contribution of the trade balance for goods and services in constant prices to GDP growth has attained positive figures since 2004. A positive contribution in a range of 0.5 to 1.0 percentage point is anticipated to persist up to 2009. The actual extent will depend on meeting the assumptions for the external environment, the launch of new technological complexes and on domestic demand developments.

Prices

The Czech economy has been characterised by low inflation since the end of the 1990s. The inflation targeting regime has had a positive influence and has helped to guide the inflation expectations of economic agents.

Table 3.3: Prices of goods and services

	Year 2005	Year 2006	Year 2007	Year 2008	Year 2009
Percentage changes					
HICP	1,6	2,4	2,6	2,5	2,5
GDP deflator	0,9	1,4	2,6	2,9	2,9
Consumption of households deflator	1,8	2,7	2,9	2,9	2,8

Source: Czech Statistical Office – price statistics and quarterly national accounts, calculations of the Ministry of Finance

The scenario is based on the assumptions of the decline in USD oil prices, additional CZK appreciation and continuous non-inflation growth of total unit labour costs. Stable development or a slight increase is expected for food prices. The market fluctuation of other prices should remain moderate.

In the area of administrative measures, a rise in excise taxes on tobacco products during the first half of 2007 will have the strongest effect. Additional measures will relate to housing – rises in the prices of electricity, regulated rent, natural gas, heat, water and sewage. Nevertheless, the scenario does not account for the inflationary effects of the contemplated environmental tax reform, seeing as though the timetable and content of the reform measures are not yet known.

Chart 3.9: HICP
y-o-y growth in %

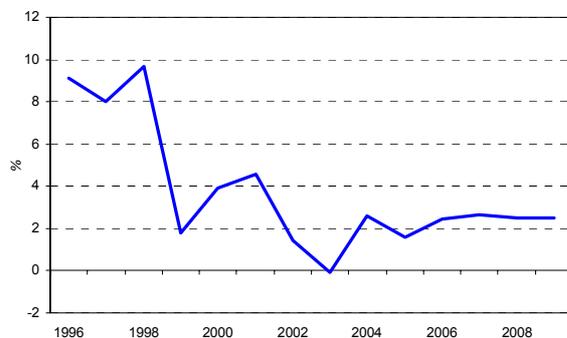
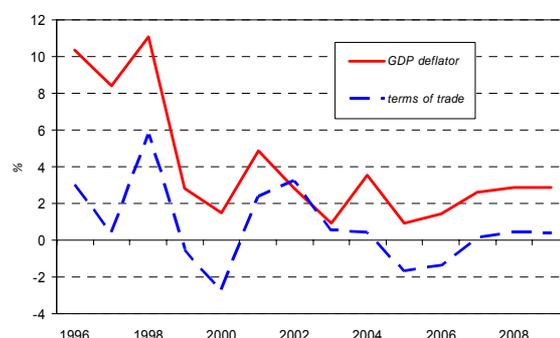


Chart 3.10: GDP inflator and terms of trade
y-o-y growth in %



Source: Czech Statistical Office – price statistics and quarterly national accounts, calculations of the Ministry of Finance

On the whole, we expect the CNB's inflation target (national CPI of 3%) to be reached between 2007 and 2009. This creates conditions for meeting the inflation convergence criteria close to the reference rate as long as the prices in certain EU member states do not deviate sharply in a downward direction from the European Central Bank's definition of price stability.

When terms of trade start to improve again, growth of the implicit GDP deflator should stabilise around 3%.

The labour market and wages

The positive development of labour market indicators is the result of the favourable position of the economy in the economic cycle. Structural problems are still present and are reflected

in the strong regional disparity and in long-term unemployment that has not declined. The reasons behind this development are low professional and regional mobility, the lack of motivation of low-income groups to seek work actively, the rigidity of labour contracts concluded for indefinite periods, and the still underdeveloped mortgage market.

Table 3.4: Employment and wages

	Year 2005	Year 2006	Year 2007	Year 2008	Year 2009
Percentage changes					
Employment (LFS)	0,7	1,6	1,0	0,5	0,2
Compensation of employees	6,6	7,8	7,8	7,6	7,3
Real compensation per 1 employee ¹⁾	2,7	3,6	4,2	4,6	4,8
Unit labour costs ²⁾	0,5	1,7	2,8	2,7	2,4
Per cent					
Unemployment rate ILO	7,9	7,2	6,7	6,5	6,5
Employment rate ³⁾	64,8	65,6	66,1	66,4	66,6
Activity rate ⁴⁾	70,4	70,7	70,8	70,9	71,1

¹⁾ Wage bill per one employee (according to the Labour Force Survey) deflated by the HICP

²⁾ Nominal compensation of employees per unit of real GDP

³⁾ Share of total employment in the population 15 to 64 years old (according to the Labour Force Survey)

⁴⁾ Share of the labour force in the population aged 15 to 64 years old (according to the Labour Force Survey)

Source: Czech Statistical Office – employment statistics and quarterly national accounts, calculations of the Ministry of Finance

The demand side of the labour market will still be affected in particular by high economic growth during the scenario period. An active employment policy focused on problematic regions will also have a positive impact. The labour market's lack of flexibility, however, will continue to be a challenge for structural policies.

Chart 3.11: Employment, participation rates in %

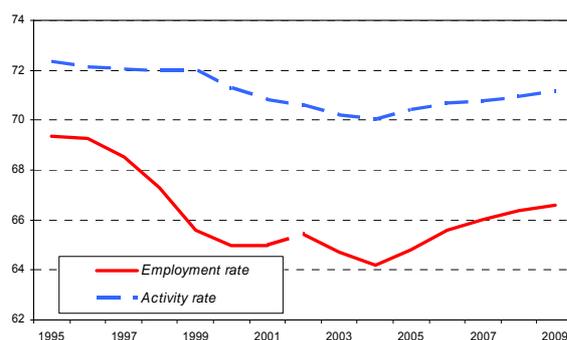
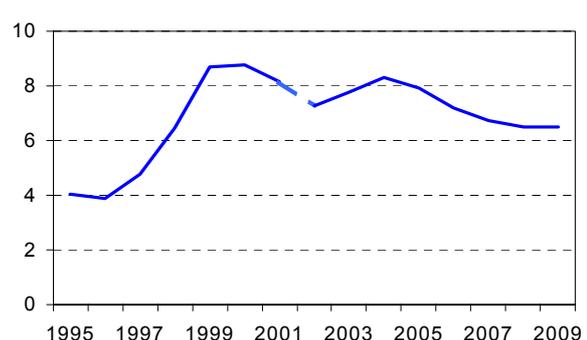


Chart 3.12: Unemployment rate in %



Note: The employment and unemployment rate from the Labour Force Survey is not comparable between 2001 and 2002 due to changes in methodology.

Source: Czech Statistical Office – employment statistics, calculations of the Ministry of Finance

We anticipate an additional rise in employment in the future, due mainly to the integration of foreigners and persons outside the labour force. The unemployment rate in 2008 should drop

to 6.5%. Without adopting relevant measures, this value can be considered to be the structural limit.

Wages have been developing in line with labour productivity and hence do not interfere with Czech macroeconomic stability. The growth rate for nominal compensation of employees should slowly decline in the monitored period from 7.8% in 2006 to 7.3% in 2009. There should also be a slight acceleration in the growth of real compensation of employees from 3.6% in 2006 to 4.8% in 2009.

In 2007, we expect the growth rate of total unit labour costs to increase against 2006 from 1.7% to 2.8%. It will then gradually decline to 2.4% in 2009, in line with the GDP deflator. This should not generate wage inflation pressures or jeopardise the financial situation of the corporate sector.

3.4 Foreign Relations and Sectoral Balances⁶

The negative balance of net lending reached 6.2% of GDP in 2004. In 2005, this was reduced to 3.3% of GDP thanks in particular to an improved merchandised balance.

The trade balance has registered a surplus since April 2005, despite high and ever-increasing mineral fuel prices. Increasing export performance shows an improvement in the competitiveness of domestic products. New capacities with a large export potential have had a substantial impact, mainly in the automobile industry, information and communication technology and the substitution of imported intermediate products with domestic products.

For the balance of goods and services, the surplus in the balance's non-fuel component should be around 6% of GDP. A stable low-inflation environment and wage developments corresponding to the equilibrium appreciation of the real exchange rate will be pivotal for the competitive capabilities of Czech export. The declining CZK prices for mineral fuels should have a positive impact. We anticipate for the balance of services a stable surplus in the share of GDP with continued improvements in the balance for transport and tourism and a decline in "other services".

The most significant negative component in net lending is and will continue to be the worsening balance of primary incomes, which reflects, in particular, the increasing flow of foreign investors' repatriated and reinvested profits. Starting from 2007, the balance of current and capital transfers will be positively affected by financial flows from the EU as a part of the contributions from the structural funds, the Cohesion Fund and for supporting agriculture and regional development

As a result, we expect the net lending deficit to gradually decline, so that in 2008, the Czech Republic could register a surplus for the first time in history.

⁶ In accordance with the rules of the "Code of Conduct", this section is prepared using the methodology of national accounts. On the basis of the relationship between investments and savings, this allows a surplus or deficit in net lending to the rest of the world to be decomposed into individual economic sectors. This differs from the analogical, ordinarily employed methodology of the balance of payment's current account in the categorisation of some transactions and in the fact that it contains additional items (capital transfers, acquisition of non-produced, non-financial assets).

Table 3.5: Net lending/borrowing

	Year 2005	Year 2006	Year 2007	Year 2008	Year 2009
% of GDP					
Balance of goods and services	1,9	1,8	2,2	3,1	4,0
- mineral fuels (SITC 3)	-3,7	-4,6	-4,0	-3,3	-2,9
- other goods	5,0	6,1	5,8	6,0	6,5
- services	0,7	0,3	0,4	0,4	0,5
Balance of primary income and transfers	-4,6	-4,8	-4,2	-4,1	-4,1
- primary income	-4,4	-4,8	-5,0	-5,2	-5,3
- transfers	-0,2	0,0	0,8	1,1	1,2
Capital transfers	-0,5	0,4	0,7	1,3	1,3
Net acquisition of non-produced assets	-0,1	-0,1	-0,1	-0,1	-0,1
Net lending/borrowing vis-a-vis ROW (B.9)	-3,3	-2,8	-1,4	0,2	1,1
Net lending/borrowing of the private sector	0,3	0,7	2,6	3,7	4,1
- households	-0,6	-0,7	-0,8	-0,6	-0,4
- financial and non-financial institutions	1,0	1,4	3,4	4,3	4,5
Net lending/borrowing of general government	-3,6	-3,5	-4,0	-3,5	-3,0

¹⁾ e.g. payments for licences, patents and trademarks

Source: Czech Statistical Office – annual national accounts, calculations of the Ministry of Finance

As for the specific sector contributions to net lending in the economy, the general government's position should improve after 2007. The position of households will continue to show a deficit due to an increase in housing investment, which will be higher than generated savings. The main improvements could be expected in the sector of financial and non-financial institutions.

3.5 The Growth Implications of Structural Reforms

The CP itself contains the assessed effects of the approved reform measures in accordance with the National Reform Programme.

Other structural reforms in the Czech Republic are currently in the deliberation and discussion phase, so the actual structure of these reforms will depend solely on political decisions that have not yet transpired. Therefore, it is not possible to quantify the macroeconomic impact or include it in the CP.